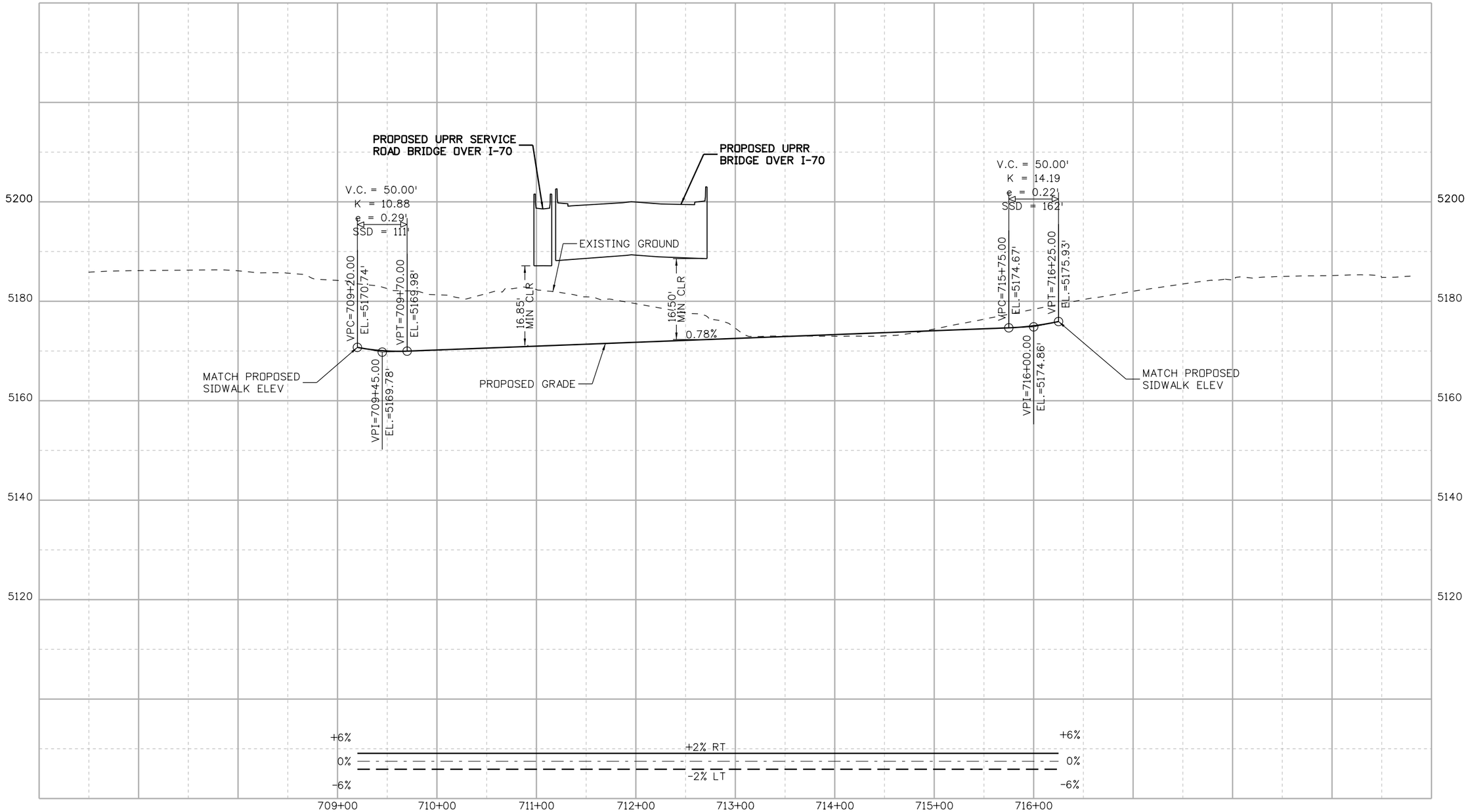

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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

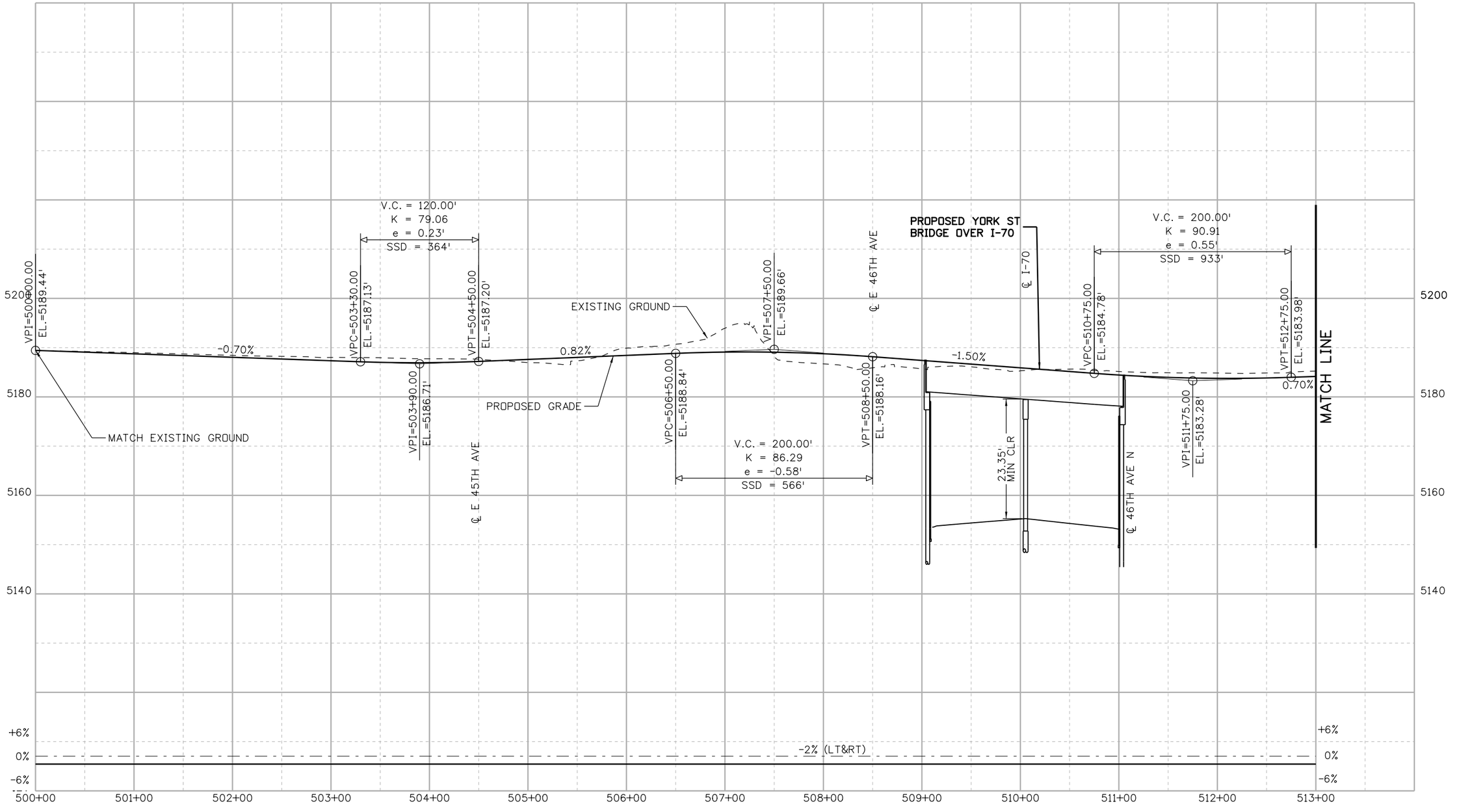
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
UPRR EB SIDEWALK

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR75 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 255



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Print Date: 5/19/2017

File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted

Vert. Scale: As Noted

Unit Information

Unit Leader

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907

Region 1 KJS

PRELIMINARY

No Revisions:

Revised:

Void:

CENTRAL 70
ROADWAY PROFILE
YORK ST
STA 500+00 TO STA 513+00

Designer:

Detailer:

Sheet Subset: ROAD PROF

Structure Numbers

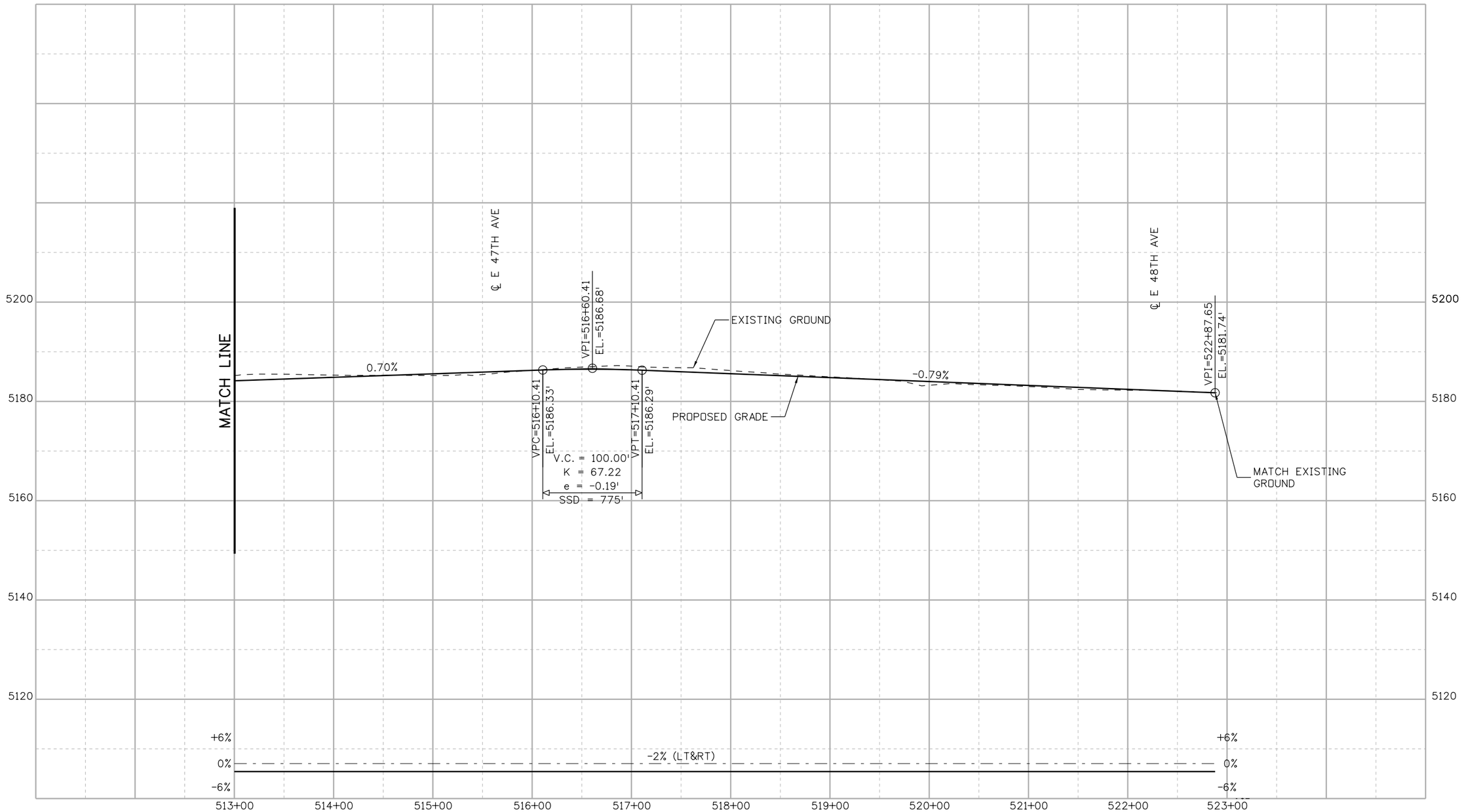
Subset Sheets: RPR76 of 136

Project No./Code

FBR 0704-234

19631

Sheet Number 256



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

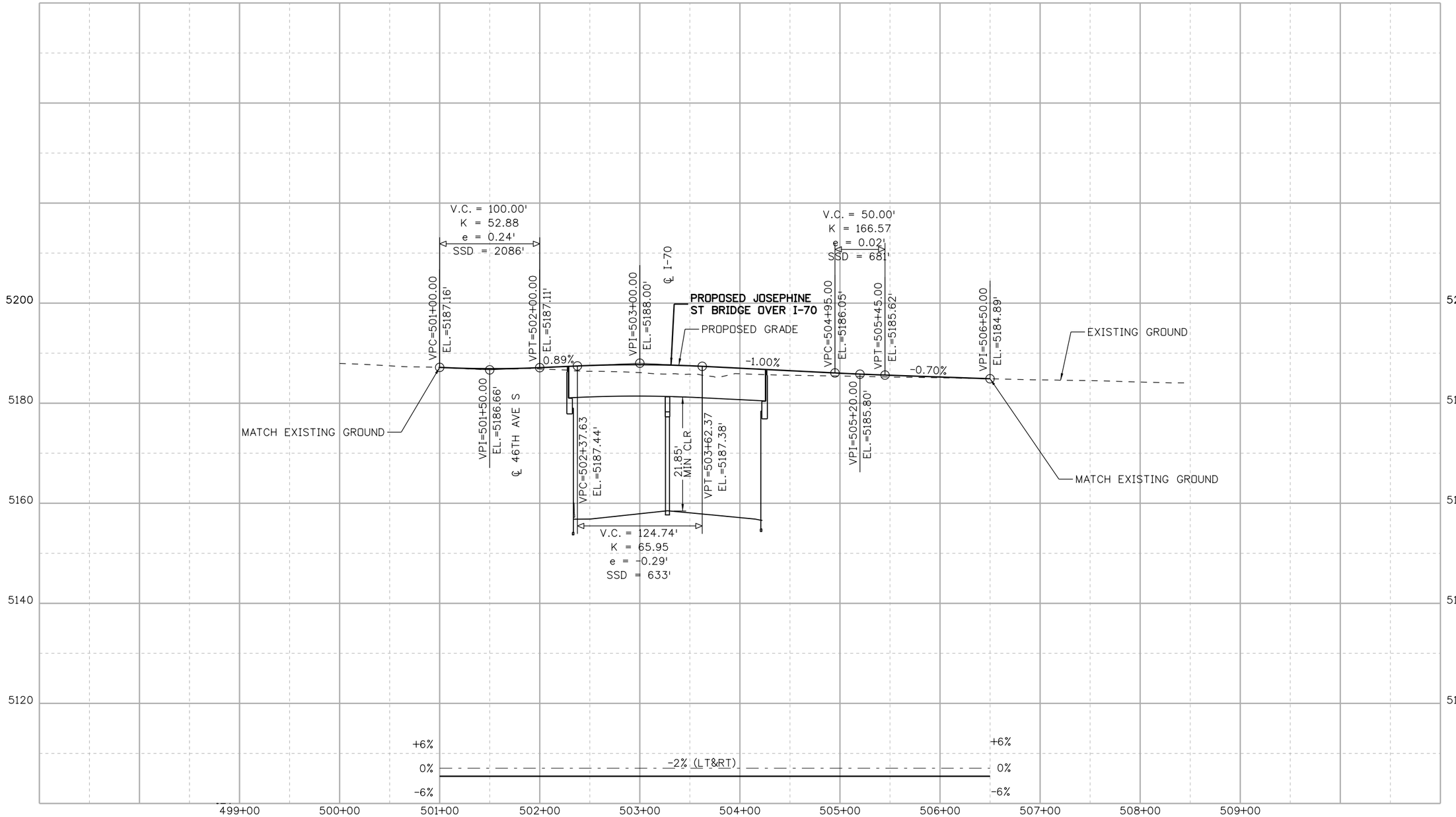
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
YORK ST
STA 513+00 TO STA 523+00

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR77 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 257



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Print Date: 5/19/2017

File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale:	As Noted
Vert. Scale:	As Noted
Unit Information	
Unit Leader	

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY

No Revisions:

Revised:

Void:

CENTRAL 70
ROADWAY PROFILE
JOSEPHINE ST

Designer:

Detailer:

Sheet Subset: ROAD PROF

Structure Numbers

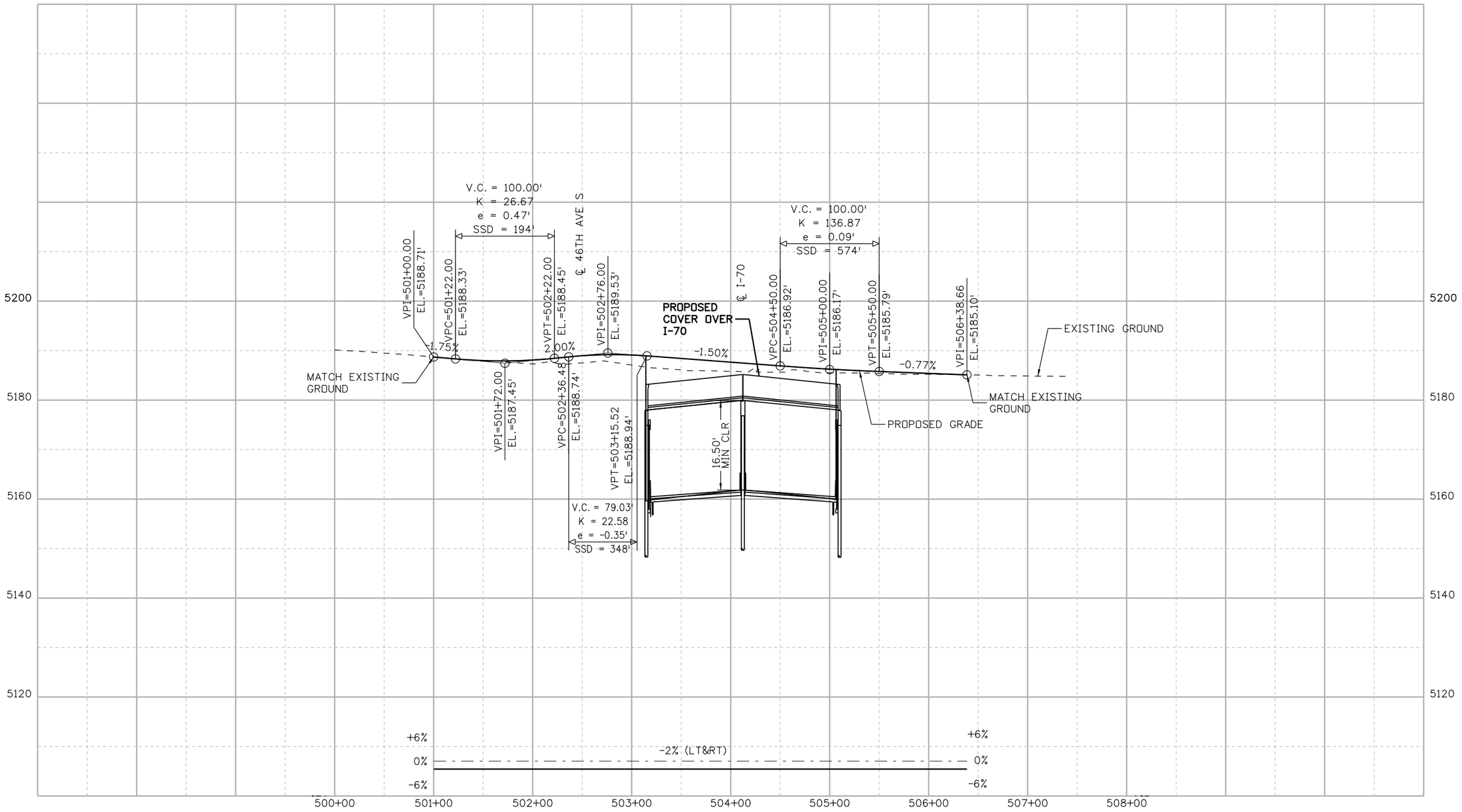
Subset Sheets: RPR78 of 136

Project No./Code

FBR 0704-234

19631

Sheet Number 258



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

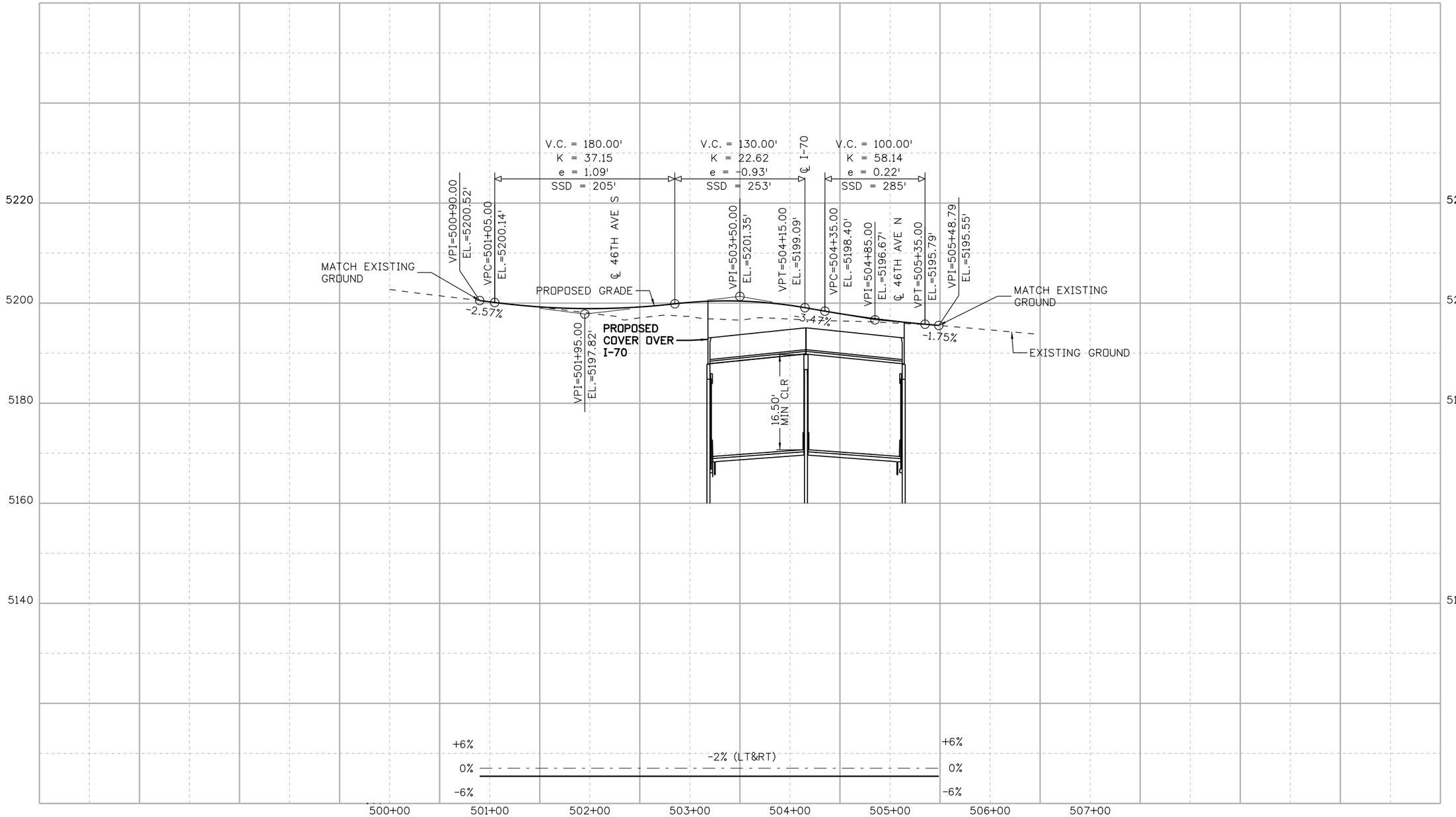
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
COLUMBINE ST

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR79 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 259



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

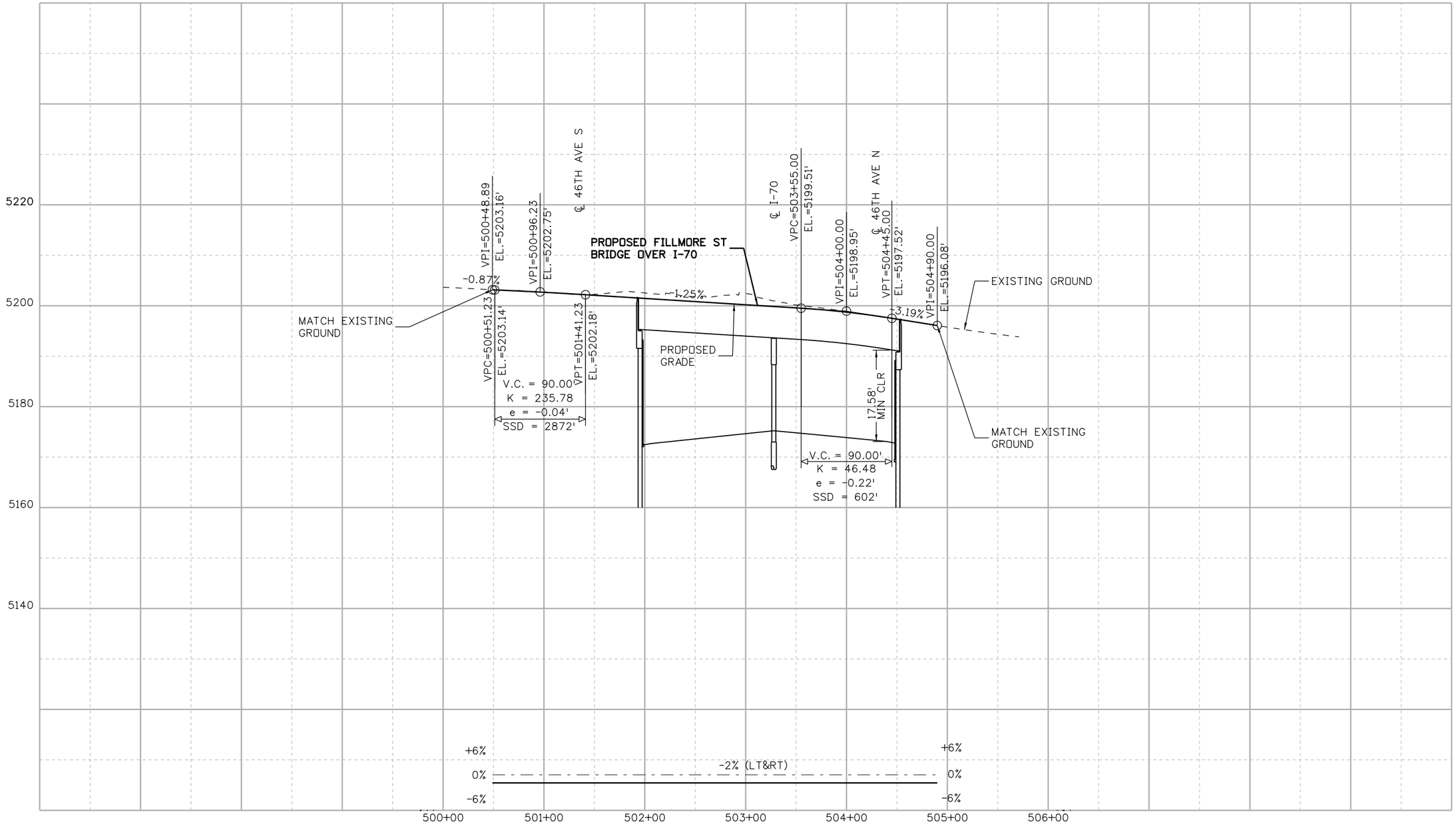
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
CLAYTON ST

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR80 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 260



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

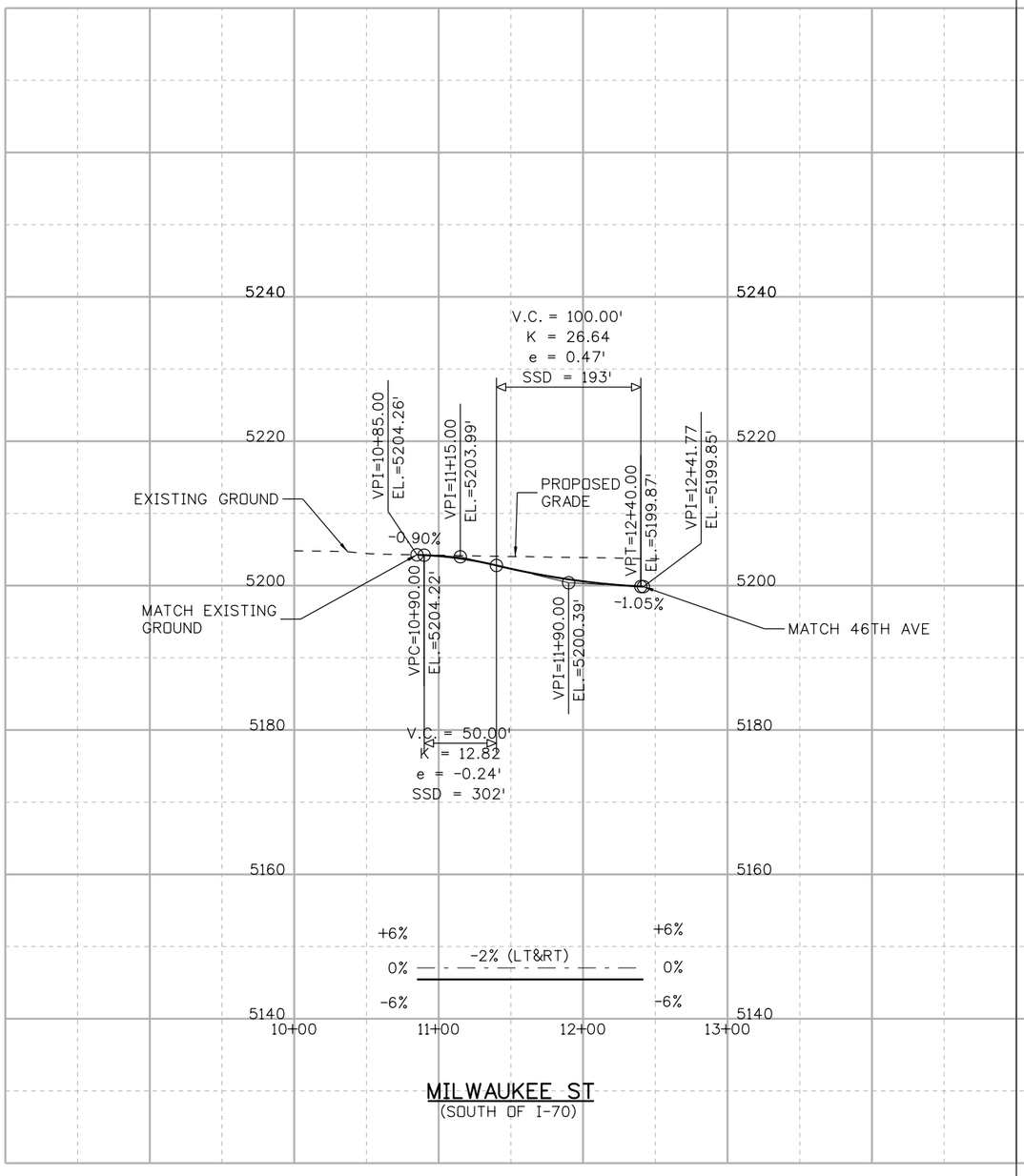
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

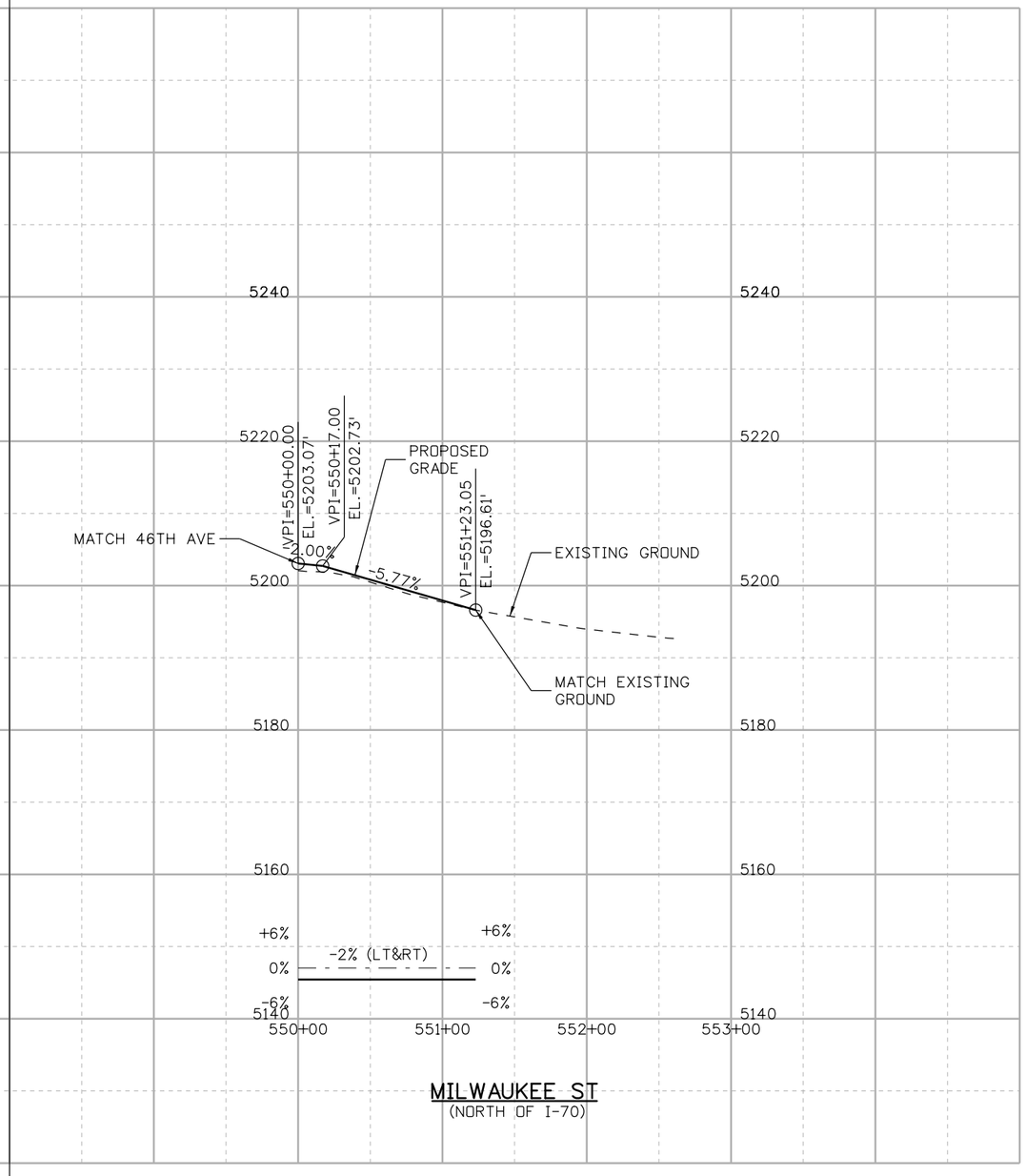
PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
FILLMORE ST

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR81 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 261





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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

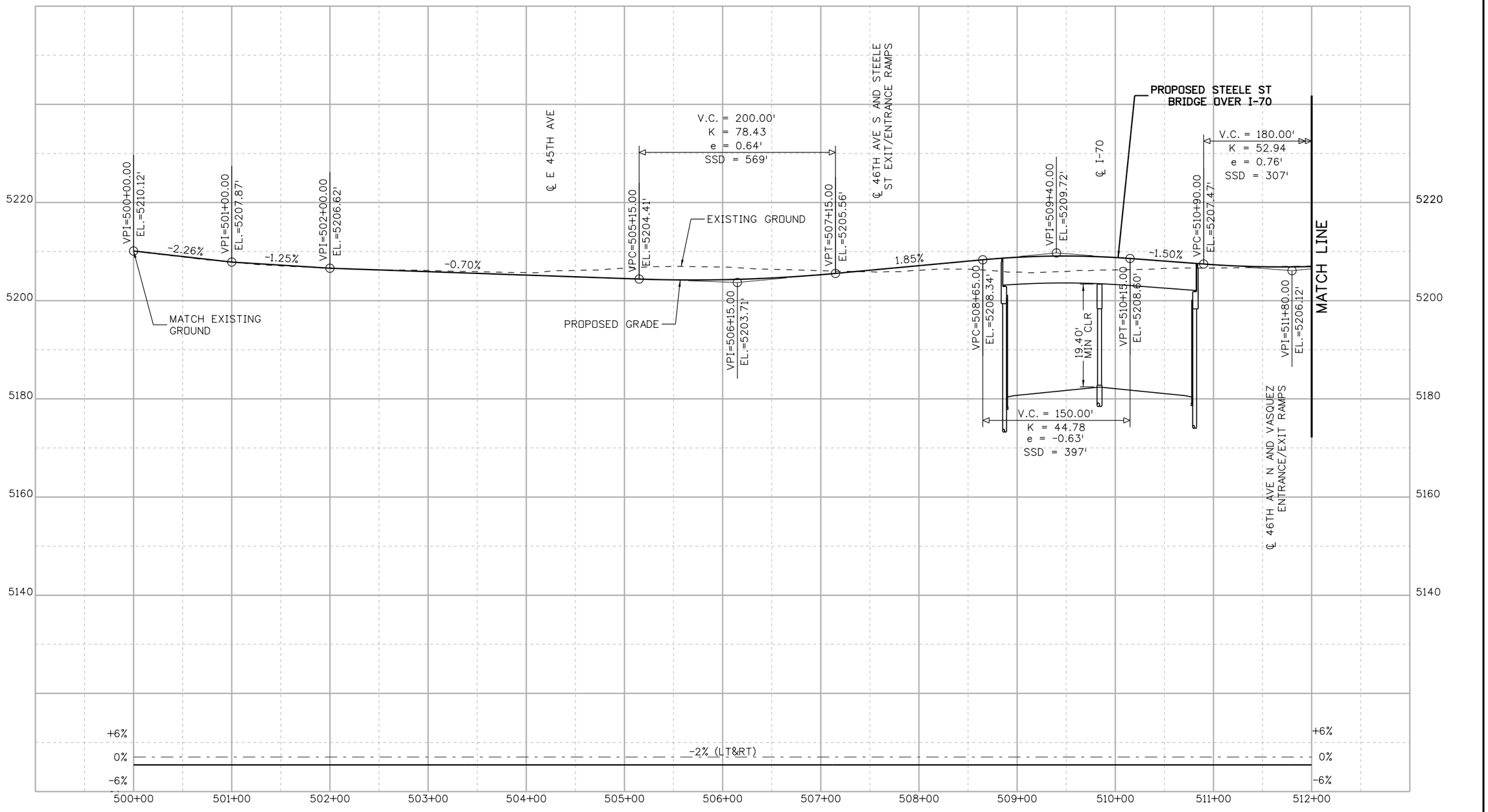
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
MILWAUKEE ST

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR82 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 262



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Print Date: 5/19/2017

File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted

Vert. Scale: As Noted

Unit Information

Unit Leader

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY

No Revisions:

Revised:

Void:

CENTRAL 70
ROADWAY PROFILE
STEELE ST/VASQUEZ BLVD
STA 500+00 TO STA 512+00

Designer:

Detailer:

Sheet Subset: ROAD PROF

Structure Numbers

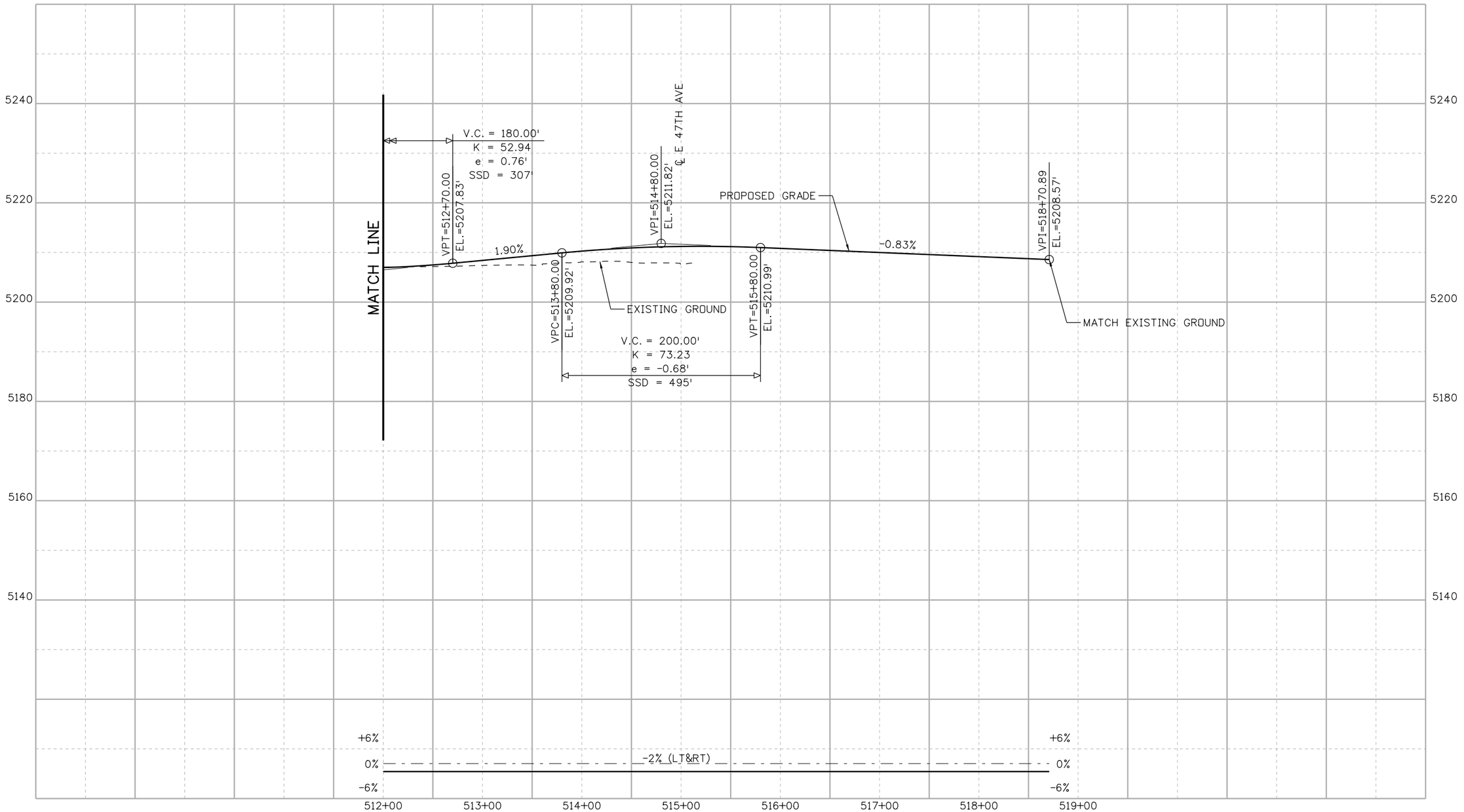
Subset Sheets: RPR83 of 136

Project No./Code

FBR 0704-234

19631

Sheet Number 263



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

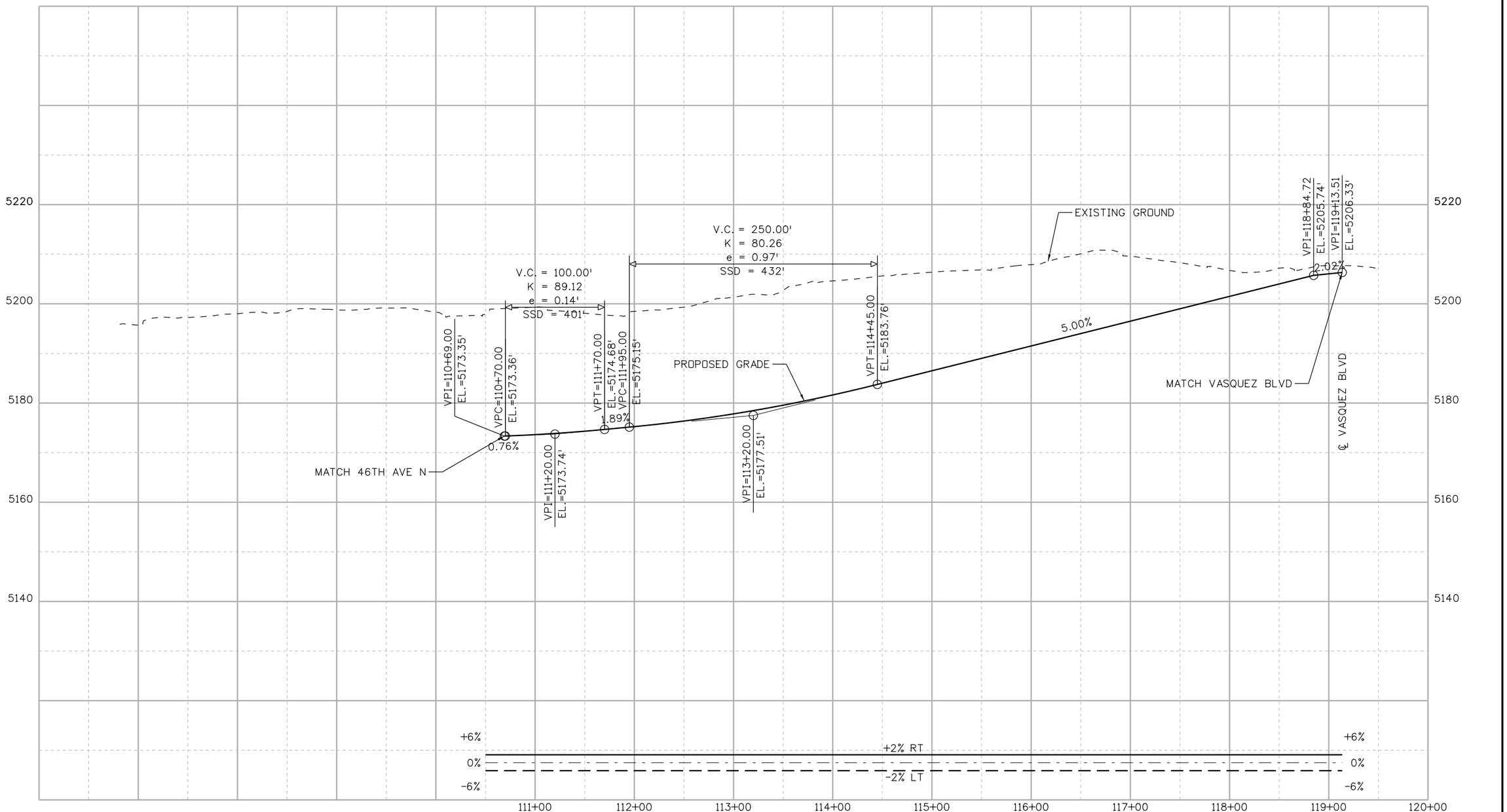
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
STEELE ST/VASQUEZ BLVD
STA 512+00 TO STA 524+00

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR84 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 264



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

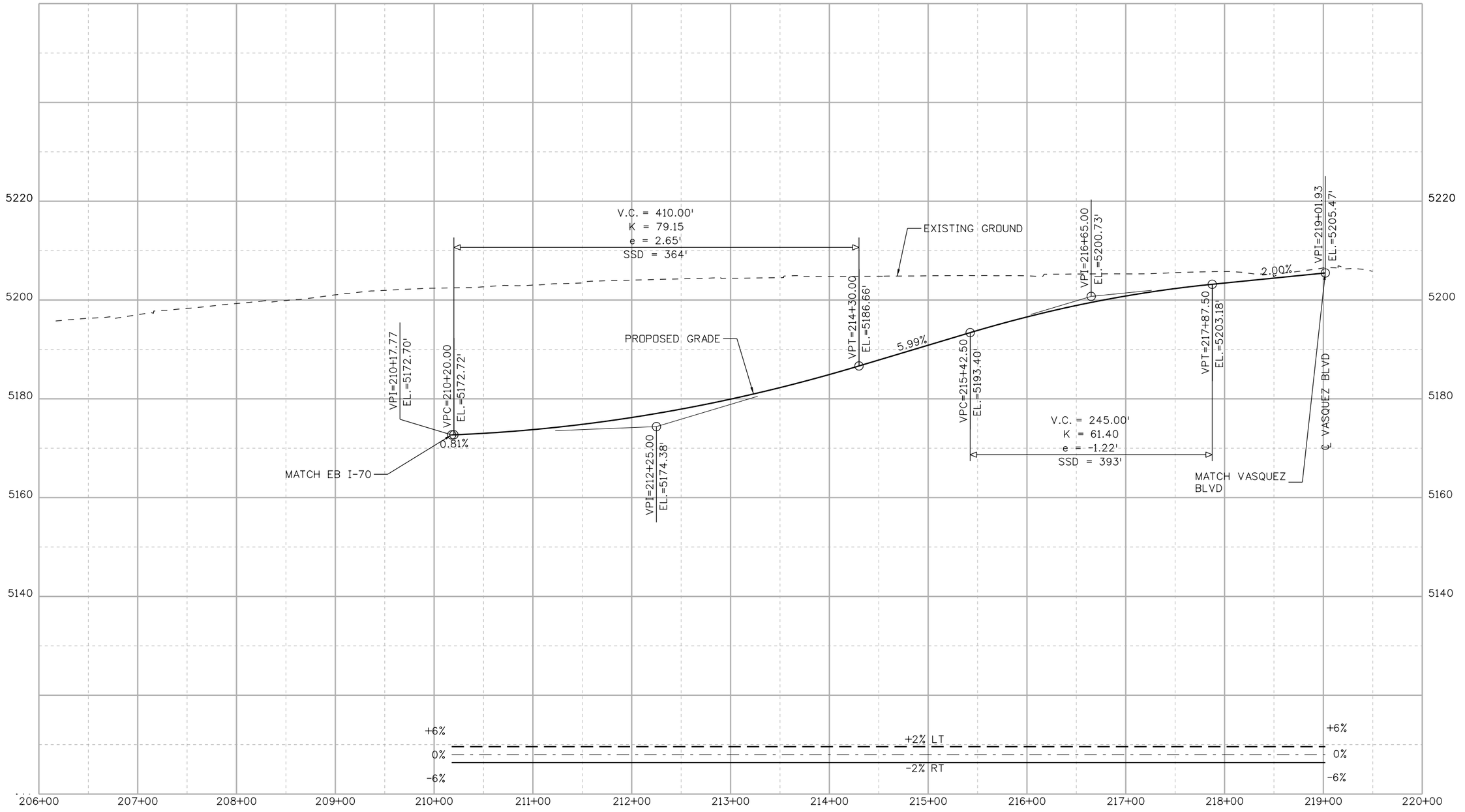
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
VASQUEZ BLVD WB ENTRANCE RAMP

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR85 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 265



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

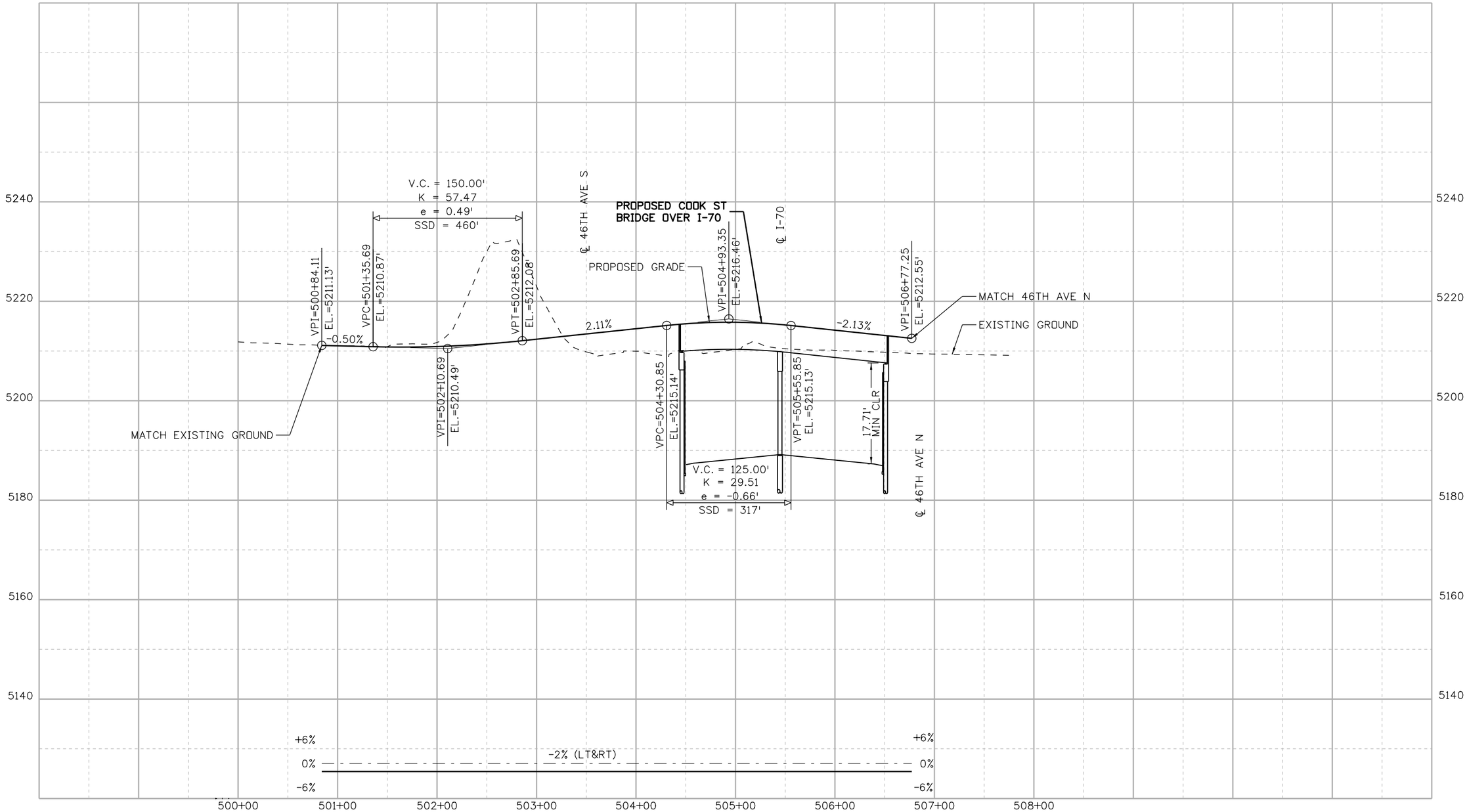
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
STEELE ST EB EXIT RAMP

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR86 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 266



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

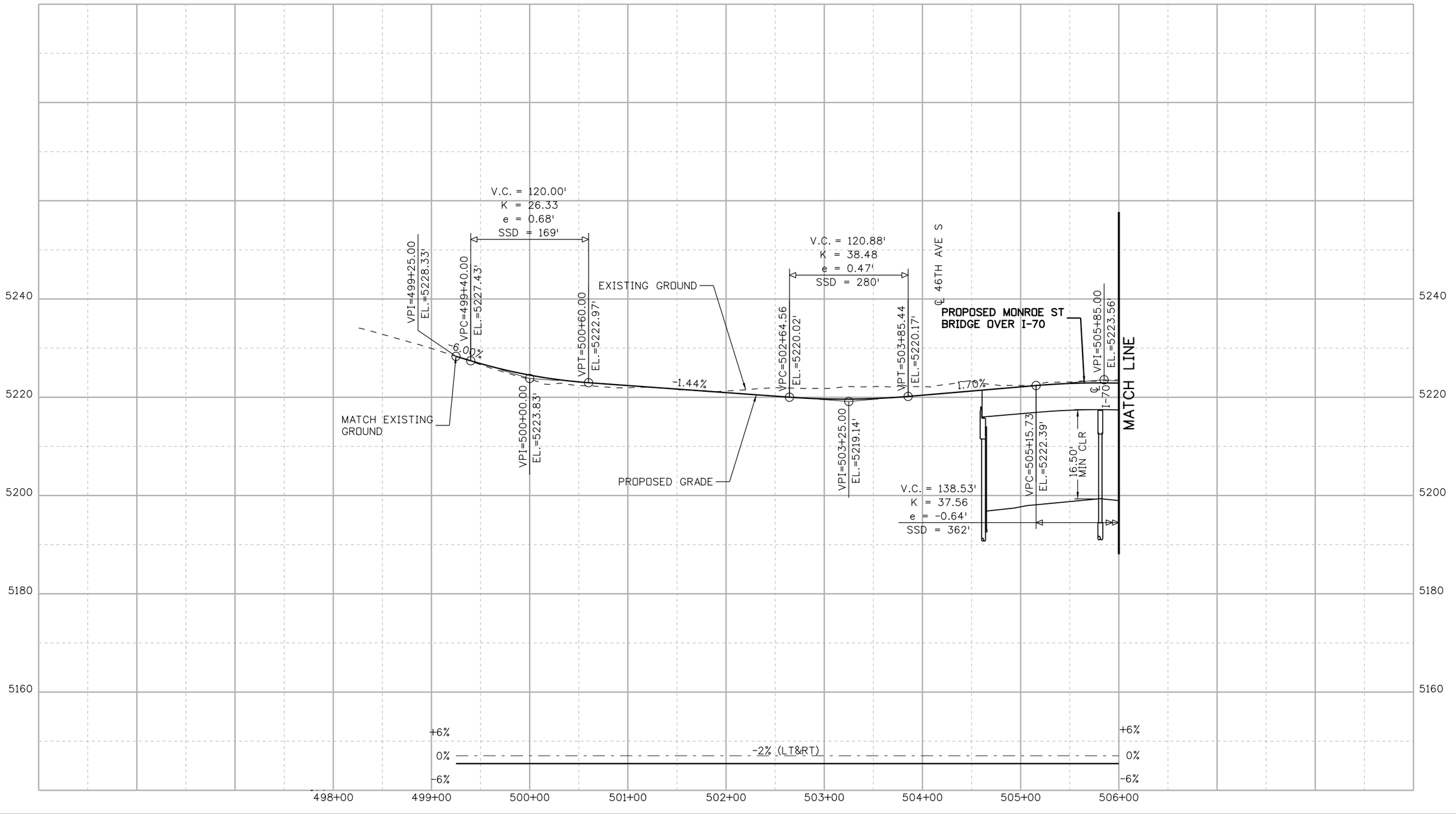
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
COOK ST

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR87 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 267



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Print Date: 5/19/2017		Sheet Revisions	
File Name: File Name: See sheet edge for information		Date:	Comments / Init.
Front Range Mobility Group	Horiz. Scale: As Noted		
	Vert. Scale: As Noted		
	Unit Information		
	Unit Leader		

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY

No Revisions:

Revised:

Void:

CENTRAL 70
ROADWAY PROFILE
MONROE ST
STA 499+25.00 TO STA 506+00.00

Designer:

Detailer:

Structure Numbers

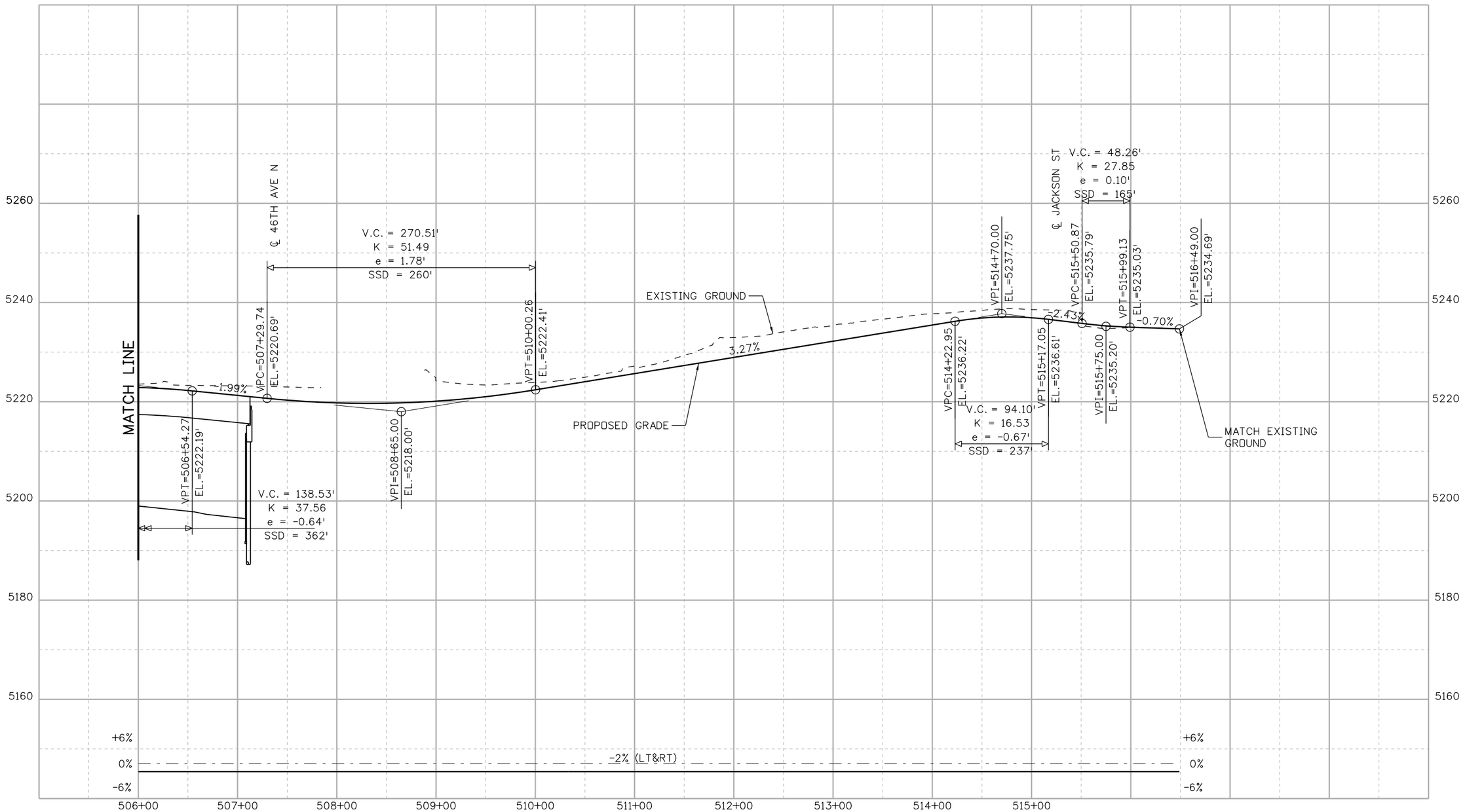
Sheet Subset: ROAD PROF

Subset Sheets: RPR88 of 136

Project No./Code: FBR 0704-234

19631

Sheet Number 268



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Print Date: 5/19/2017

File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted

Vert. Scale: As Noted

Unit Information

Unit Leader

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation

2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907

Region 1 KJS

PRELIMINARY

No Revisions:

Revised:

Void:

CENTRAL 70
ROADWAY PROFILE
MONROE ST
STA 506+00 TO STA 517+00

Designer:

Detailer:

Structure Numbers

Sheet Subset: ROAD PROF

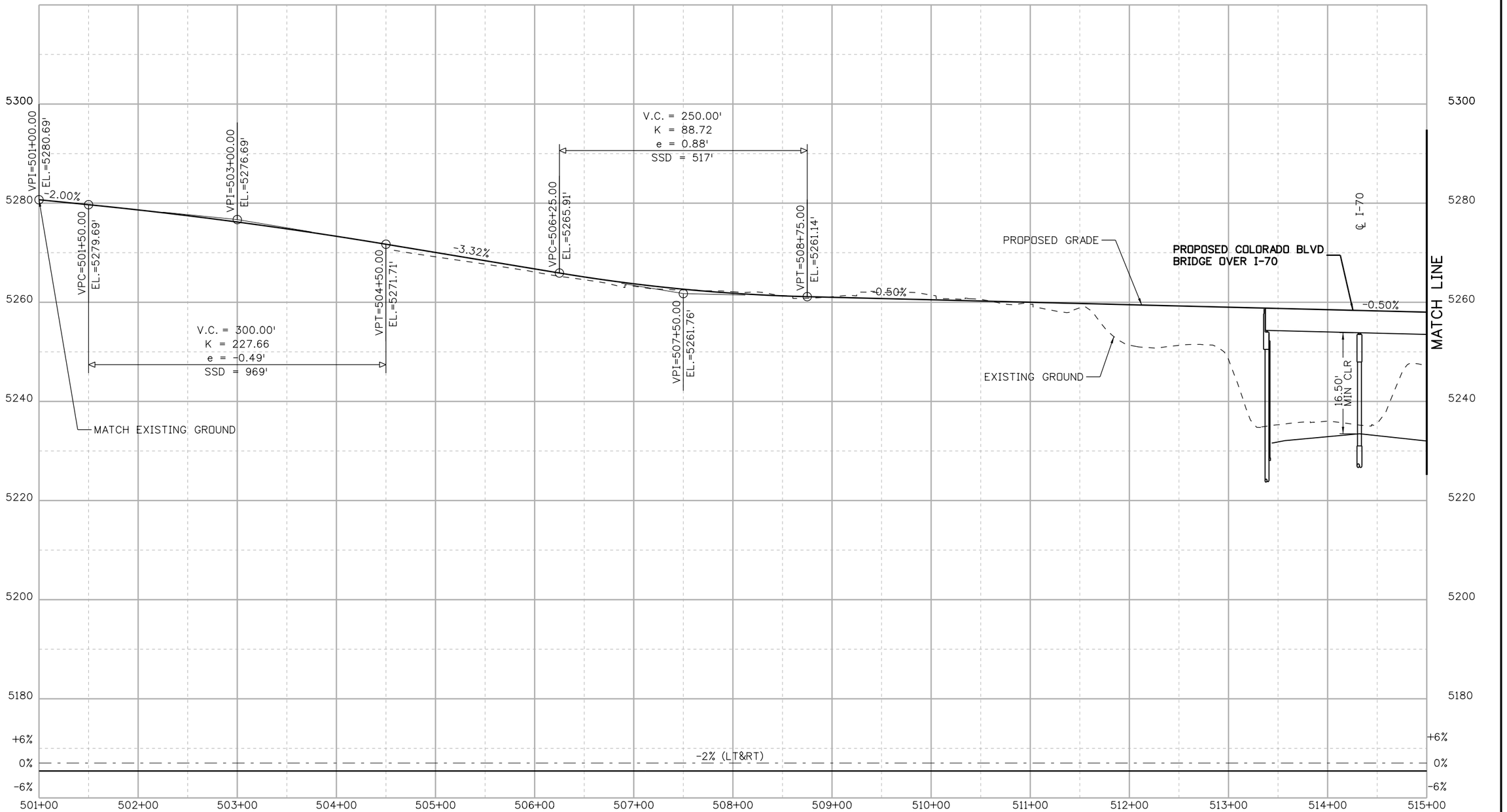
Subset Sheets: RPR89 of 136

Project No./Code

FBR 0704-234

19631

Sheet Number 269



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

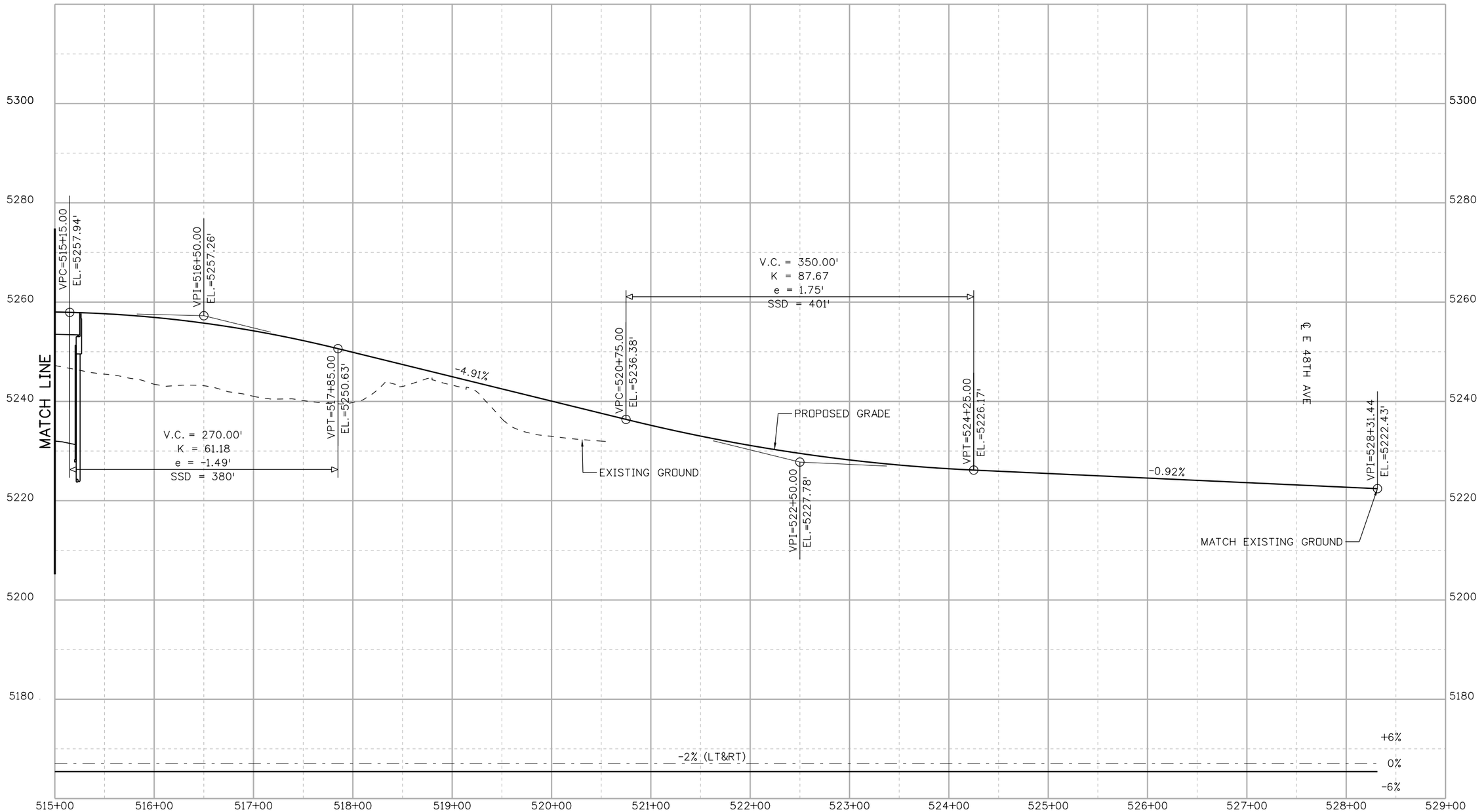
PRELIMINARY

No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
COLORADO BLVD
STA 501+00 TO STA 515+00

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR90 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 270



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Print Date: 5/19/2017		Sheet Revisions	
File Name: File Name: See sheet edge for information		Date: / Comments / Init.	
Front Range Mobility Group	Horiz. Scale: As Noted		
	Vert. Scale: As Noted		
	Unit Information		
	Unit Leader		

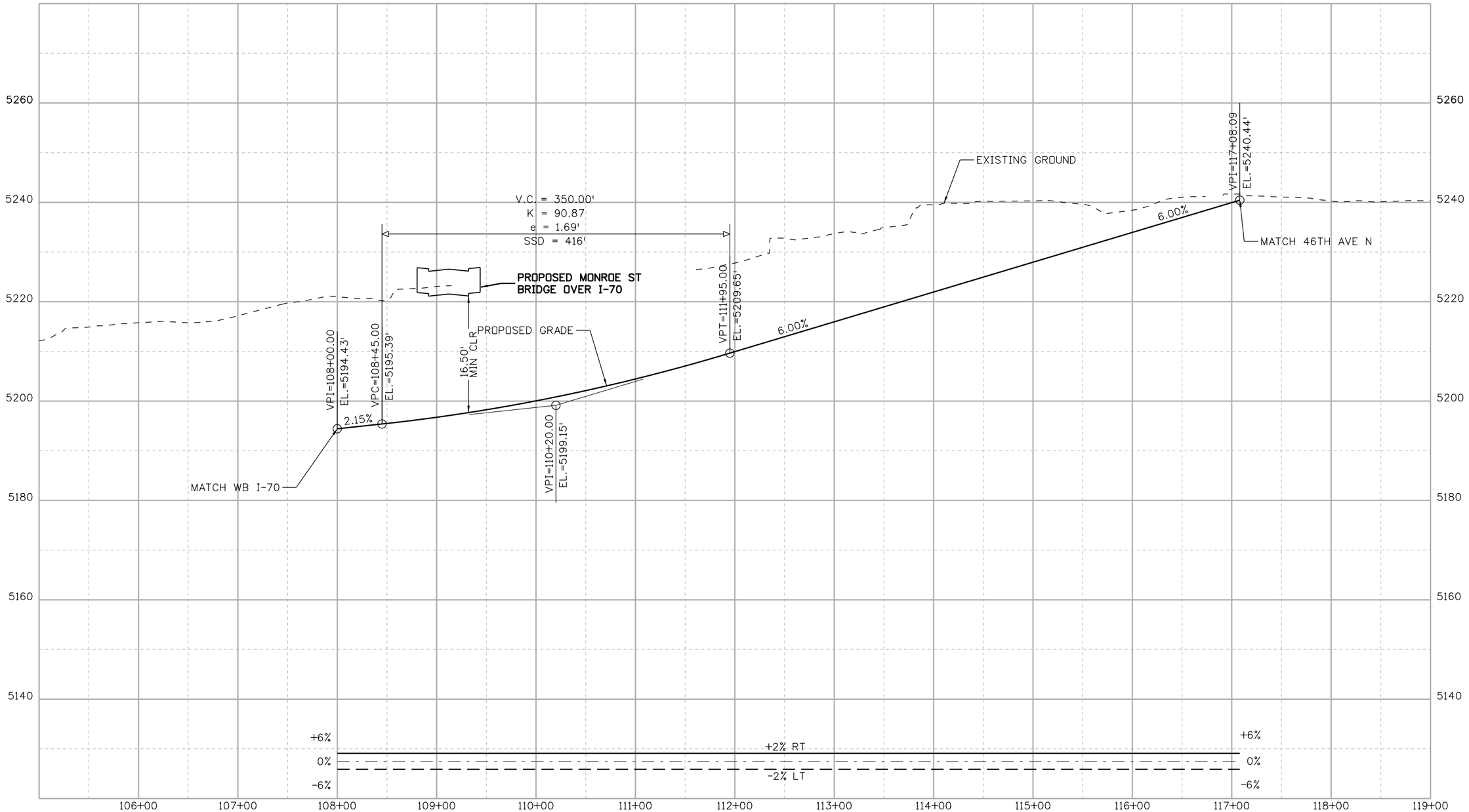
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
COLORADO BLVD
STA 515+00 TO STA 528+00

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers:
Subset Sheets: RPR91 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 271



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Print Date: 5/19/2017

File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted

Vert. Scale: As Noted

Unit Information

Unit Leader

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907

Region 1 KJS

PRELIMINARY

No Revisions:

Revised:

Void:

CENTRAL 70
ROADWAY PROFILE
COLORADO BLVD WB ENTRANCE RAMP

Designer:

Detailer:

Sheet Subset: ROAD PROF

Structure Numbers

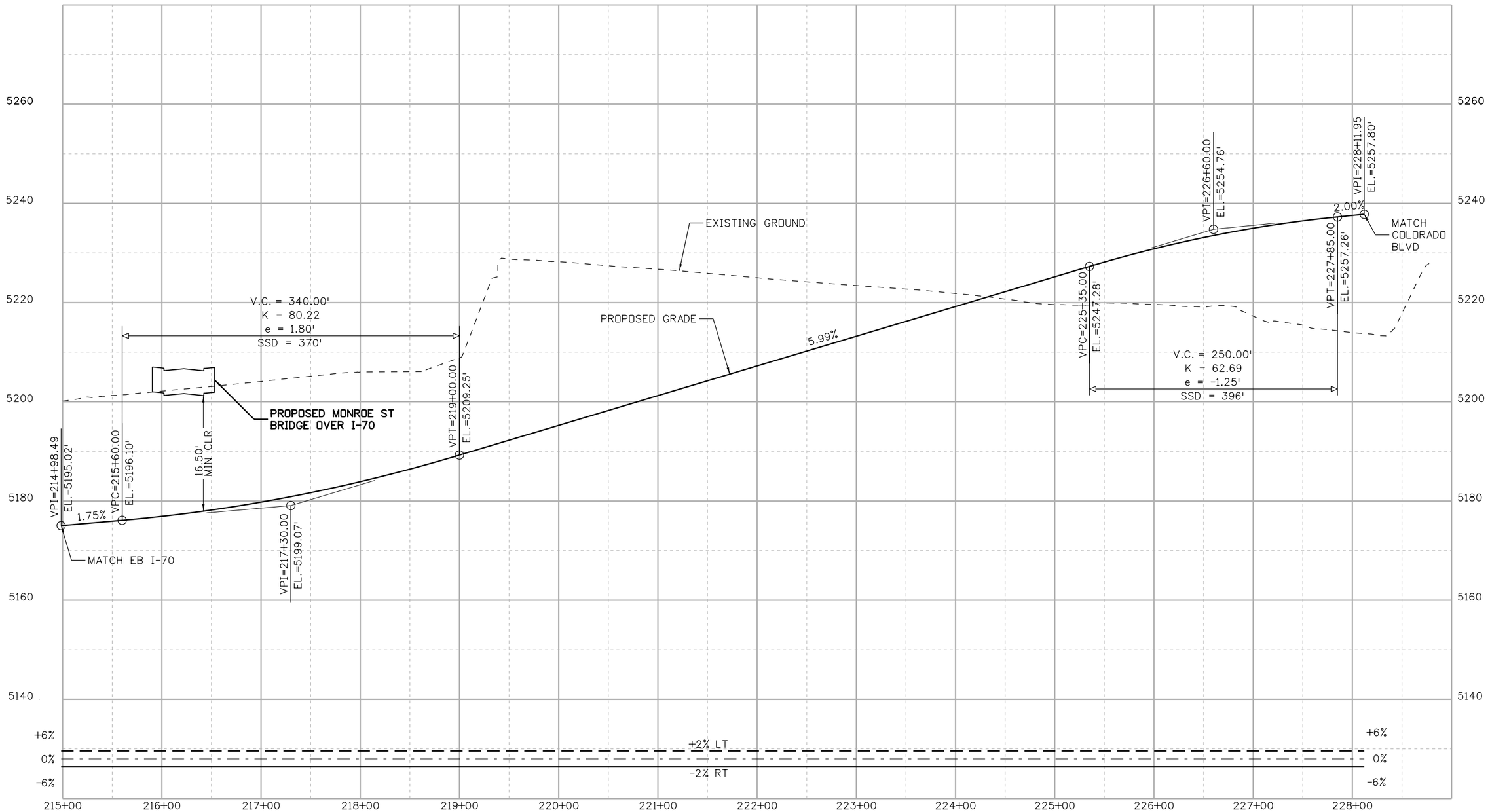
Subset Sheets: RPR92 of 136

Project No./Code

FBR 0704-234

19631

Sheet Number 272



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Print Date: 5/19/2017			
File Name: File Name: See sheet edge for information			
Front Range Mobility Group	Horiz. Scale: As Noted		
	Vert. Scale: As Noted		
	Unit Information		
	Unit Leader		

Sheet Revisions

Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY

No Revisions:

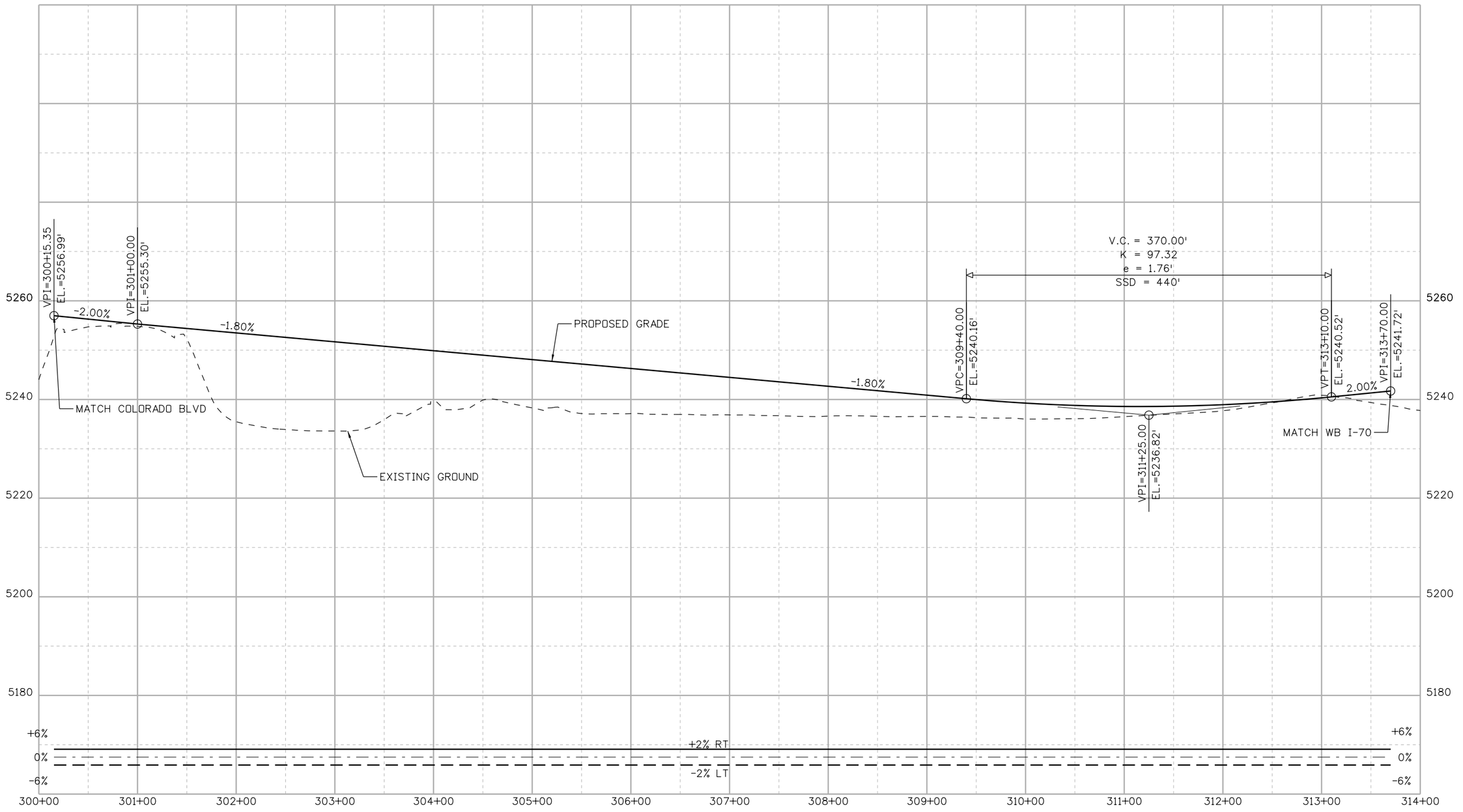
Revised:

Void:

CENTRAL 70
ROADWAY PROFILE
COLORADO BLVD EB EXIT RAMP

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR93 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 273



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Print Date: 5/19/2017

File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted

Vert. Scale: As Noted

Unit Information

Unit Leader

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation

2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907

Region 1 KJS

PRELIMINARY

No Revisions:

Revised:

Void:

CENTRAL 70
ROADWAY PROFILE
COLORADO BLVD WB EXIT RAMP

Designer:

Detailer:

Sheet Subset: ROAD PROF

Structure Numbers

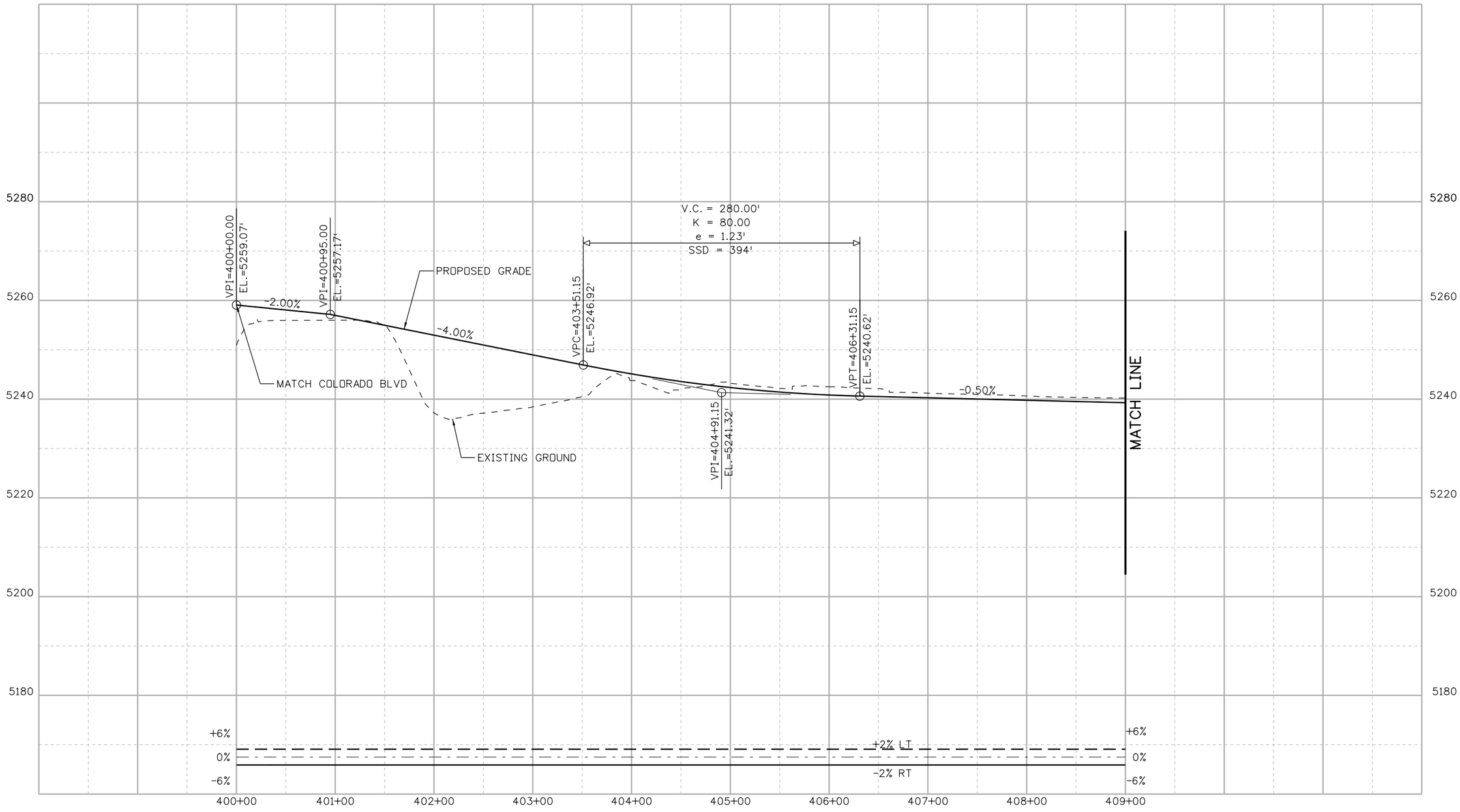
Subset Sheets: RPR94 of 136

Project No./Code

FBR 0704-234

19631

Sheet Number 274



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

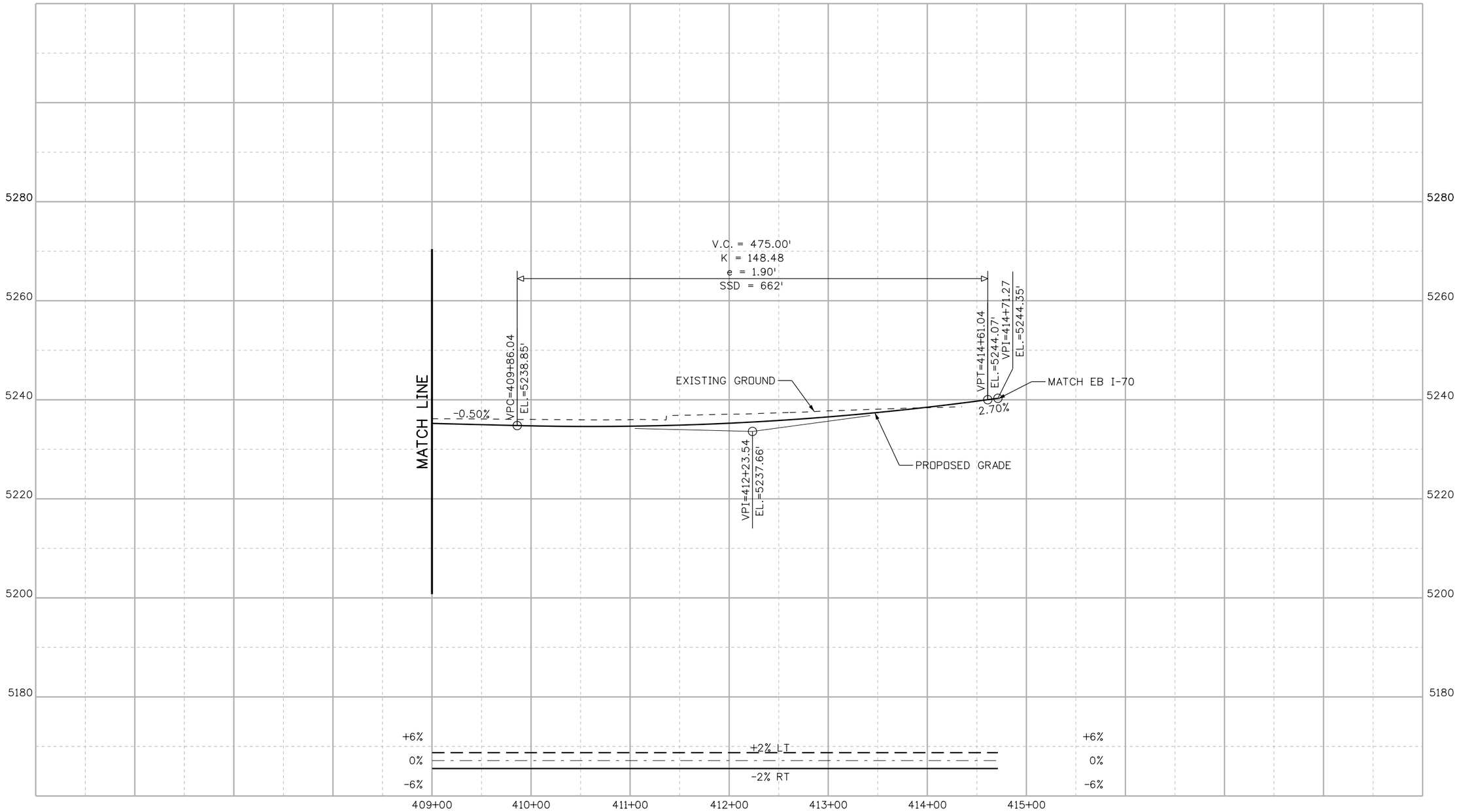
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
COLORADO BLVD EB ENTRANCE RAMP
STA 400+00 TO STA 409+00

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR95 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 275



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Print Date: 5/19/2017

File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale:	As Noted
Vert. Scale:	As Noted
Unit Information	
Unit Leader	

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY

No Revisions:

Revised:

Void:

CENTRAL 70
ROADWAY PROFILE
COLORADO BLVD EB ENTRANCE RAMP
STA 409+00 TO STA 415+00

Designer:

Detailer:

Sheet Subset: ROAD PROF

Structure Numbers

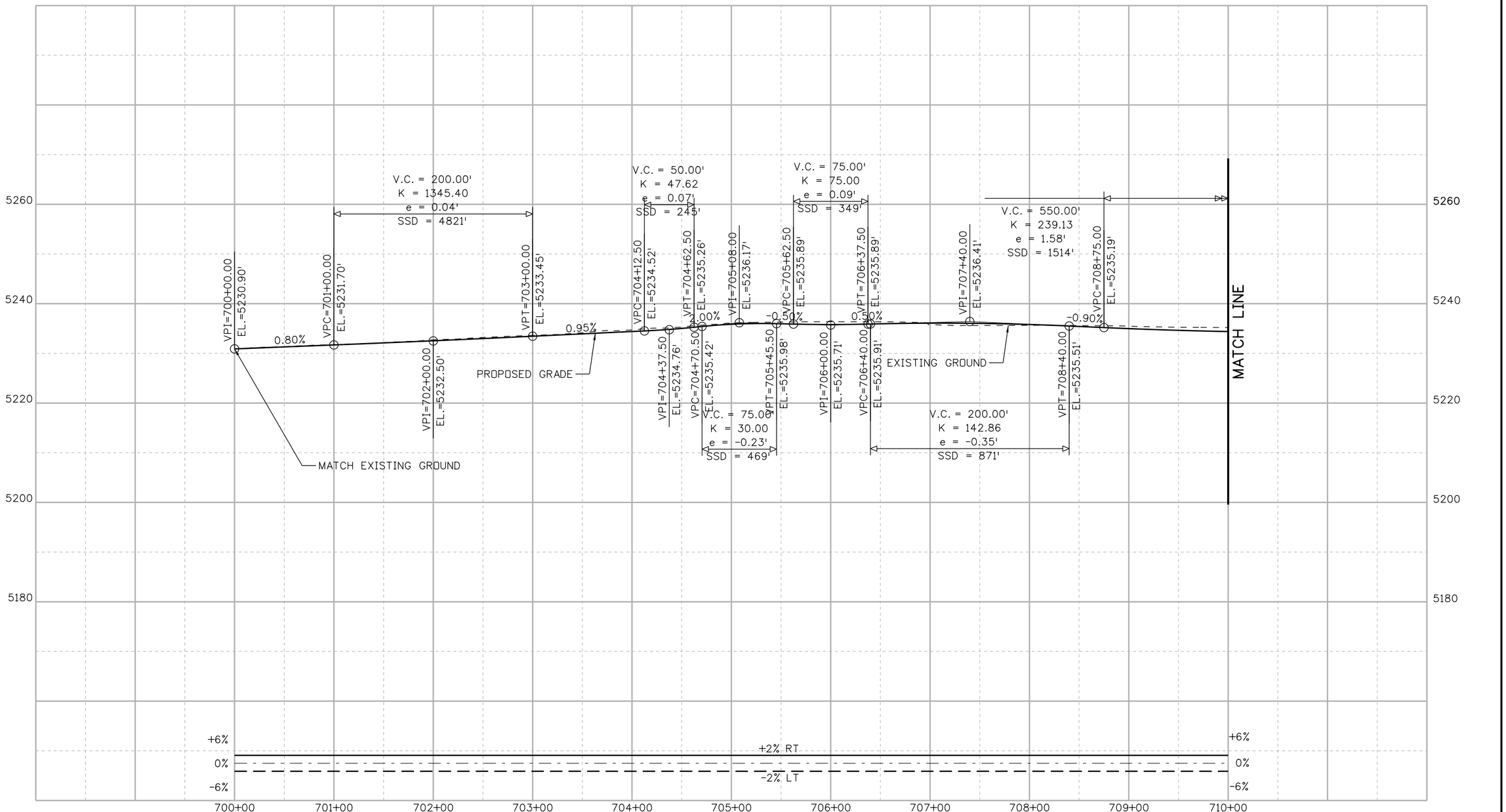
Subset Sheets: RPR96 of 136

Project No./Code

FBR 0704-234

19631

Sheet Number 276



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Print Date: 5/19/2017

File Name: File Name: See sheet edge for information

Horiz. Scale: As Noted

Vert. Scale: As Noted

Unit Information

Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907

Region 1 KJS

PRELIMINARY

No Revisions:

Revised:

Void:

CENTRAL 70
ROADWAY PROFILE
LOCAL RD 2
STA 700+00 TO STA 710+00

Designer:

Detailer:

Sheet Subset: ROAD PROF

Structure Numbers

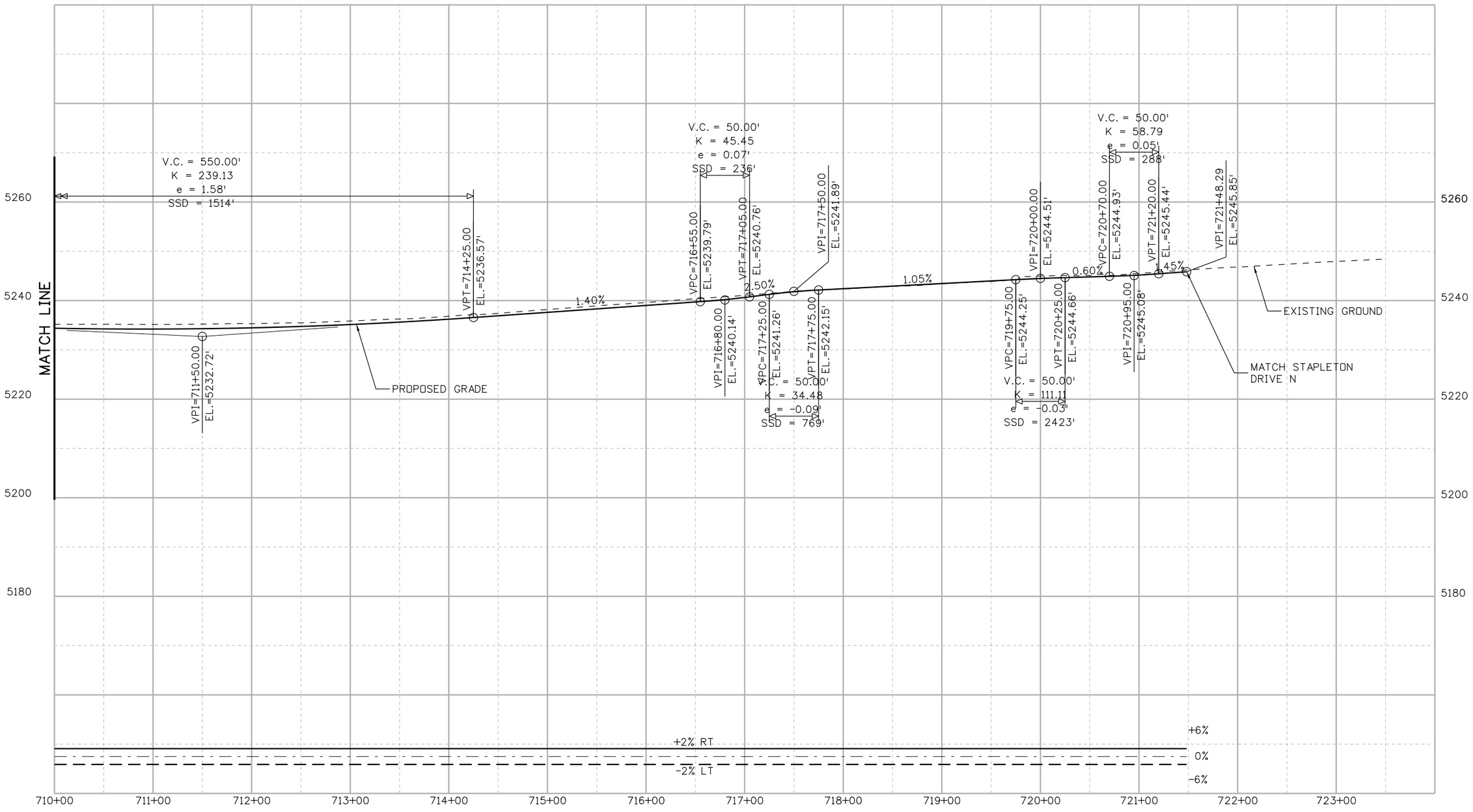
Subset Sheets: RPR97 of 136

Project No./Code

FBR 0704-234

19631

Sheet Number 277



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

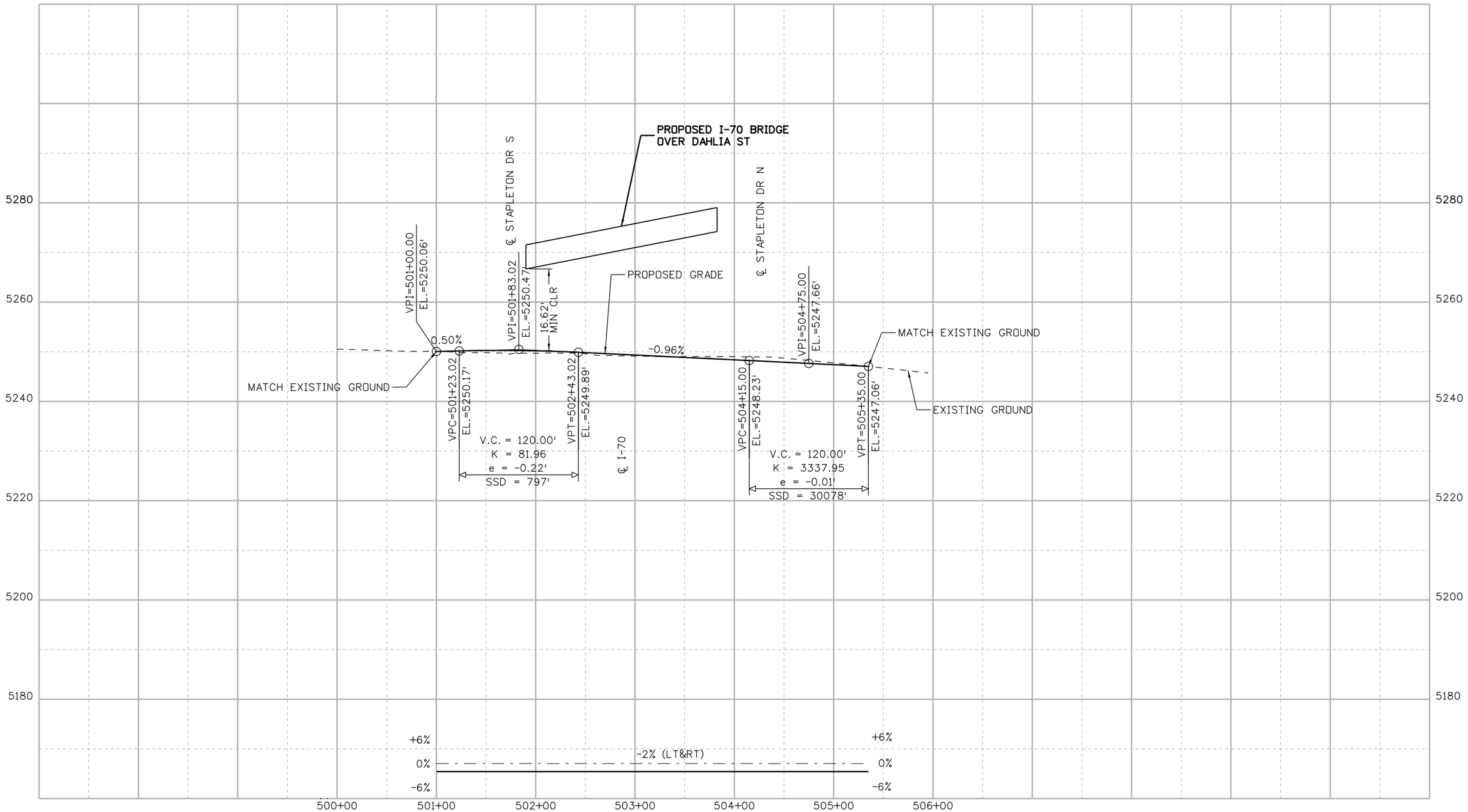
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
LOCAL RD 2
STA 710+00 TO STA 724+00

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR98 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 278



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

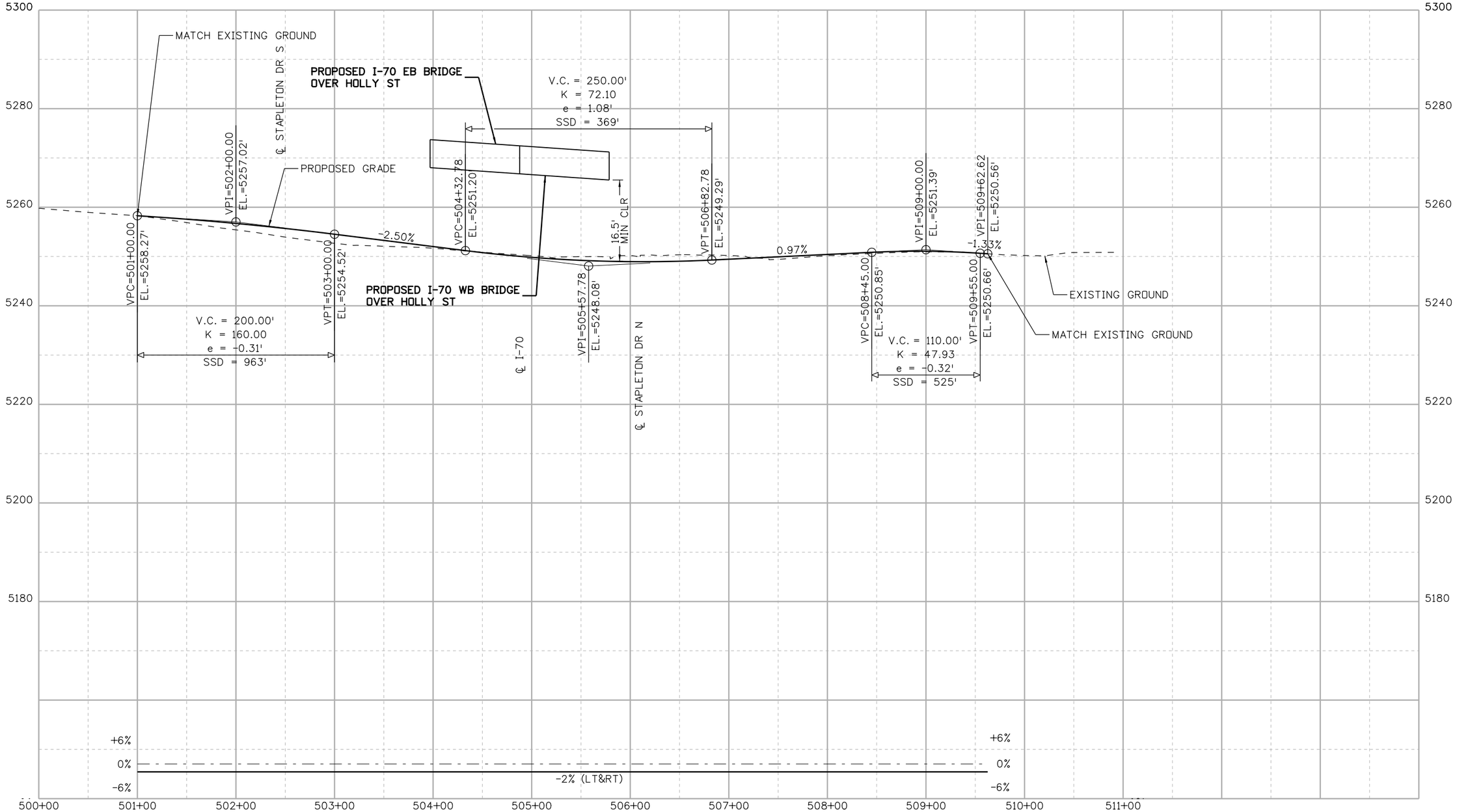
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
DAHLIA ST

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR99 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 279



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

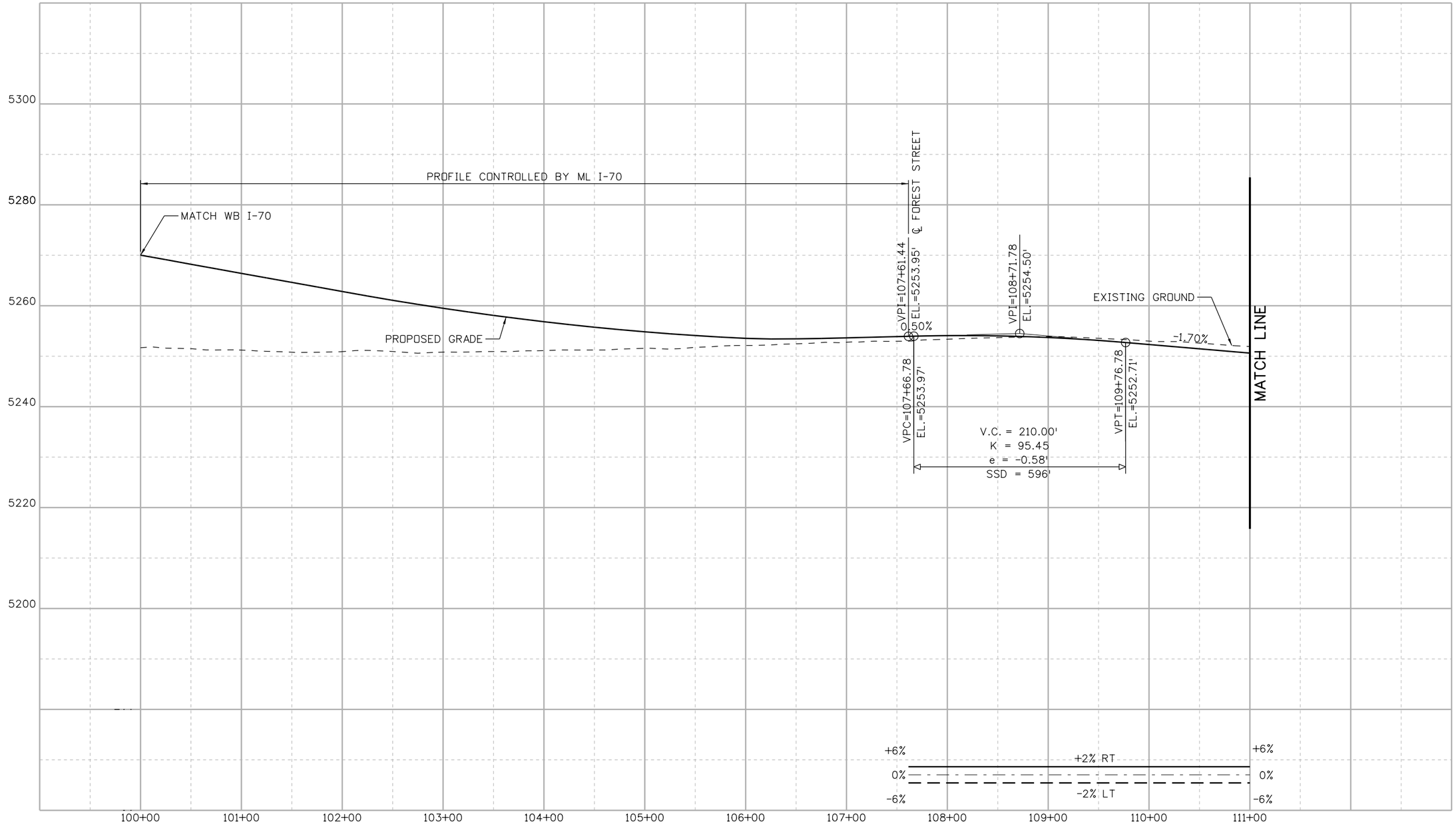
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
HOLLY ST

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR100 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 280



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

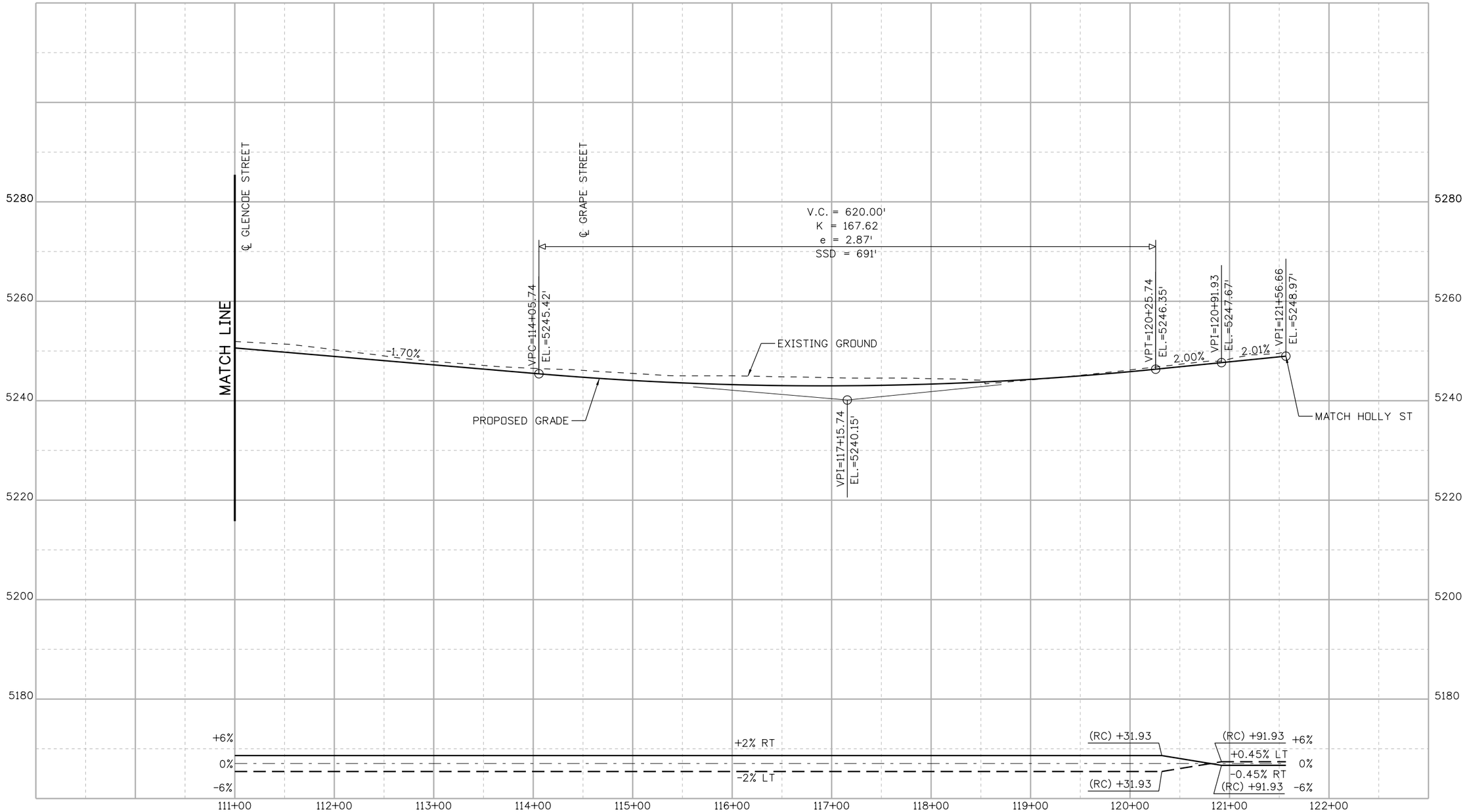
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
HOLLY ST WB ENTRANCE RAMP
STA 100+00 TO STA 111+00

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR101 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 281



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

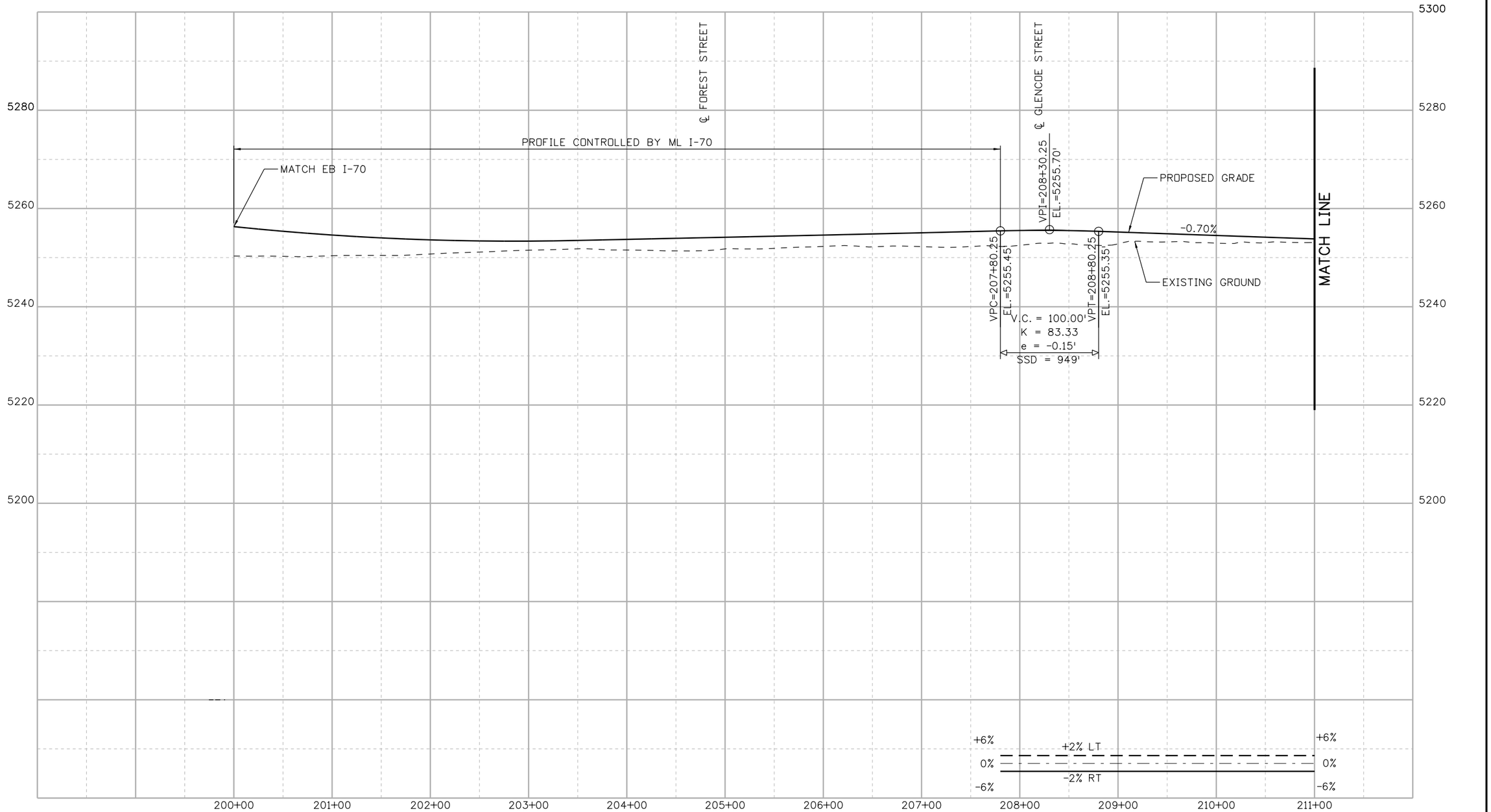
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
HOLLY ST WB ENTRANCE RAMP
STA 111+00 TO STA 122+00

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR102 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 282



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Print Date: 5/19/2017

File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale:	As Noted
Vert. Scale:	As Noted
Unit Information	
Unit Leader	

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY

No Revisions:

Revised:

Void:

CENTRAL 70
ROADWAY PROFILE
HOLLY ST EB EXIT RAMP
STA 200+00 TO STA 211+00

Designer:

Detailer:

Sheet Subset: ROAD PROF

Structure Numbers

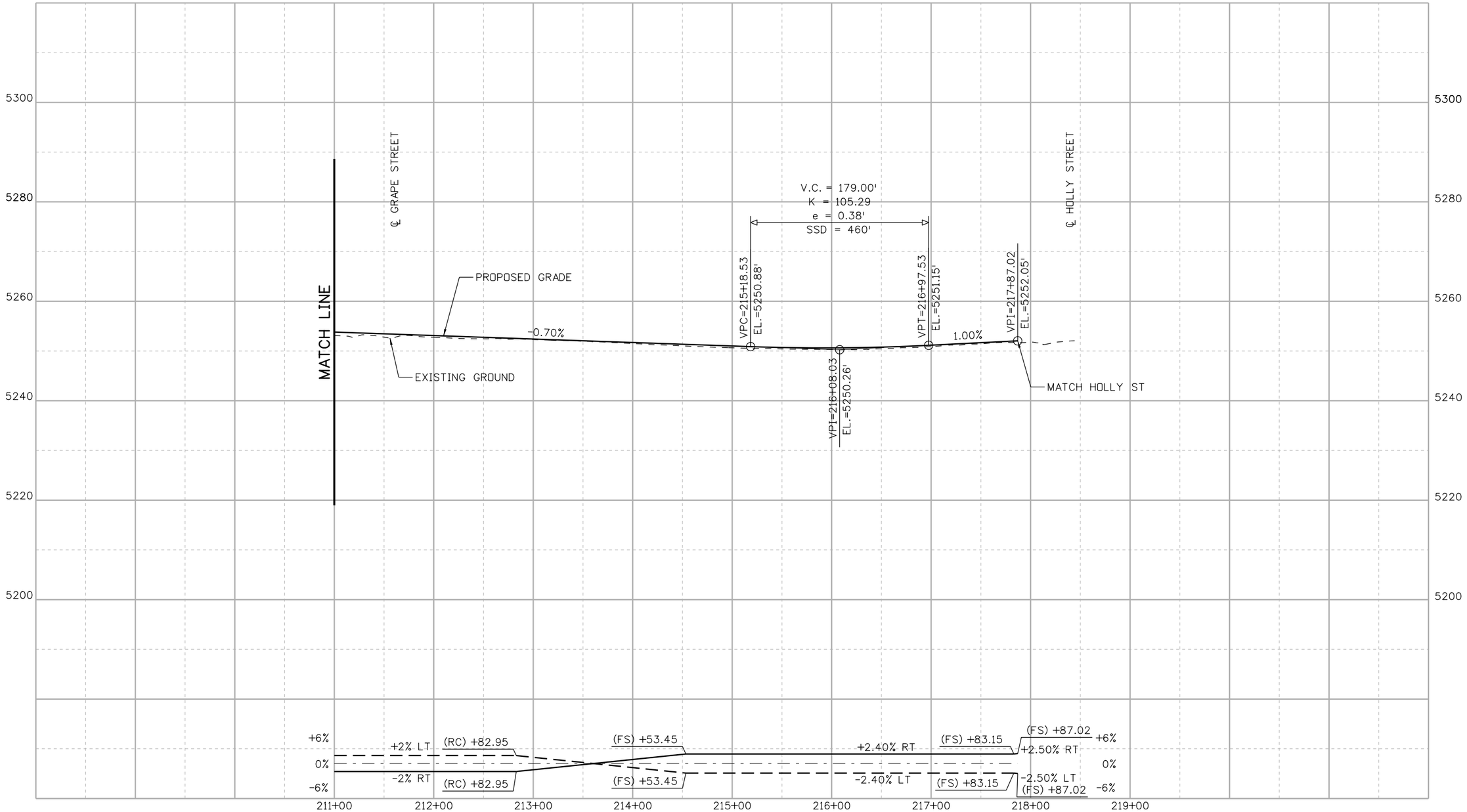
Subset Sheets: RPR103 of 136

Project No./Code

FBR 0704-234

19631

Sheet Number 283



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

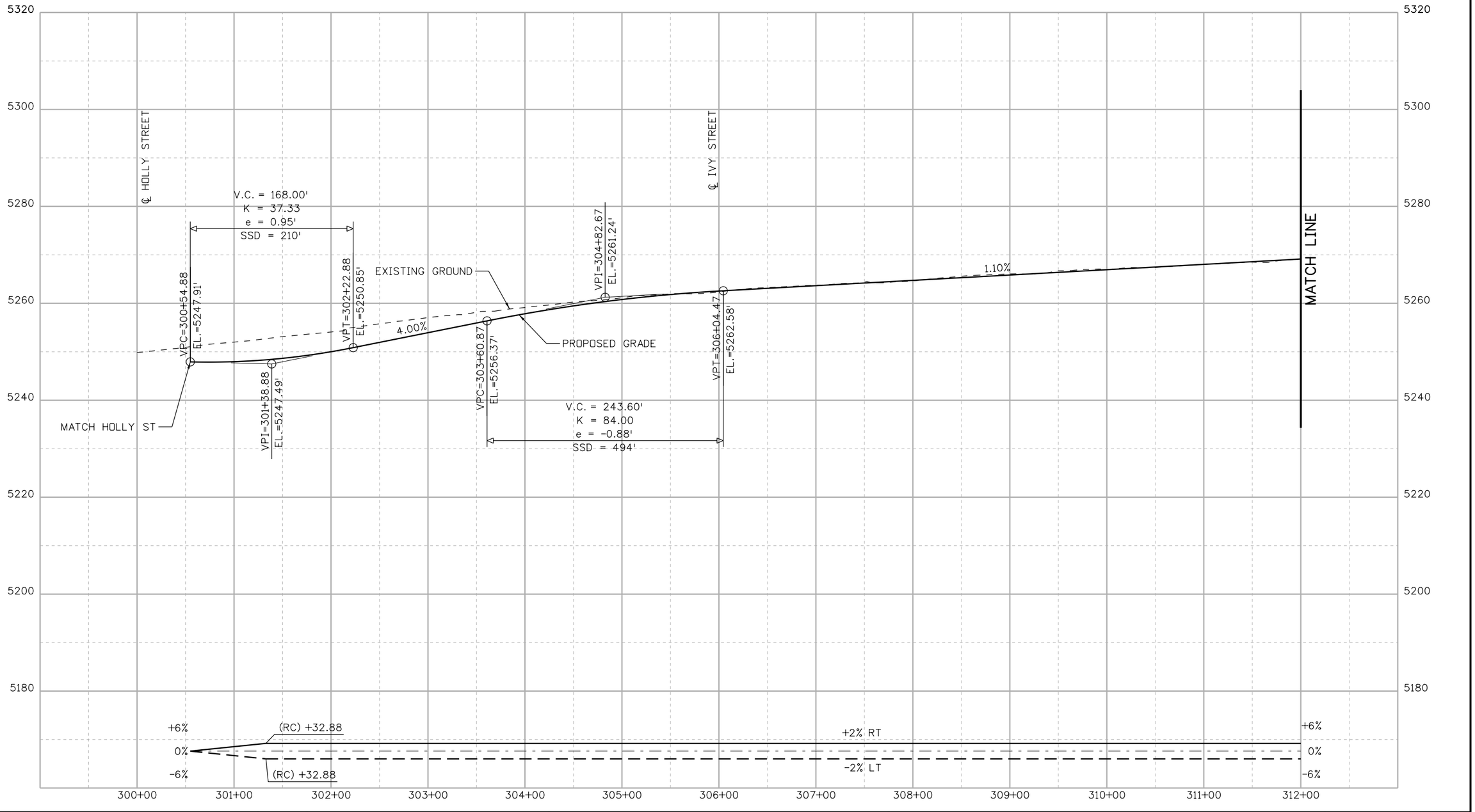
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
HOLLY ST EB EXIT RAMP
STA 211+00 TO STA 219+00

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR104 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 284



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

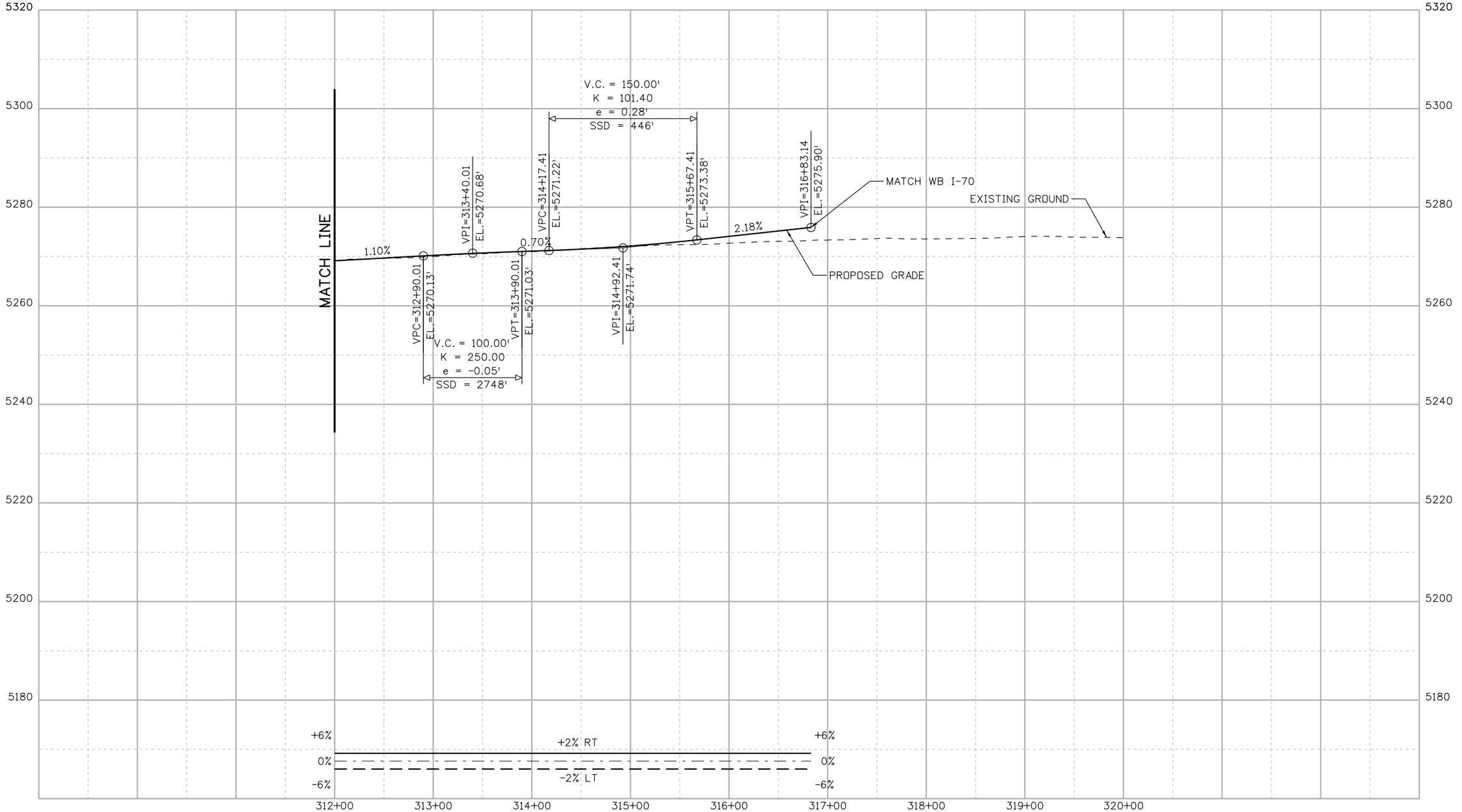
PRELIMINARY

No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
HOLLY ST WB EXIT RAMP
STA 300+00 TO STA 312+00

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR105 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 285



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Print Date: 5/19/2017

File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale:	As Noted
Vert. Scale:	As Noted
Unit Information	
Unit Leader	

Sheet Revisions

Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY

No Revisions:

Revised:

Void:

CENTRAL 70
ROADWAY PROFILE
HOLLY ST WB EXITRAMP
STA 312+00 TO STA 324+00

Designer:

Detailer:

Sheet Subset: ROAD PROF

Structure Numbers

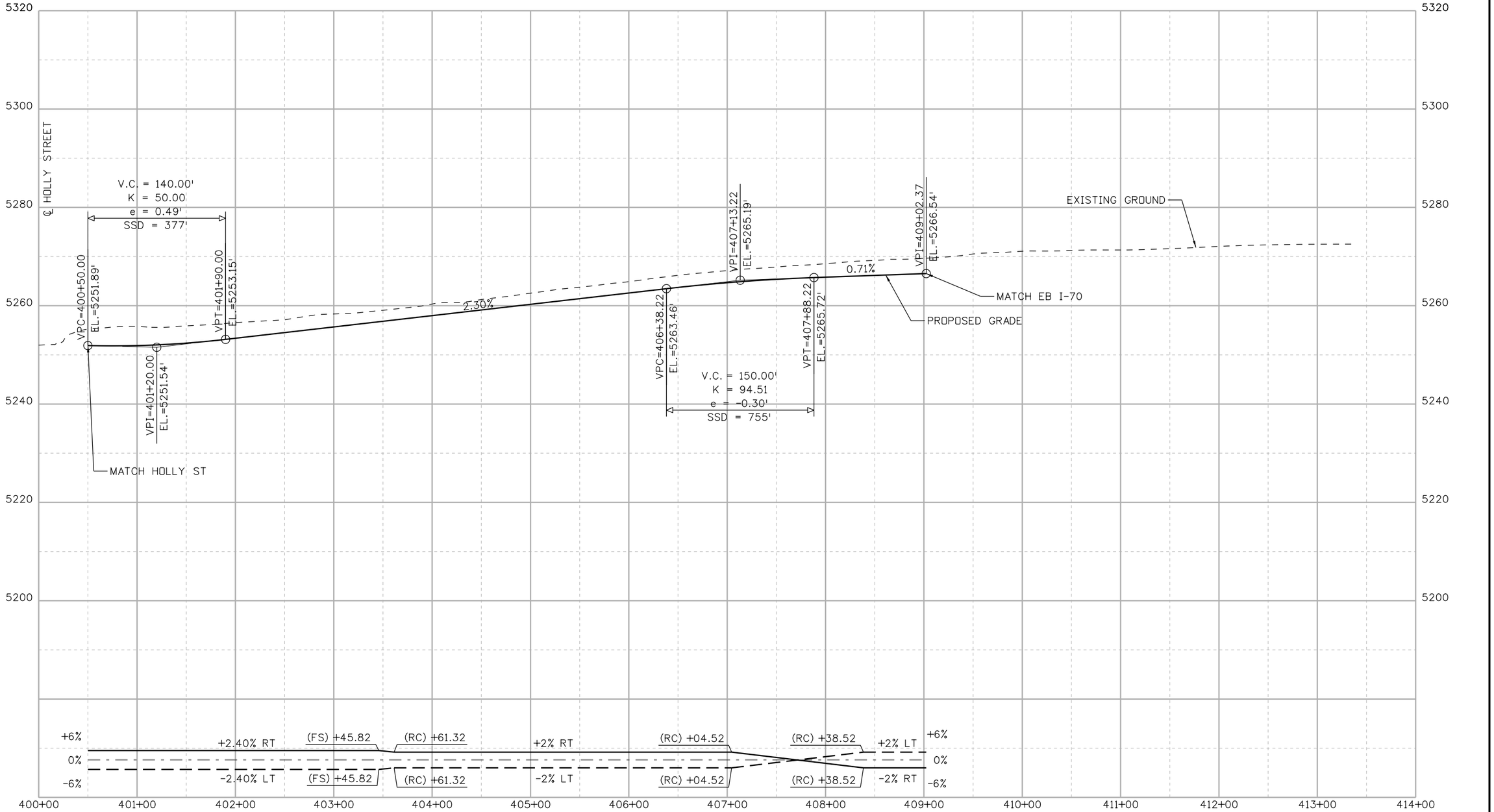
Subset Sheets: RPR106 of 136

Project No./Code

FBR 0704-234

19631

Sheet Number 286



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

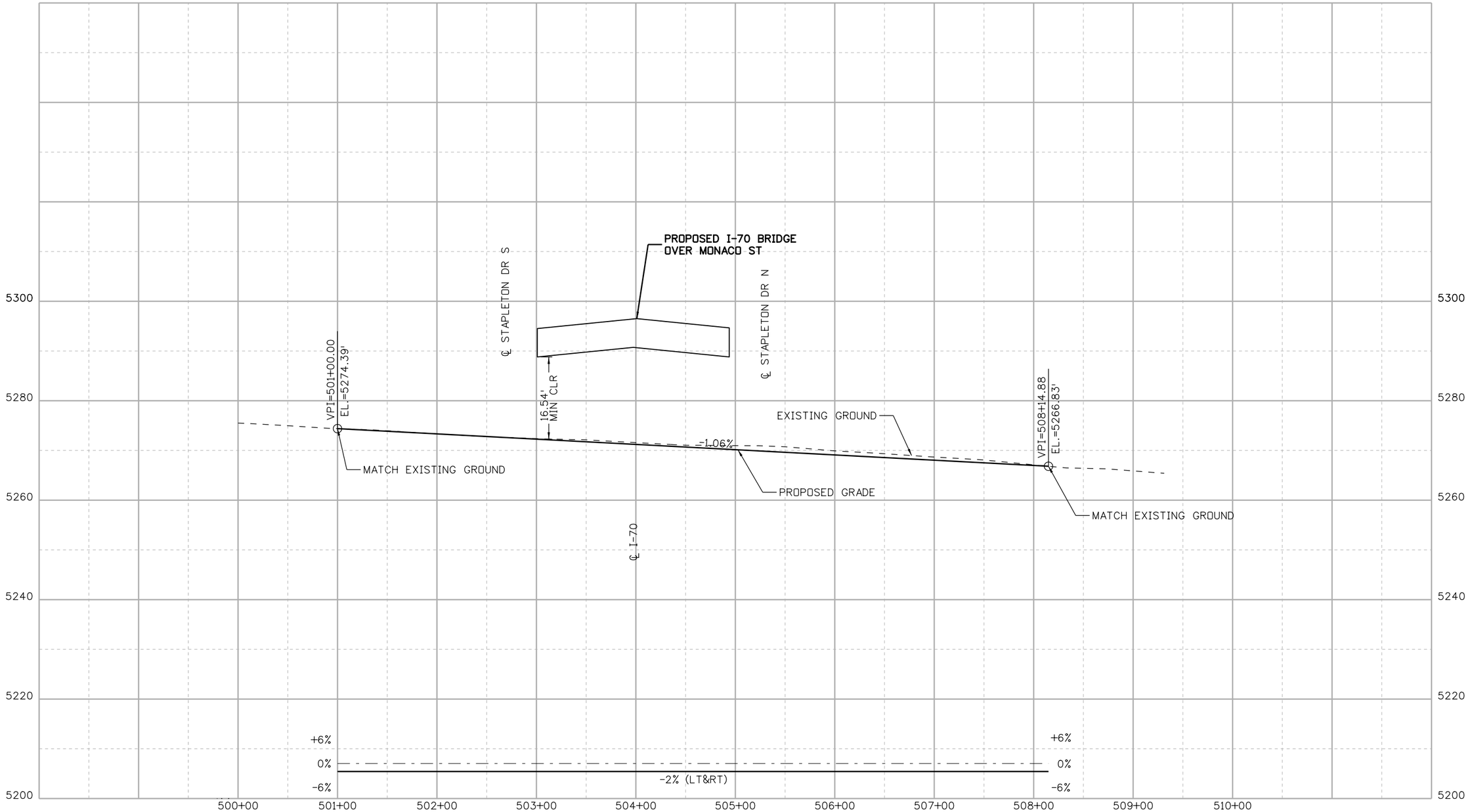
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
HOLLY ST EB ENTRANCE RAMP

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR107 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 287



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

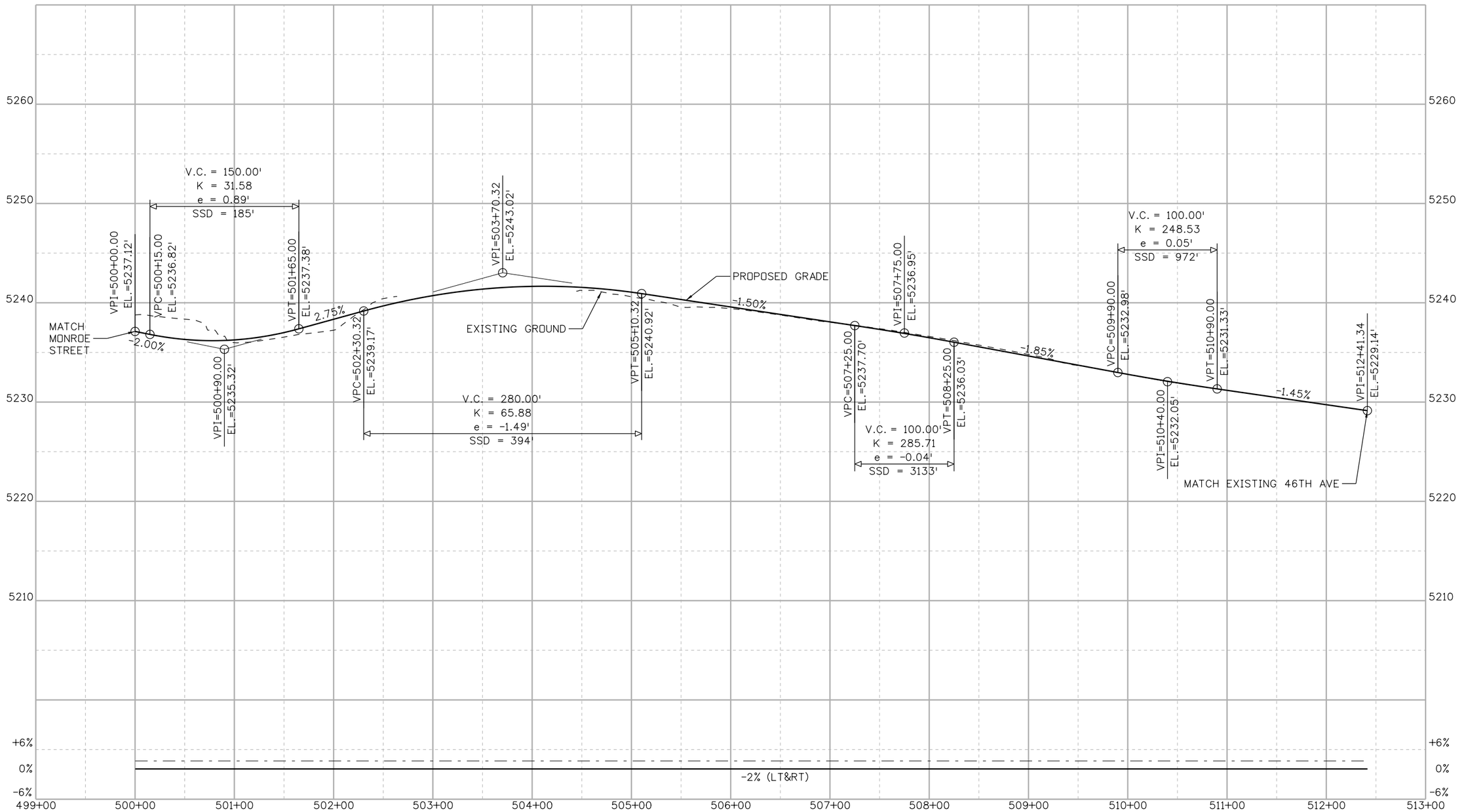
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
MONACO ST

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR108 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 288



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Print Date: 5/19/2017

File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted

Vert. Scale: As Noted

Unit Information

Unit Leader

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907

Region 1 KJS

PRELIMINARY

No Revisions:

Revised:

Void:

CENTRAL 70
ROADWAY PROFILE
E 46TH AVE

Designer:

Detailer:

Sheet Subset: ROAD PROF

Structure Numbers

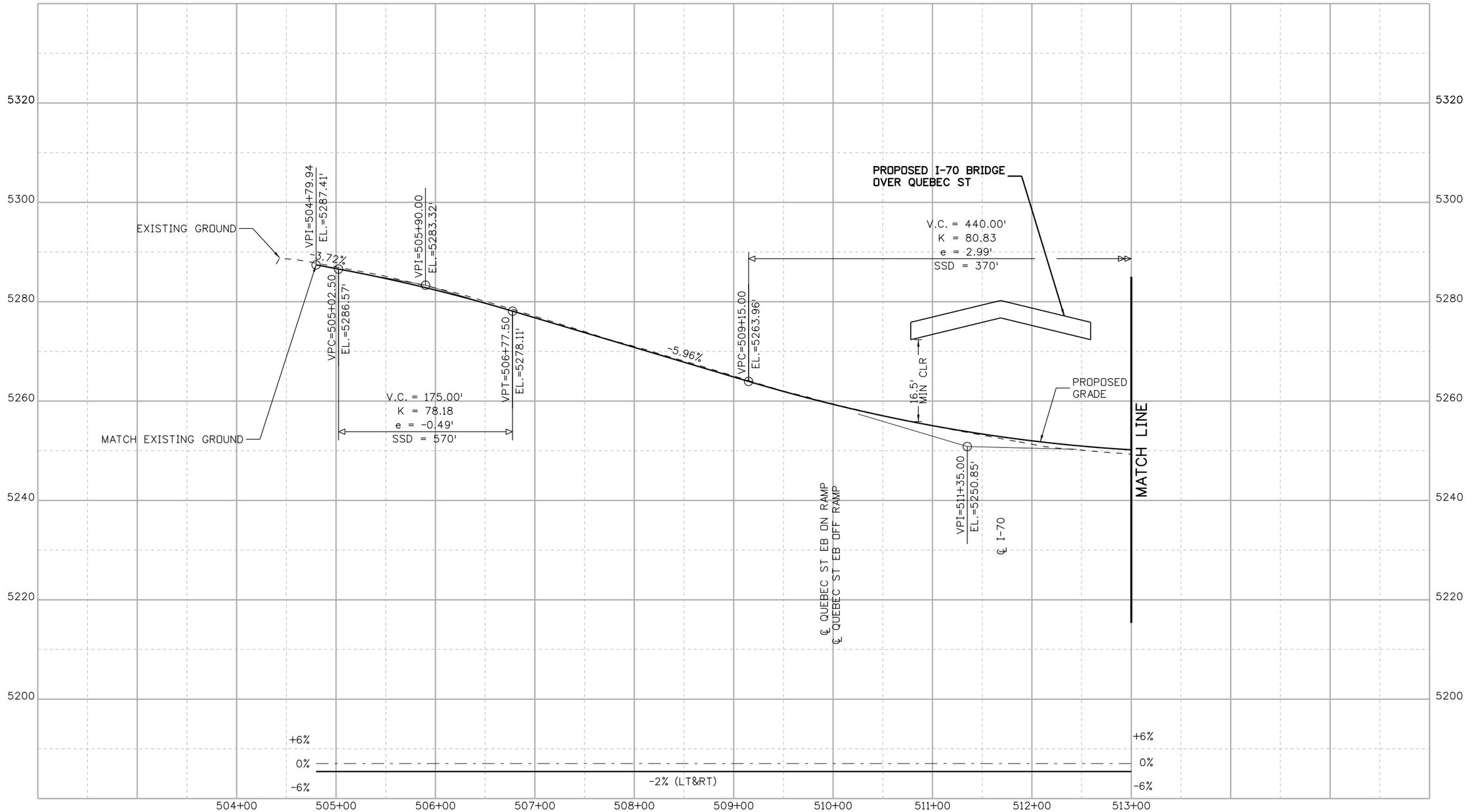
Subset Sheets: RPR109 of 136

Project No./Code

FBR 0704-234

19631

Sheet Number 289



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Print Date: 5/19/2017

File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale:	As Noted
Vert. Scale:	As Noted
Unit Information	
Unit Leader	

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY

No Revisions:

Revised:

Void:

CENTRAL 70
ROADWAY PROFILE
QUEBEC ST
STA 500+00 TO STA 513+00

Designer:

Detailer:

Sheet Subset: ROAD PROF

Structure Numbers

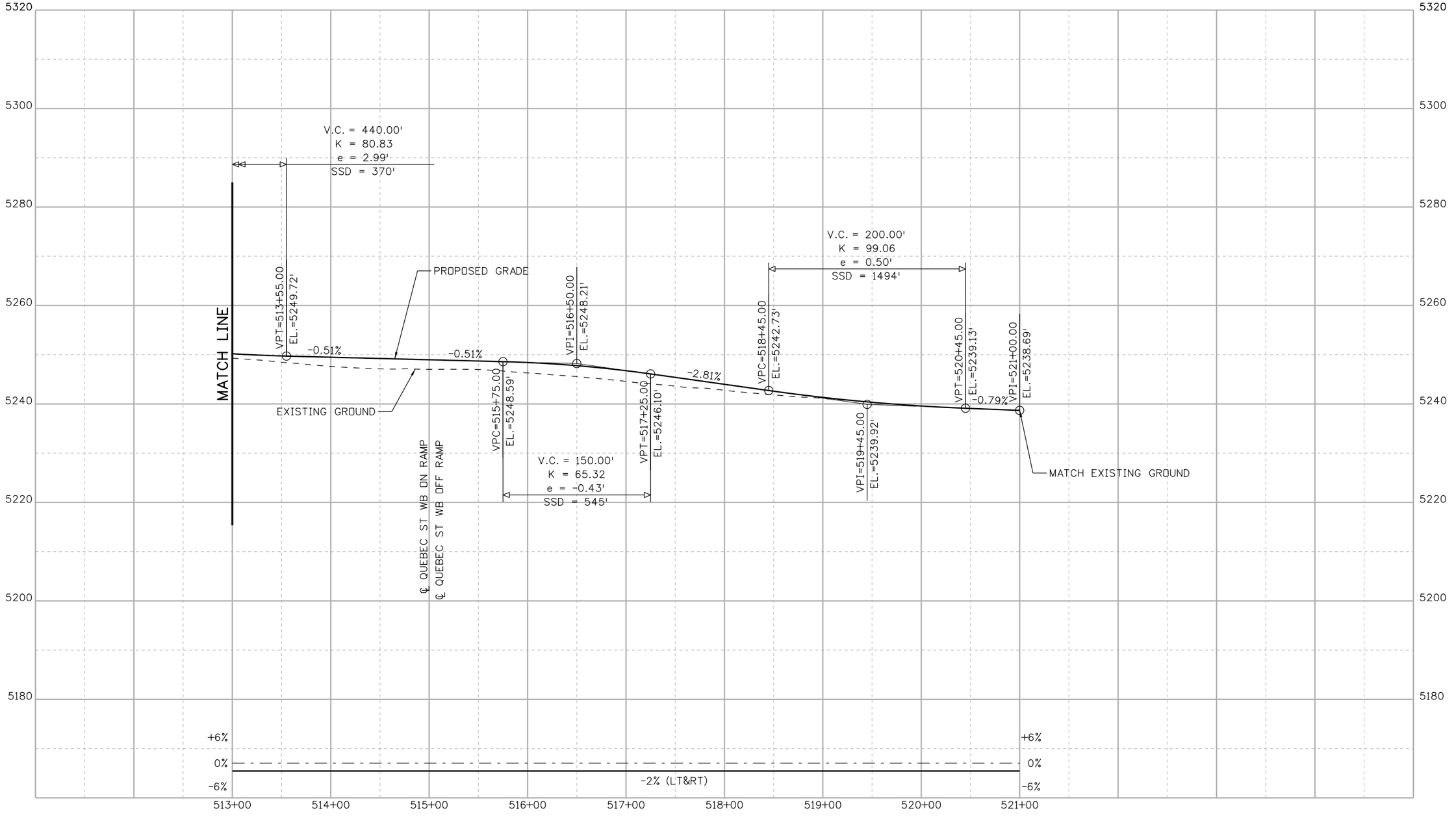
Subset Sheets: RPR110 of 136

Project No./Code

FBR 0704-234

19631

Sheet Number 290



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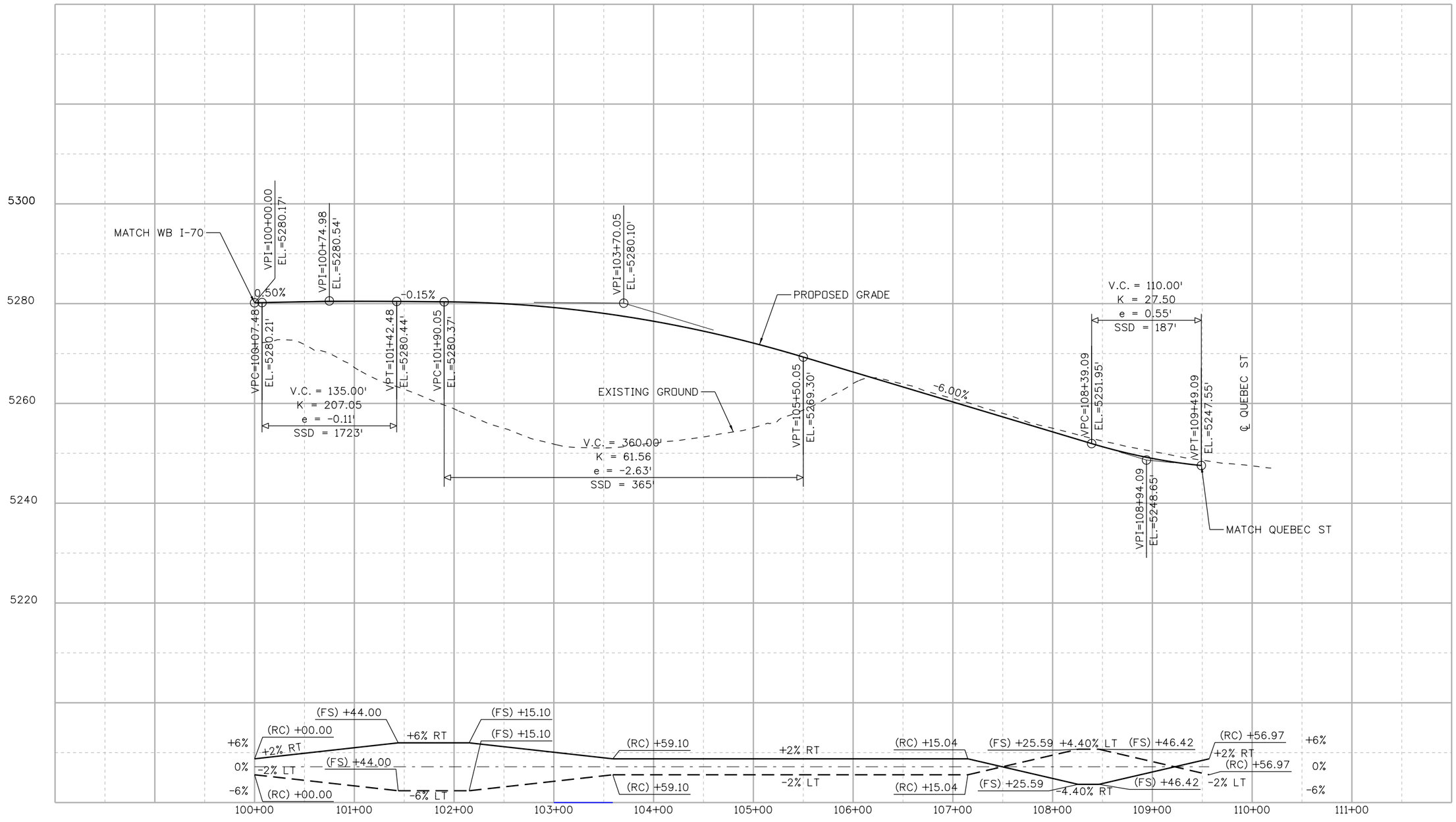
Print Date: 5/19/2017		Sheet Revisions			Colorado Department of Transportation
File Name: File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907
Front Range Mobility Group	Horiz. Scale: As Noted				Region 1 KJS
	Vert. Scale: As Noted				
	Unit Information				
	Unit Leader				

PRELIMINARY	CENTRAL 70 ROADWAY PROFILE QUEBEC ST STA 513+00 TO STA 526+00		Project No./Code
No Revisions:			FBR 0704-234
Revised:	Designer:	Structure Numbers	19631
Void:	Detailer:		Sheet Number 291
	Sheet Subset: ROAD PROF	Subset Sheets: RPR111 of 136	



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Print Date: 5/19/2017	Sheet Revisions			Colorado Department of Transportation
File Name: File Name: See sheet edge for information	Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907
Horiz. Scale: As Noted				Region 1 KJS
Vert. Scale: As Noted				
Unit Information				
Unit Leader				

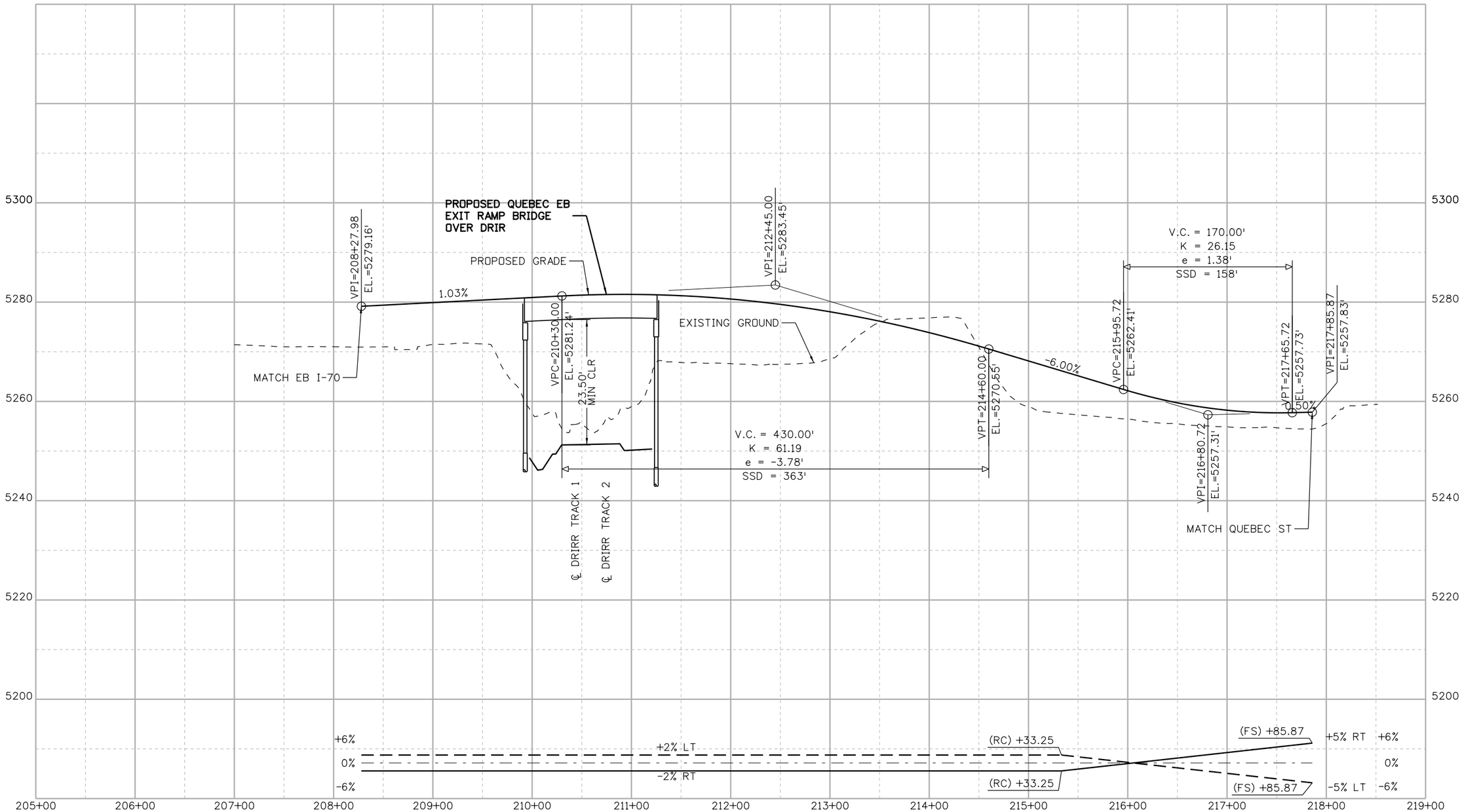
Front Range Mobility Group

PRELIMINARY	
No Revisions:	
Revised:	
Void:	

CENTRAL 70
ROADWAY PROFILE
QUEBEC ST WB ENTRANCE RAMP

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PROF		Subset Sheets: RPR112 of 136	

Project No./Code	
FBR 0704-234	
19631	
Sheet Number	292



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Print Date: 5/19/2017			
File Name: File Name: See sheet edge for information			
Front Range Mobility Group	Horiz. Scale: As Noted		
	Vert. Scale: As Noted		
	Unit Information		
	Unit Leader		

Sheet Revisions		
Date:	Comments	Init.

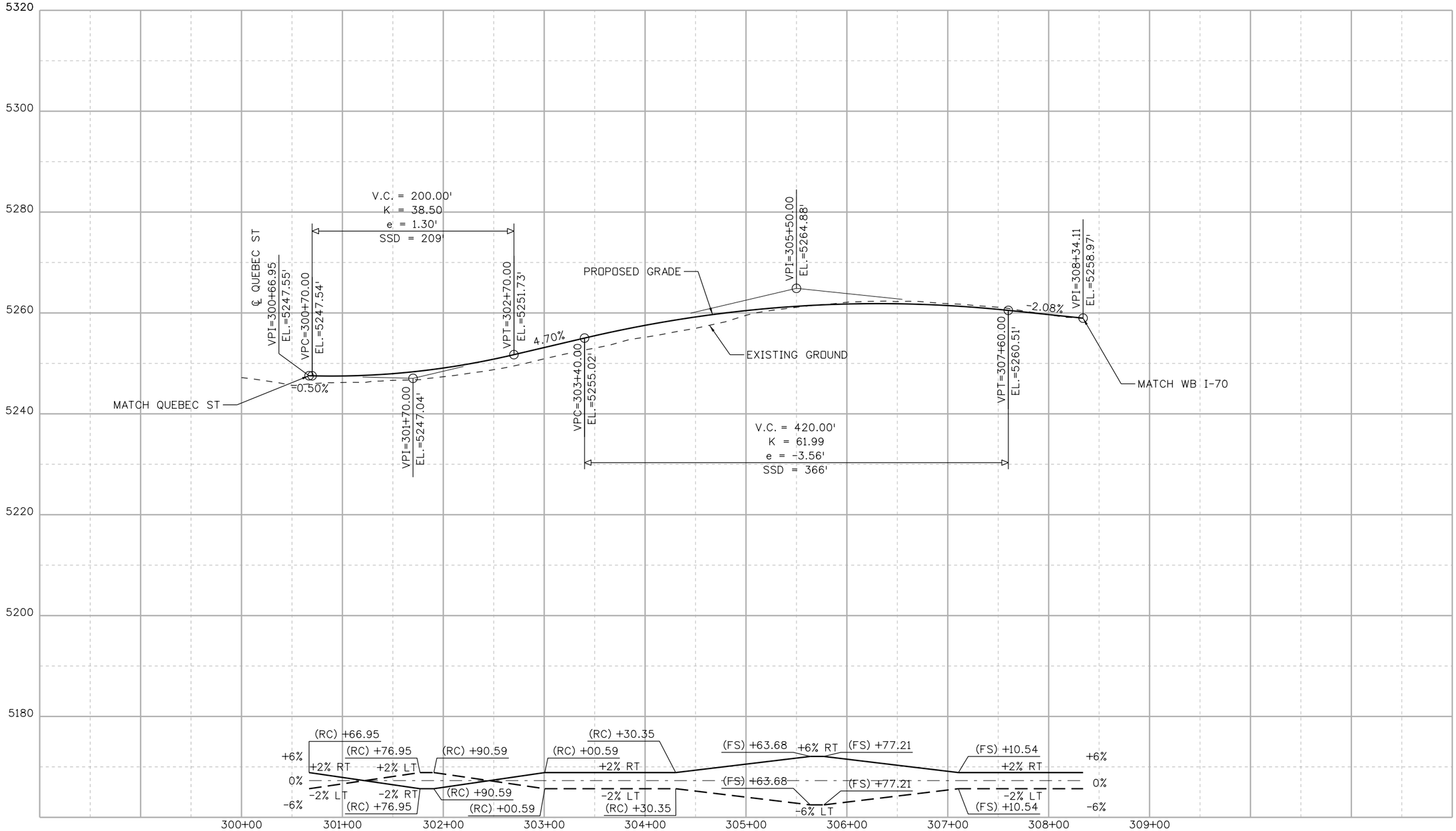
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
QUEBEC ST EB EXIT RAMP

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PROF		Subset Sheets: RPR113 of 136	

Project No./Code
FBR 0704-234
19631
Sheet Number 293



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Print Date: 5/19/2017			
File Name: File Name: See sheet edge for information			
Front Range Mobility Group	Horiz. Scale: As Noted		
	Vert. Scale: As Noted		
	Unit Information		
	Unit Leader		

Sheet Revisions

Date:	Comments	Init.

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Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

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No Revisions:

Revised:

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CENTRAL 70
ROADWAY PROFILE
QUEBEC ST WB EXIT RAMP

Designer:

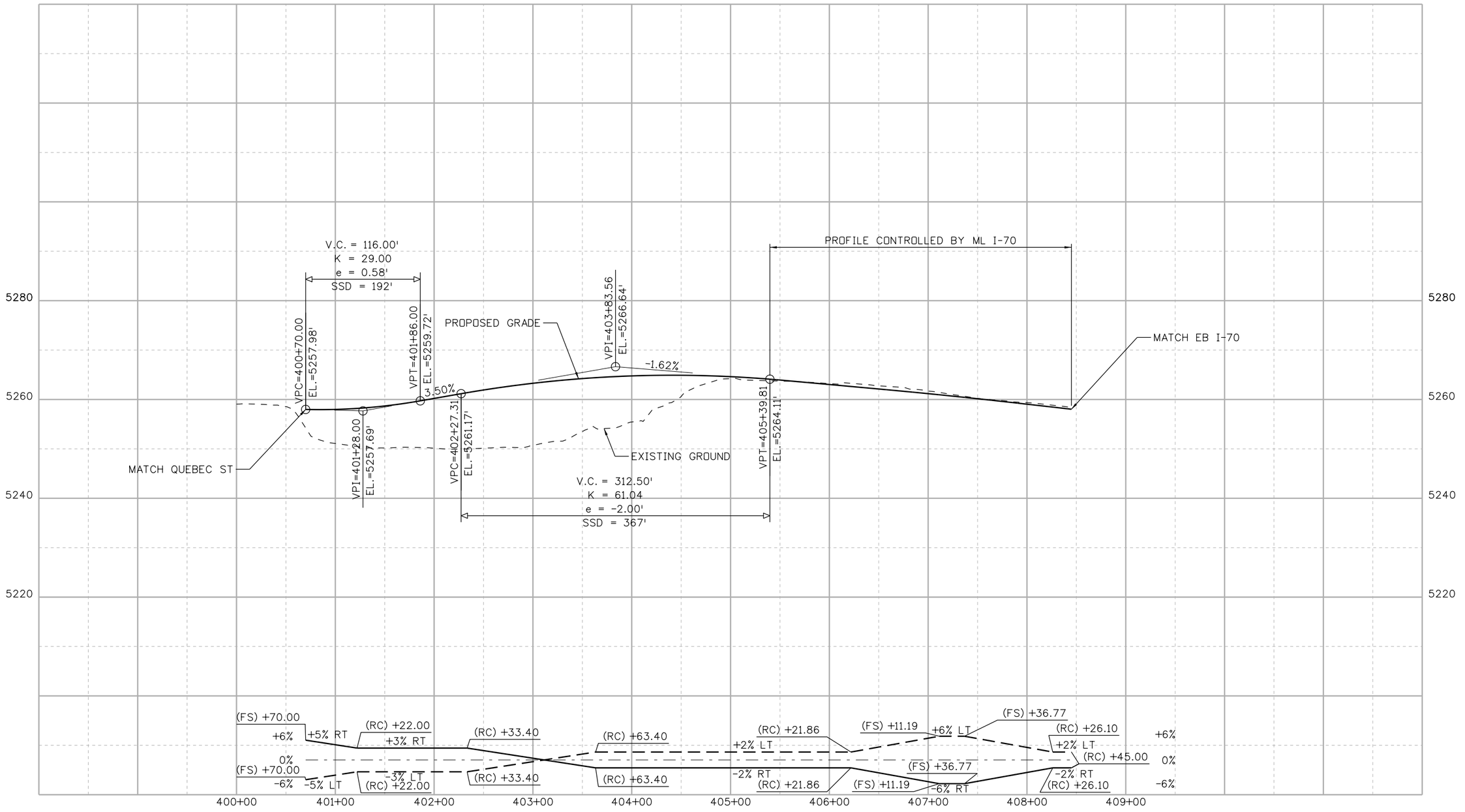
Detailer:

Sheet Subset: ROAD PROF

Structure Numbers

Subset Sheets: RPR114 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 294



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Print Date: 5/19/2017

File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale:	As Noted
Vert. Scale:	As Noted
Unit Information	
Unit Leader	

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
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Region 1 KJS

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No Revisions:

Revised:

Void:

CENTRAL 70
ROADWAY PROFILE
QUEBEC ST EB ENTRANCE RAMP

Designer:

Detailer:

Sheet Subset: ROAD PROF

Structure Numbers

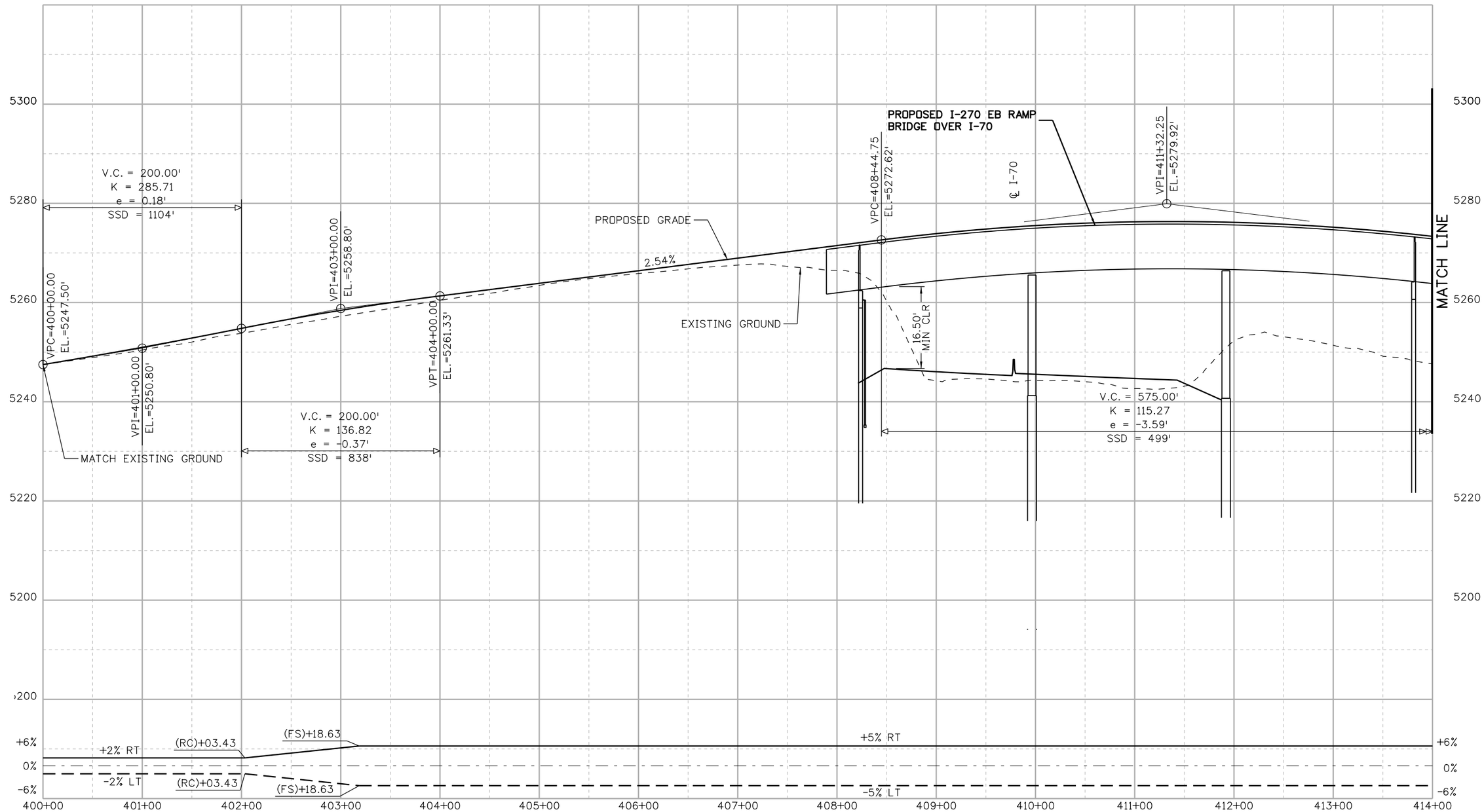
Subset Sheets: RPR115 of 136

Project No./Code

FBR 0704-234

19631

Sheet Number 295



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
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Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

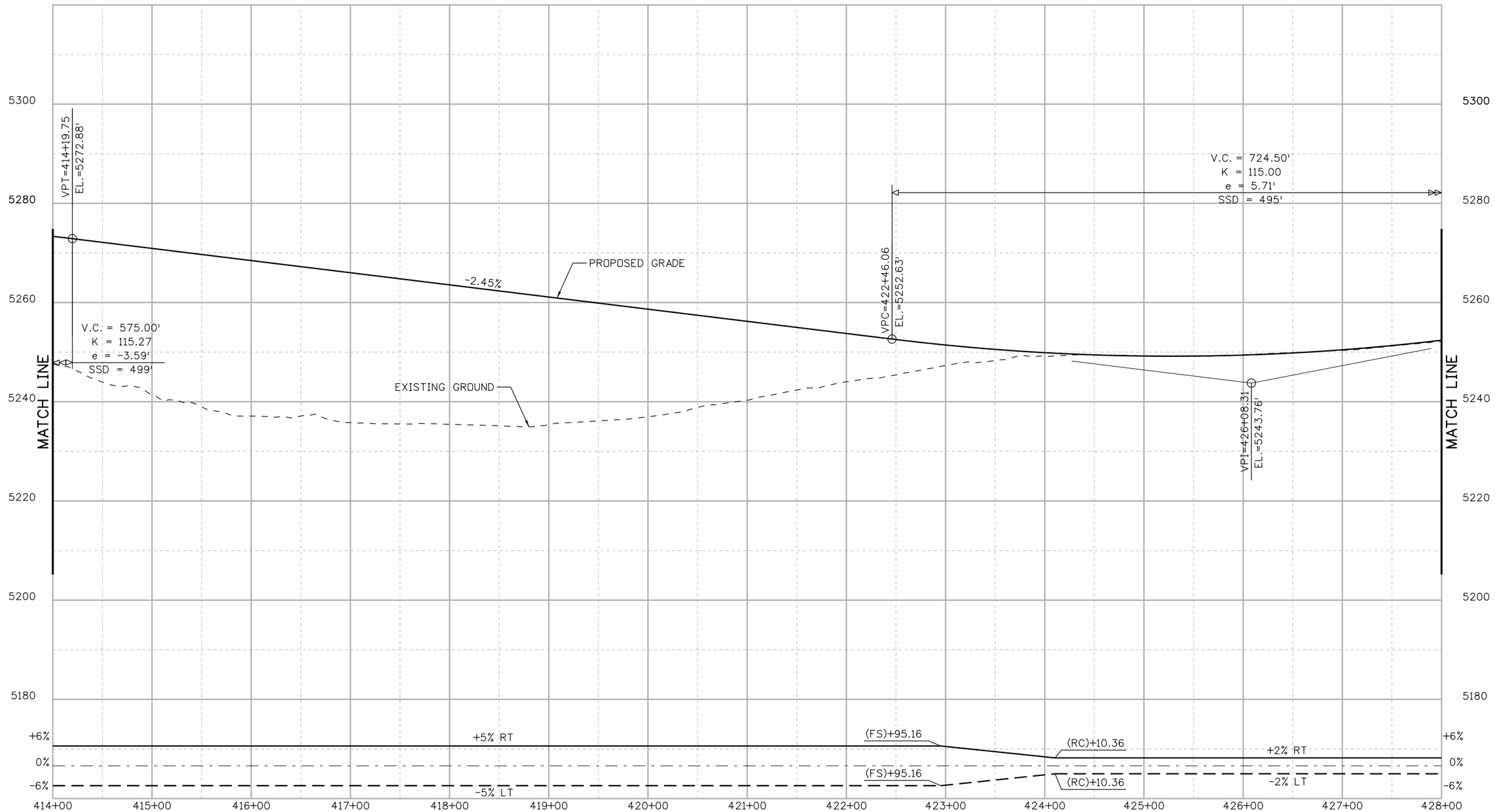
PRELIMINARY

No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-270 EB CONNECTOR
STA 400+00 TO STA 414+00

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR116 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 296



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

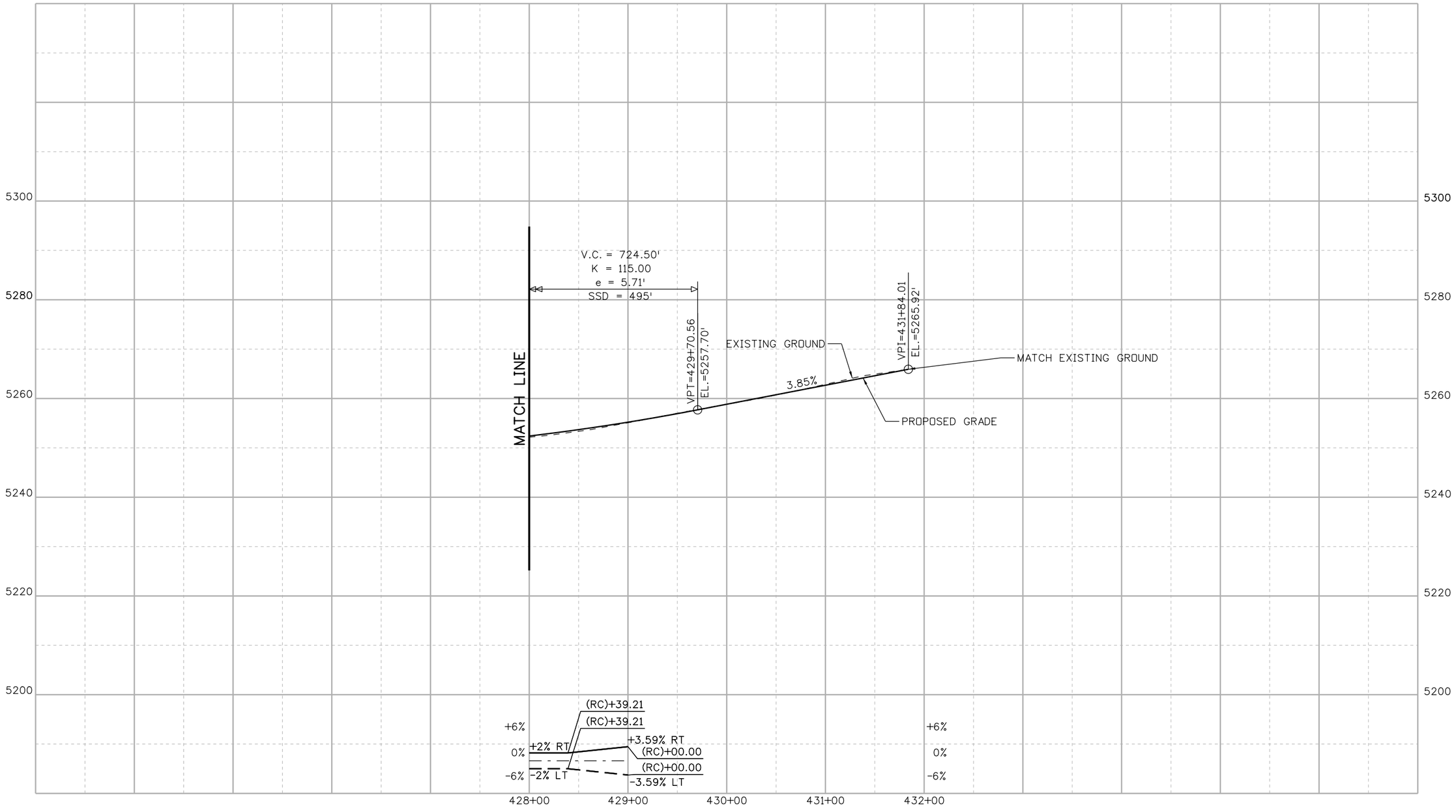
PRELIMINARY

No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-270 EB CONNECTOR
STA 414+00 TO STA 428+00

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR117 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 297



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Print Date: 5/19/2017

File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted

Vert. Scale: As Noted

Unit Information

Unit Leader

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907

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PRELIMINARY

No Revisions:

Revised:

Void:

CENTRAL 70
ROADWAY PROFILE
I-270 EB CONNECTOR
STA 428+00 TO STA 432+00

Designer:

Detailer:

Sheet Subset: ROAD PROF

Structure Numbers

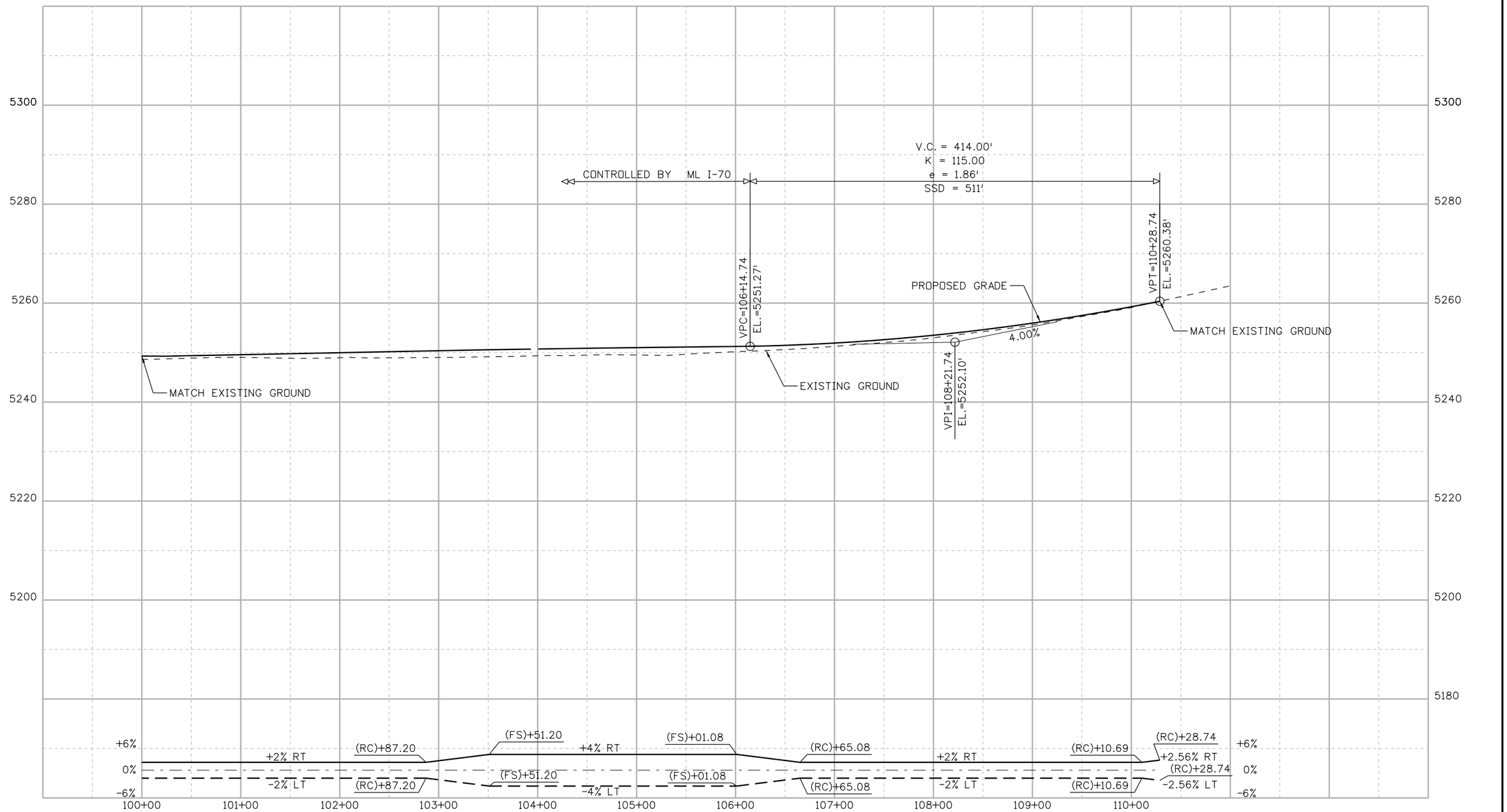
Subset Sheets: RPR118 of 136

Project No./Code

FBR 0704-234

19631

Sheet Number 298



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
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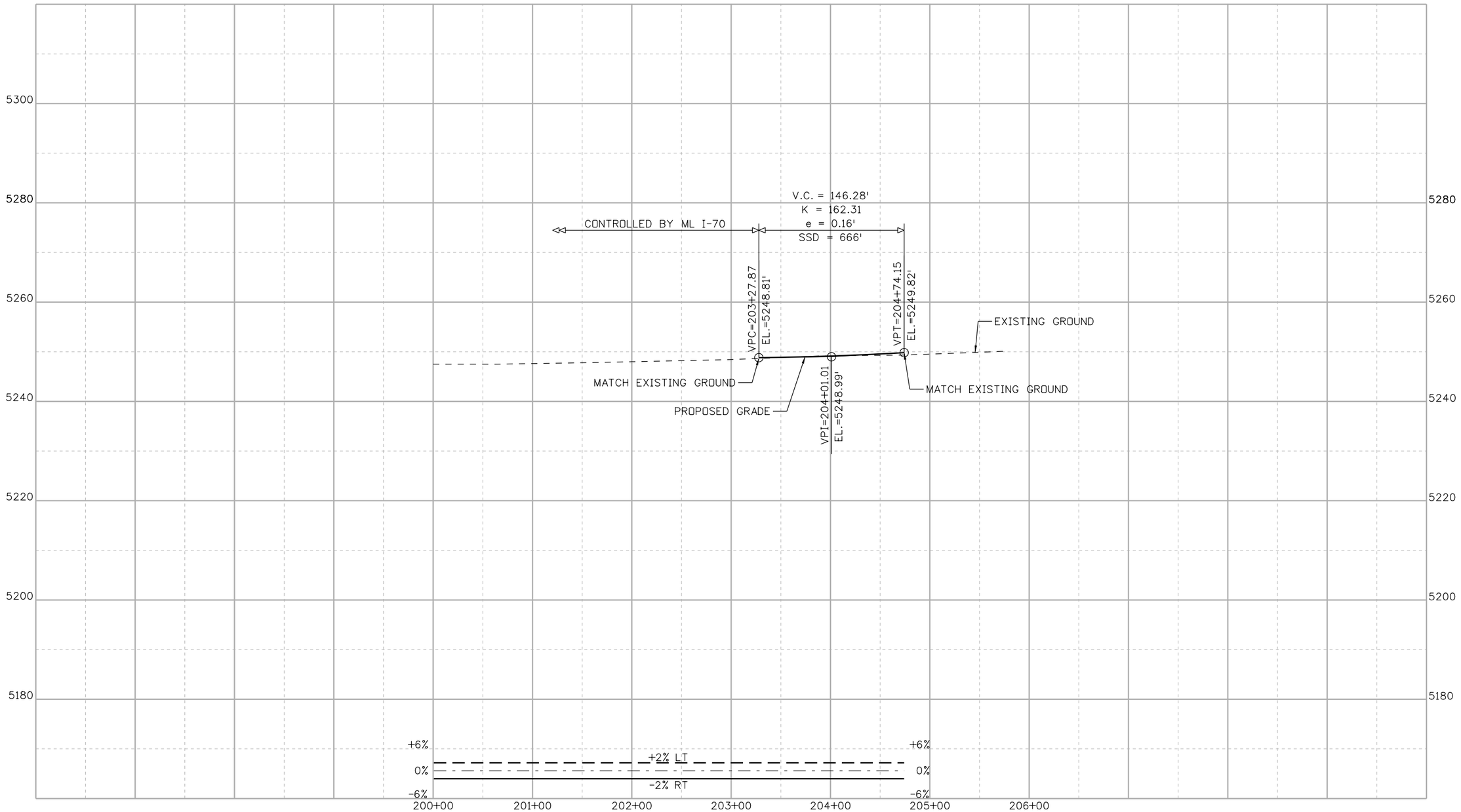
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
CENTRAL PARK BLVD
WB ENTRANCE RAMP

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers:
Subset Sheets: RPR119 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 299



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
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Phone: 303-757-9934 FAX: 303-757-9907
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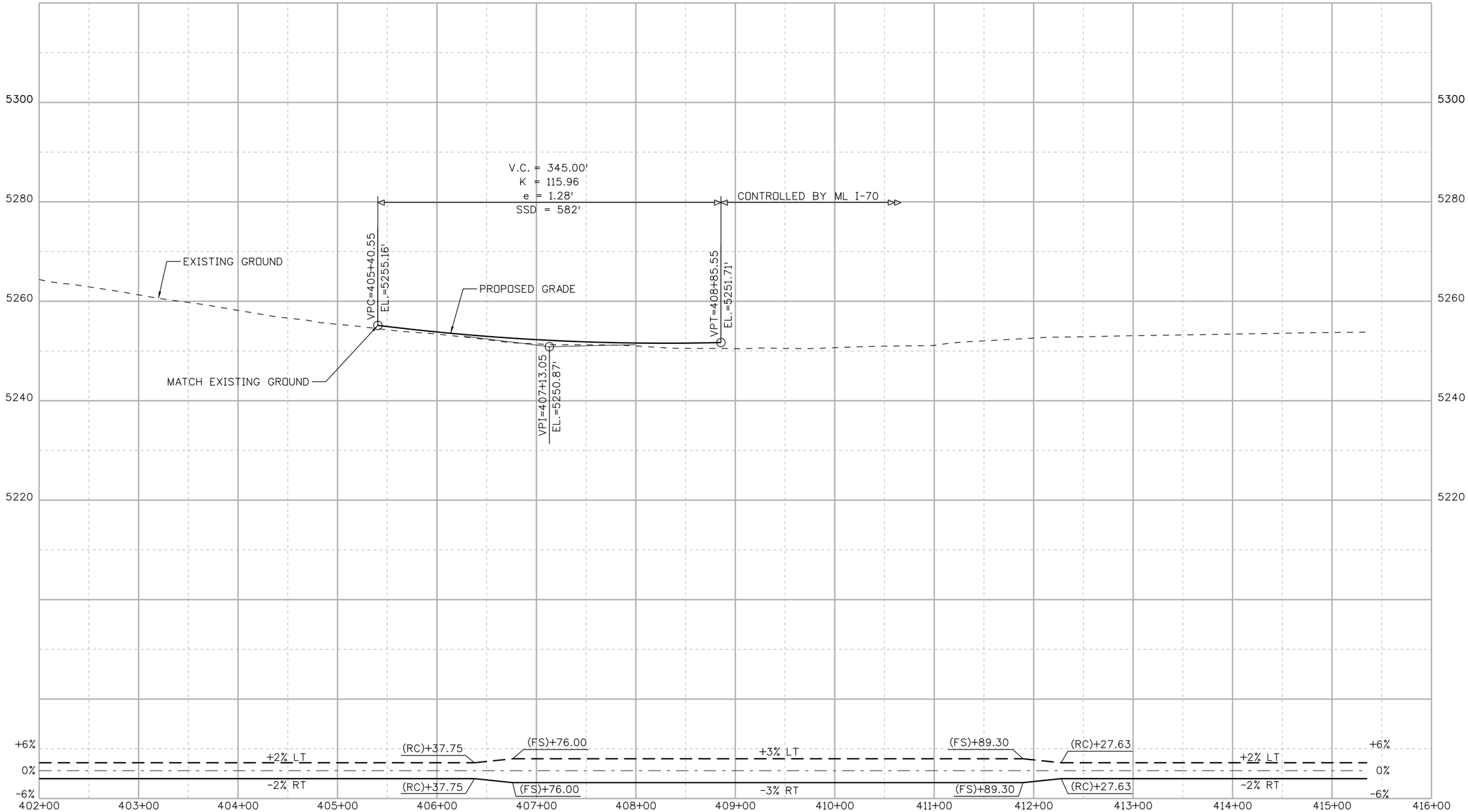
PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
CENTRAL PARK BLVD
EB EXIT RAMP

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR120 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 300



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
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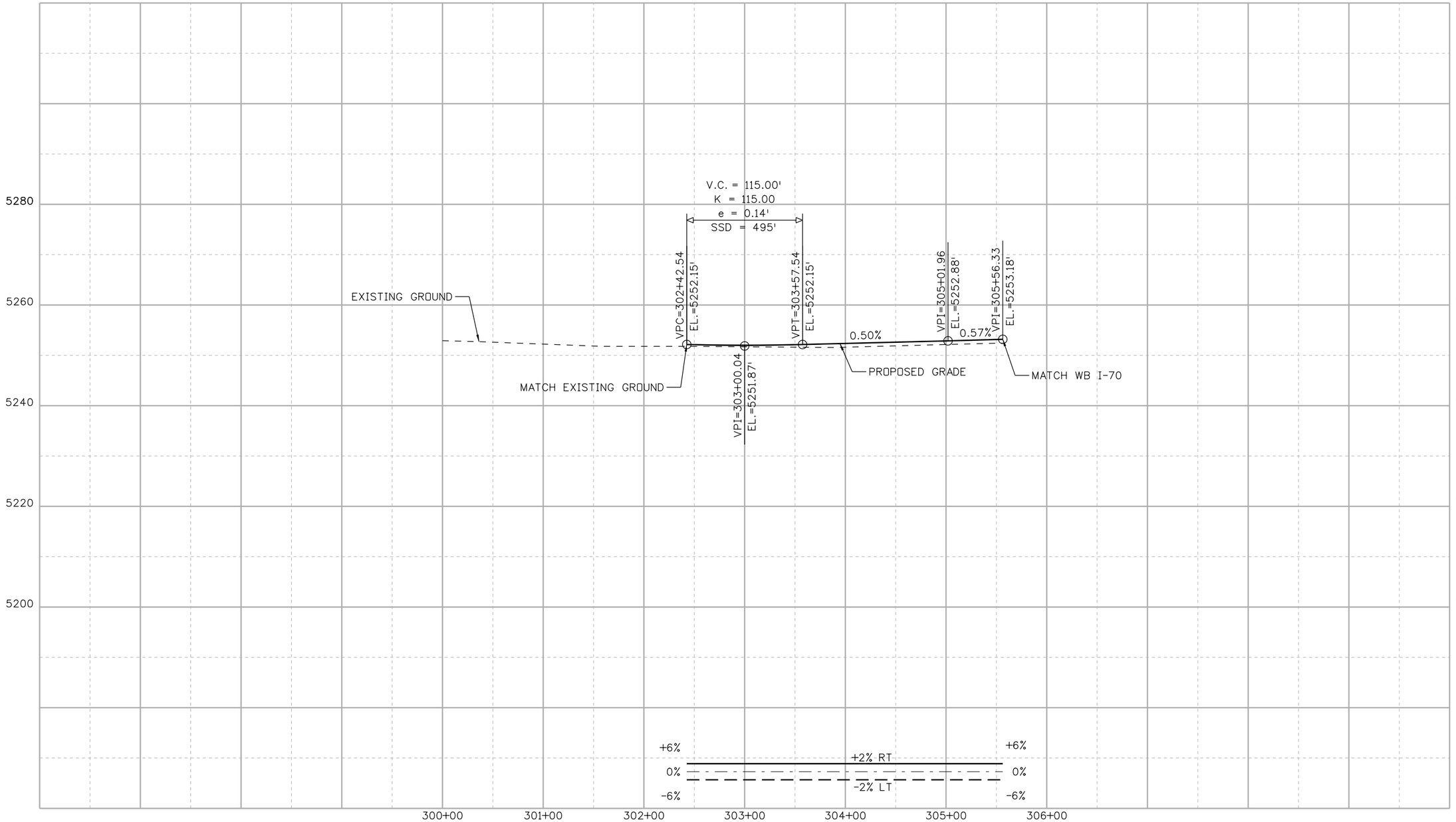
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-270 EB ENTRANCE RAMP

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR121 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 301



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
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Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

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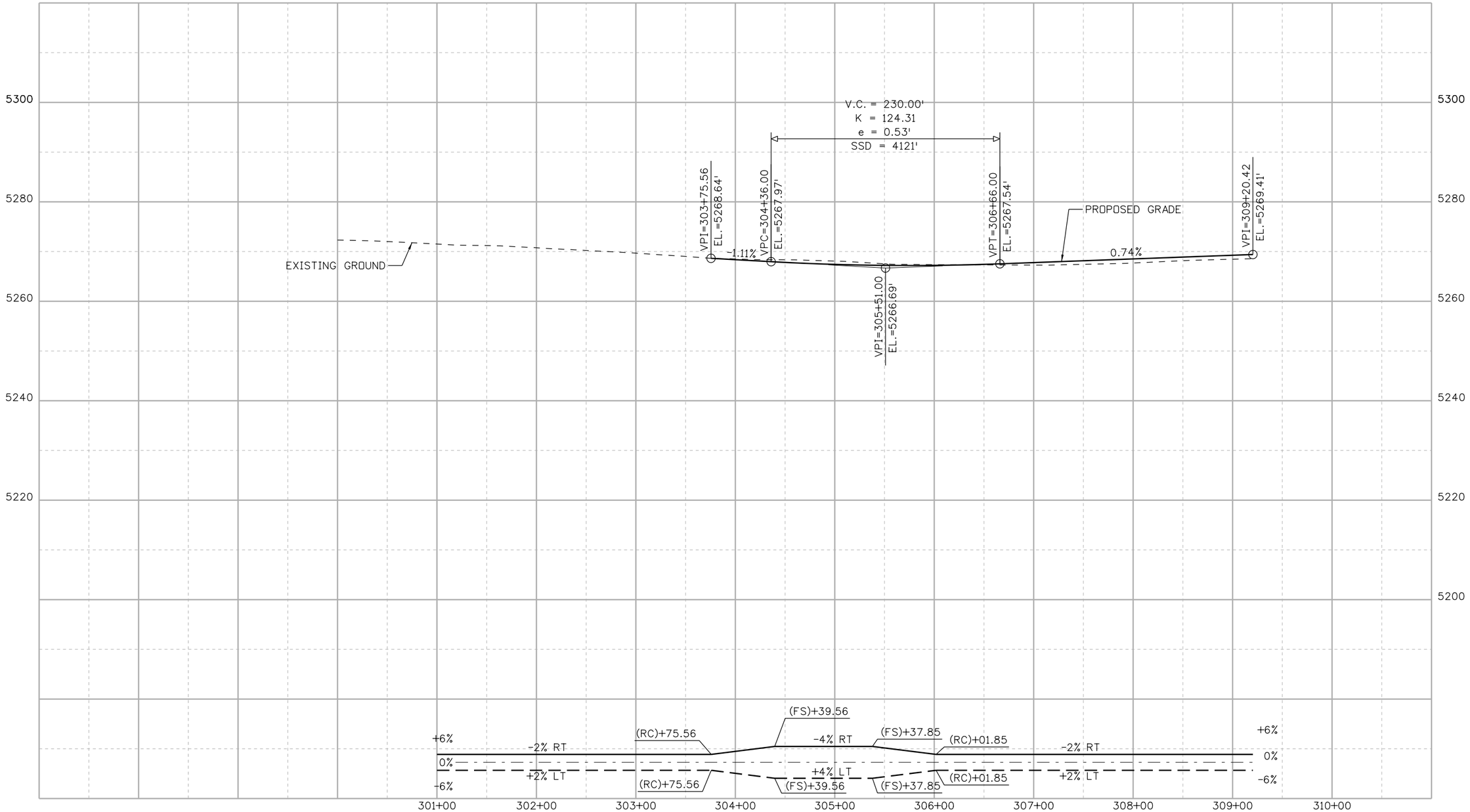
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-270 WB EXIT RAMP

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR122 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 302



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

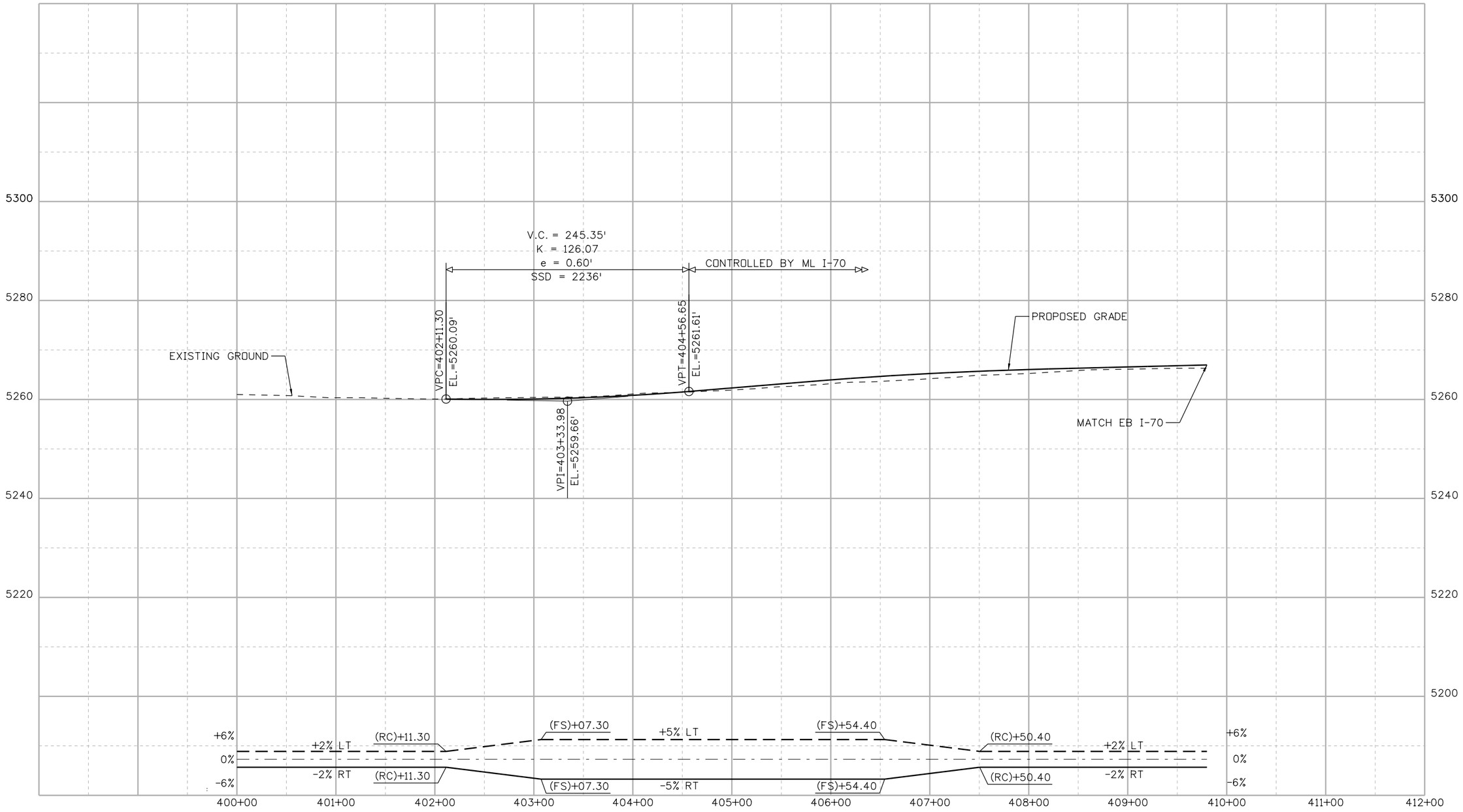
PRELIMINARY

No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
CENTRAL PARK BLVD
WB EXIT RAMP

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR123 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 303



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Print Date: 5/19/2017		Sheet Revisions	
File Name: File Name: See sheet edge for information		Date: / Comments / Init.	
Front Range Mobility Group	Horiz. Scale: As Noted		
	Vert. Scale: As Noted		
	Unit Information		
	Unit Leader		

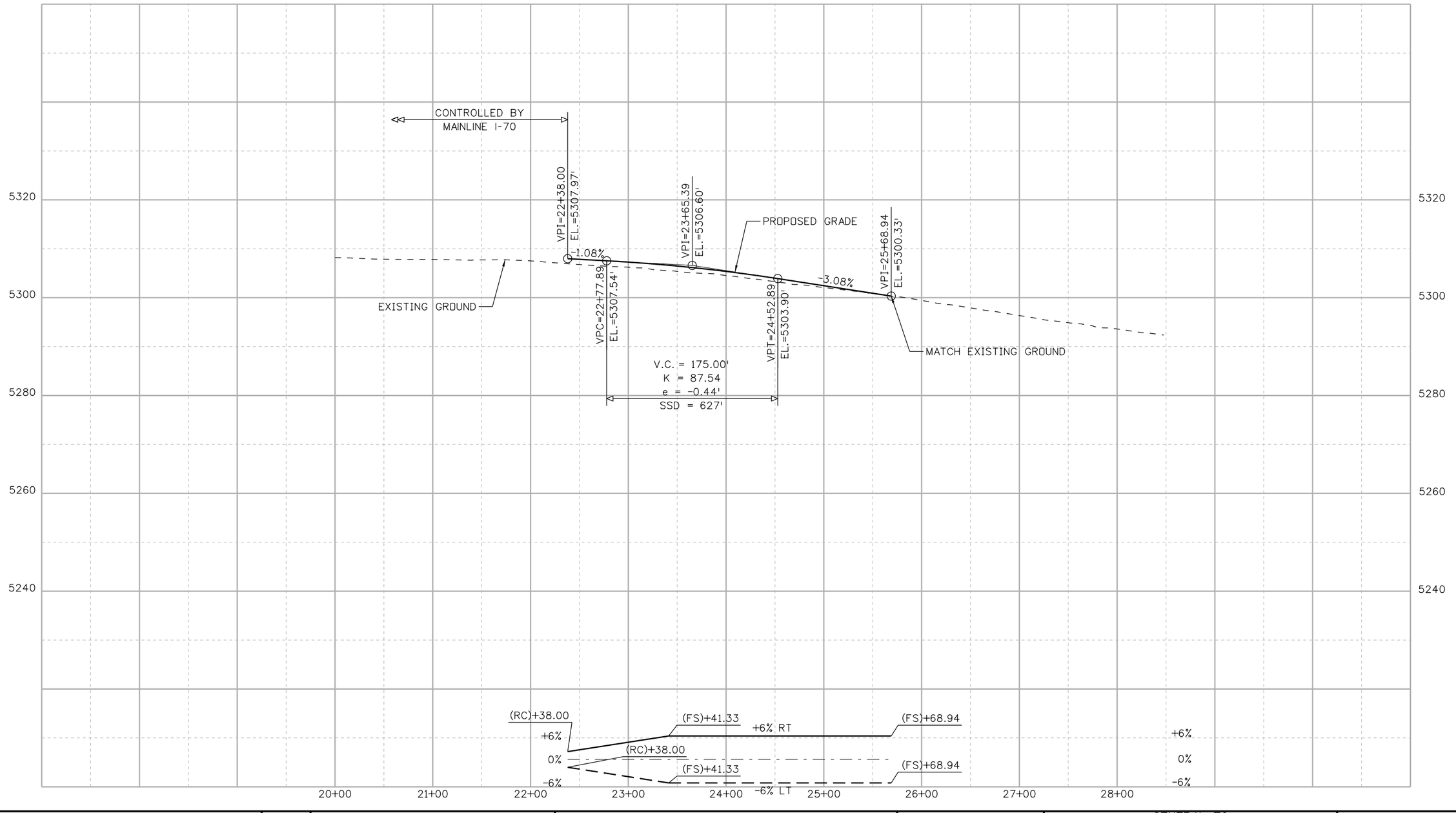
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
CENTRAL PARK BLVD
EB ENTRANCE RAMP

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers:
Subset Sheets: RPR124 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 304



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
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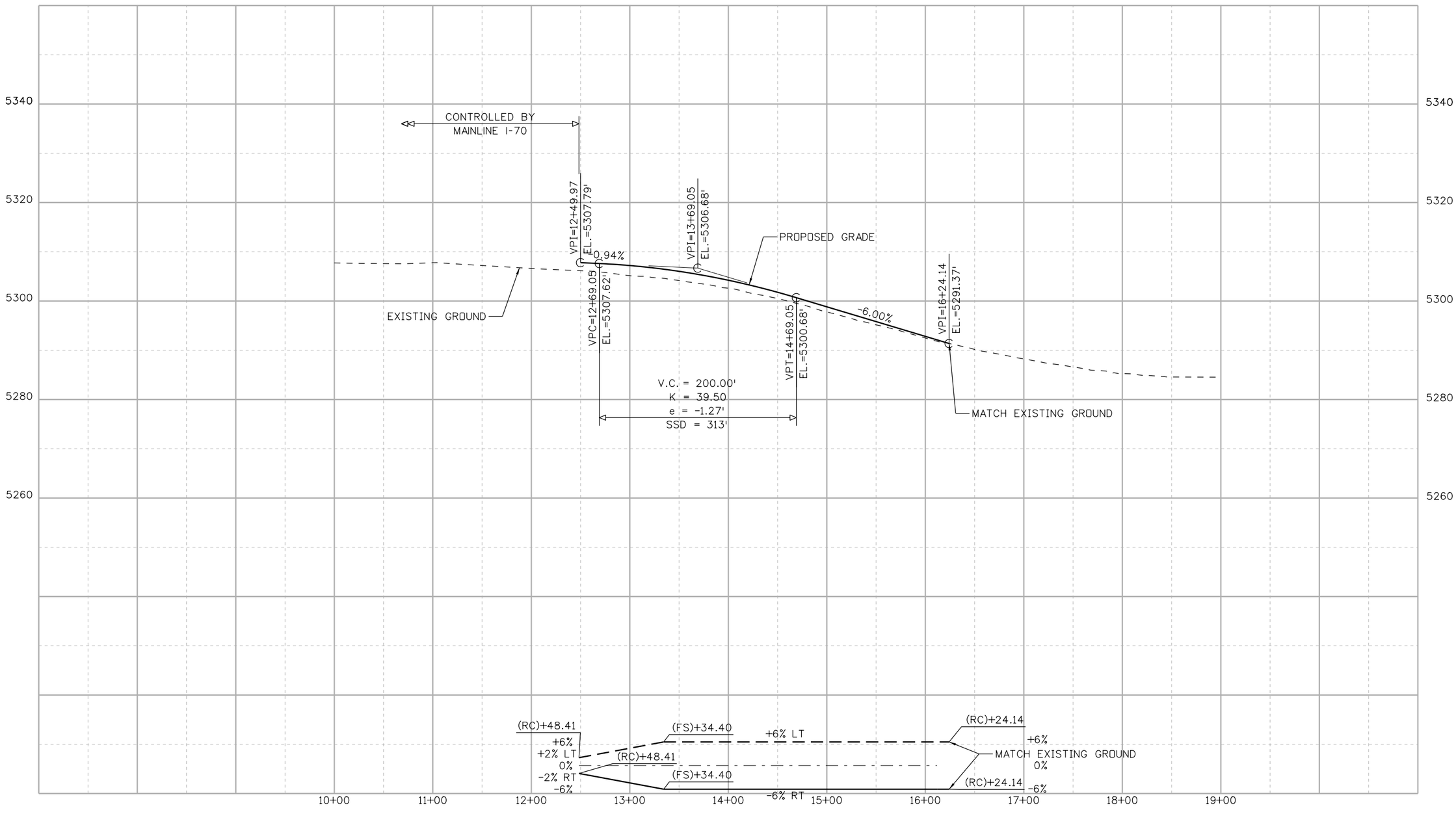
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
HAVANA STREET
WB ENTRANCE RAMP

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR125 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 305



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
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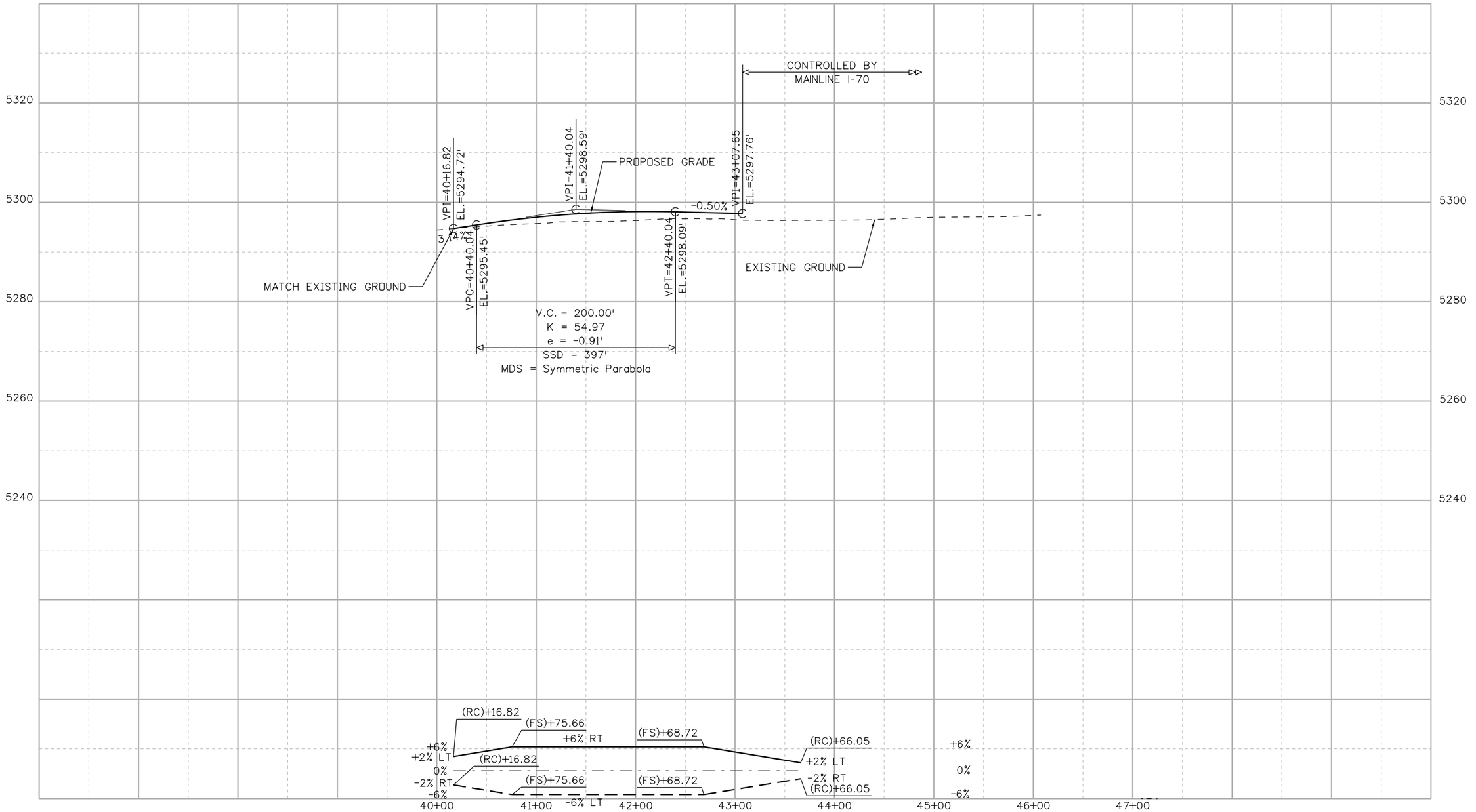
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
HAVANA STREET
EB EXIT RAMP

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR126 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 306



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
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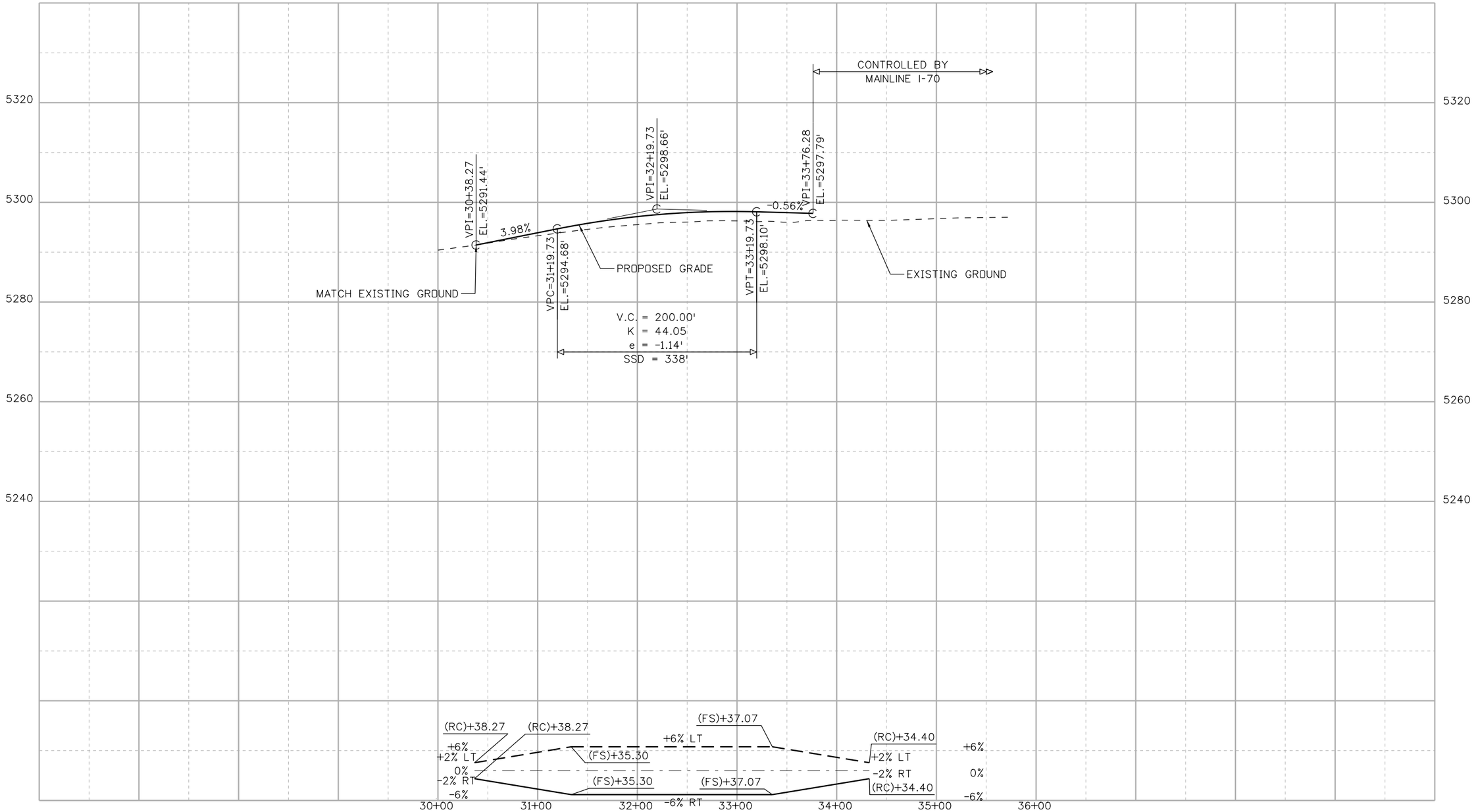
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
HAVANA STREET
WB EXIT RAMP

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR127 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 307



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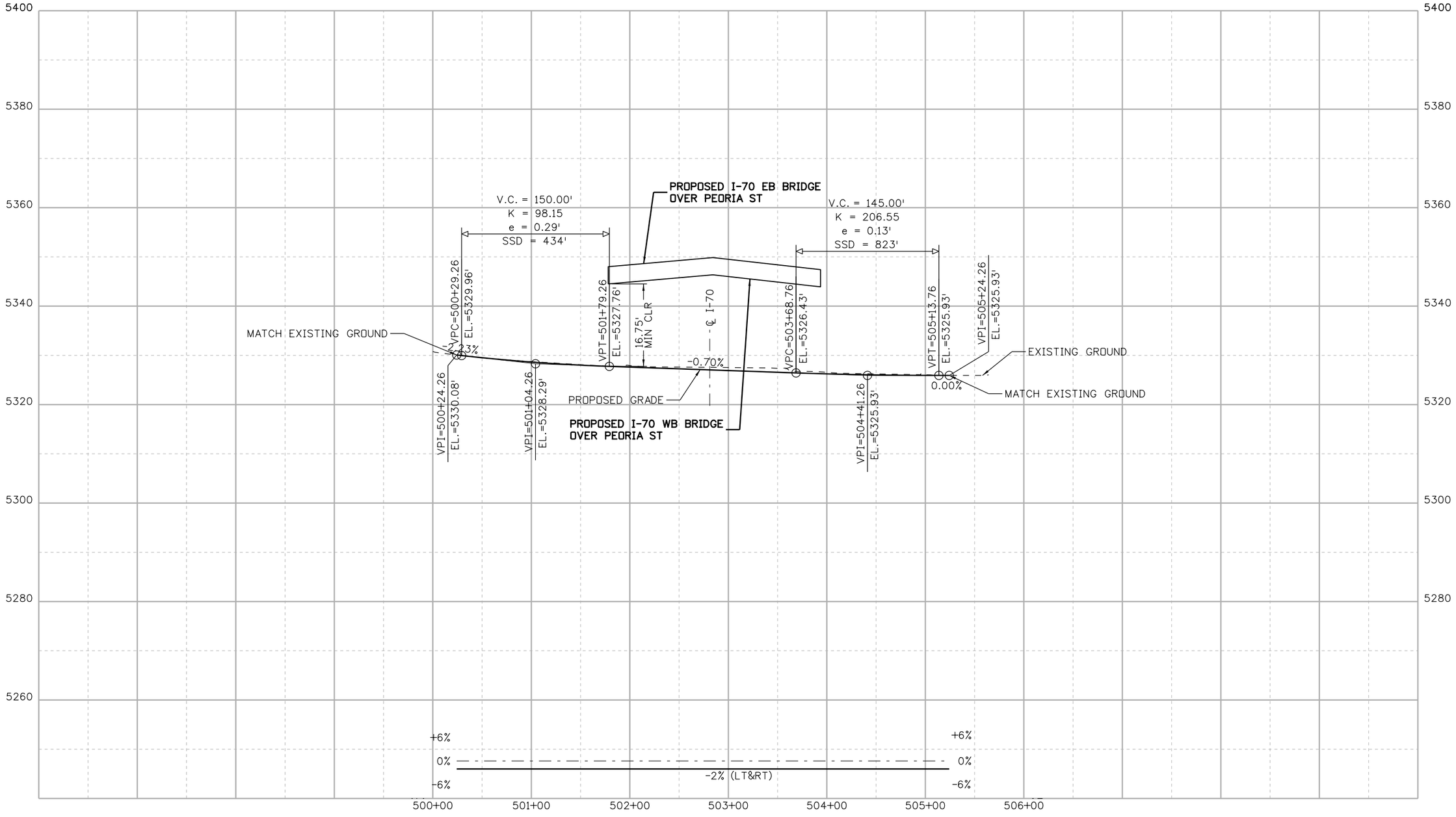
Print Date: 5/19/2017	Sheet Revisions			Colorado Department of Transportation	PRELIMINARY
File Name: File Name: See sheet edge for information	Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:
Horiz. Scale: As Noted				Region 1 KJS	Revised:
Vert. Scale: As Noted					Void:
Unit Information					
Unit Leader					

Front Range Mobility Group

CENTRAL 70
ROADWAY PROFILE
HAVANA STREET
EB ENTRANCE RAMP

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PROF		Subset Sheets: RPR128 of 136	

Project No./Code
FBR 0704-234
19631
Sheet Number 308



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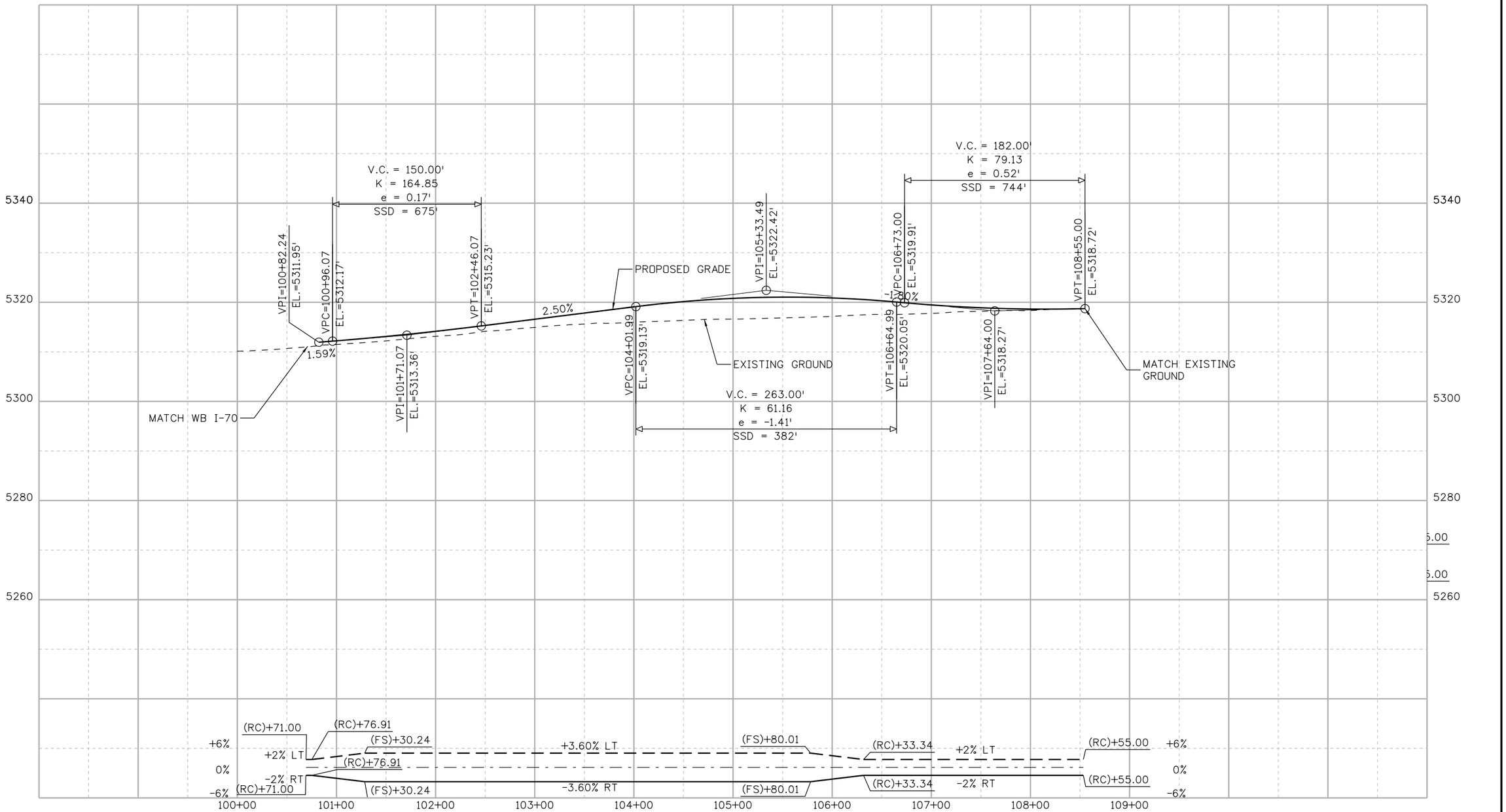
Print Date: 5/19/2017		Sheet Revisions			Colorado Department of Transportation
File Name: File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907
Front Range Mobility Group	Horiz. Scale: As Noted				Region 1 KJS
	Vert. Scale: As Noted				
	Unit Information				
	Unit Leader				

PRELIMINARY	CENTRAL 70 ROADWAY PROFILE PEORIA ST		Project No./Code
No Revisions:			FBR 0704-234
Revised:	Designer:	Structure Numbers	19631
Void:	Detailer:		Sheet Number 309
	Sheet Subset: ROAD PROF	Subset Sheets: RPR129 of 136	



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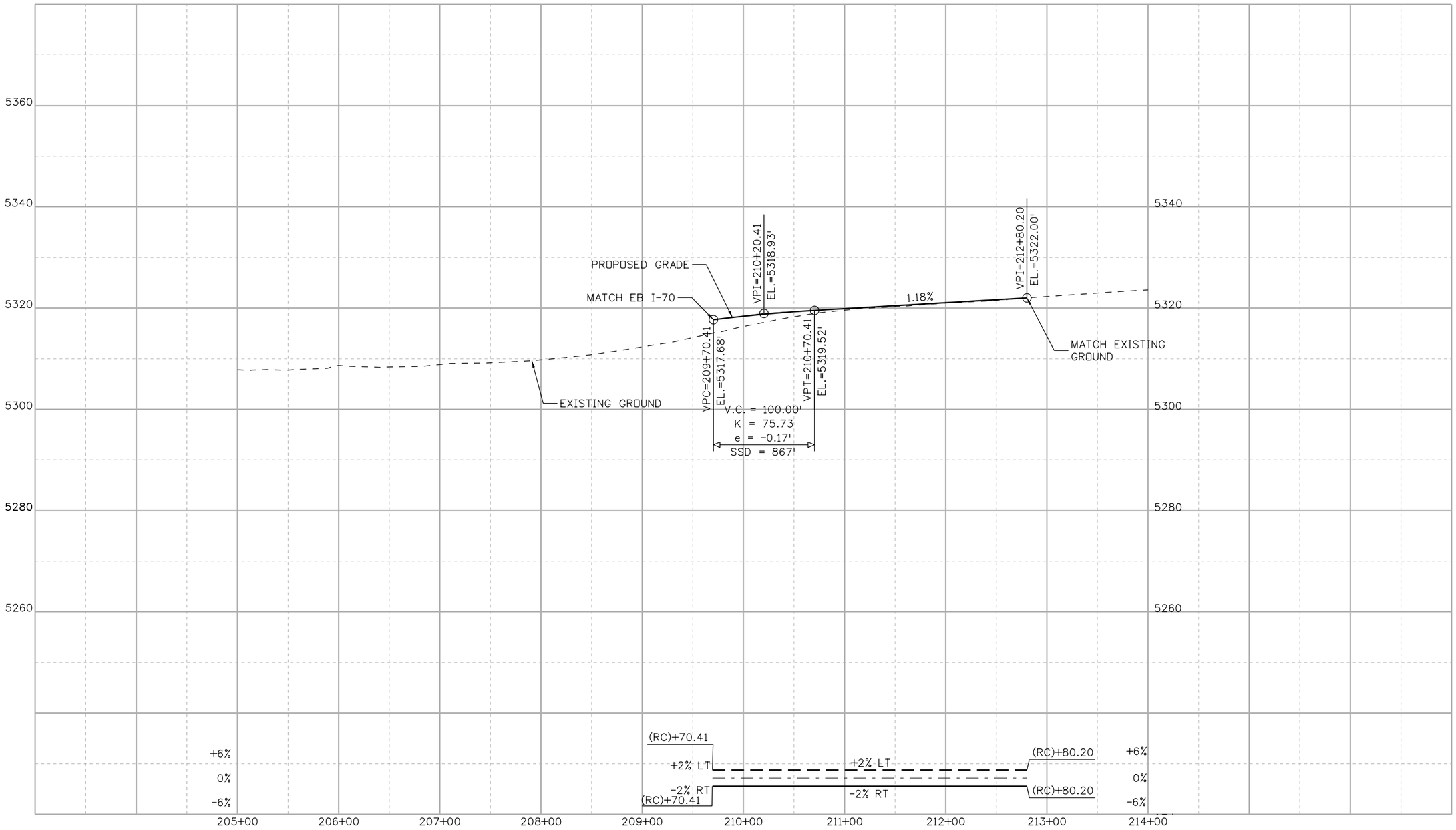
Print Date: 5/19/2017	Sheet Revisions	Colorado Department of Transportation	PRELIMINARY
File Name: File Name: See sheet edge for information	Date: / Comments / Init.	2000 South Holly Street, Denver, CO 80222, Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:
Front Range Mobility Group		Region 1 KJS	Revised:
Horiz. Scale: As Noted			Void:
Vert. Scale: As Noted			
Unit Information			
Unit Leader			

CENTRAL 70 ROADWAY PROFILE PEORIA ST WB ENTRANCE RAMP		Project No./Code FBR 0704-234
Designer:	Structure Numbers	19631
Detailer:		
Sheet Subset: ROAD PROF	Subset Sheets: RPR130 of 136	Sheet Number 310



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
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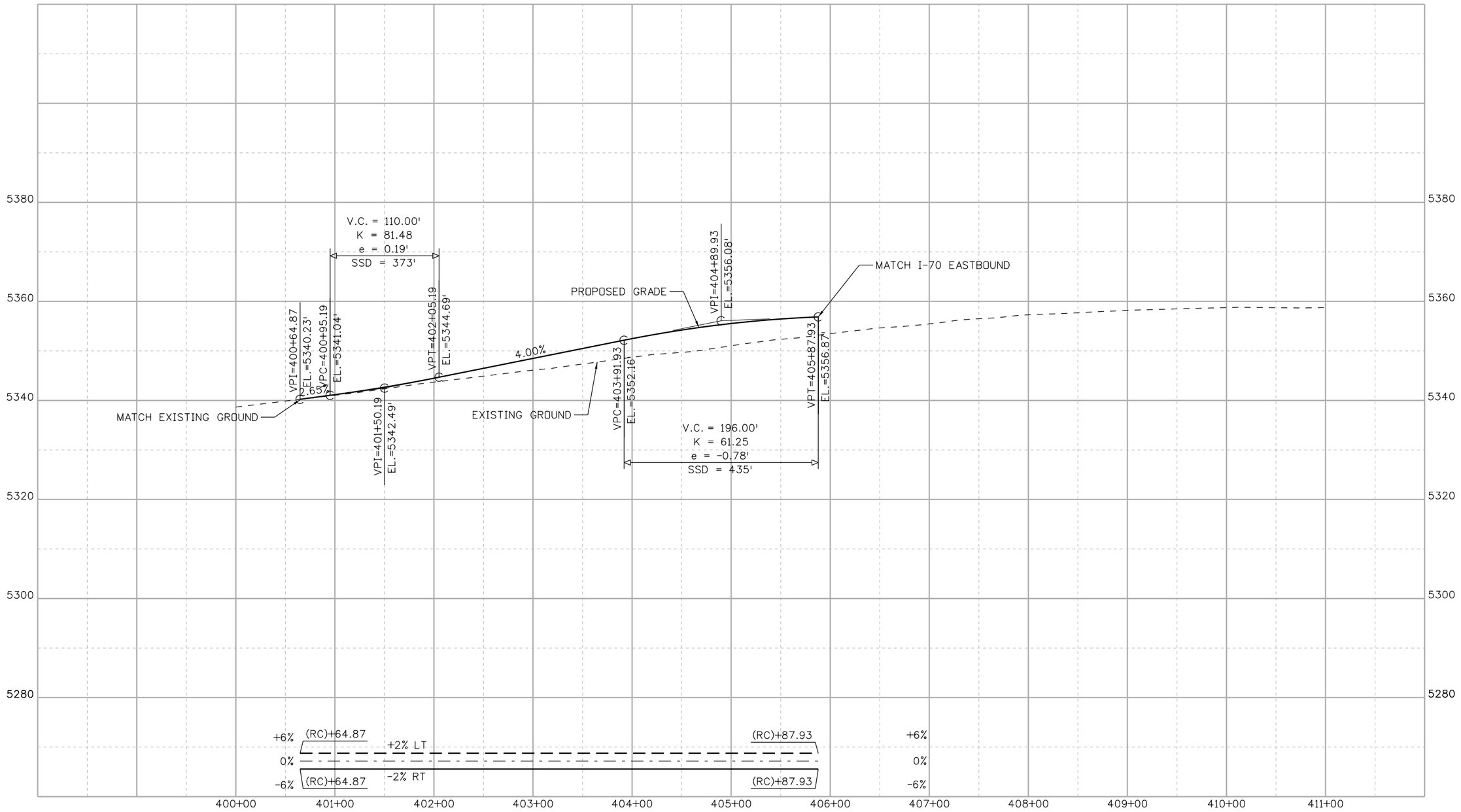
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
PEORIA ST EB EXIT RAMP

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers:
Subset Sheets: RPR131 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 311



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

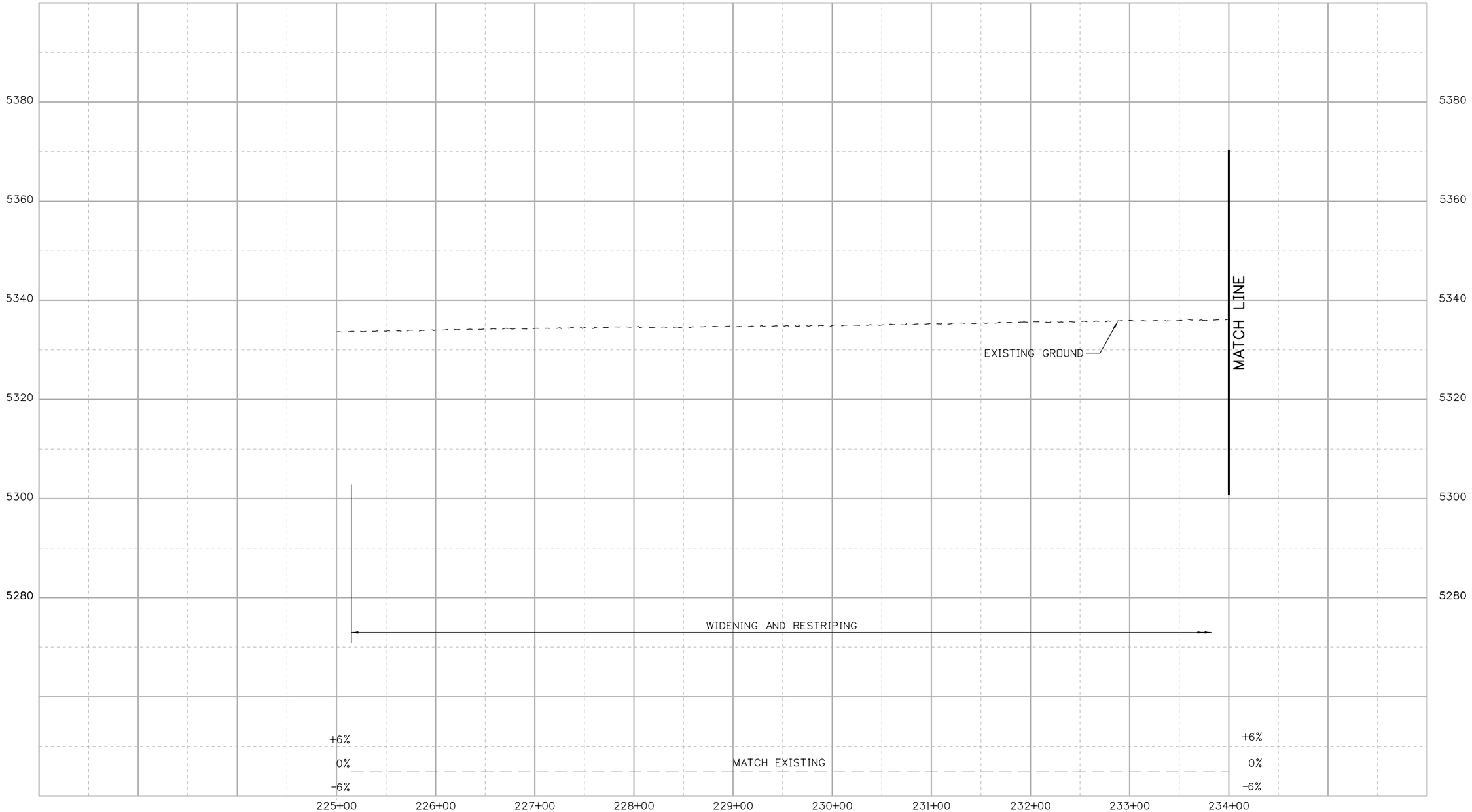
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
PEORIA ST EB ENTRANCE RAMP

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR132 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 312



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

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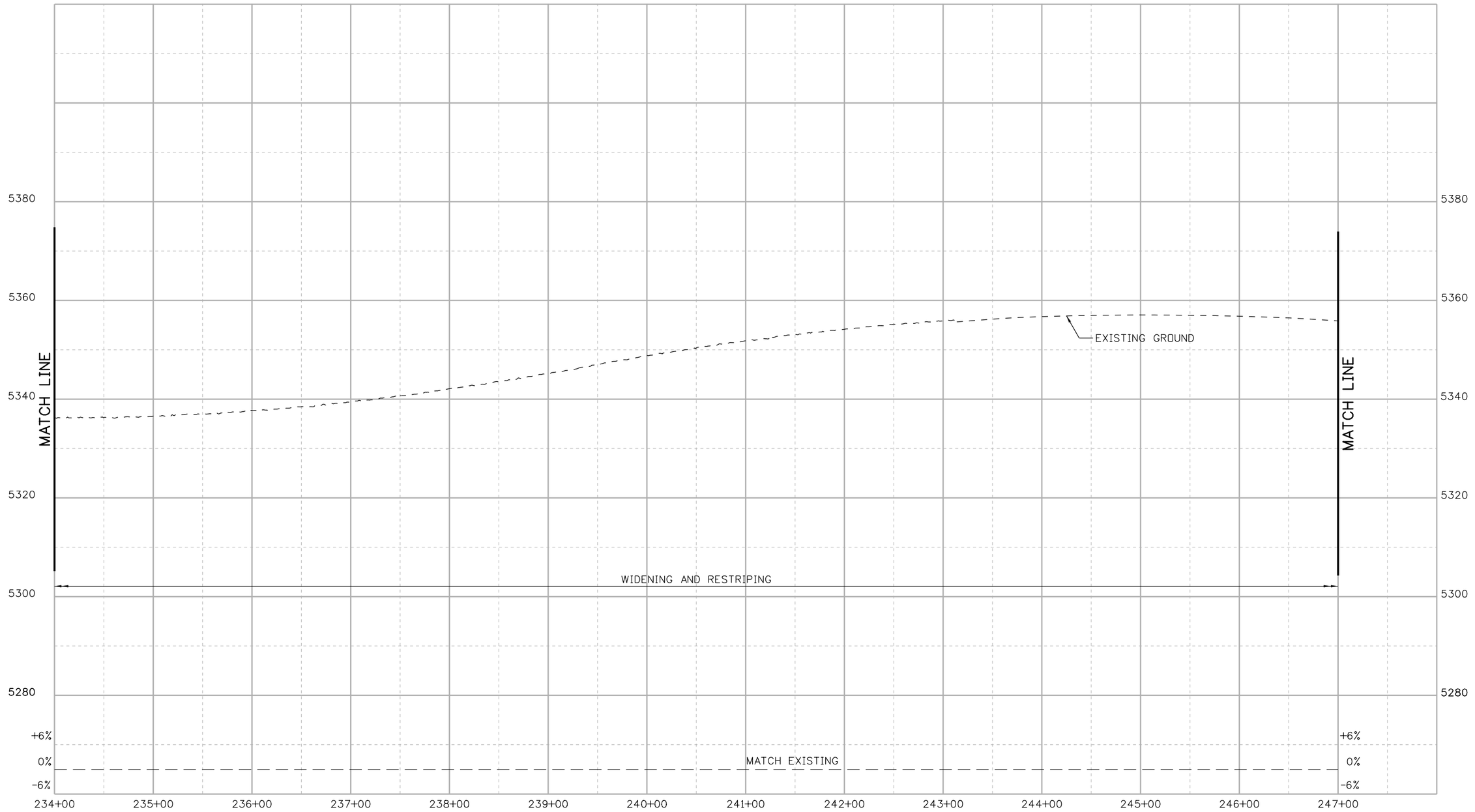
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 EB TO I-225 SB CONNECTOR
STA 225+00 TO STA 234+00

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR133 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 313



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Print Date: 5/19/2017

File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted

Vert. Scale: As Noted

Unit Information

Unit Leader

Sheet Revisions		
Date:	Comments	Init.

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Revised:

Void:

CENTRAL 70
ROADWAY PROFILE
I-70 EB TO I-225 SB CONNECTOR
STA 234+00 TO STA 247+00

Designer:

Detailer:

Sheet Subset: ROAD PROF

Structure Numbers:

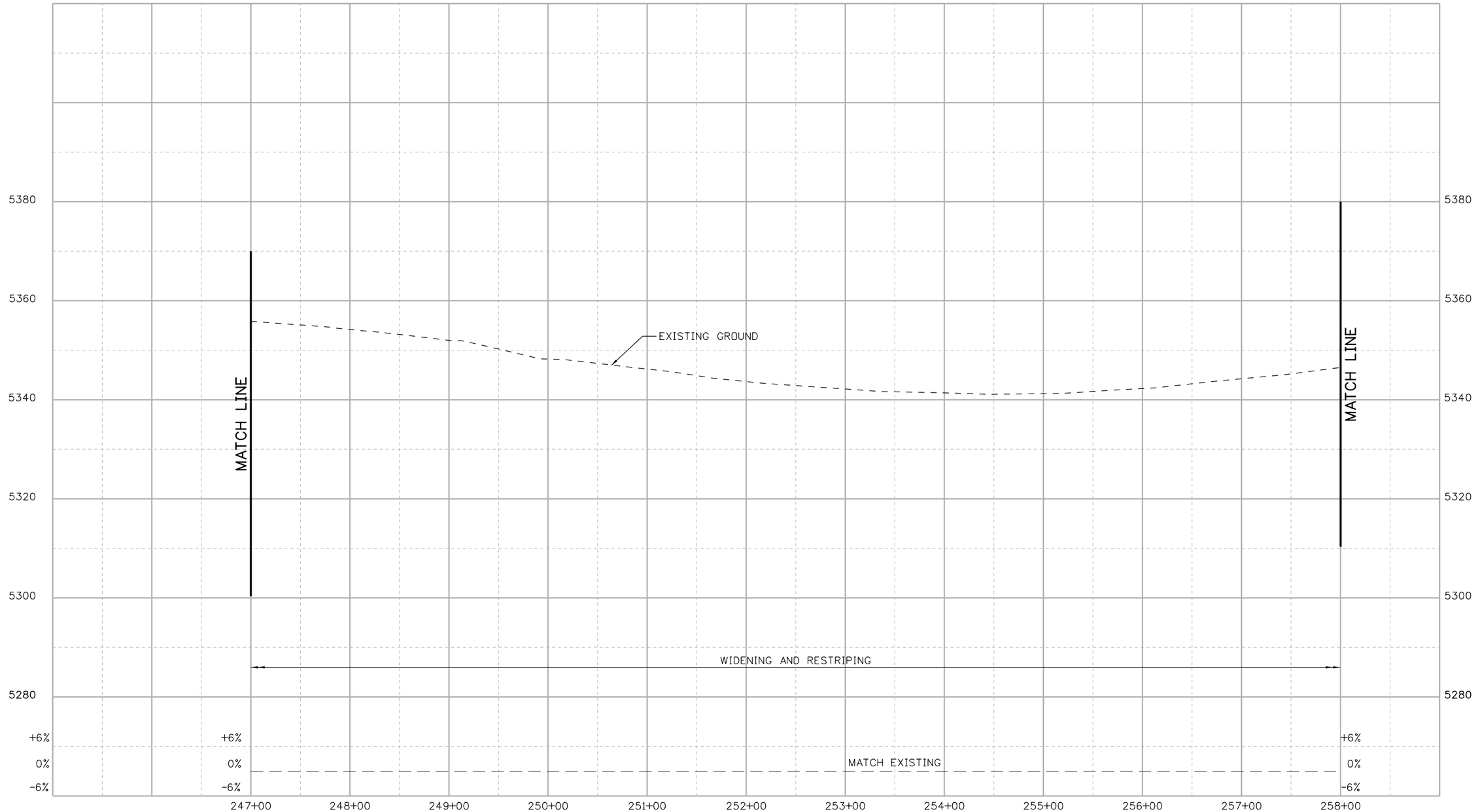
Subset Sheets: RPR134 of 136

Project No./Code

FBR 0704-234

19631

Sheet Number 314



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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

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Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
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Phone: 303-757-9934 FAX: 303-757-9907
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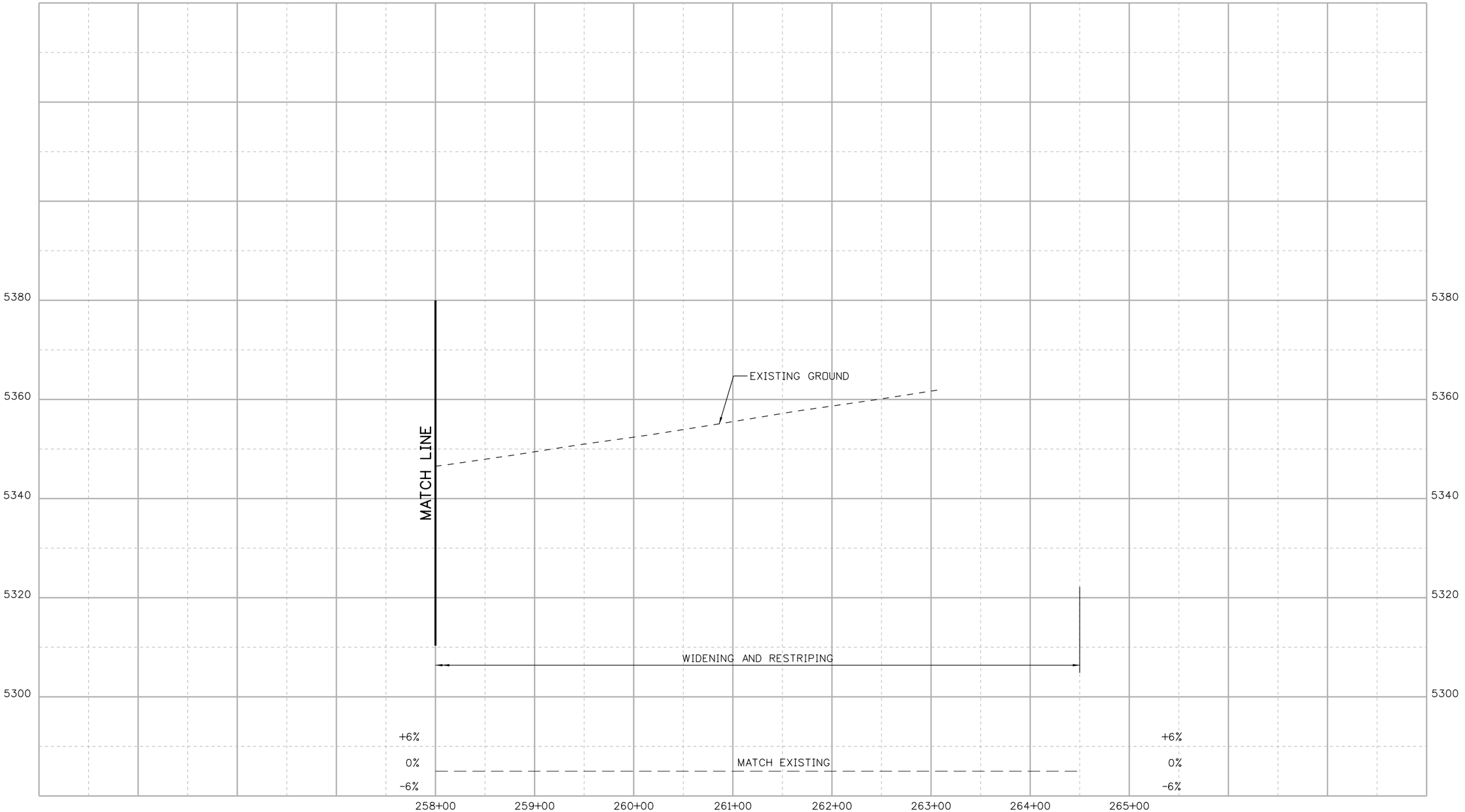
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 EB TO I-225 SB CONNECTOR
STA 247+00 TO STA 258+00

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR135 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 315



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Print Date: 5/19/2017

File Name: File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted

Vert. Scale: As Noted

Unit Information

Unit Leader

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
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Phone: 303-757-9934 FAX: 303-757-9907
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PRELIMINARY

No Revisions:

Revised:

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CENTRAL 70
ROADWAY PROFILE
I-70 EB TO I-225 SB CONNECTOR
STA 258+00 TO STA 265+00

Designer:

Detailer:

Sheet Subset: ROAD PROF

Structure Numbers

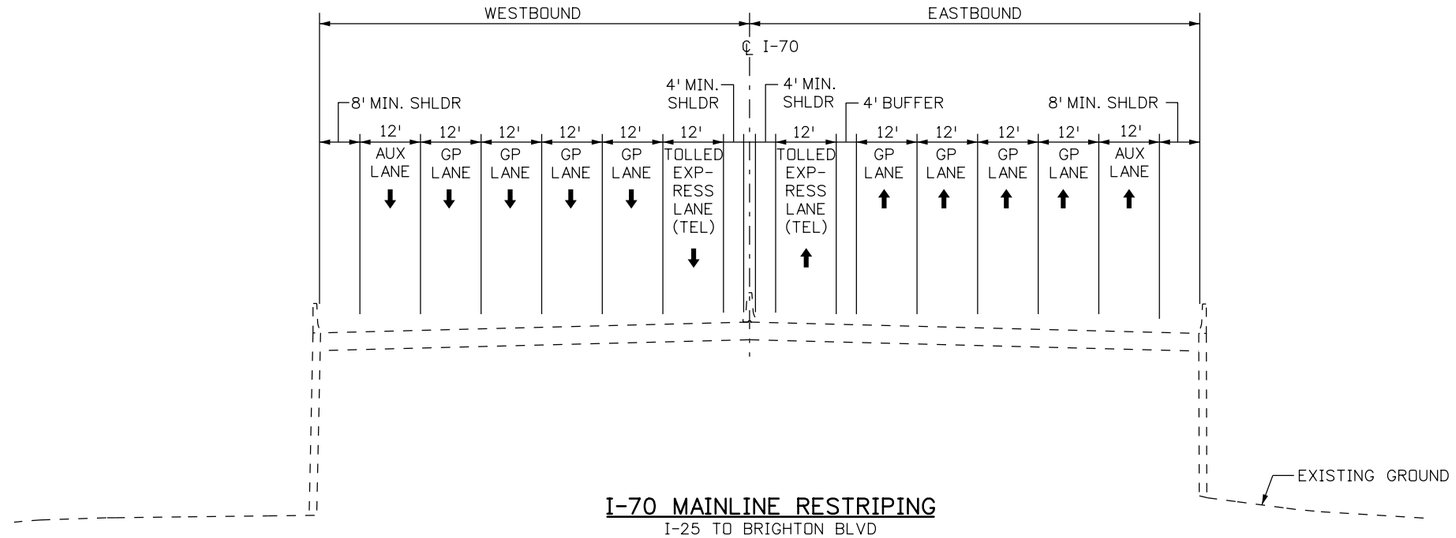
Subset Sheets: RPR136 of 136

Project No./Code

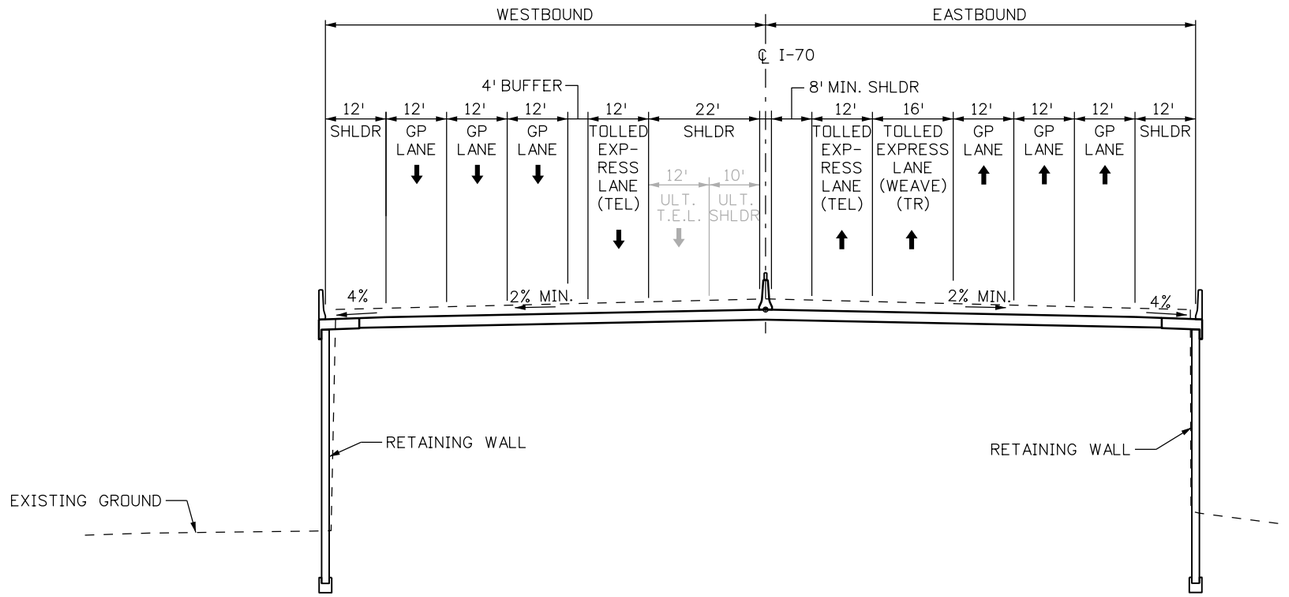
FBR 0704-234

19631

Sheet Number 316



I-70 MAINLINE RESTRIPING
I-25 TO BRIGHTON BLVD



I-70 MAINLINE
BRIGHTON BLVD TO UPRR

NOTES:
1. IN LOCATIONS WHERE AN AUXILIARY LANE IS NOT PRESENT, PROVIDE A 12' OUTSIDE SHOULDER.
2. WITHIN MAINLINE RESTRIPING SECTION MATCH THE SAME NUMBER OF EXISTING GENERAL PURPOSE AND AUXILIARY LANES. ROADWAY STRIPING IS TO ACCOMMODATE ADDITIONAL TOLLED EXPRESS LANE. SEE ROADWAY PLANS.
3. SEE TYPICAL SECTION PAVEMENT SECTION DETAIL SHEET FOR PAVEMENT MATERIAL TYPES AND THICKNESSES.
4. SEE ROADWAY PROFILES FOR SUPERELEVATION INFORMATION.
5. SEE DRAINAGE PLANS FOR DITCH LOCATIONS AND DETAILS.

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Print Date: 5/19/2017
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Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
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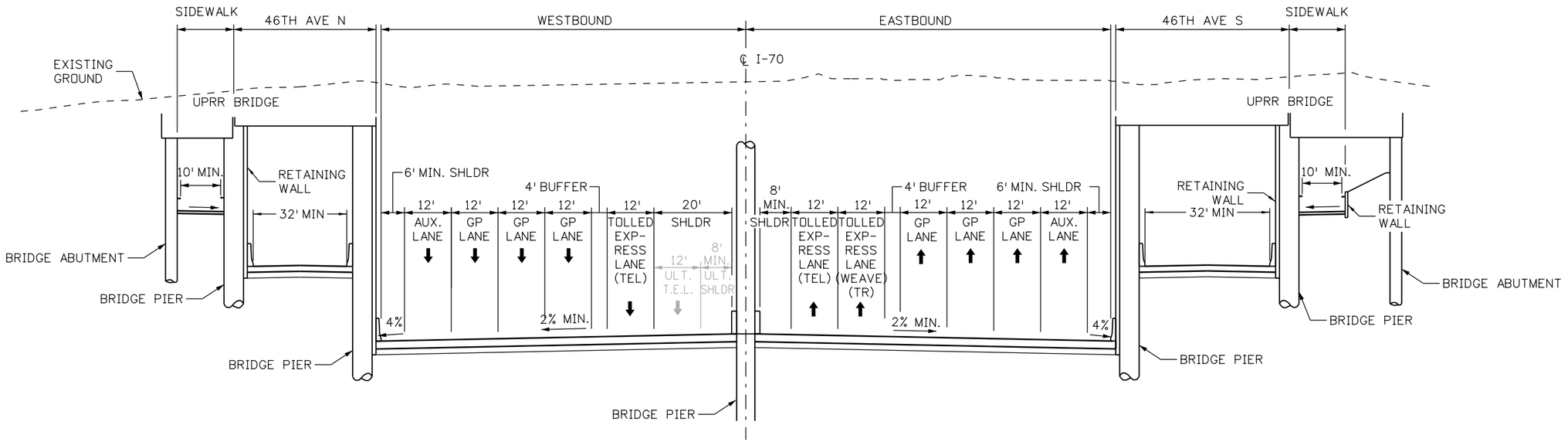
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

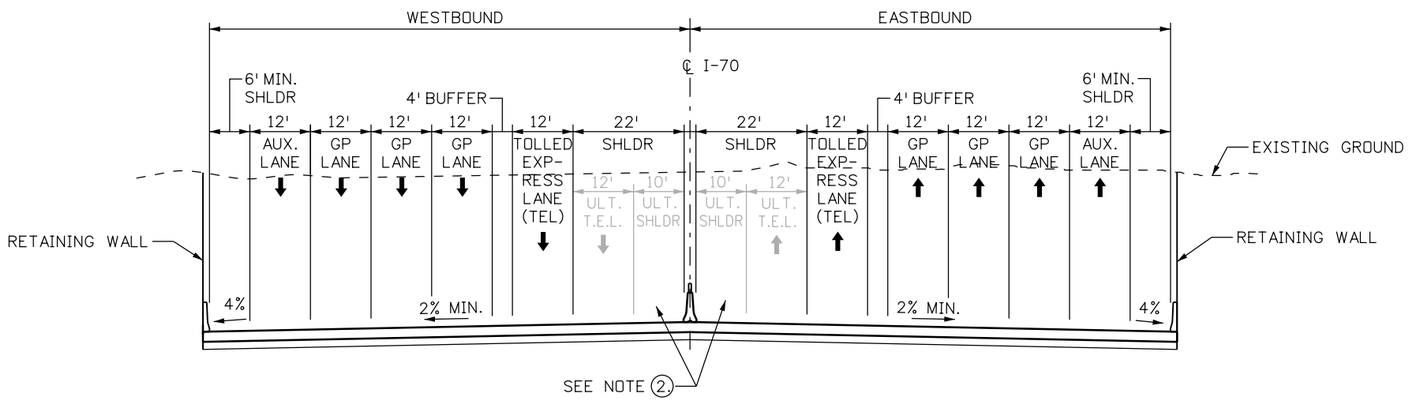
CENTRAL 70
TYPICAL SECTIONS
I-70 MAINLINE

Designer:
Detailer:
Sheet Subset: TYP SEC
Structure Numbers
Subset Sheets: TS1 of 19

Project No./Code
FBR 0704-234
19631
Sheet Number 317



I-70 MAINLINE
UNDER UPRR BRIDGE



I-70 MAINLINE
UPRR TO DAHLIA ST

NOTES:
1. AT LOCATIONS WHERE A CONTINUOUS AUXILIARY LANE IS NOT REQUIRED, PROVIDE A 12' OUTSIDE SHOULDER.
2. INSIDE SHOULDERS REDUCE AT COVER PIERS TO MINIMUM 8' ULTIMATE SHOULDER WIDTH AND MODIFIED CD BARRIER.
3. SEE TYPICAL SECTION PAVEMENT SECTION DETAIL SHEET FOR PAVEMENT MATERIAL TYPES AND THICKNESSES.
4. SEE ROADWAY PROFILES FOR SUPERELEVATION INFORMATION.
5. SEE DRAINAGE PLANS FOR DITCH LOCATIONS AND DETAILS.

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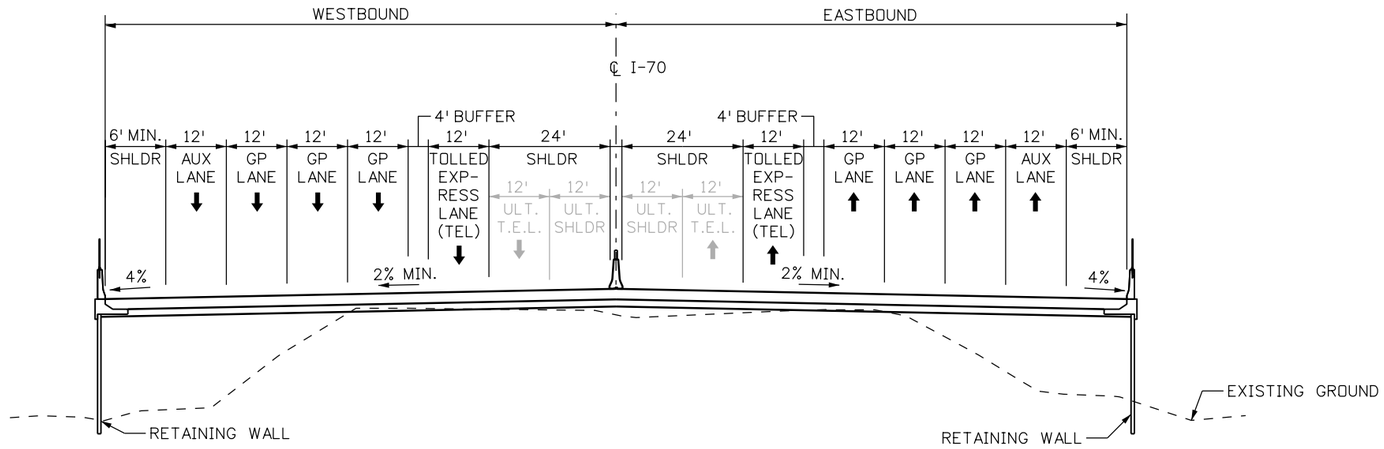
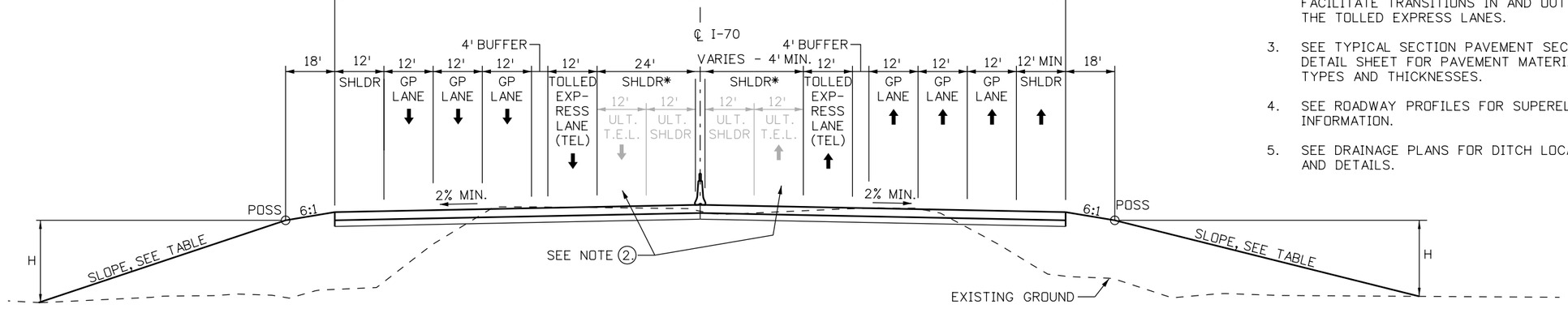
Print Date: 5/19/2017			Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 TYPICAL SECTIONS I-70 MAINLINE		Project No./Code
File Name: See sheet edge for information			Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:			FBR 0704-234
Front Range Mobility Group	Horiz. Scale: As Noted						Revised:	Designer:	Structure Numbers	19631
	Vert. Scale: As Noted							Detailer:		
	Unit Information					Region 1 KJS	Void:	Sheet Subset: TYP SEC	Subset Sheets: TS2 of 19	Sheet Number 318
	Unit Leader									



I-70 MAINLINE
DAHLIA ST TO QUEBEC ST



I-70 MAINLINE
QUEBEC ST TO SAND CREEK

*SHOULDER WIDTH TRANSITIONS TO MATCH EXISTING BRIDGE OVER SAND CREEK

Slope	Fill Height	Cut
6:1	<4'	NA
4:1	4'<15'	If Can Tie To Existing Ground Within ROW
3:1	>15'	To Stay Inside of ROW
3:1	To Stay Inside of ROW	

NOTES:
1. AT LOCATIONS WHERE A CONTINUOUS AUXILIARY LANE IS NOT REQUIRED, PROVIDE A 12' OUTSIDE SHOULDER.
2. ONE CONTINUOUS TOLLED EXPRESS LANE IS PROVIDED. AN ADDITIONAL LANE HAS BEEN SHOWN IN SOME AREAS TO FACILITATE TRANSITIONS IN AND OUT OF THE TOLLED EXPRESS LANES.
3. SEE TYPICAL SECTION PAVEMENT SECTION DETAIL SHEET FOR PAVEMENT MATERIAL TYPES AND THICKNESSES.
4. SEE ROADWAY PROFILES FOR SUPERELEVATION INFORMATION.
5. SEE DRAINAGE PLANS FOR DITCH LOCATIONS AND DETAILS.

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Print Date: 5/19/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

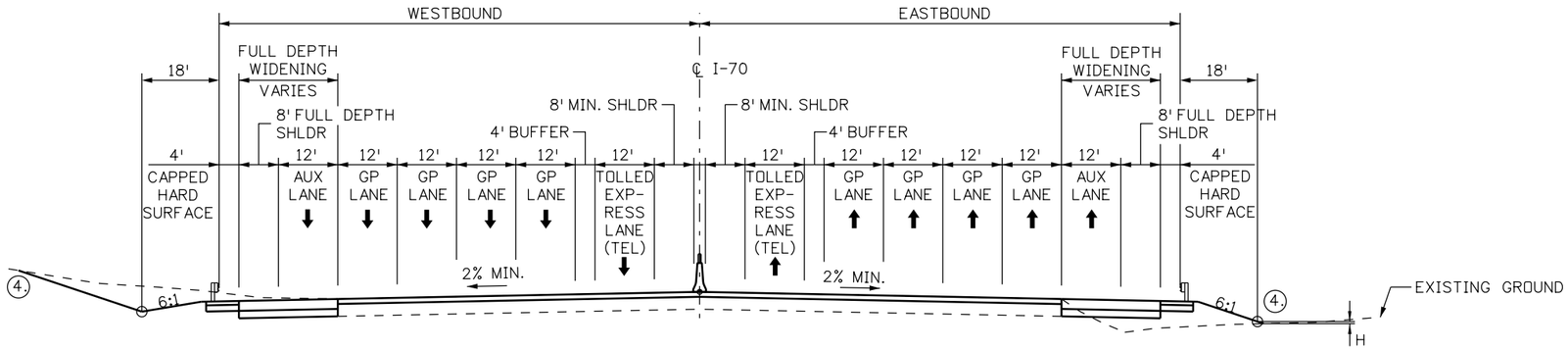
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
TYPICAL SECTIONS
I-70 MAINLINE

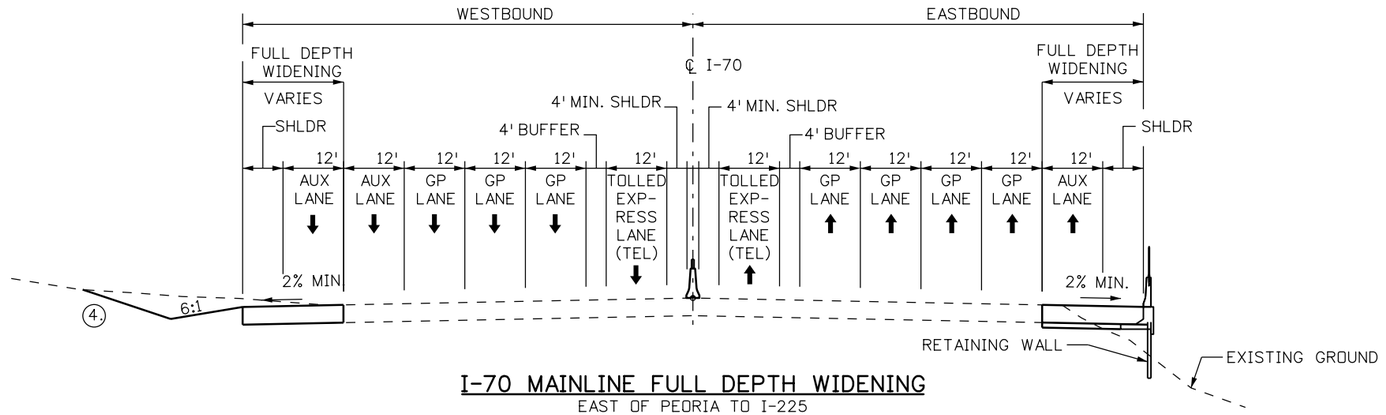
Designer:
Detailer:
Sheet Subset: TYP SEC
Structure Numbers
Subset Sheets: TS3 of 19

Project No./Code
FBR 0704-234
19631
Sheet Number 319

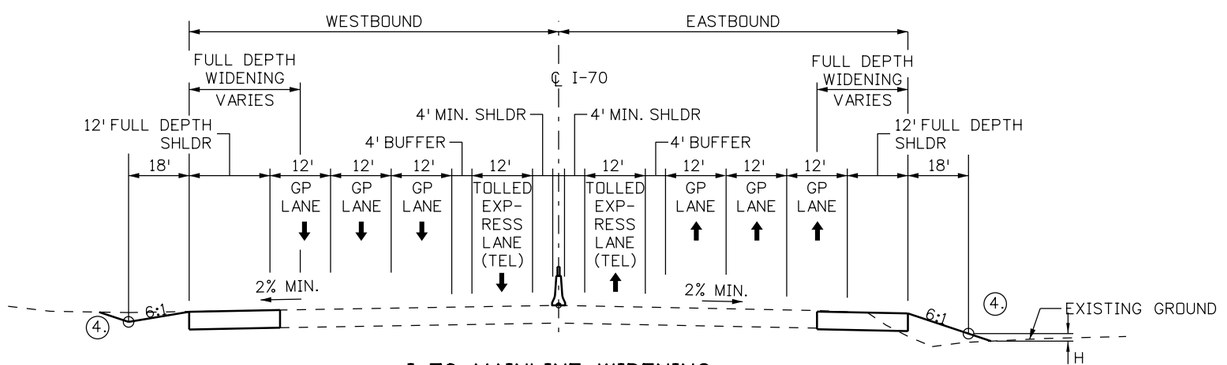


I-70 MAINLINE WIDENING
EAST OF SAND CREEK TO EAST OF PEORIA ST

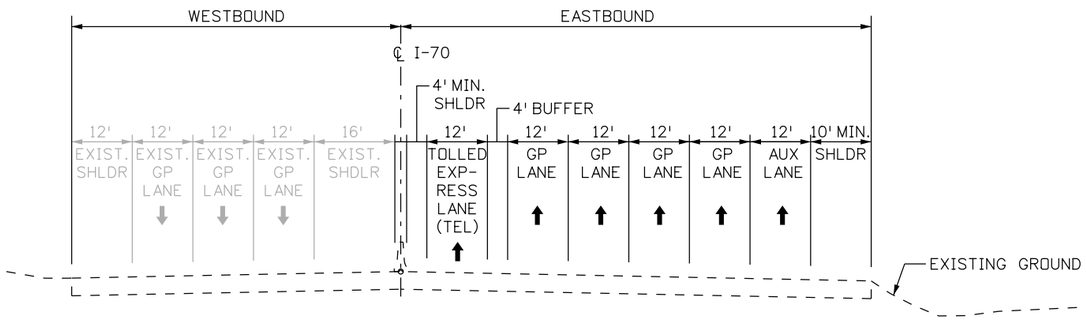
Slope	Fill Height	Cut
6:1	<4'	NA
4:1	4'<15'	If Can Tie To Existing Ground Within ROW
3:1	>15'	To Stay Inside of ROW
3:1	To Stay Inside of ROW	



I-70 MAINLINE FULL DEPTH WIDENING
EAST OF PEORIA TO I-225



I-70 MAINLINE WIDENING
I-225 INTERCHANGE AREA



I-70 MAINLINE RESTRIPING
EAST OF I-225 TO CHAMBERS RD

NOTES:
1. SEE TYPICAL SECTION PAVEMENT SECTION DETAIL SHEET FOR PAVEMENT MATERIAL TYPES AND THICKNESSES.
2. WITHIN MAINLINE RESTRIPING SECTION MATCH THE SAME NUMBER OF EXISTING GENERAL PURPOSE AND AUXILIARY LANES. ROADWAY STRIPING IS TO ACCOMMODATE ADDITIONAL TOLLED EXPRESS LANE. SEE ROADWAY PLANS.
2. SEE ROADWAY PROFILES FOR SUPERELEVATION INFORMATION.
3. SEE DRAINAGE PLANS FOR DITCH LOCATIONS AND DETAILS.

(4.) SLOPE, SEE TABLE.

Print Date: 5/19/2017
File Name: See sheet edge for information
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Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

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Date:	Comments	Init.

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2000 South Holly Street
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Region 1 KJS

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No Revisions:
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CENTRAL 70
TYPICAL SECTIONS
I-70 MAINLINE

Designer:
Detailer:
Sheet Subset: TYP SEC
Structure Numbers
Subset Sheets: TS4 of 19

Project No./Code
FBR 0704-234
19631
Sheet Number 320

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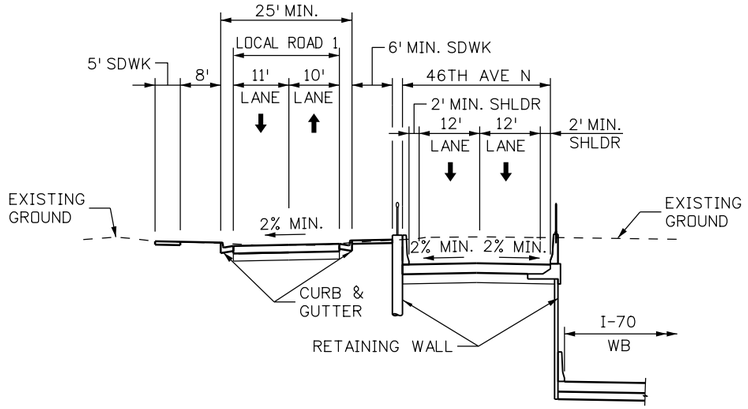
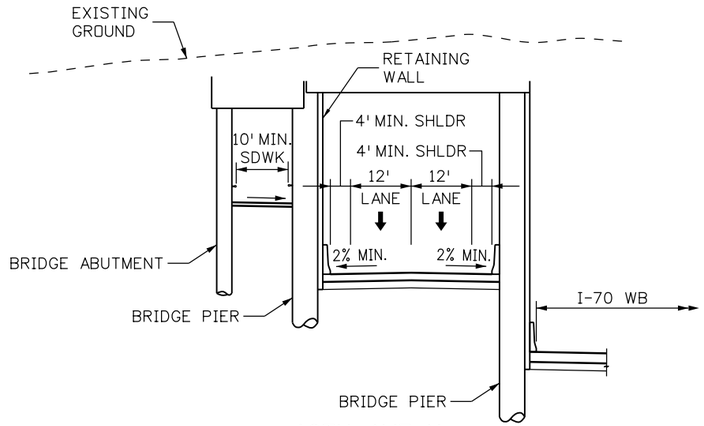
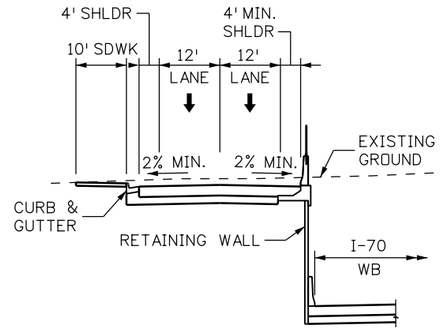


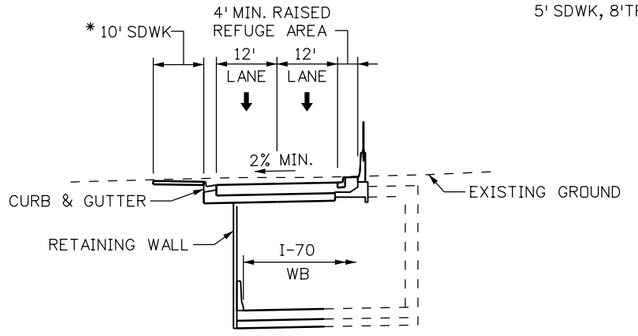
46TH AVE N
HIGH ST TO UPRR



46TH AVE N
UNDER UPRR

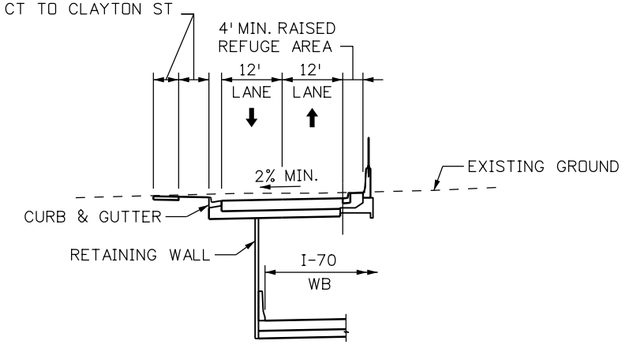


46TH AVE N
UPRR TO YORK ST

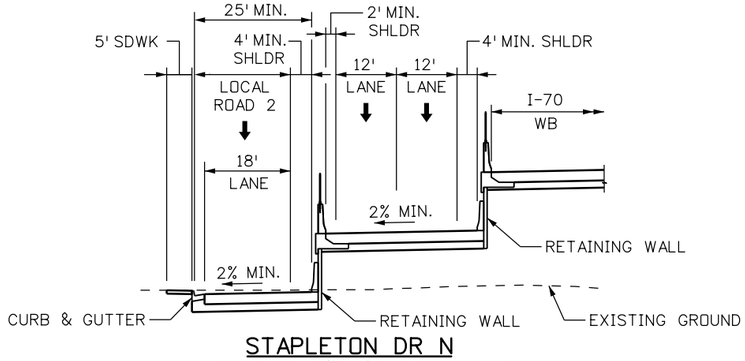


46TH AVE N
YORK ST TO JOSEPHINE ST

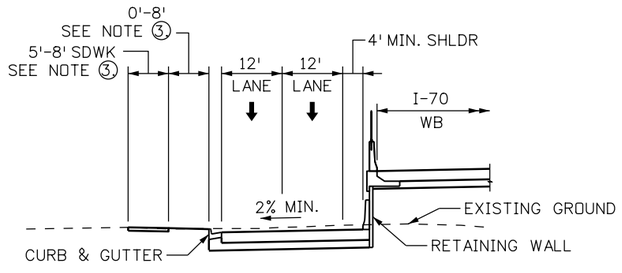
*10' ATTACHED SDWK JOSEPHINE ST TO COLUMBINE ST
5' SDWK, 8'TREE LAWN THOMPSON CT TO CLAYTON ST



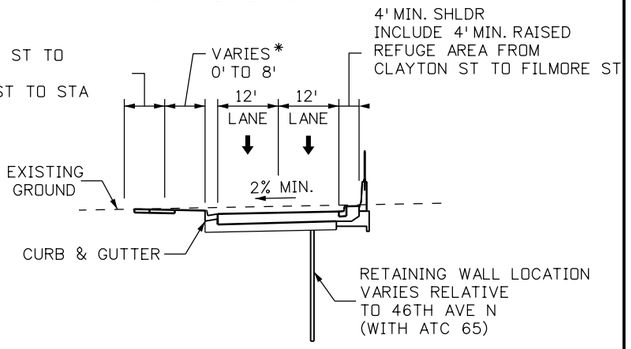
46TH AVE N
JOSEPHINE ST TO COLUMBINE ST
THOMPSON CT TO CLAYTON ST



STAPLETON DR N
STA 2083+00 (I-70) TO DAHLIA ST



STAPLETON DR N
DAHLIA ST TO STA 2167+00 (I-70)



46TH AVE N (COLLECTOR-DISTRIBUTOR ROAD)
CLAYTON ST TO 2083+00 (I-70)

NOTES:
1. SEE ROADWAY PLANS FOR CENTER TURN LANE LOCATIONS.
2. STAPLETON DR N BETWEEN DAHLIA ST AND STA 2167+00 (I-70) REQUIRES AN INSIDE SHOULDER ONLY IN LOCATIONS WHERE TRAVEL LANE IS ADJACENT TO A BARRIER. AT ALL OTHER LOCATIONS PROVIDE CURB AND GUTTER.
3. SIDEWALK AND TREE LAWN DESIGN AT STAPLETON DR N BETWEEN DAHLIA ST AND STA 2167+00 (I-70)

DAHLIA ST TO E 46TH AVE	8' ATTACHED SDWK
E 46TH AVE TO FOREST ST	8' TREE LAWN WITH 5' SDWK
FOREST ST TO GLENCOE ST	6' ATTACHED SDWK
GLENCOE ST TO GRAPE ST	5.5' TREE LAWN WITH 5' SDWK
GRAPE ST TO IVY ST	5' ATTACHED SDWK
IVY ST TO STA 2167+00 (I-70)	5.5' TREE LAWN WITH 5' SIDEWALK

4. SEE TYPICAL SECTION PAVEMENT SECTION DETAIL SHEET FOR PAVEMENT MATERIAL TYPES AND THICKNESSES.
5. SEE ROADWAY PROFILES FOR SUPERELEVATION INFORMATION.
6. SEE DRAINAGE PLANS FOR DITCH LOCATIONS AND DETAILS.

* SIDEWALK CHANGE ASSOCIATED WITH ATC 65.

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Unit Information
Unit Leader
Front Range Mobility Group

Sheet Revisions

Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
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Region 1 KJS

PROPOSAL
No Revisions:
Revised:
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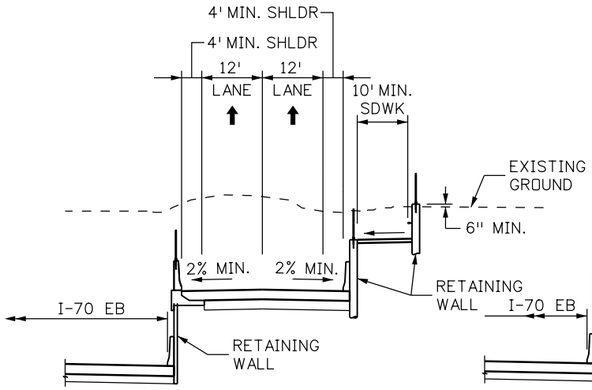
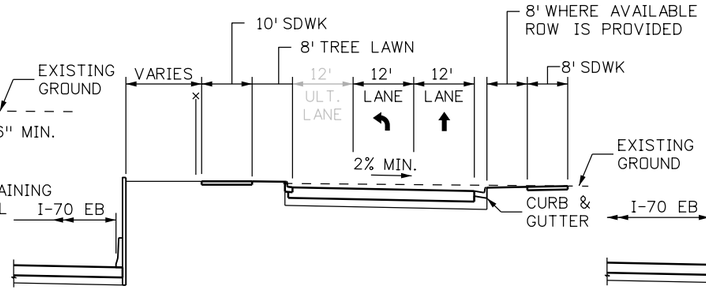
CENTRAL 70
TYPICAL SECTIONS
46TH AVE N AND STAPLETON DR N

Designer:
Detailer:
Sheet Subset: TYP SEC
Structure Numbers
Subset Sheets: TS5 of 19

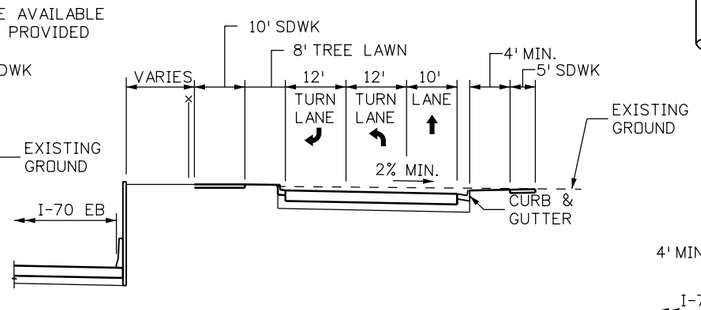
Project No./Code
FBR 0704-234
19631
Sheet Number 321



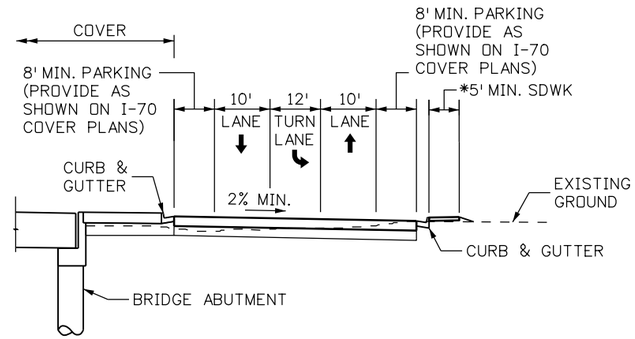
46TH AVE S
BRIGHTON BLVD TO YORK ST



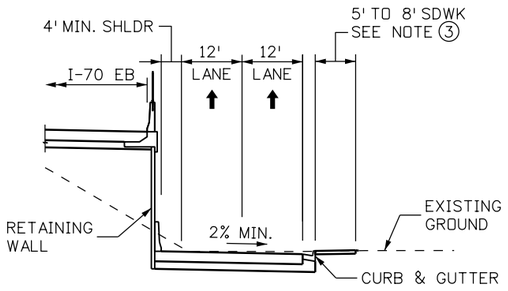
46TH AVE S
YORK ST TO JOSEPHINE ST



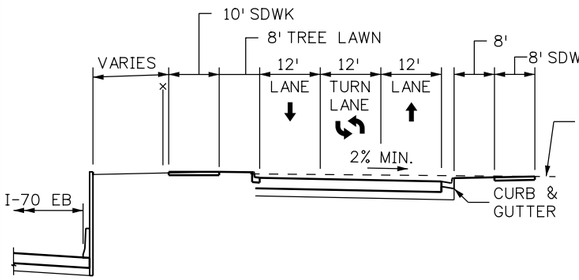
46TH AVE S
JOSEPHINE ST TO COLUMBINE ST



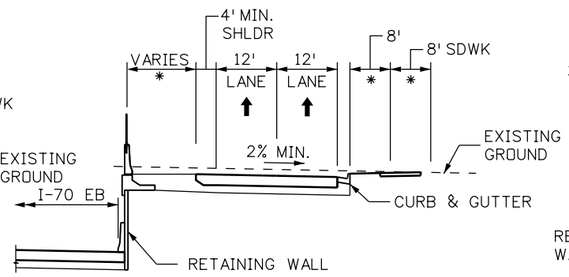
46TH AVE S
COLUMBINE ST TO CLAYTON ST
*MAXIMIZE SIDEWALK WIDTH WITHIN ROW
AND PROVIDE 8' TREE LAWN OUTSIDE
PARKING AREA



STAPLETON DR S
DAHLIA ST TO 2162+00 (I-70)



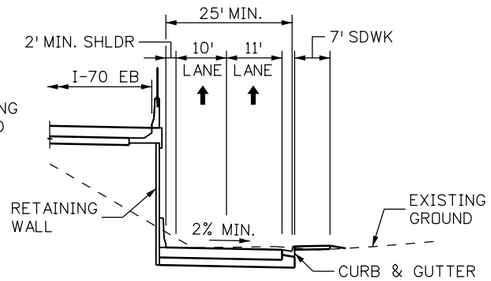
46TH AVE S
CLAYTON ST TO STEELE ST



46TH AVE S (COLLECTOR-DISTRIBUTOR ROAD)
STEELE ST TO STA 2083+00 (I-70)
PROVIDE 6' TREE LAWN NEAR GARFIELD ST
BETWEEN MONROE ST AND COLORADO BLVD

* AS PART OF ATC 65, A 10' SIDEWALK IS PROPOSED ON THE NORTH SIDE OF 46TH FROM STEELE ST TO MONROE ST FOR ACCESS TO FUTURE COVER. TREE LAWN WIDTH VARIES.

* AS PART OF ATC 65, THE SIDEWALK SOUTH OF 46TH IS 10' FROM STEELE TO MONROE. THE SIDEWALK IS ATTACHED FROM MADISON TO MONROE.



STAPLETON DR S
STA 2083+00 (I-70) TO DAHLIA ST

NOTE:
1. SEE ROADWAY PLANS FOR CENTER TURN LANE LOCATIONS.
2. SHOULDER REQUIRED ONLY IN LOCATIONS WHERE TRAVEL LANE IS ADJACENT TO A BARRIER.
3. DAHLIA ST TO FOREST ST — 8' TREE LAWN, 5' SDWK
   FOREST ST TO HOLLY ST — *8' SDWK
   IVY TO KEARNEY ST — 5' SDWK
   KEARNEY ST TO STA 2162+00 (I-70) — 8' SDWK
   STA 2162+00 (I-70) TO AIRLAWN RD — 5' SDWK

   *6' SDWK WHERE APPROVED WEST OF HOLLY ST TO REDUCE IMPACTS TO PRIVATE PROPERTY
4. SEE TYPICAL SECTION PAVEMENT SECTION DETAIL SHEET FOR PAVEMENT MATERIAL TYPES AND THICKNESSES.
5. SEE ROADWAY PROFILES FOR SUPERELEVATION INFORMATION.
6. SEE DRAINAGE PLANS FOR DITCH LOCATIONS AND DETAILS.

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Unit Information
Unit Leader

Front Range Mobility Group

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Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
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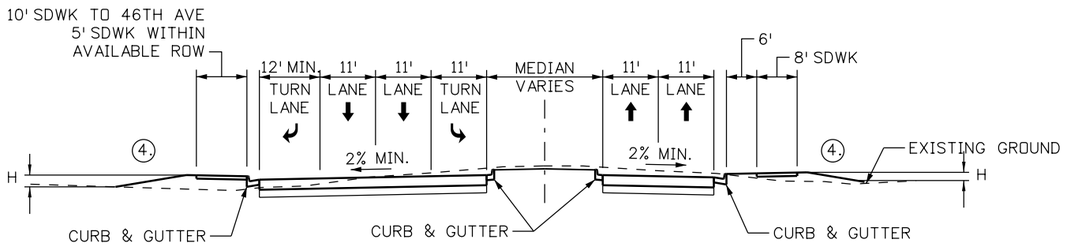
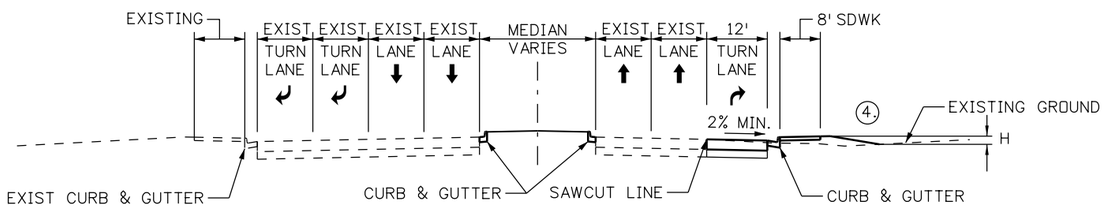
CENTRAL 70
TYPICAL SECTIONS
46TH AVE S AND STAPLETON DR S

Designer:
Detailer:
Sheet Subset: TYP SEC
Structure Numbers
Subset Sheets: TS6 of 19

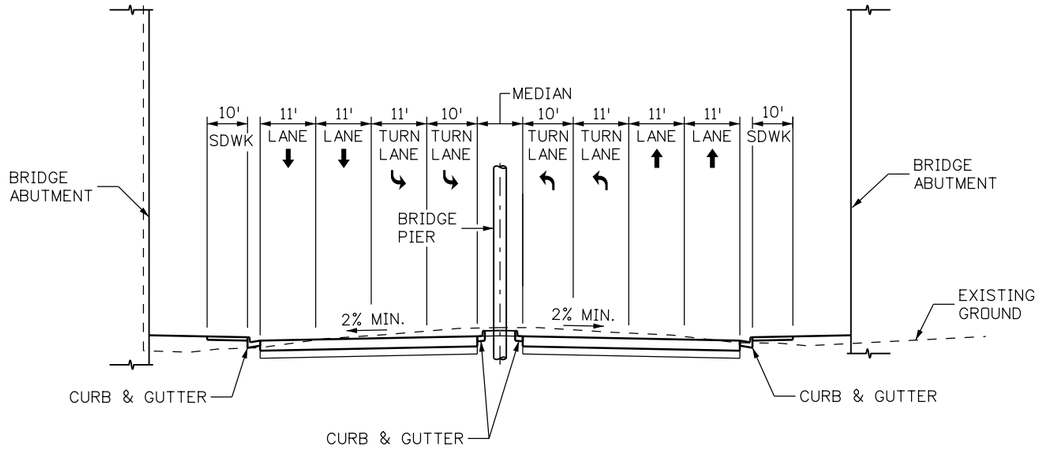
Project No./Code
FBR 0704-234
19631
Sheet Number 322



BRIGHTON BLVD
NORTH OF I-70

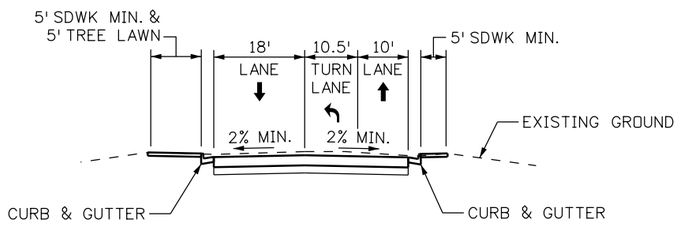


BRIGHTON BLVD
SOUTH OF I-70

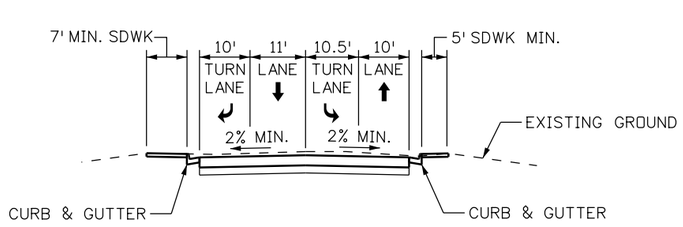


BRIGHTON BLVD
UNDER I-70

Slope	Fill Height	Cut
6:1	<4'	NA
4:1	4'<15'	If Can Tie To Existing Ground Within ROW
3:1	>15'	To Stay Inside of ROW
3:1	To Stay Inside of ROW	



47TH AVE
WEST OF BRIGHTON BLVD.
(LOOKING EAST)



47TH AVE
EAST OF BRIGHTON BLVD
(LOOKING EAST)

NOTE:
1. SEE TYPICAL SECTION PAVEMENT SECTION DETAIL SHEET FOR PAVEMENT MATERIAL TYPES AND THICKNESSES.
2. SEE ROADWAY PROFILES FOR SUPERELEVATION INFORMATION.
3. SEE DRAINAGE PLANS FOR DITCH LOCATIONS AND DETAILS.
4. SLOPE, SEE TABLE.

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Unit Information
Unit Leader

Front Range Mobility Group

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Date:	Comments	Init.

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2000 South Holly Street
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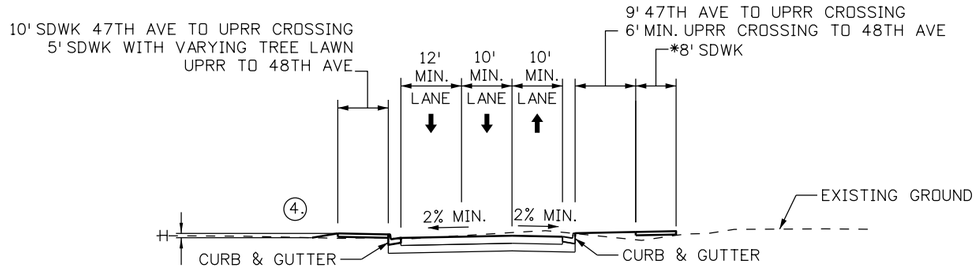
CENTRAL 70
TYPICAL SECTIONS
BRIGHTON BLVD AND 47TH AVE

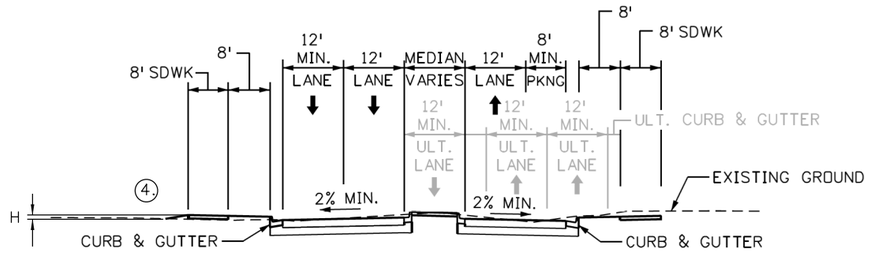
Designer:
Detailer:
Sheet Subset: TYP SEC
Structure Numbers:
Subset Sheets: TS7 of 19

Project No./Code
FBR 0704-234
19631
Sheet Number 323



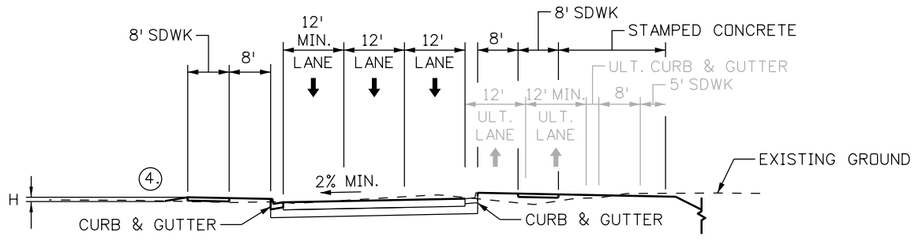
YORK ST

47TH AVE TO 48TH AVE
*MAXIMIZE SIDEWALK WIDTH WITHIN ROW,
6' SDWK PERMISSIBLE WITHIN ROW CONSTRAINTS



YORK ST

NORTH OF I-70 MAINLINE TO 47TH AVE



Slope	Fill Height	Cut
6:1	<4'	NA
4:1	4'<15'	If Can Tie To Existing Ground Within ROW
3:1	>15'	To Stay Inside of ROW
3:1	To Stay Inside of ROW	

YORK ST

SOUTH OF I-70 MAINLINE

NOTE:
1. SEE TYPICAL SECTION PAVEMENT SECTION DETAIL SHEET FOR PAVEMENT MATERIAL TYPES AND THICKNESSES.
2. SEE ROADWAY PROFILES FOR SUPERELEVATION INFORMATION.
3. SEE DRAINAGE PLANS FOR DITCH LOCATIONS AND DETAILS.

(4.) SLOPE, SEE TABLE.

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Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

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2000 South Holly Street
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Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
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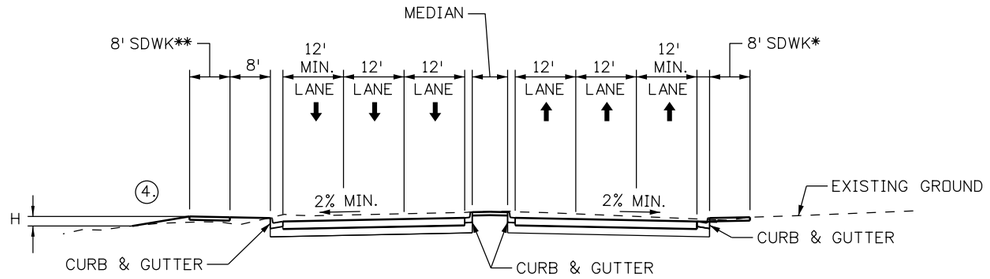
CENTRAL 70
TYPICAL SECTIONS
YORK ST

Designer:
Detailer:
Sheet Subset: TYP SEC
Structure Numbers
Subset Sheets: TS8 of 19

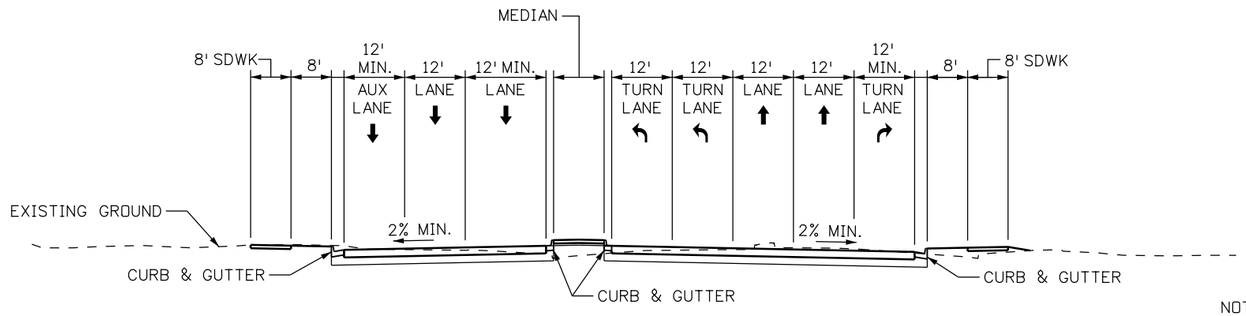
Project No./Code
FBR 0704-234
19631
Sheet Number 324



VASQUEZ BLVD

*8' SDWK WITH 8' TREE LAWN WHERE ROW IS AVAILABLE
**8' ATTACHED SDWK NORTH OF 47TH AVE

Slope	Fill Height	Cut
6:1	<4'	NA
4:1	4'<15'	If Can Tie To Existing Ground Within ROW
3:1	>15'	To Stay Inside of ROW
3:1	To Stay Inside of ROW	



STEELE ST

NOTE:
1. SEE TYPICAL SECTION PAVEMENT SECTION DETAIL SHEET FOR PAVEMENT MATERIAL TYPES AND THICKNESSES.
2. SEE ROADWAY PROFILES FOR SUPERELEVATION INFORMATION.
3. SEE DRAINAGE PLANS FOR DITCH LOCATIONS AND DETAILS.

(4.) SLOPE, SEE TABLE.

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Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions

Date:	Comments	Init.

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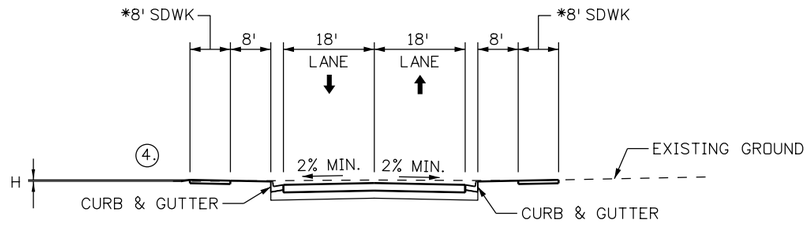
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
TYPICAL SECTIONS
STEELE ST/VASQUEZ BLVD

Designer:
Detailer:
Sheet Subset: TYP SEC
Structure Numbers
Subset Sheets: TS9 of 19

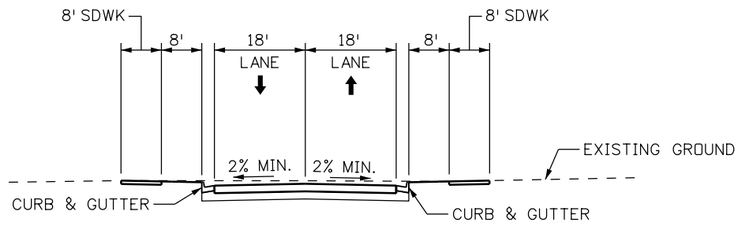
Project No./Code
FBR 0704-234
19631
Sheet Number 325



COOK ST

*PROVIDE SIDEWALK SOUTH OF I-70 ONLY

Slope	Fill Height	Cut
6:1	<4'	NA
4:1	4'<15'	If Can Tie To Existing Ground Within ROW
3:1	>15'	To Stay Inside of ROW
3:1	To Stay Inside of ROW	



MONROE ST

NOTE:
1. SEE TYPICAL SECTION PAVEMENT SECTION DETAIL SHEET FOR PAVEMENT MATERIAL TYPES AND THICKNESSES.
2. SEE ROADWAY PROFILES FOR SUPERELEVATION INFORMATION.
3. SEE DRAINAGE PLANS FOR DITCH LOCATIONS AND DETAILS.

(4.) SLOPE, SEE TABLE.

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Unit Information
Unit Leader

Front Range Mobility Group

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Date:	Comments	Init.

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Region 1 KJS

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No Revisions:
Revised:
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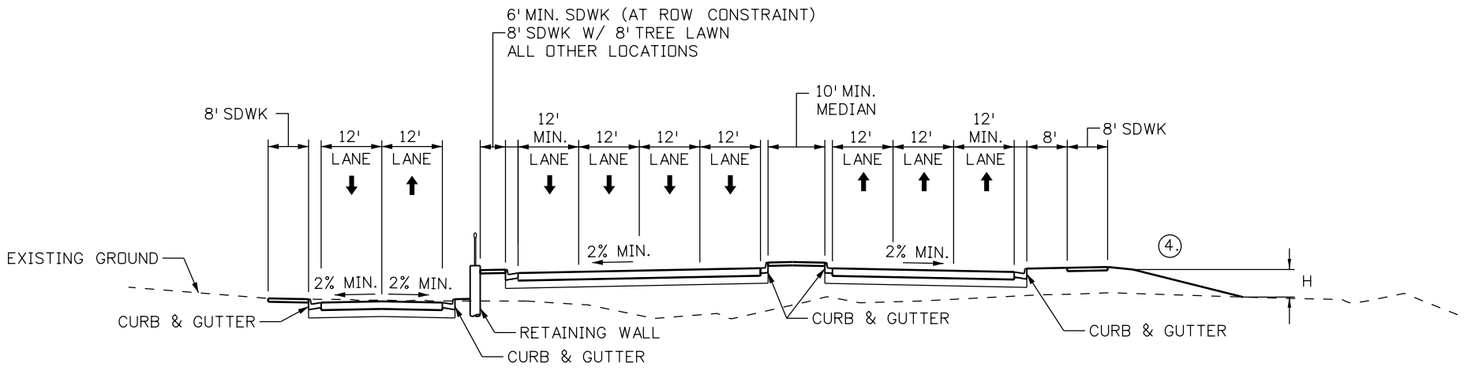
CENTRAL 70
TYPICAL SECTIONS
COOK STREET & MONROE STREET

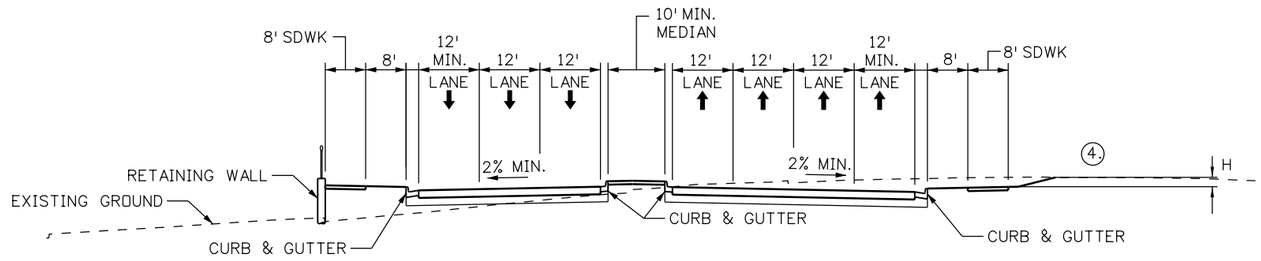
Designer:
Detailer:
Sheet Subset: TYP SEC
Structure Numbers
Subset Sheets: TS10 of 19

Project No./Code
FBR 0704-234
19631
Sheet Number 326



COLORADO BLVD
NORTH OF I-70

Slope	Fill Height	Cut
6:1	<4'	NA
4:1	4'<15'	If Can Tie To Existing Ground Within ROW
3:1	>15'	To Stay Inside of ROW
3:1	To Stay Inside of ROW	



COLORADO BLVD
SOUTH OF I-70

NOTE:
1. SEE TYPICAL SECTION PAVEMENT SECTION DETAIL SHEET FOR PAVEMENT MATERIAL TYPES AND THICKNESSES.
2. SEE ROADWAY PROFILES FOR SUPERELEVATION INFORMATION.
3. SEE DRAINAGE PLANS FOR DITCH LOCATIONS AND DETAILS.

(4.) SLOPE, SEE TABLE.

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Print Date: 5/19/2017
File Name: See sheet edge for information
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Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions

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2000 South Holly Street
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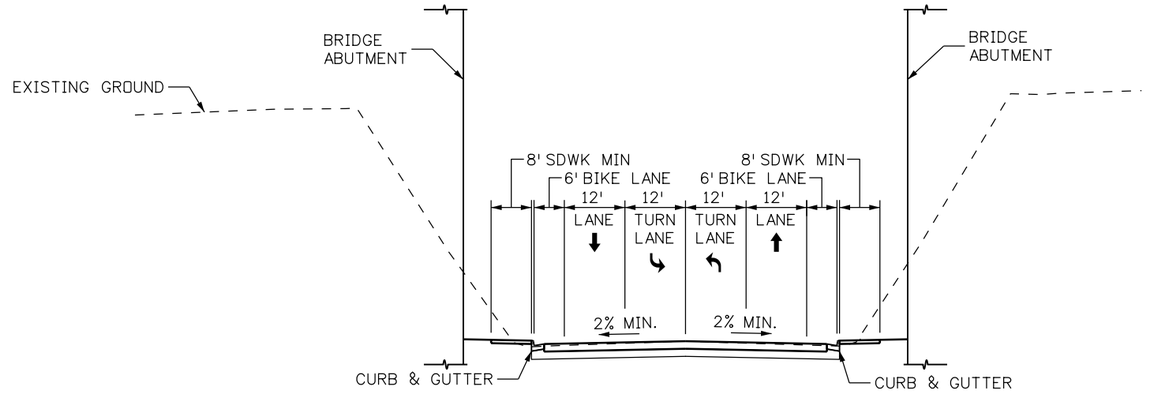
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
TYPICAL SECTIONS
COLORADO BLVD

Designer:
Detailer:
Sheet Subset: TYP SEC
Structure Numbers
Subset Sheets: TS11 of 19

Project No./Code
FBR 0704-234
19631
Sheet Number 327



DAHLIA ST
UNDER I-70

NOTE:
1. SEE TYPICAL SECTION PAVEMENT SECTION DETAIL SHEET FOR PAVEMENT MATERIAL TYPES AND THICKNESSES.
2. SEE ROADWAY PROFILES FOR SUPERELEVATION INFORMATION.
3. SEE DRAINAGE PLANS FOR DITCH LOCATIONS AND DETAILS.

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Print Date: 5/19/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

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Denver, CO 80222
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Region 1 KJS

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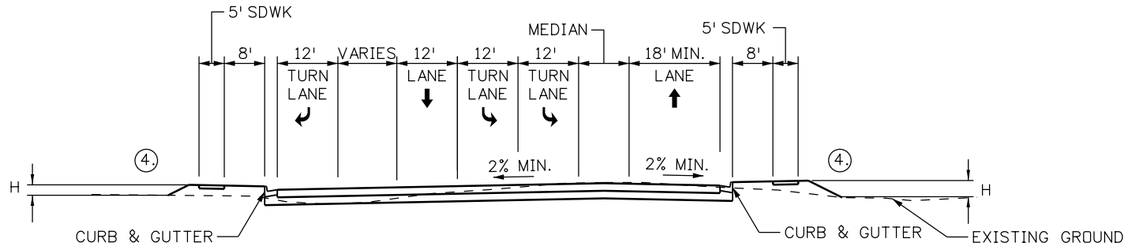
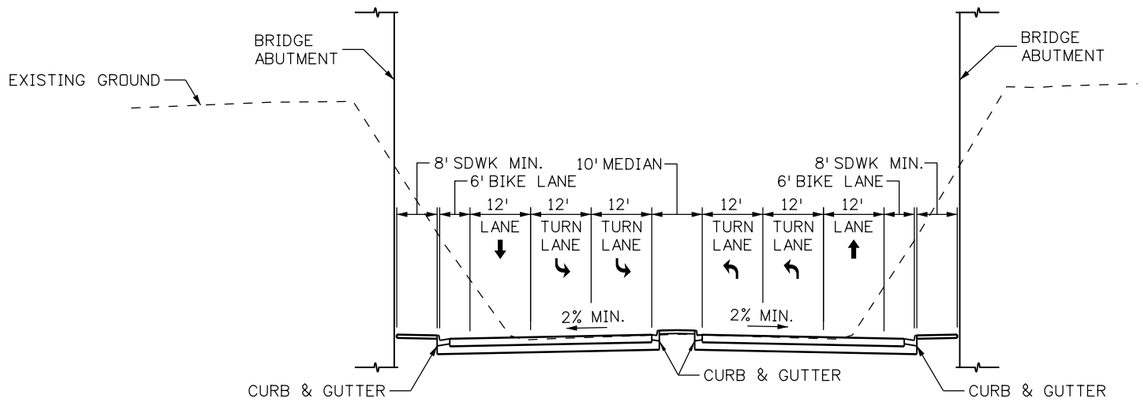
CENTRAL 70
TYPICAL SECTIONS
DAHLIA ST

Designer:
Detailer:
Sheet Subset: TYP SEC
Structure Numbers
Subset Sheets: TS12 of 19

Project No./Code
FBR 0704-234
19631
Sheet Number 328

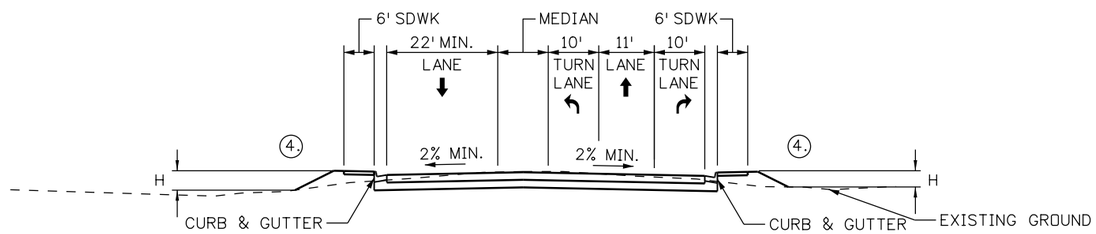


HOLLY ST
NORTH OF I-70



HOLLY ST
UNDER I-70

Slope	Fill Height	Cut
6:1	<4'	NA
4:1	4'<15'	If Can Tie To Existing Ground Within ROW
3:1	>15'	To Stay Inside of ROW
3:1	To Stay Inside of ROW	



HOLLY ST
SOUTH OF I-70

NOTE:
1. SEE TYPICAL SECTION PAVEMENT SECTION DETAIL SHEET FOR PAVEMENT MATERIAL TYPES AND THICKNESSES.
2. SEE ROADWAY PROFILES FOR SUPERELEVATION INFORMATION.
3. SEE DRAINAGE PLANS FOR DITCH LOCATIONS AND DETAILS.
4. SLOPE, SEE TABLE.

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Print Date: 5/19/2017
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Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
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Region 1 KJS

PROPOSAL
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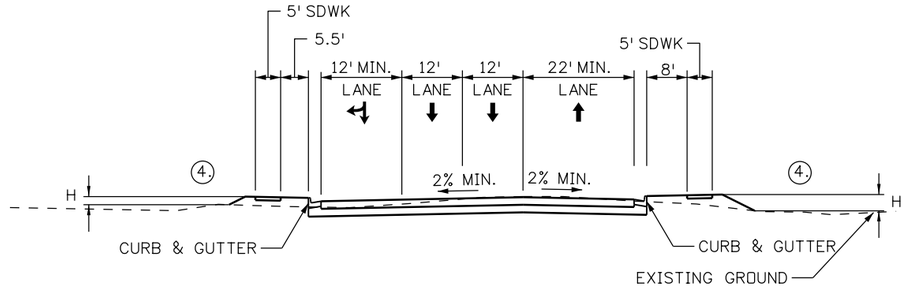
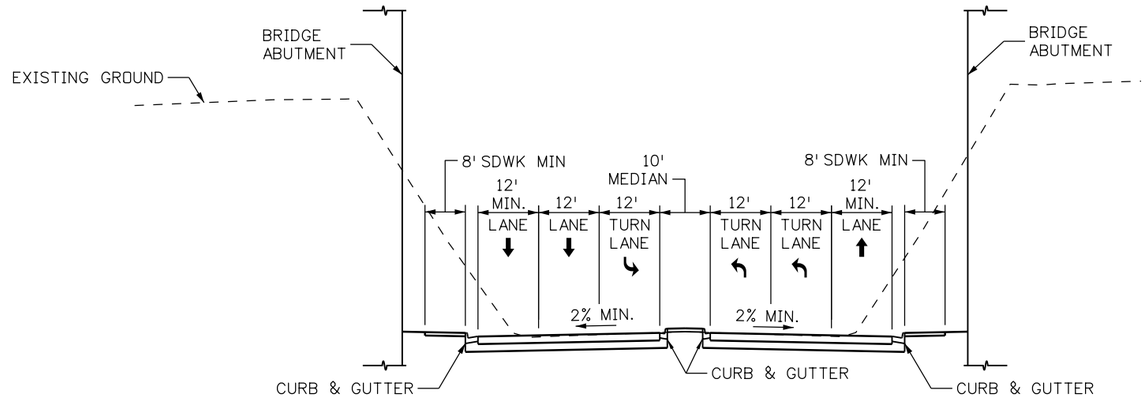
CENTRAL 70
TYPICAL SECTIONS
HOLLY ST

Designer:
Detailer:
Sheet Subset: TYP SEC
Structure Numbers
Subset Sheets: TSI3 of 19

Project No./Code
FBR 0704-234
19631
Sheet Number 329

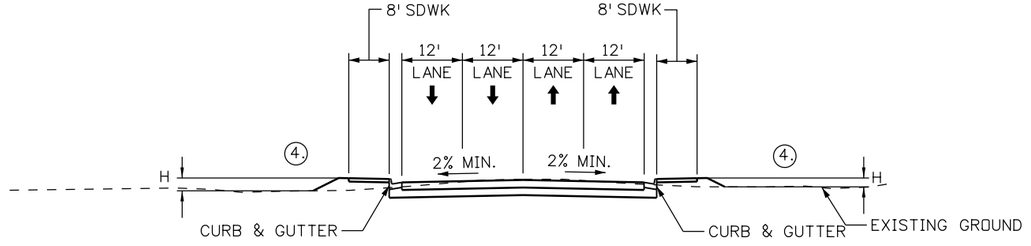


MONACO ST
NORTH OF I-70



MONACO ST
UNDER I-70

Slope	Fill Height	Cut
6:1	<4'	NA
4:1	4'<15'	If Can Tie To Existing Ground Within ROW
3:1	>15'	To Stay Inside of ROW
3:1	To Stay Inside of ROW	



MONACO ST
SOUTH OF I-70

NOTE:
1. SEE TYPICAL SECTION PAVEMENT SECTION DETAIL SHEET FOR PAVEMENT MATERIAL TYPES AND THICKNESSES.
2. SEE ROADWAY PROFILES FOR SUPERELEVATION INFORMATION.
3. SEE DRAINAGE PLANS FOR DITCH LOCATIONS AND DETAILS.

(4.) SLOPE, SEE TABLE.

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Print Date: 5/19/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

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2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
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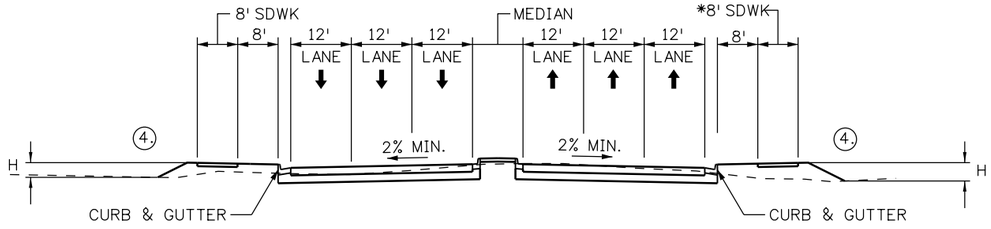
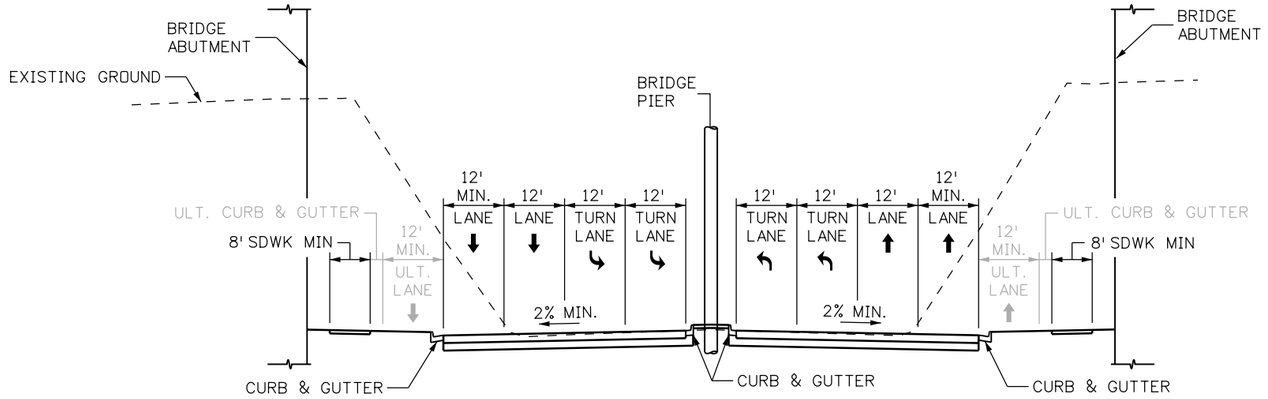
CENTRAL 70
TYPICAL SECTIONS
MONACO ST

Designer:
Detailer:
Sheet Subset: TYP SEC
Structure Numbers
Subset Sheets: TS14 of 19

Project No./Code
FBR 0704-234
19631
Sheet Number 330

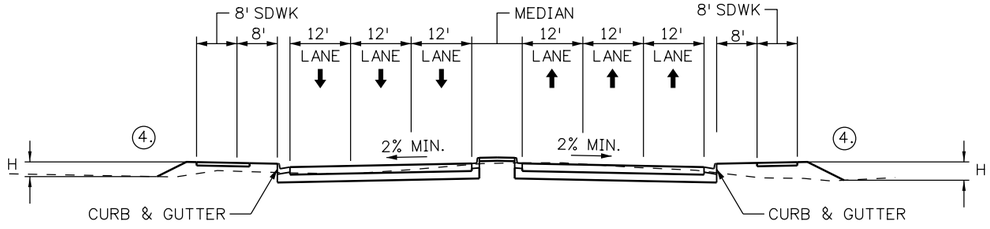


QUEBEC ST
NORTH OF I-70
*TERMINATE SIDEWALK AT THE CONNECTION WITH THE SAND CREEK TRAIL



QUEBEC ST
UNDER I-70

Slope	Fill Height	Cut
6:1	<4'	NA
4:1	4'<15'	If Can Tie To Existing Ground Within ROW
3:1	>15'	To Stay Inside of ROW
3:1	To Stay Inside of ROW	



QUEBEC ST
SOUTH OF I-70

NOTE:
1. SEE TYPICAL SECTION PAVEMENT SECTION DETAIL SHEET FOR PAVEMENT MATERIAL TYPES AND THICKNESSES.
2. SEE ROADWAY PROFILES FOR SUPERELEVATION INFORMATION.
3. SEE DRAINAGE PLANS FOR DITCH LOCATIONS AND DETAILS.

(4.) SLOPE, SEE TABLE.

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Horiz. Scale: As Noted
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Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
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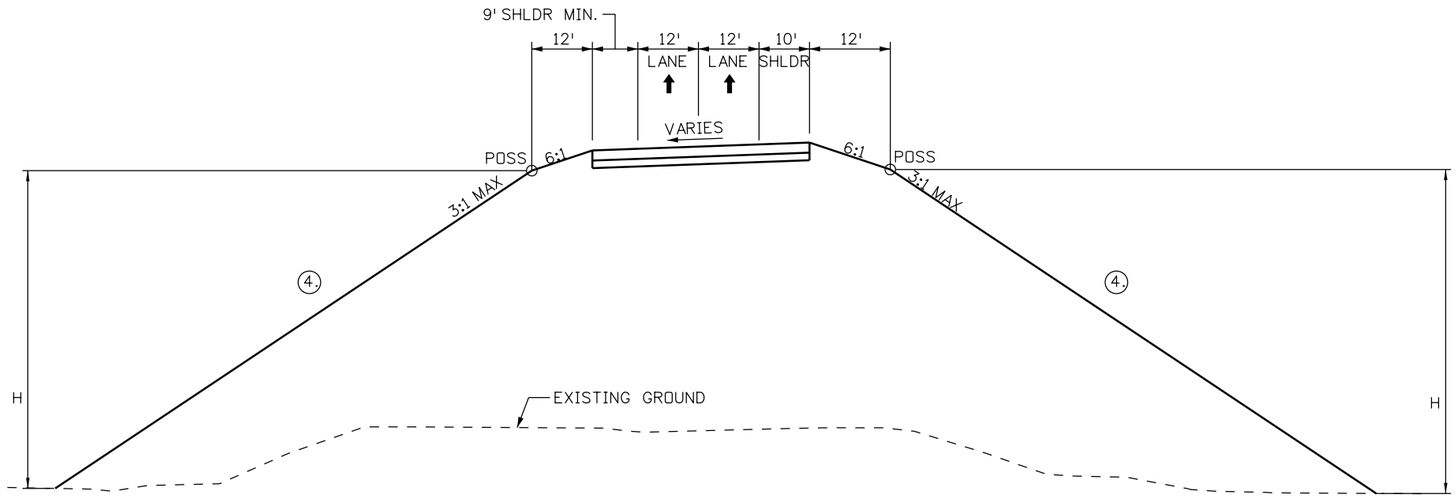
CENTRAL 70
TYPICAL SECTIONS
QUEBEC ST

Designer:
Detailer:
Sheet Subset: TYP SEC
Structure Numbers
Subset Sheets: TS15 of 19

Project No./Code
FBR 0704-234
19631
Sheet Number 331



Slope	Fill Height	Cut
6:1	<4'	NA
4:1	4'<15'	If Can Tie To Existing Ground Within ROW
3:1	>15'	To Stay Inside of ROW
3:1	To Stay Inside of ROW	

I-270 EB CONNECTOR

NOTE:
1. SEE TYPICAL SECTION PAVEMENT SECTION DETAIL SHEET FOR PAVEMENT MATERIAL TYPES AND THICKNESSES.
2. SEE ROADWAY PROFILES FOR SUPERELEVATION INFORMATION.
3. SEE DRAINAGE PLANS FOR DITCH LOCATIONS AND DETAILS.

(4.) SLOPE, SEE TABLE.

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Unit Information
Unit Leader

Front Range Mobility Group

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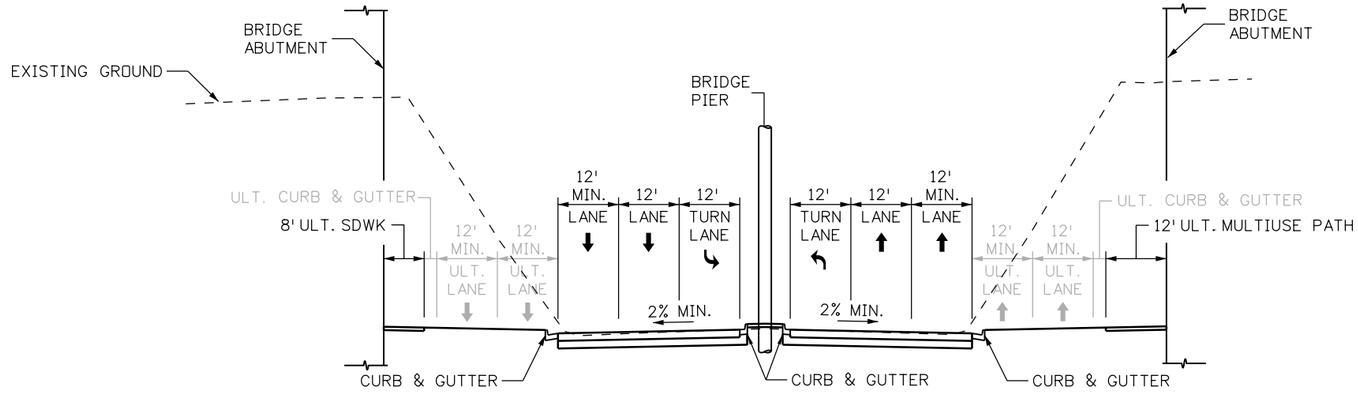
CENTRAL 70
TYPICAL SECTIONS
I-270 EB CONNECTOR

Designer:
Detailer:
Sheet Subset: TYP SEC
Structure Numbers
Subset Sheets: TS16 of 19

Project No./Code
FBR 0704-234
19631
Sheet Number 332



PEORIA ST
UNDER I-70

NOTES:
1. SECOND LEFT TURN LANE, IN EACH DIRECTION, MAY BE DEVELOPED BEYOND THE LIMITS OF THE BRIDGE PIER.
2. SEE TYPICAL SECTION PAVEMENT SECTION DETAIL SHEET FOR PAVEMENT MATERIAL TYPES AND THICKNESSES.
3. SEE ROADWAY PROFILES FOR SUPERELEVATION INFORMATION.
4. SEE DRAINAGE PLANS FOR DITCH LOCATIONS AND DETAILS.

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Unit Information
Unit Leader

Front Range Mobility Group

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Date:	Comments	Init.

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Region 1 KJS

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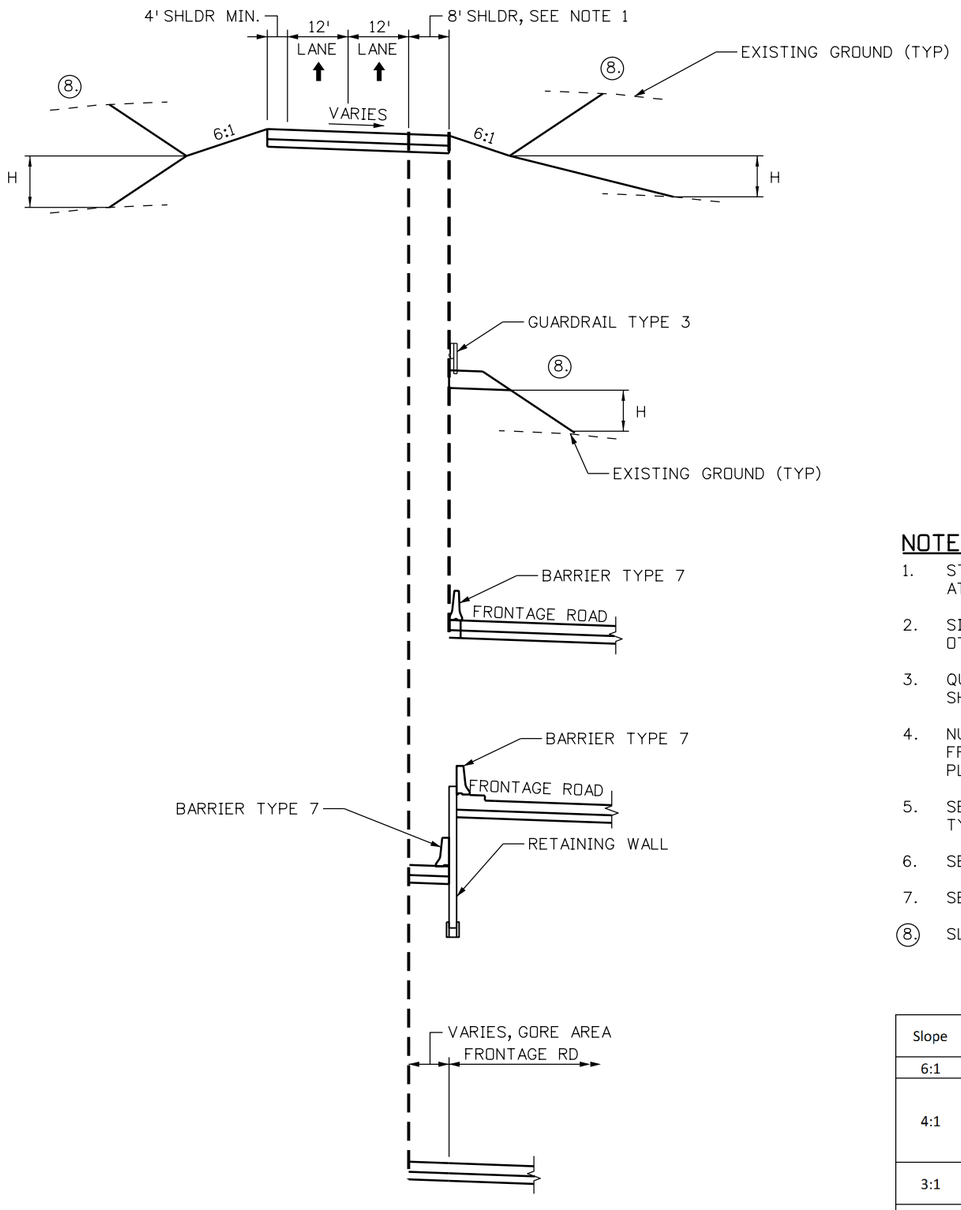
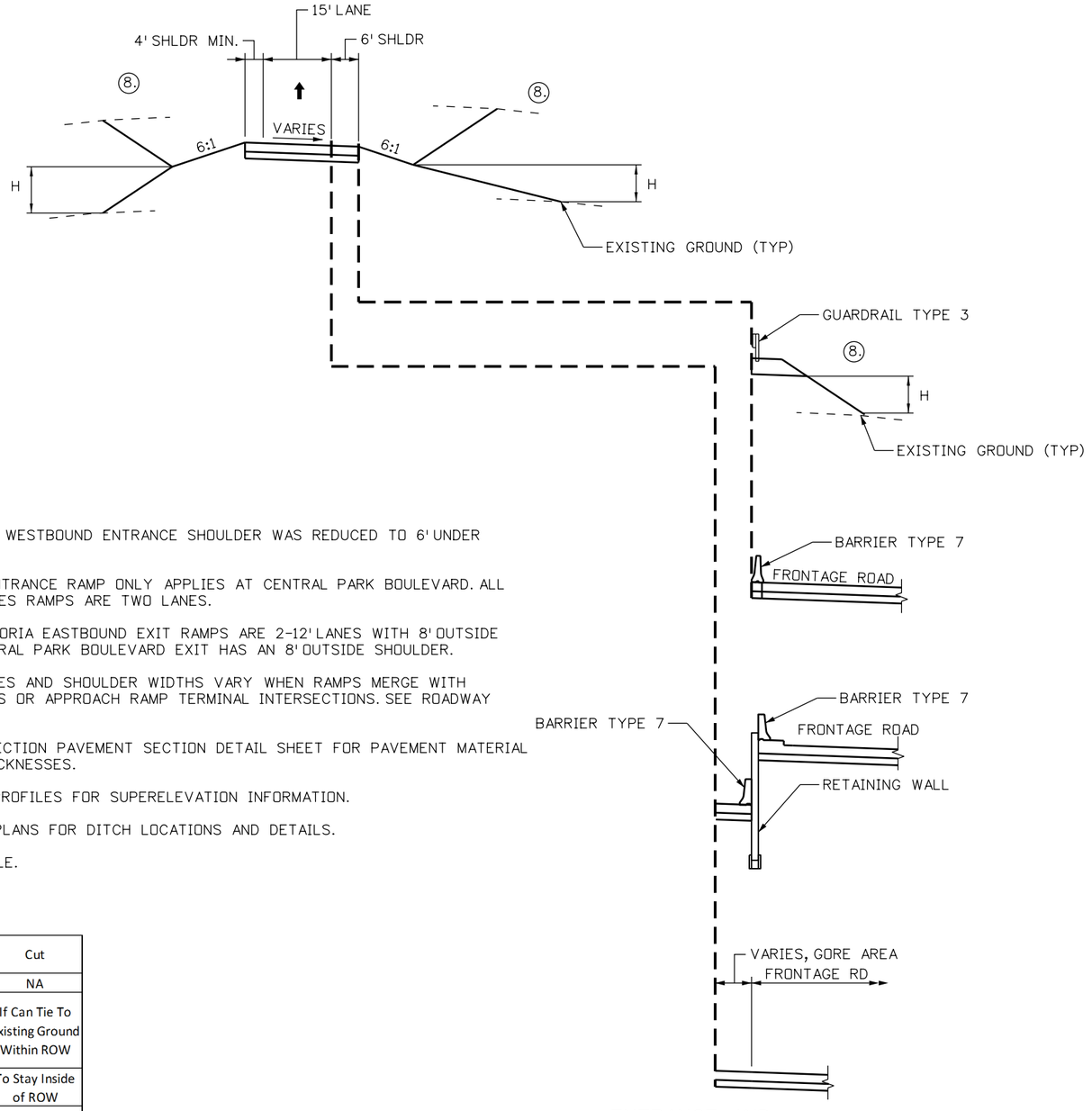
CENTRAL 70
TYPICAL SECTIONS
PEORIA ST

Designer:
Detailer:
Sheet Subset: TYP SEC
Structure Numbers
Subset Sheets: TS17 of 19

Project No./Code
FBR 0704-234
19631
Sheet Number 333



ENTRANCE RAMP TYPICAL SECTION
2-LANE RAMP



ENTRANCE AND
EXIT RAMP TYPICAL SECTION
1-LANE RAMP
SEE NOTES 2 AND 3

NOTES:

1. STEELE STREET WESTBOUND ENTRANCE SHOULDER WAS REDUCED TO 6' UNDER ATC65.
2. SINGLE LANE ENTRANCE RAMP ONLY APPLIES AT CENTRAL PARK BOULEVARD. ALL OTHER ENTRANCES RAMPS ARE TWO LANES.
3. QUEBEC AND PEORIA EASTBOUND EXIT RAMPS ARE 2-12' LANES WITH 8' OUTSIDE SHOULDER CENTRAL PARK BOULEVARD EXIT HAS AN 8' OUTSIDE SHOULDER.
4. NUMBER OF LANES AND SHOULDER WIDTHS VARY WHEN RAMPS MERGE WITH FRONTAGE ROADS OR APPROACH RAMP TERMINAL INTERSECTIONS. SEE ROADWAY PLANS.
5. SEE TYPICAL SECTION PAVEMENT SECTION DETAIL SHEET FOR PAVEMENT MATERIAL TYPES AND THICKNESSES.
6. SEE ROADWAY PROFILES FOR SUPERELEVATION INFORMATION.
7. SEE DRAINAGE PLANS FOR DITCH LOCATIONS AND DETAILS.

(8.) SLOPE, SEE TABLE.

Slope	Fill Height	Cut
6:1	<4'	NA
4:1	4'<15'	If Can Tie To Existing Ground Within ROW
3:1	>15'	To Stay Inside of ROW
3:1	To Stay Inside of ROW	

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Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
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PROPOSAL
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CENTRAL 70
TYPICAL SECTIONS
RAMPS

Designer:
Detailer:
Sheet Subset: TYP SEC
Structure Numbers
Subset Sheets: TS18 of 19

Project No./Code
FBR 0704-234
19631
Sheet Number 334

Mainline Segments	PCCP Depth (inches)	HMA depth (inches) - includes 2" SMA Surface Course	Aggregate Depth (inches)
Brighton to Colorado	10		6
Colorado to Sand Creek	10		6
Sand Creek to I-270/ Central Park			
Overlay Existing Pavement and shoulders		4	
New Pavement		10.5	6
I-270/ Central Park to Havana			
Overlay Existing Pavement and shoulders		2	
New Pavement		11.75	6
Havana to Peoria			
Overlay Existing Pavement and shoulders		4.5*	
New Pavement		11.75	6
Peoria to I-225			
Overlay Existing Pavement and shoulders		5.25	
New Pavement (EB Auxiliary Lane)		11.75	6
West of I-225 to Chambers			
Preventative Maintenance Areas	As noted on Roadway Plan Sheets		

* 0.5" milling prior to overlay

Ramp Segments	PCCP Depth (inches)	HMA depth (inches)	Aggregate Depth (inches)
Brighton EB Off	8		6
Brighton WB On	8		6
Brighton EB On		7.25	6
Brighton WB Off		7	6
Steele/Vasquez EB Off		7	6
Steele/Vasquez WB On		7.25	6
Colorado EB Off		7	6
Colorado Blvd WB On		7	6
Colorado EB On		7	6
Colorado WB Off		8	6
Holly EB Off		7	6
Holly WB On		7.5	6
Holly EB On		7	6
Holly WB Off		7.25	6
Quebec EB Off		7.5	6
Quebec WB On		7.75	6
Quebec EB On		7.75	6
Quebec WB Off		7.5	6
Central Park EB Off		6.25	6
Central Park WB On		5.75	6
Central Park EB On		6.25	6
Central Park WB Off		6.25	6
Havana EB Off		7.5	6
Havana WB On		7.5	6
Havana EB On		6.5	6
Havana WB Off		7	6
Peoria EB Off		7.5	6
Peoria WB On		8	6
Peoria EB On		6.75	6

Cross Road Segments	Limits	Full Depth HMA on untreated subgrade (inches)	Full Depth PCCP on untreated subgrade (inches)
Brighton Blvd	I-70 to E 47th Ave		11
	I-70 to s/o I-70		11.5
E 47th Ave @ Brighton Blvd	Baldwin Ct to Williams St	12	
Race St	E 46th Ave (N) to E 47th Ave	9	
(New St)	High St to Gaylord St	9	
York St	E 46th Ave (N) to E 47th Ave	12.5	
	E 46th Ave (S) to s/o E 45th Ave	13	
45th St @ York St	York St to w/o Josephine St	9	
Josephine St	E 46th Ave (N) to n/o E 46th Ave (N)	12	
	E 46th Ave (S) to s/o E 46th Ave (S)	13	
Columbine St	E 46th Ave (N) to n/o E 46th Ave (N)	10	
	E 46th Ave (S) to s/o E 46th Ave (S)	10	
Clayton St	E 46th Ave (N) to n/o E 46th Ave (N)	10	
	E 46th Ave (S) to s/o E 46th Ave (S)	10.5	
Fillmore St	E 46th Ave (N) to n/o E 46th Ave (N)	9	
	E 46th Ave (S) to s/o E 46th Ave (S)	10.5	
Milwaukee St	E 46th Ave (N) to n/o E 46th Ave (N)	10	
	E 46th Ave (S) to s/o E 46th Ave (S)	9	
Cook St	E 46th Ave (S) to Cook St	10.5	
(New St)	E 46th Ave (N) to Jackson St	10	
	E 46th Ave (S) to E 45th Ave	10	
	Jackson St to E 46th Ave	10.5	
Dahlia St	Stapleton Dr N to n/o Stapleton Dr N	12.5	
	Stapleton Dr S to s/o Stapleton Dr S	12.5	
Holly St	Stapleton Dr N to n/o Stapleton Dr N	12	
	Stapleton Dr S to s/o Stapleton Dr S	13	
Monaco St	Stapleton Dr N to n/o Stapleton Dr N	9	
	Stapleton Dr S to s/o Stapleton Dr S	12	
Oneida St	Stapleton Dr S to s/o Stapleton Dr S	10	
Peoria St	n/o I-70E ramps to s/o I-70W ramps	13	

CDOT Roadways (With Sections Prescribed)	HMA depth (inches)	Aggregate Depth (inches)
Vasquez Boulevard	7	6
Colorado Boulevard	8	6
Quebec Street	9	6
I-270	13	6

Local Agency Roadways	Limits	Full Depth HMA on untreated subgrade (inches)
46th Ave (North)	York St to Off-ramp	10.5
	Josephine St to York St	12.5
	Columbine St to Josephine St	10.5
	Clayton St to Thompson Ct	10
	Fillmore St to Clayton St	10.5
	Milwaukee St to Fillmore St	12
	Steele St to Milwaukee St	12
	Cook St to Steele St	10.5
	On-ramp to Cook St	12
	Colorado Blvd to On-ramp	12.5
46th Ave (South)	On-Ramp to York St	12
	York St to Josephine St	10
	Josephine St to Columbine St	10
	Columbine St to Clayton St	10
	Clayton St to Filmore St	10
	Fillmore St to Milwaukee St	10
	Milwaukee St to Off-Ramp	10.5
	Steele St to Cook St	10
	Cook St to Off-ramp	10.5
	Off-ramp to Colorado Blvd	12.5
Stapleton Dr N	On-ramp to Monaco St	13
	Monaco St to Off-ramp	13
	Off-ramp to Holly St	13
	Holly St to On-ramp	12
	On-ramp to Forest St	12
	Forest St to Dahlia St	12
	Dahlia St to Colorado Blvd	13.5
Stapleton Dr S	On-Ramp to Dahlia St	13
	Dahlia St to Off-ramp	12
	Off-ramp to Holly St	12
	Holly St to On-ramp	12
	On-ramp to Monaco St	12
	Monaco St to Oneida St	10
	Oneida St to Quebec St	10

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Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions

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Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
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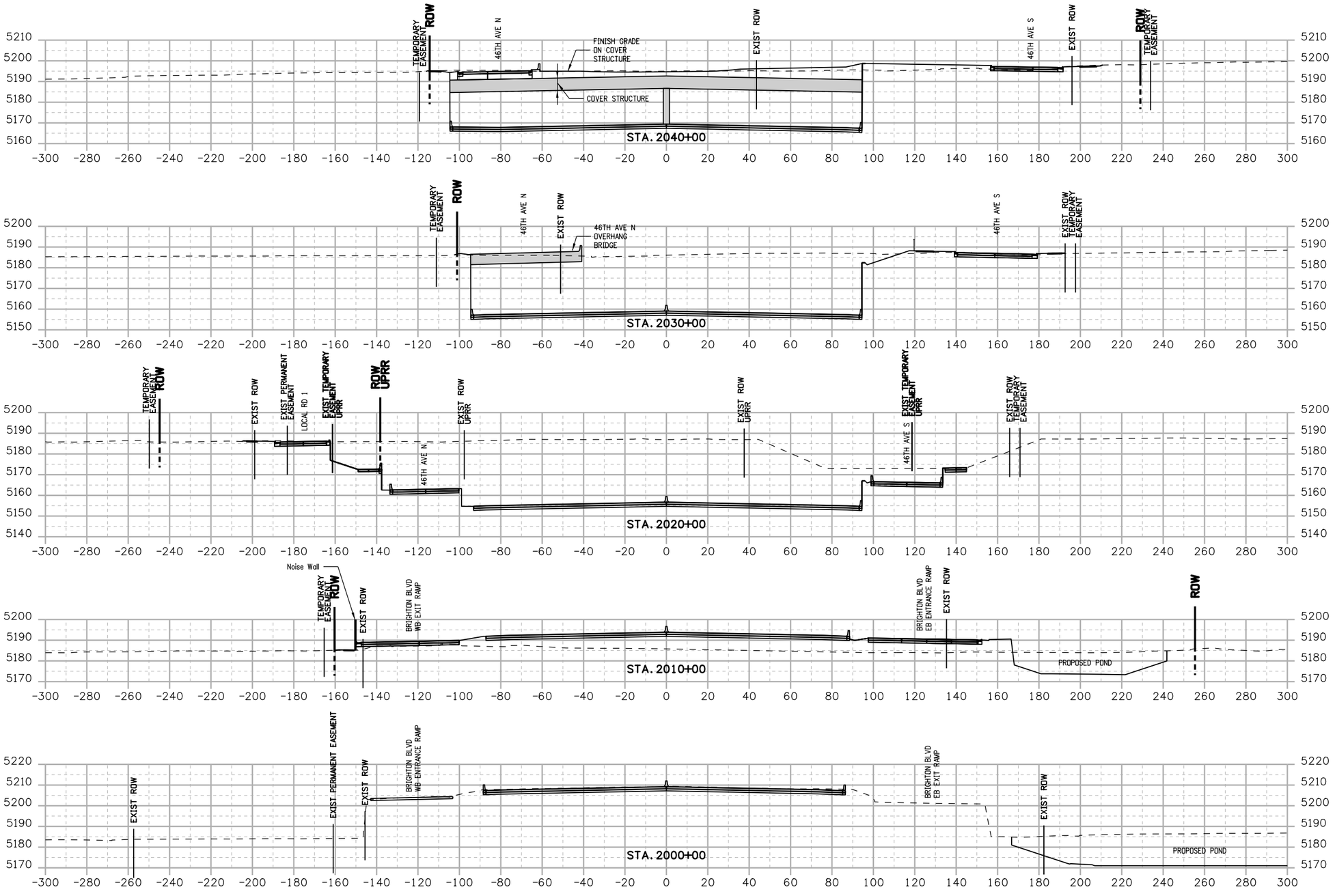
CENTRAL 70
TYPICAL SECTIONS
PAVEMENT SECTION DETAILS

Designer:
Detailer:
Sheet Subset: TYP SEC
Structure Numbers
Subset Sheets: TS19 of 19

Project No./Code
FBR 0704-234
19631
Sheet Number 335



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Print Date: 5/19/2017

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Front Range Mobility Group

Horiz. Scale: As Noted

Vert. Scale: As Noted

Unit Information

Unit Leader

Sheet Revisions		
Date:	Comments	Init.

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2000 South Holly Street
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Phone: 303-757-9934 FAX: 303-757-9907

Region 1 KJS

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CENTRAL 70
ROADWAY
CROSS SECTIONS

Designer:

Detailer:

Sheet Subset: XSEC

Structure Numbers

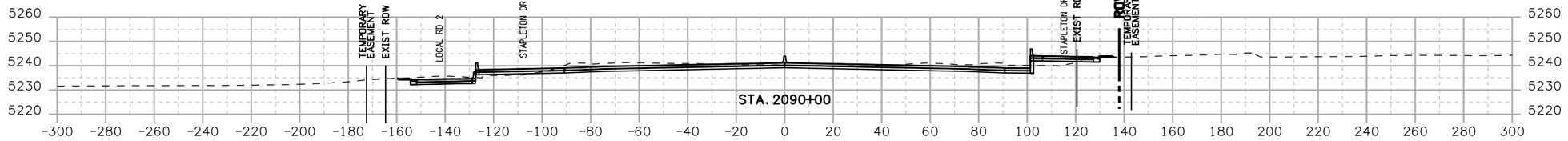
Subset Sheets: XS1 of 9

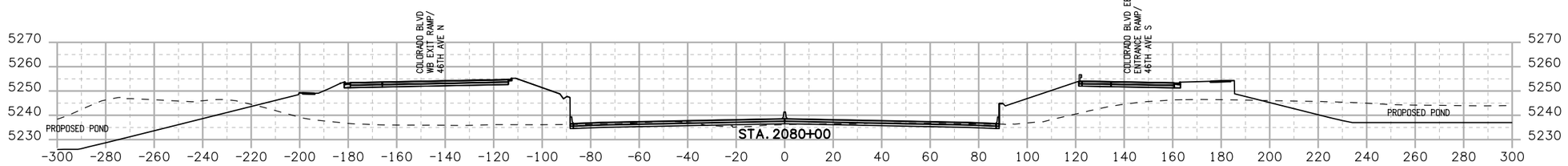
Project No./Code

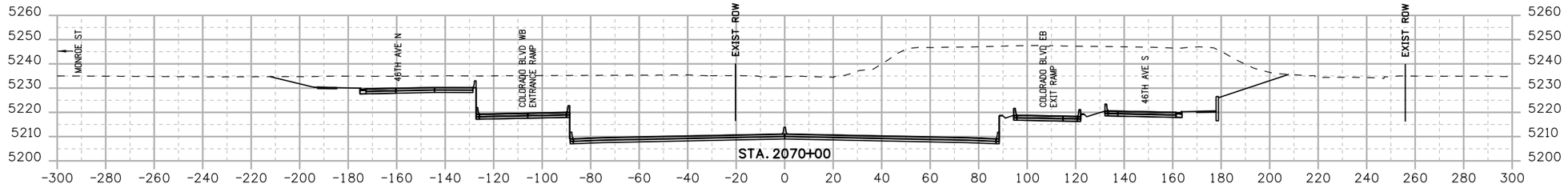
FBR 0704-234

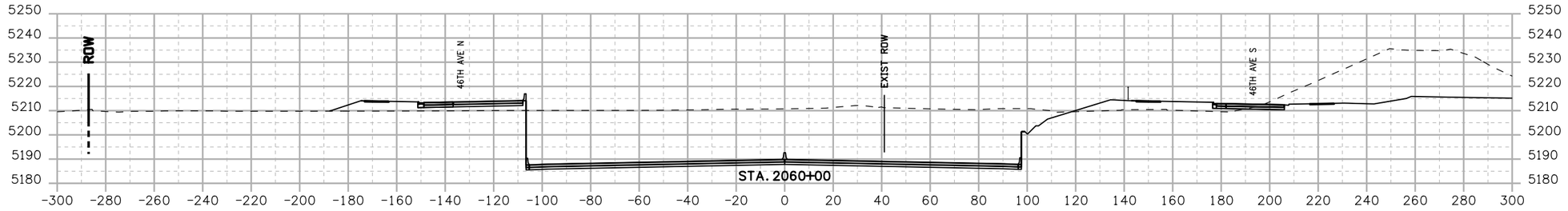
19631

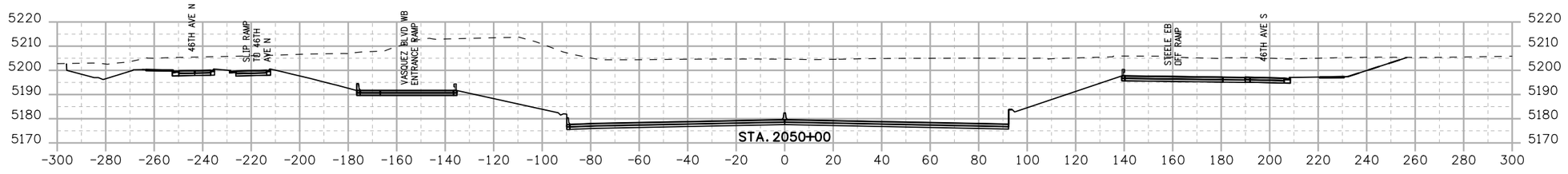
Sheet Number 336











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File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:		FBR 0704-234
Front Range Mobility Group	Horiz. Scale: As Noted					Revised:	Designer:	19631
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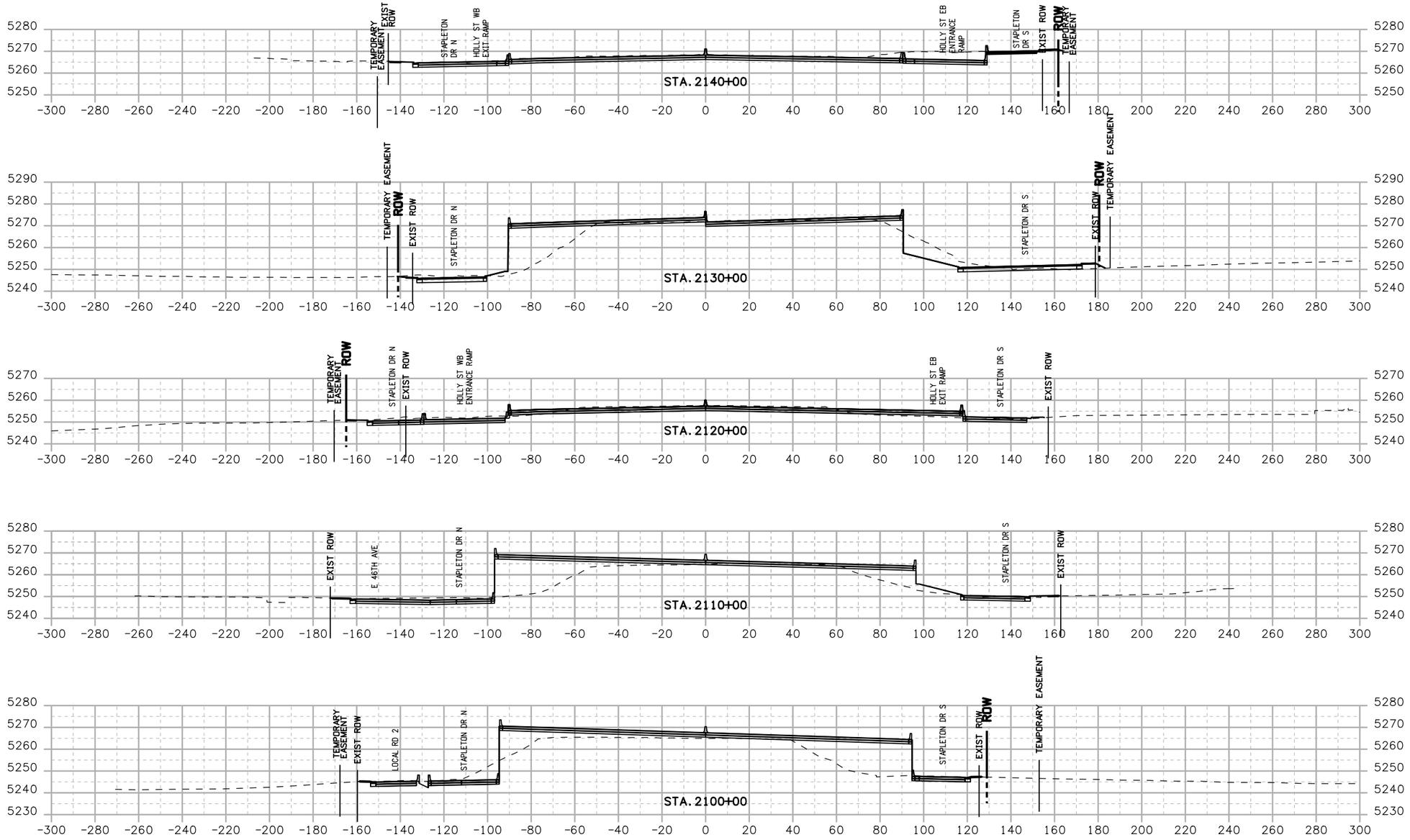
	Unit Leader						Structure Numbers / Subset Sheets: XS2 of 9	



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Front Range Mobility Group

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Unit Information
Unit Leader

Sheet Revisions		
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Region 1 KJS

PROPOSAL
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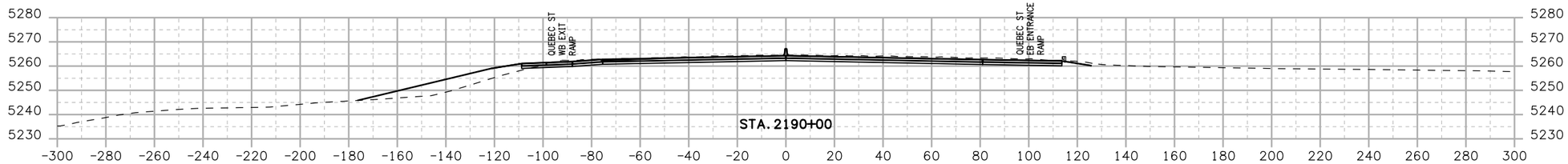
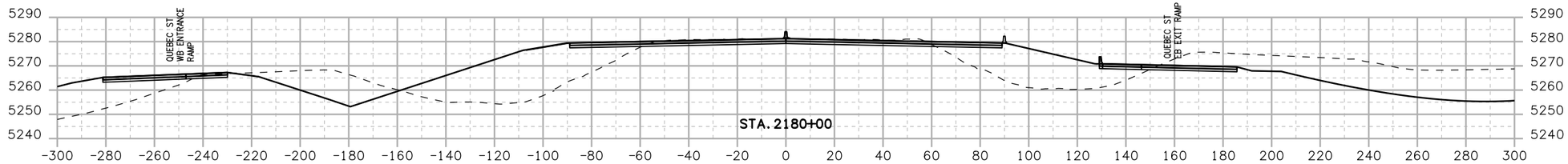
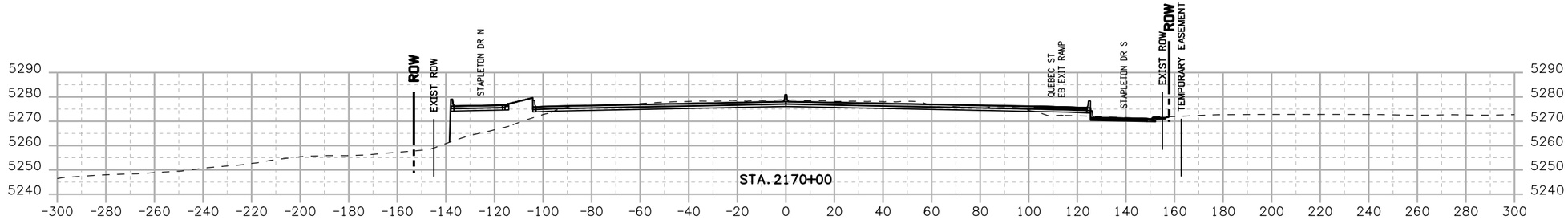
CENTRAL 70
ROADWAY
CROSS SECTIONS

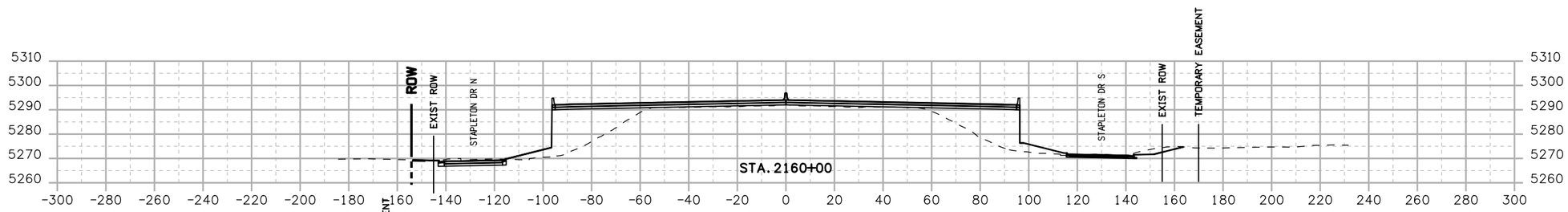
Designer:
Detailer:
Sheet Subset: XSEC
Structure Numbers
Subset Sheets: XS3 of 9

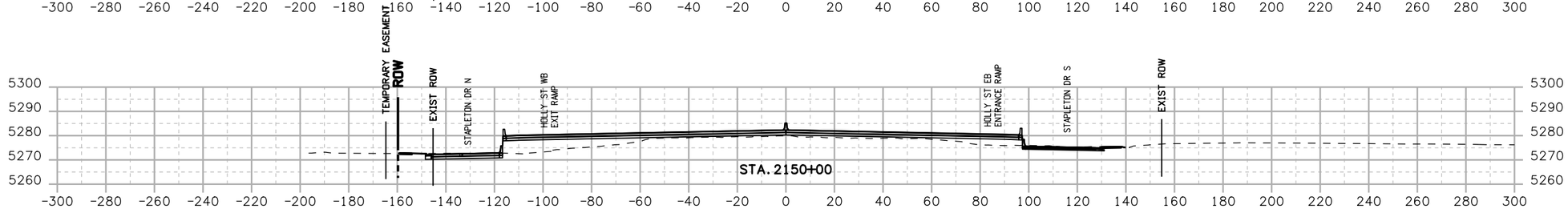
Project No./Code
FBR 0704-234
19631
Sheet Number 338











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Print Date: 5/19/2017			Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 ROADWAY CROSS SECTIONS	Project No./Code
File Name: See sheet edge for information			Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:		FBR 0704-234
Front Range Mobility Group	Horiz. Scale: As Noted	0000					Revised:	Designer:	19631
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	Unit Information					Region 1 KJS	Void:	Sheet Subset: XSEC	Subset Sheets: XS4 of 9
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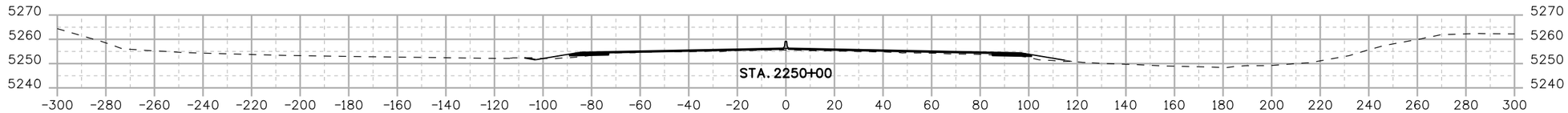

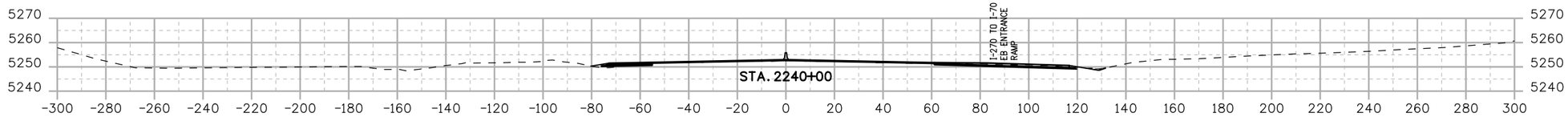

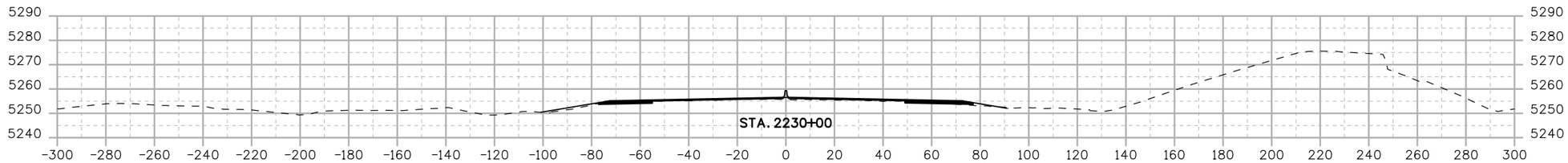

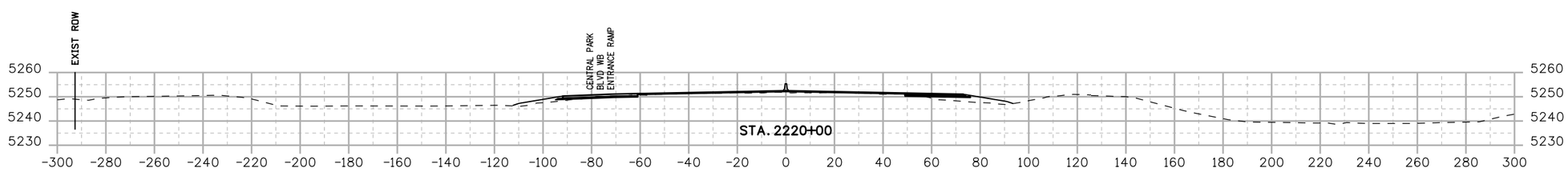

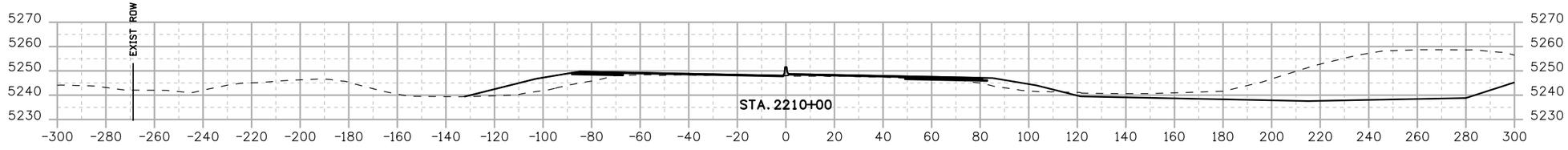

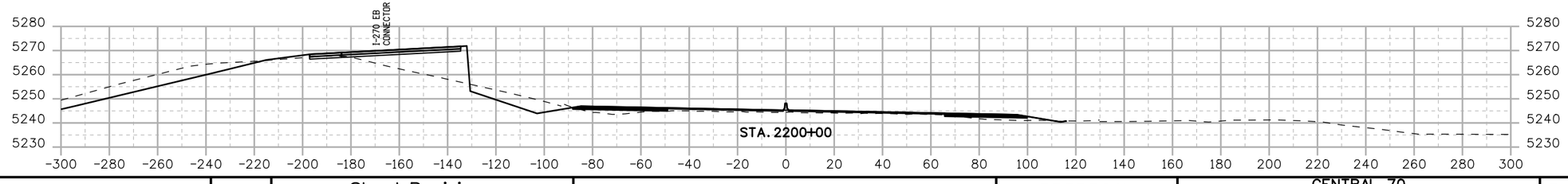

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Print Date: 5/19/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

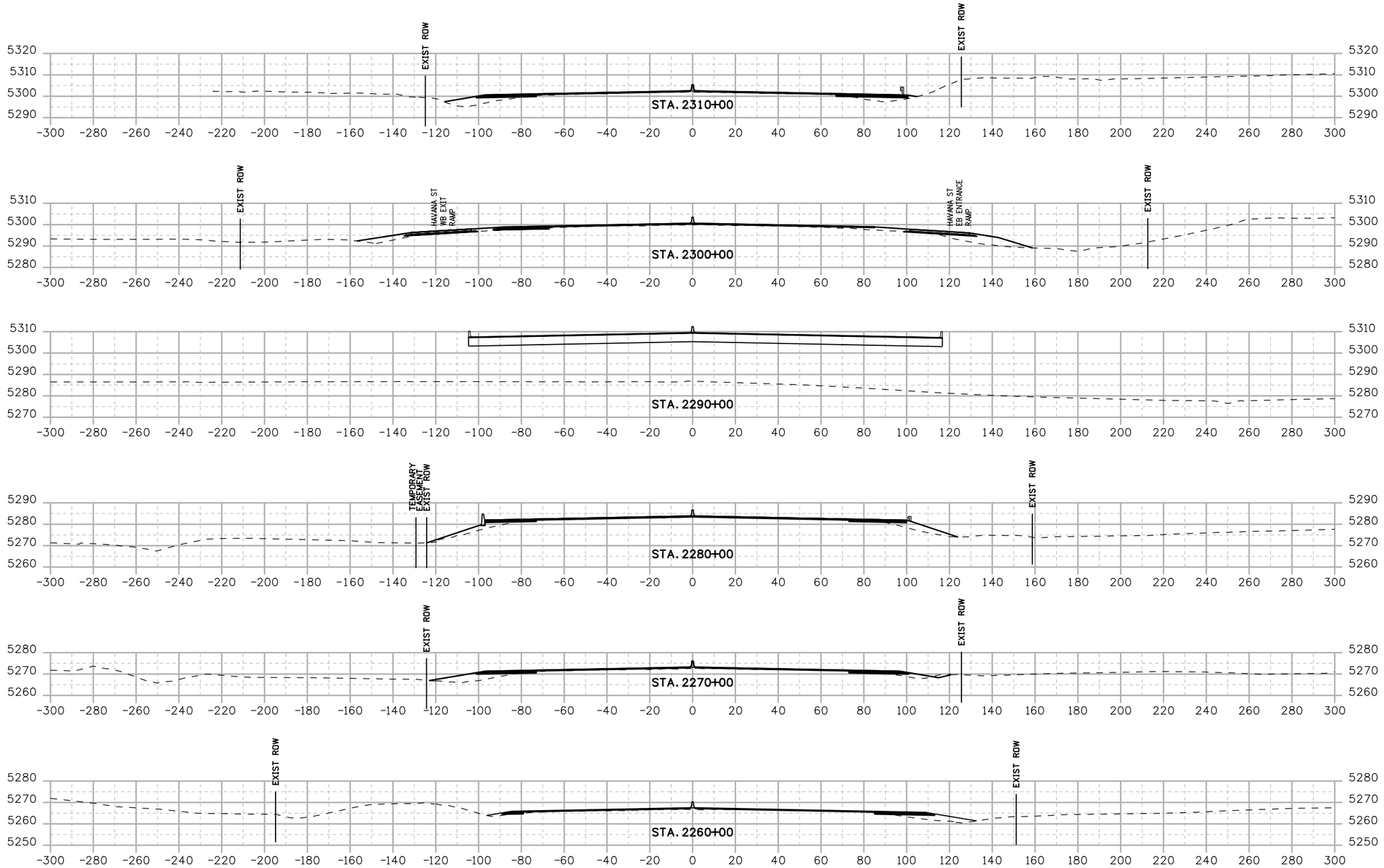
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY
CROSS SECTIONS

Designer:
Detailer:
Sheet Subset: XSEC
Structure Numbers
Subset Sheets: XS5 of 9

Project No./Code
FBR 0704-234
19631
Sheet Number 340



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Print Date: 5/19/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

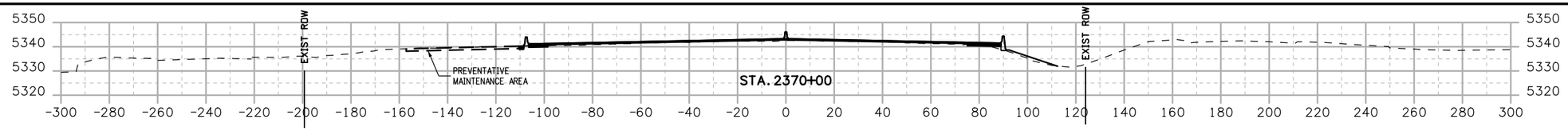
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

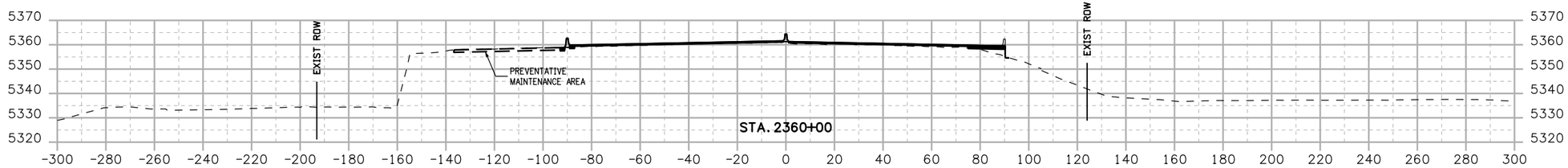
PROPOSAL
No Revisions:
Revised:
Void:

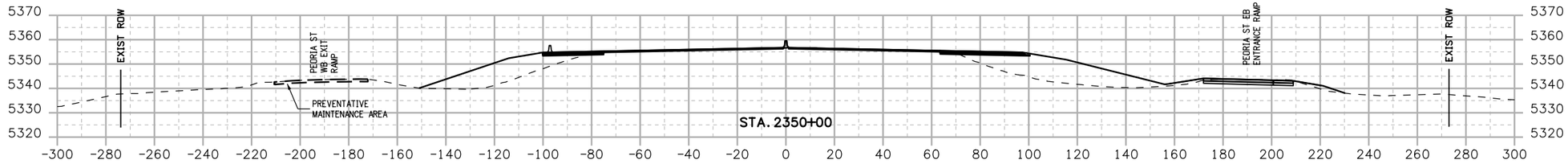
CENTRAL 70
ROADWAY
CROSS SECTIONS

Designer:
Detailer:
Sheet Subset: XSEC
Structure Numbers
Subset Sheets: XS6 of 9

Project No./Code
FBR 0704-234
19631
Sheet Number 341







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Print Date: 5/21/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
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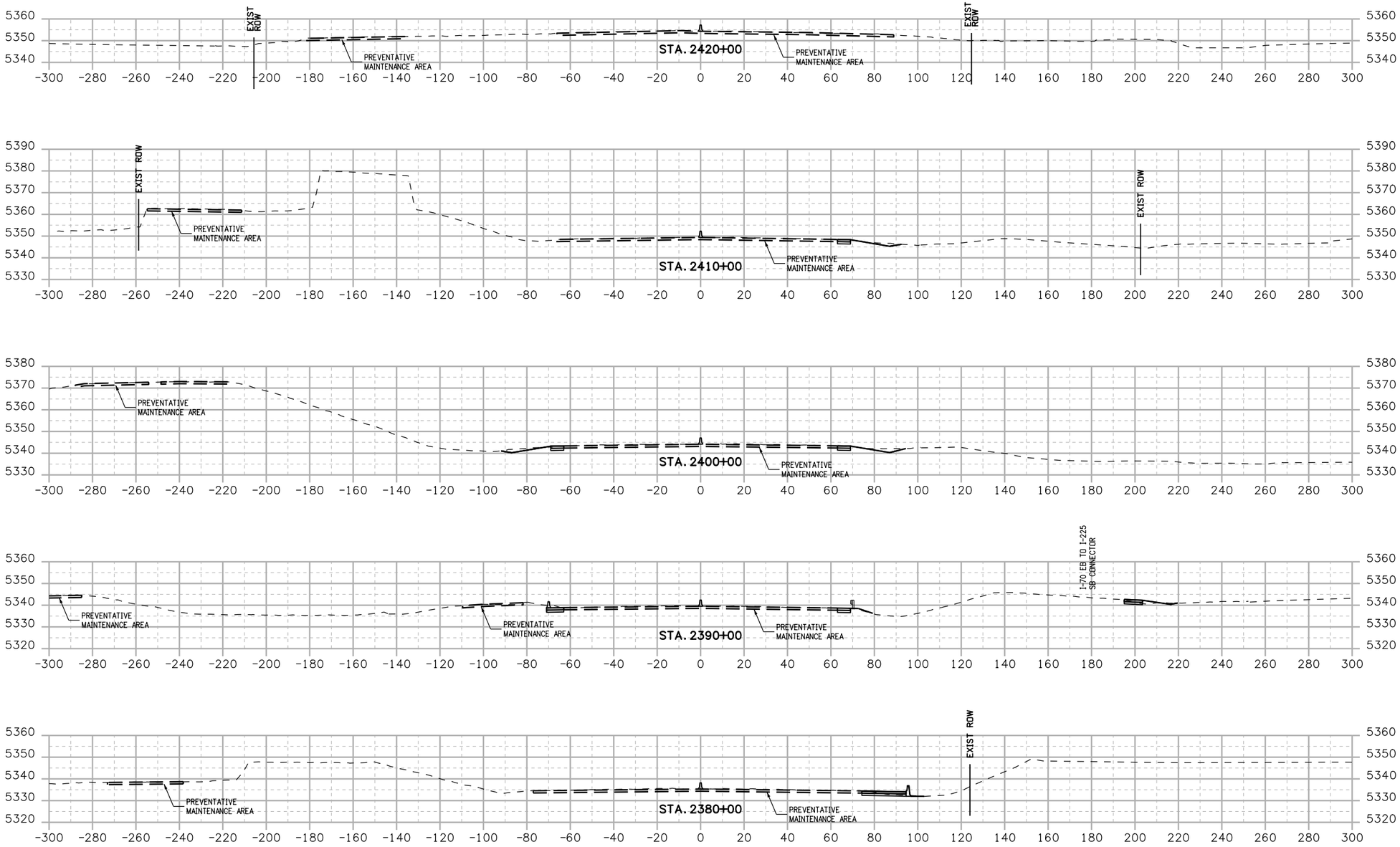
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY
CROSS SECTIONS

Designer:
Detailer:
Sheet Subset: XSEC
Structure Numbers
Subset Sheets: XS7 of 9

Project No./Code
FBR 0704-234
19631
Sheet Number 342



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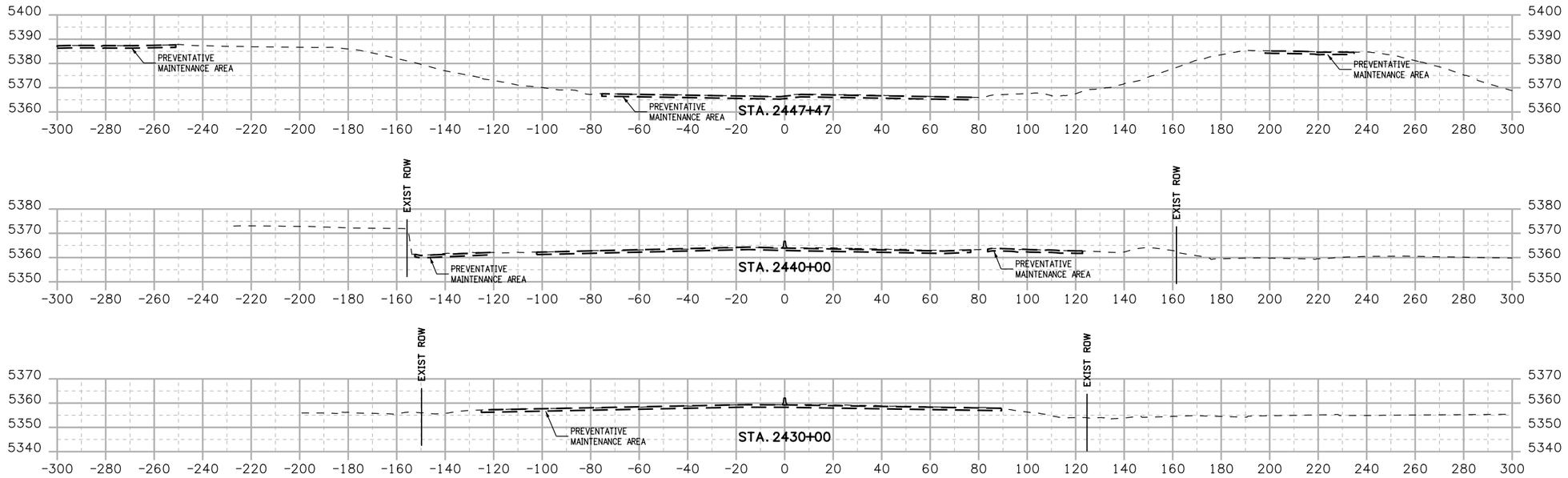
Print Date: 5/19/2017		Sheet Revisions			Colorado Department of Transportation
File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907
Front Range Mobility Group	Horiz. Scale: As Noted				Region 1 KJS
	Vert. Scale: As Noted				
	Unit Information				
	Unit Leader				

PROPOSAL	CENTRAL 70 ROADWAY CROSS SECTIONS		Project No./Code
No Revisions:			FBR 0704-234
Revised:	Designer:	Structure Numbers	19631
Void:	Detailer:		Sheet Number 343
	Sheet Subset: XSEC	Subset Sheets: XS8 of 9	



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Print Date: 5/19/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

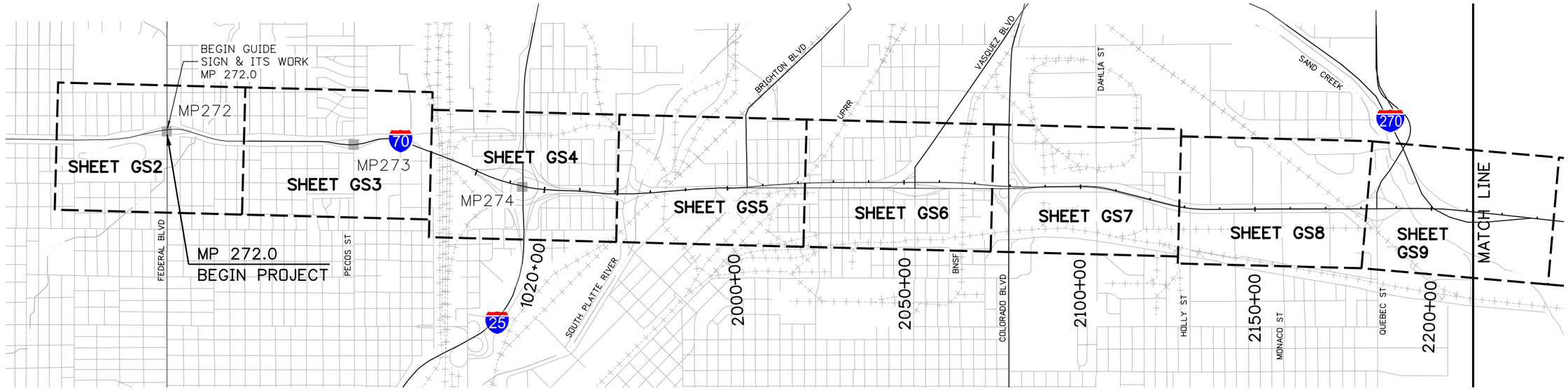
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

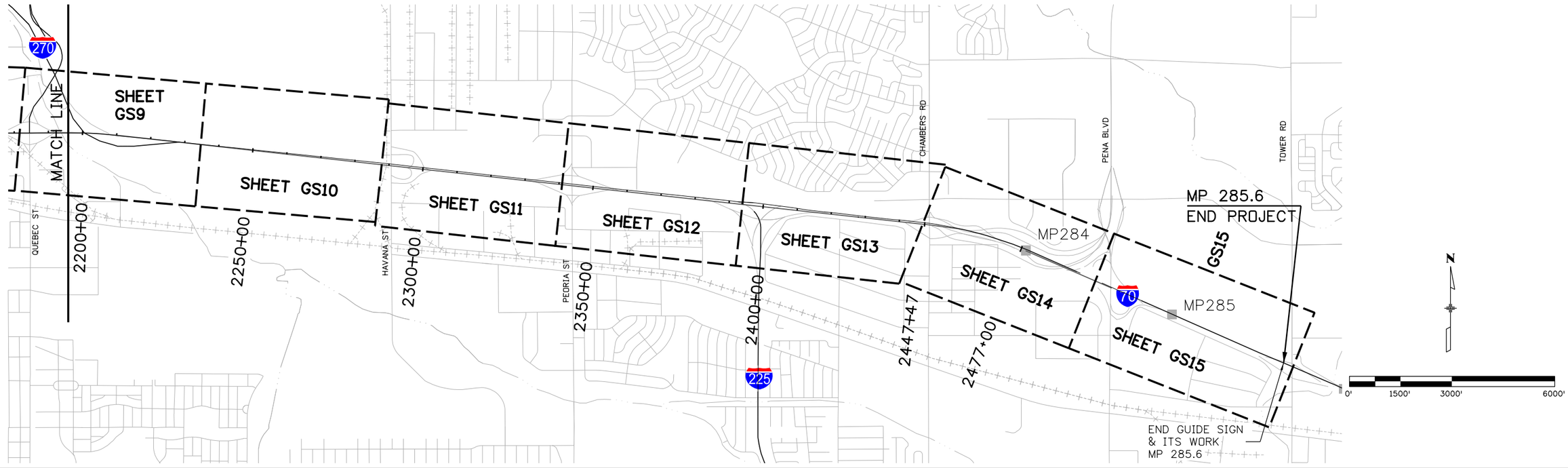
PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY
CROSS SECTIONS

Designer:
Detailer:
Sheet Subset: XSEC
Structure Numbers
Subset Sheets: XS9 of 9

Project No./Code
FBR 0704-234
19631
Sheet Number 344





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Print Date: 5/14/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

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Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
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Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY GUIDE SIGNS
KEY PLAN

Designer:
Detailer:
Sheet Subset: G. SIGN
Structure Numbers
Subset Sheets: GS1 of 15

Project No./Code
FBR 0704-234
19631
Sheet Number 345

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Print Date: 5/19/2017			Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 ROADWAY GUIDE SIGN PLAN I-70 MAINLINE MP 272 TO MP 272.41		Project No./Code
File Name: See sheet edge for information			Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:			FBR 0704-234
Front Range Mobility Group	Horiz. Scale: As Noted						Revised:	Designer:	Structure Numbers	19631
	Vert. Scale: As Noted							Detailer:		
	Unit Information						Void:	Sheet Subset: G. SIGN	Subset Sheets: GS2 of 15	Sheet Number 346
	Unit Leader					Region 1 KJS				

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Print Date: 5/19/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

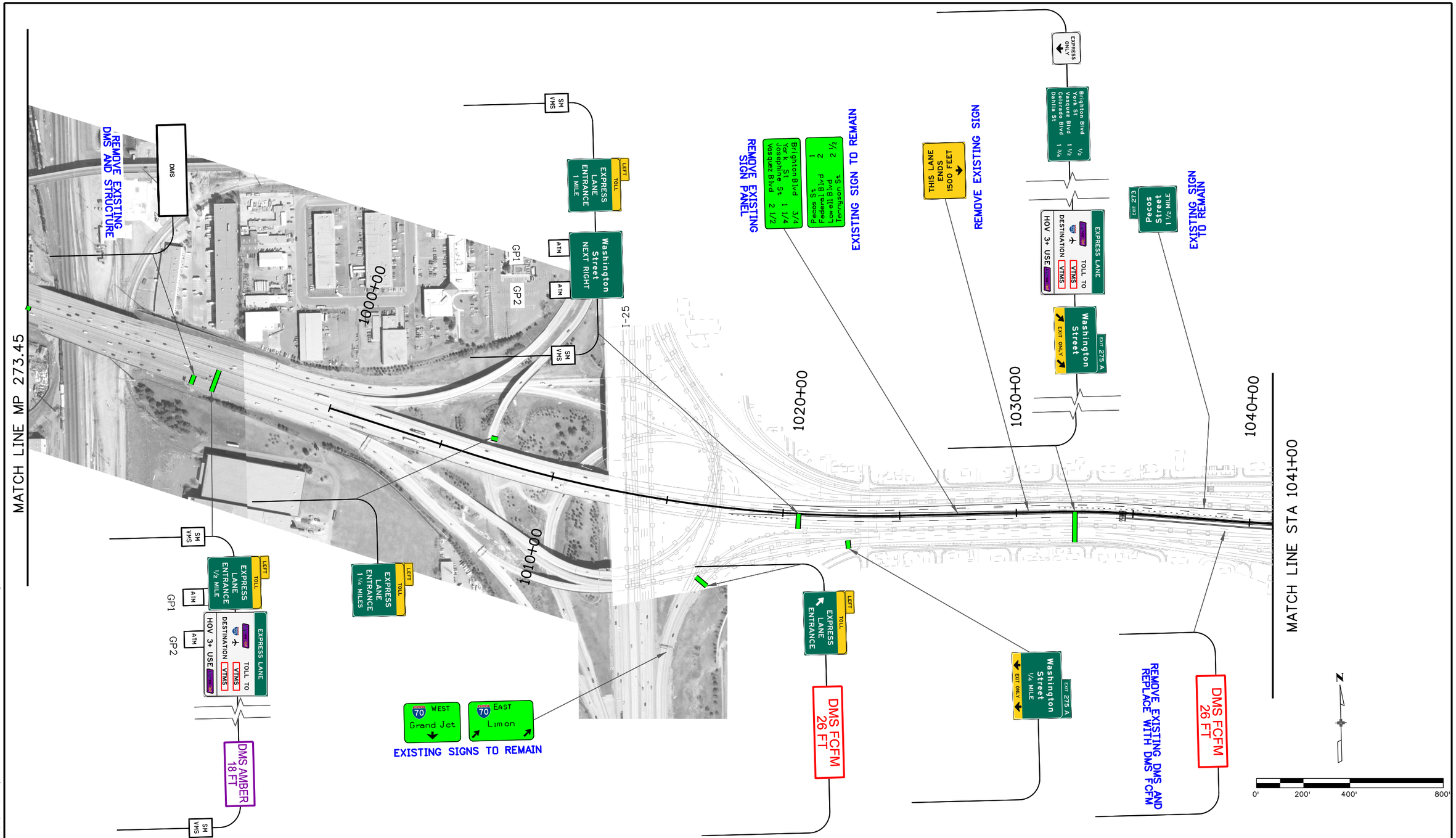
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY GUIDE SIGN PLAN
I-70 MAINLINE
MP 272.41 TO MP 273.45

Designer:
Detailer:
Sheet Subset: G. SIGN
Structure Numbers:
Subset Sheets: GS3 of 15

Project No./Code
FBR 0704-234
19631
Sheet Number 347



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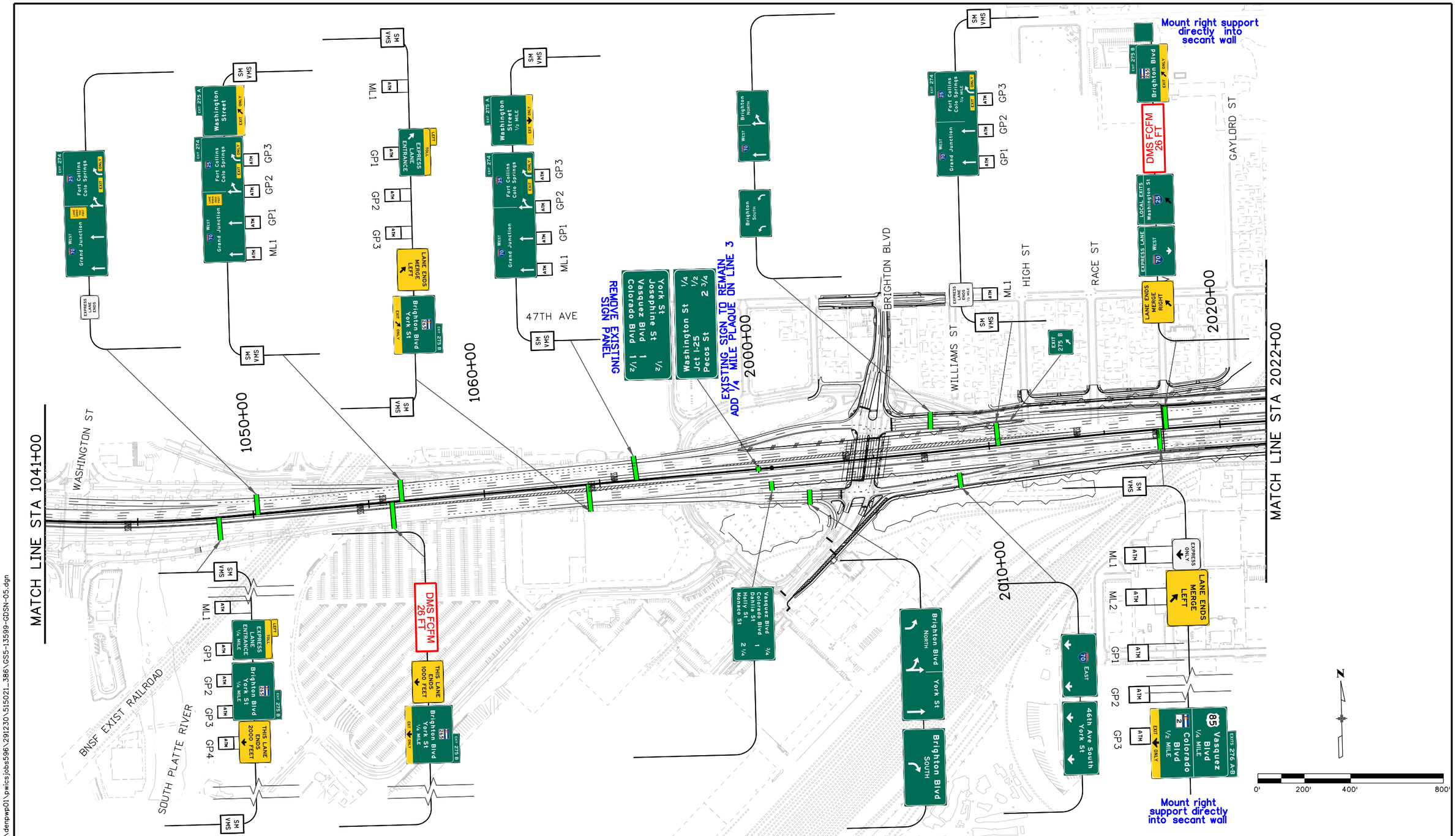
Print Date: 5/19/2017		Sheet Revisions			Colorado Department of Transportation
File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907
Front Range Mobility Group	Horiz. Scale: As Noted				Region 1 KJS
	Vert. Scale: As Noted				
	Unit Information				
	Unit Leader				

PROPOSAL	CENTRAL 70 ROADWAY GUIDE SIGN PLAN I-70 MAINLINE MP 273.5 TO STA 1041+00			Project No./Code
No Revisions:	Designer:	Structure Numbers		FBR 0704-234
Revised:	Detailer:			19631
Void:	Sheet Subset: G. SIGN	Subset Sheets: GS4 of 15		Sheet Number 348



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Print Date: 5/19/2017		
File Name: See sheet edge for information		
Front Range Mobility Group	Horiz. Scale: As Noted	
	Vert. Scale: As Noted	
	Unit Information	
	Unit Leader	

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Sheet Revisions		
Date:	Comments	Init.

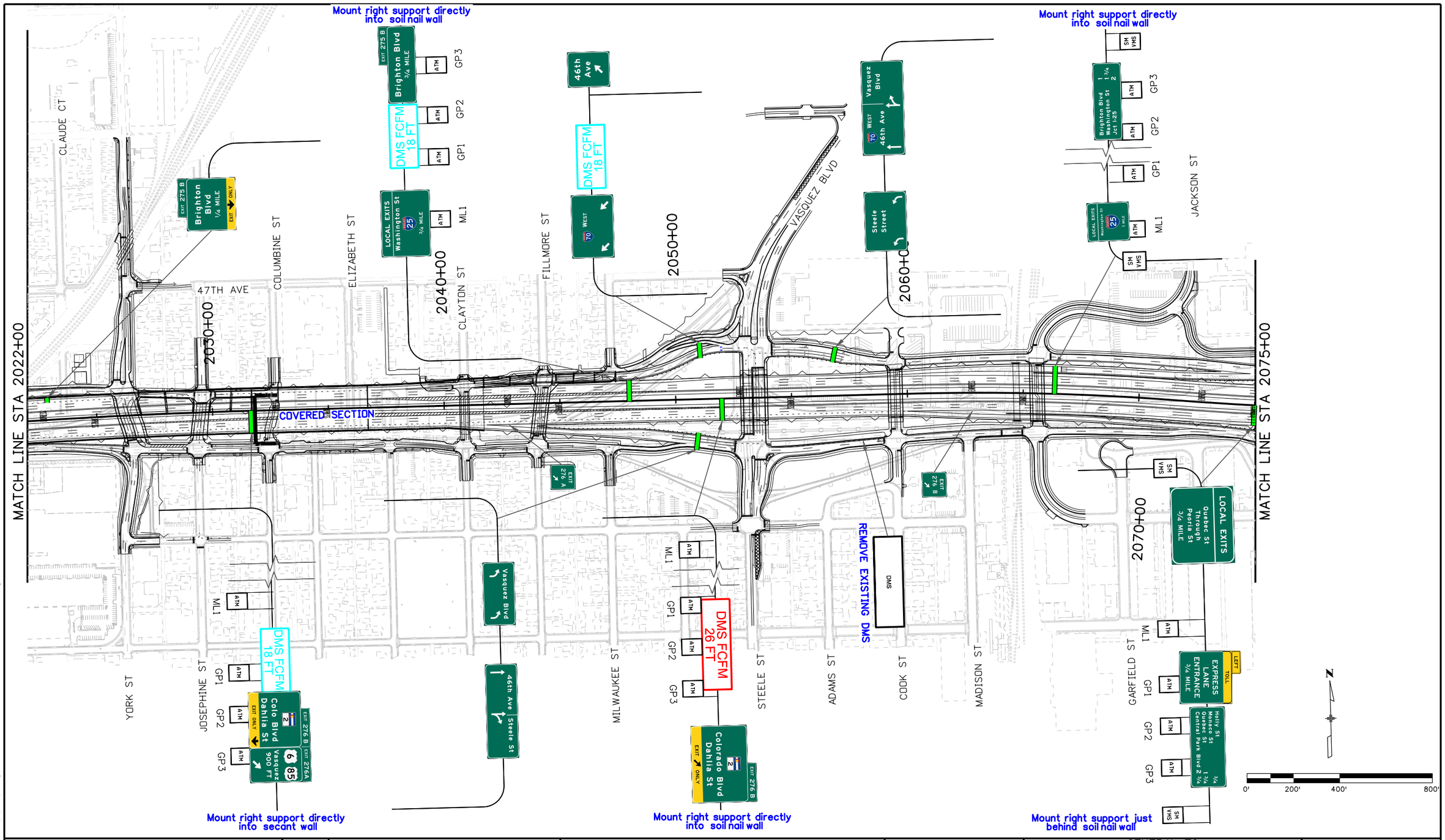
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL	
No Revisions:	
Revised:	
Void:	

CENTRAL 70
ROADWAY GUIDE SIGN PLAN
I-70 MAINLINE
STA 1041+00 TO STA 2022+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	G. SIGN	Subset Sheets: GS5	of 15

Project No./Code	FBR 0704-234
	19631
Sheet Number	349



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Print Date: 5/19/2017			Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 ROADWAY GUIDE SIGN PLAN I-70 MAINLINE STA 2022+00 TO STA 2075+00	Project No./Code
File Name: See sheet edge for information			Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:		FBR 0704-234
Front Range Mobility Group	Horiz. Scale: As Noted	0000				Region 1 KJS	Revised:	Designer:	19631
	Vert. Scale: As Noted						Void:	Detailer: Structure Numbers	
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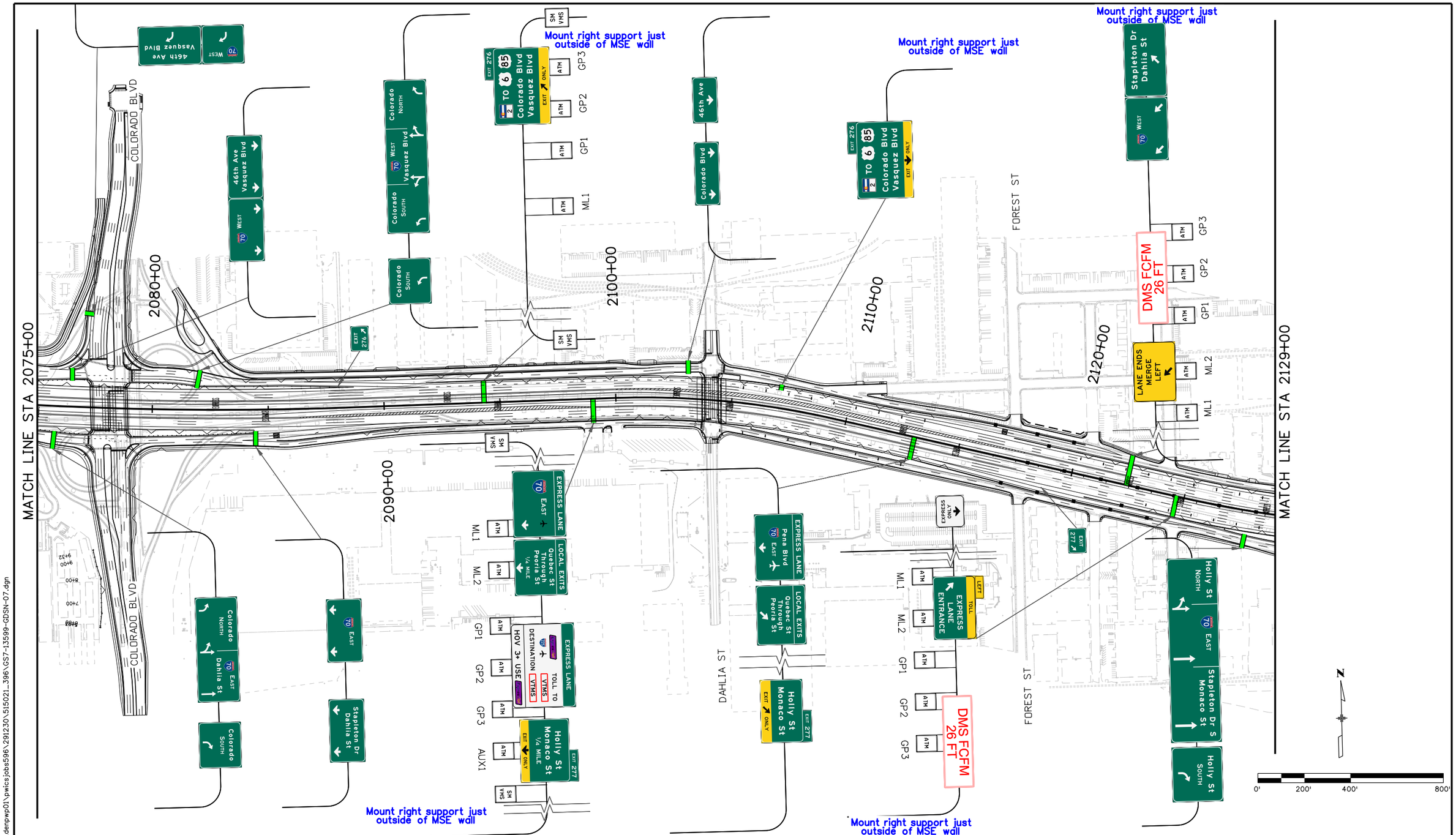
	Unit Leader								



Print Date: 5/19/2017		0000	Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 ROADWAY GUIDE SIGN PLAN I-70 MAINLINE STA 2075+00 TO STA 2129+00	Project No./Code
File Name: See sheet edge for information			Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:		FBR 0704-234
Front Range Mobility Group	Horiz. Scale: As Noted						Revised:		19631
	Vert. Scale: As Noted						Void:	Designer: / Detailer: / Structure Numbers:	Sheet Number 351
	Unit Information					Region 1 KJS		Sheet Subset: G. SIGN	Subset Sheets: GS7 of 15
	Unit Leader								

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MATCH LINE STA 2129+00

MATCH LINE STA 2182+00

HOLLY ST

MONACO ST

ONEIDA ST

N. STAPLETON RD

S. STAPLETON RD

2130+00

2140+00

2150+00

2160+00

2170+00

2180+00

Holly St North

70 WEST Dahlia St

Holly St South

Colorado Blvd 1
Vasquez Blvd 2 1/2
Brighton Blvd 2 1/2
Washington St 3

TOLL EXPRESS LANE ENTRANCE

LEFT

EXPRESS ONLY

Holly St Dahlia St EXIT ONLY EXIT 277

LOCAL EXITS Vasquez Colorado Brighton 1/2 MILE

Holly St Dahlia St 1/2
Colorado Blvd 1 1/2
Vasquez Blvd 2 1/2
Brighton Blvd 3

Monaco St

70 WEST

Quebec St Central Park Blvd 1 1/2 Havana St 2 1/4

70 EAST Stapleton Dr Monaco St

EXPRESS LANE 70 WEST

LOCAL EXITS Colorado Blvd Vasquez Blvd Brighton Blvd

Quebec St 1/4 MILE EXIT ONLY 35 EXIT 278

LANE ENDS MERGE LEFT

70 EAST Quebec St

Stapleton Dr S

Quebec St EXIT ONLY 35 EXIT 278

Quebec St North 70 EAST Quebec St South

Central Park Blvd 2 3/4 Havana St Peoria St

Mount right support just outside of MSE wall

SM VMS

ATM

GP1 GP2 GP3 ML1 ML2 AUX1

0' 200' 400' 800'

Print Date: 5/19/2017		Sheet Revisions			Colorado Department of Transportation
File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907
Front Range Mobility Group	Horiz. Scale: As Noted				Region 1 KJS
	Vert. Scale: As Noted				
	Unit Information				
	Unit Leader				

PROPOSAL	CENTRAL 70 ROADWAY GUIDE SIGN PLAN I-70 MAINLINE STA 2129+00 TO STA 2182+00			Project No./Code
No Revisions:	Designer:	Structure Numbers		FBR 0704-234
Revised:	Detailer:			19631
Void:	Sheet Subset: G. SIGN	Subset Sheets: GS8 of 15		Sheet Number 352

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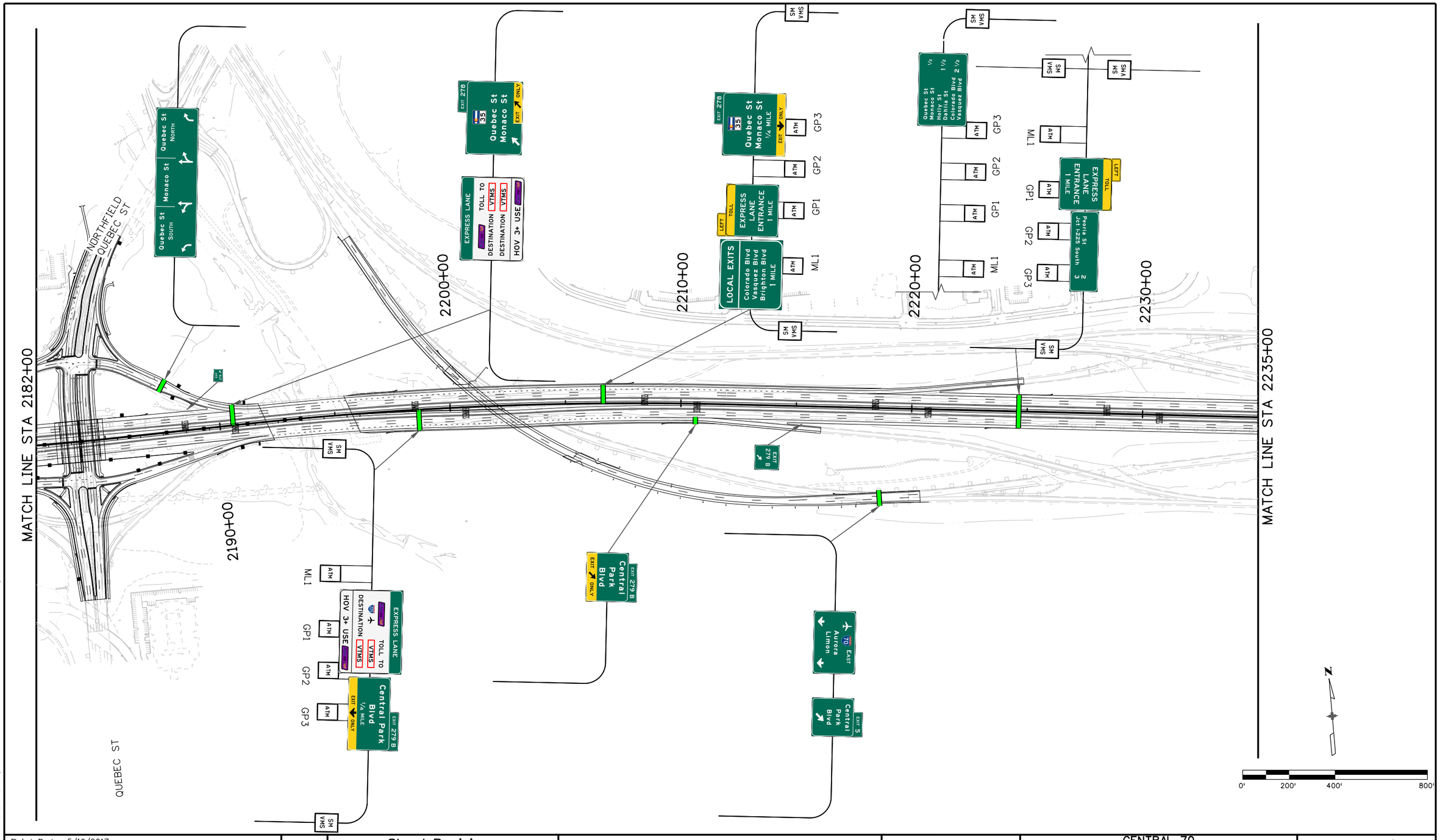

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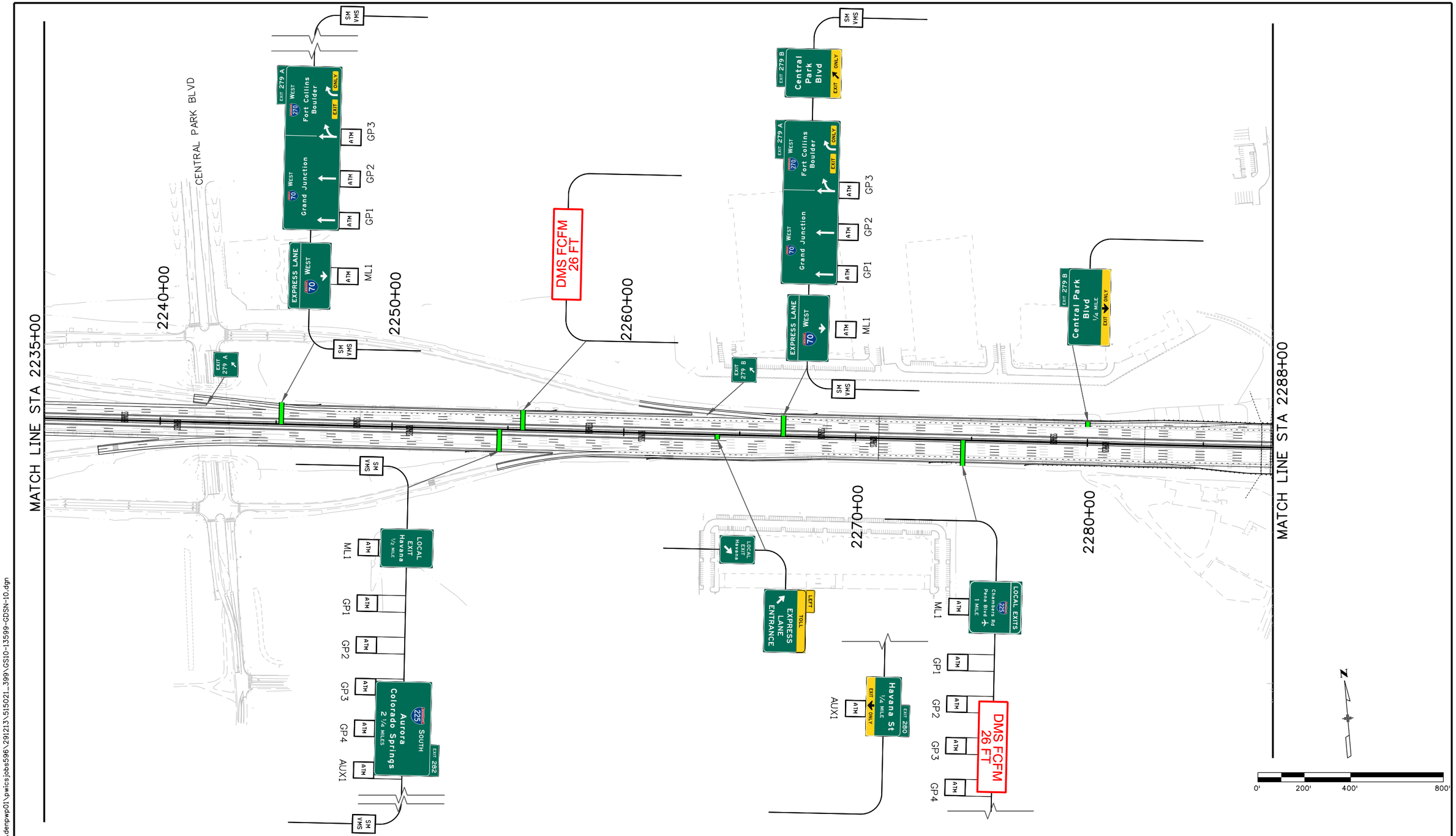
Print Date: 5/19/2017		Sheet Revisions			Colorado Department of Transportation
File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907
Front Range Mobility Group	Horiz. Scale: As Noted				Region 1 KJS
	Vert. Scale: As Noted				
	Unit Information				
	Unit Leader				

PROPOSAL	CENTRAL 70 ROADWAY GUIDE SIGN PLAN I-70 MAINLINE STA 2182+00 TO STA 2235+00			Project No./Code
No Revisions:	Designer:	Structure Numbers		FBR 0704-234
Revised:	Detailer:			19631
Void:	Sheet Subset: G. SIGN	Subset Sheets: GS9 of 15		Sheet Number 353



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Print Date: 5/19/2017			
File Name: See sheet edge for information			
Front Range Mobility Group	Horiz. Scale: As Noted		
	Vert. Scale: As Noted		
	Unit Information		
	Unit Leader		

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Sheet Revisions

Date:	Comments	Init.

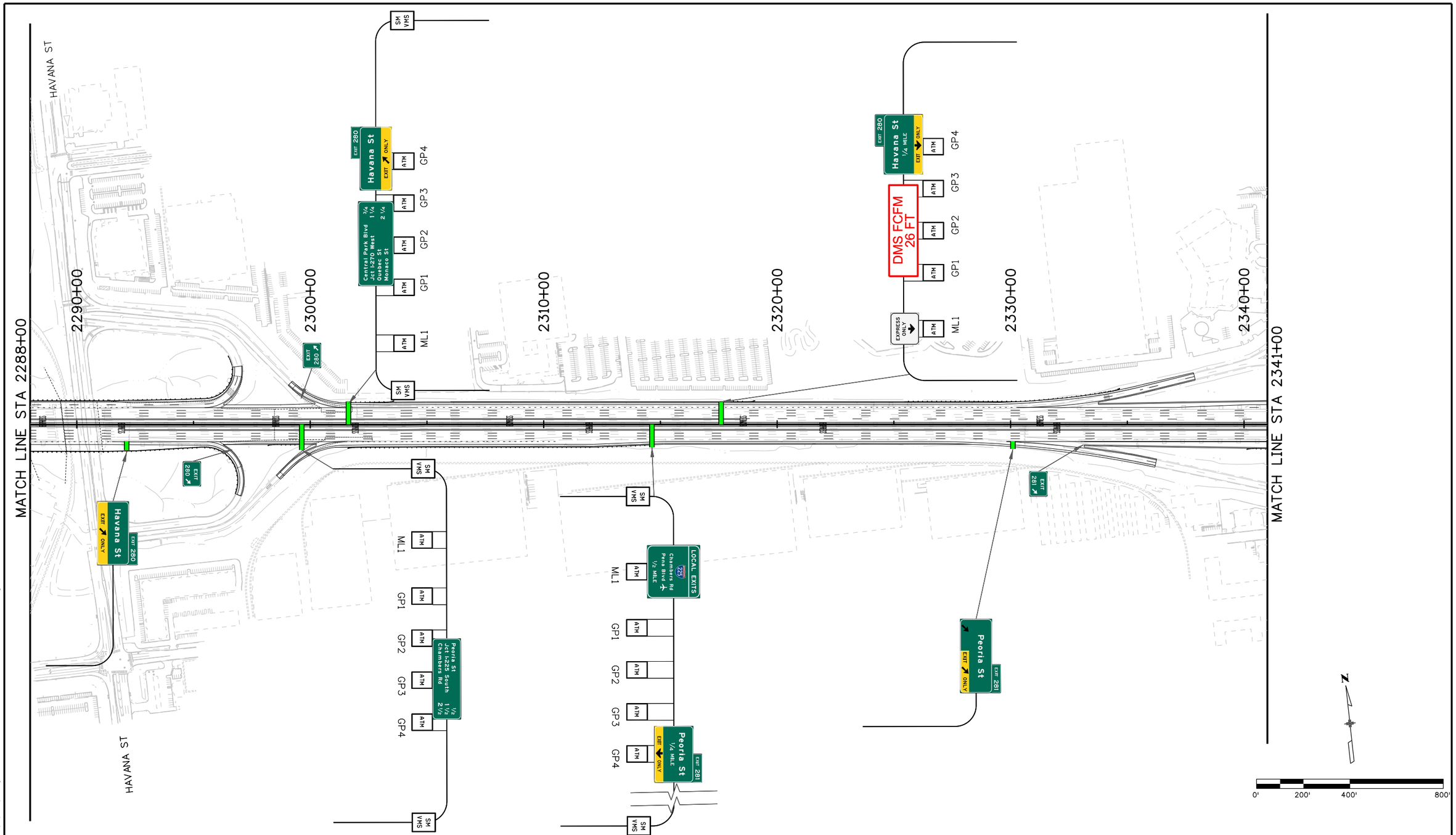
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL	
No Revisions:	
Revised:	
Void:	

CENTRAL 70
ROADWAY GUIDE SIGN PLAN
I-70 MAINLINE
STA 2235+00 TO STA 2288+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	G. SIGN	Subset Sheets: GS10	of 15

Project No./Code	
FBR 0704-234	
19631	
Sheet Number	354



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Print Date: 5/19/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

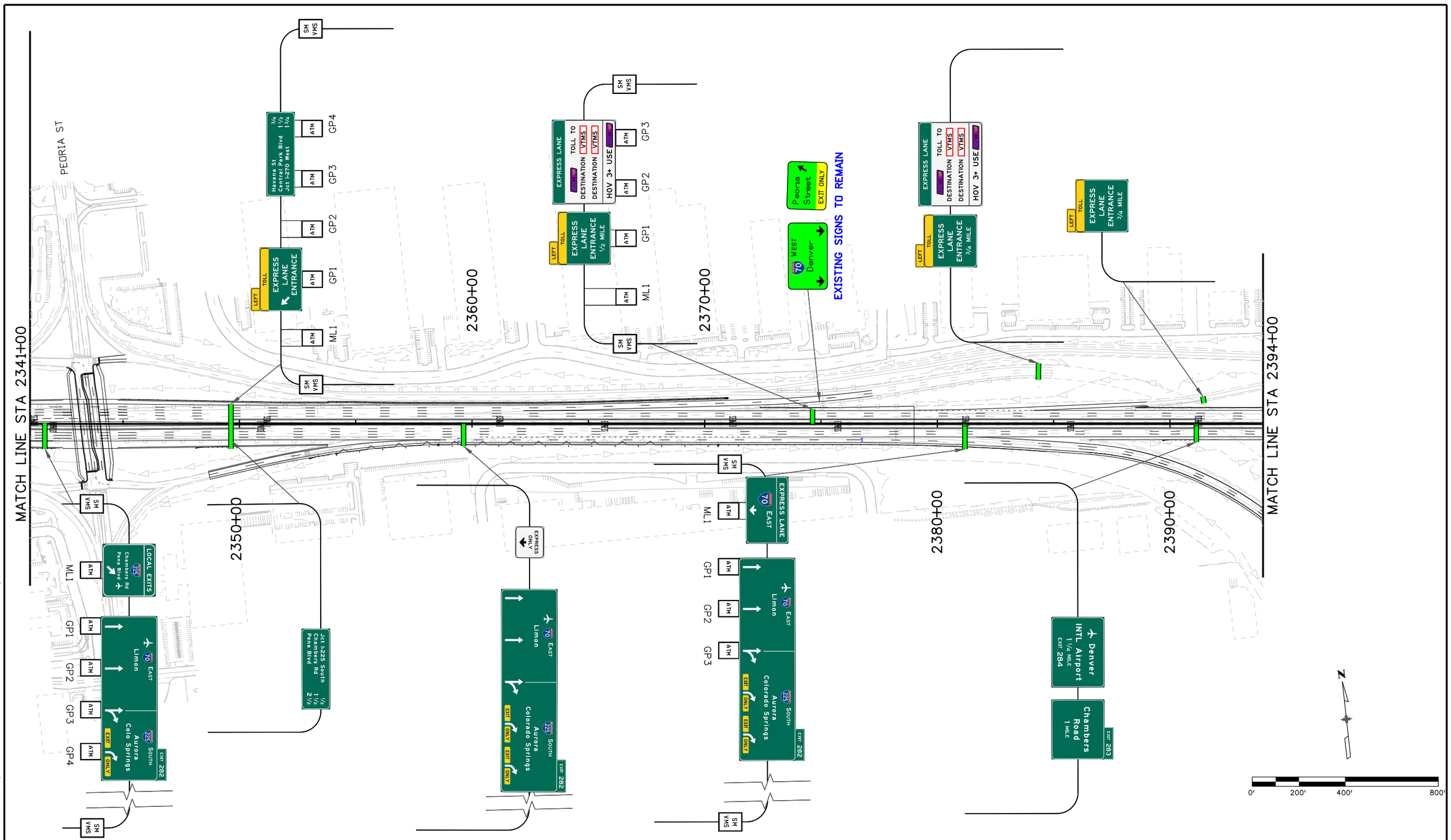
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY GUIDE SIGN PLAN
I-70 MAINLINE
STA 2288+00 TO STA 2341+00

Designer:
Detailer:
Sheet Subset: G. SIGN
Structure Numbers
Subset Sheets: GS11 of 15

Project No./Code
FBR 0704-234
19631
Sheet Number 355



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Print Date: 5/19/2017			
File Name: See sheet edge for information			
Front Range Mobility Group	Horiz. Scale: As Noted		
	Vert. Scale: As Noted		
	Unit Information		
	Unit Leader		

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Sheet Revisions

Date:	Comments	Init.

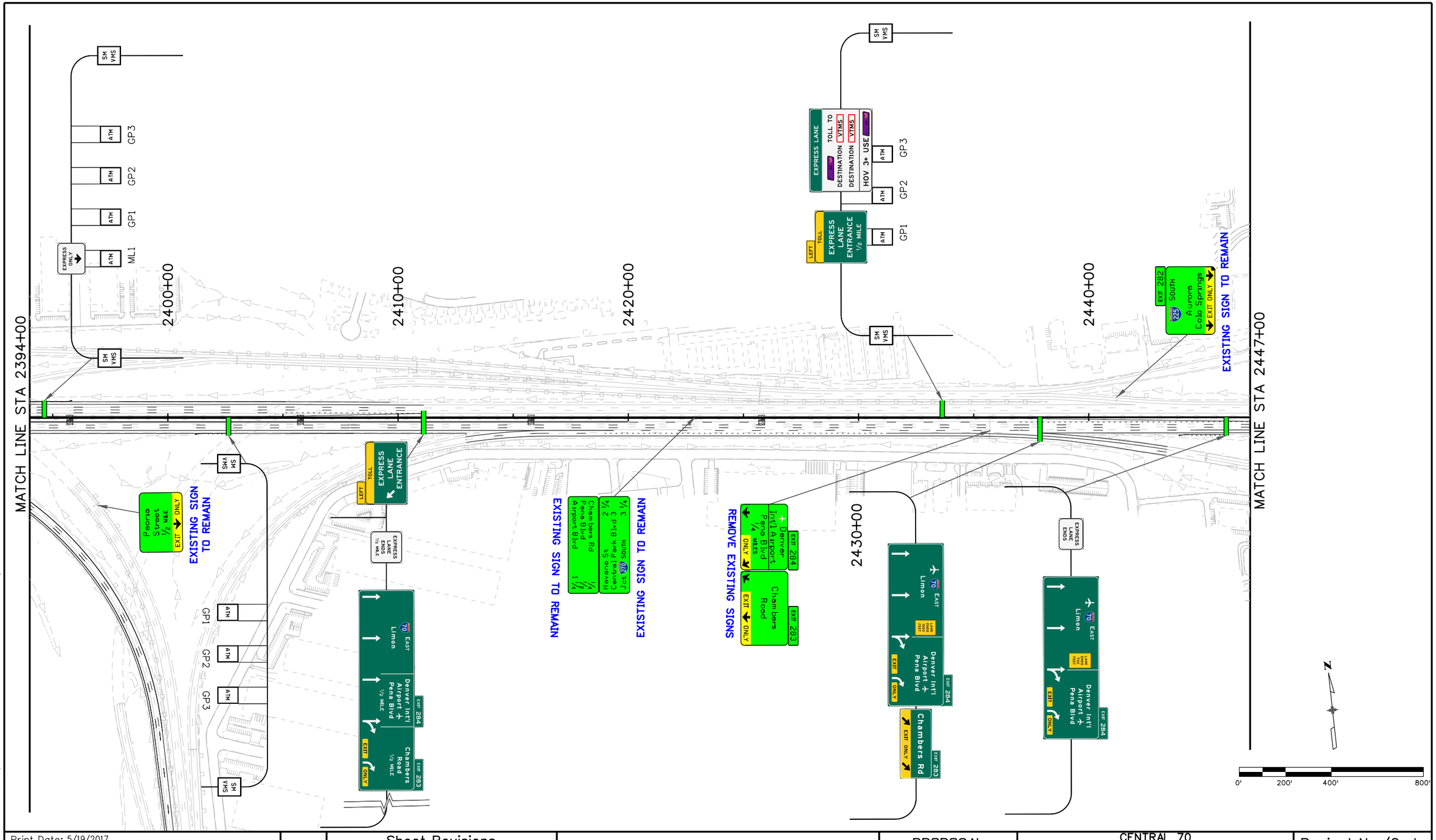
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL	
No Revisions:	
Revised:	
Void:	

CENTRAL 70
ROADWAY GUIDE SIGN PLAN
I-70 MAINLINE
STA 2341+00 TO STA 2394+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	G. SIGN	Subset Sheets: GS12	of 15

Project No./Code	
FBR 0704-234	
19631	
Sheet Number	356



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File Name: See sheet edge for information			
Front Range Mobility Group	Horiz. Scale: As Noted		
	Vert. Scale: As Noted		
	Unit Information		
	Unit Leader		

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Sheet Revisions

Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
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Region 1 KJS

PROPOSAL

No Revisions:

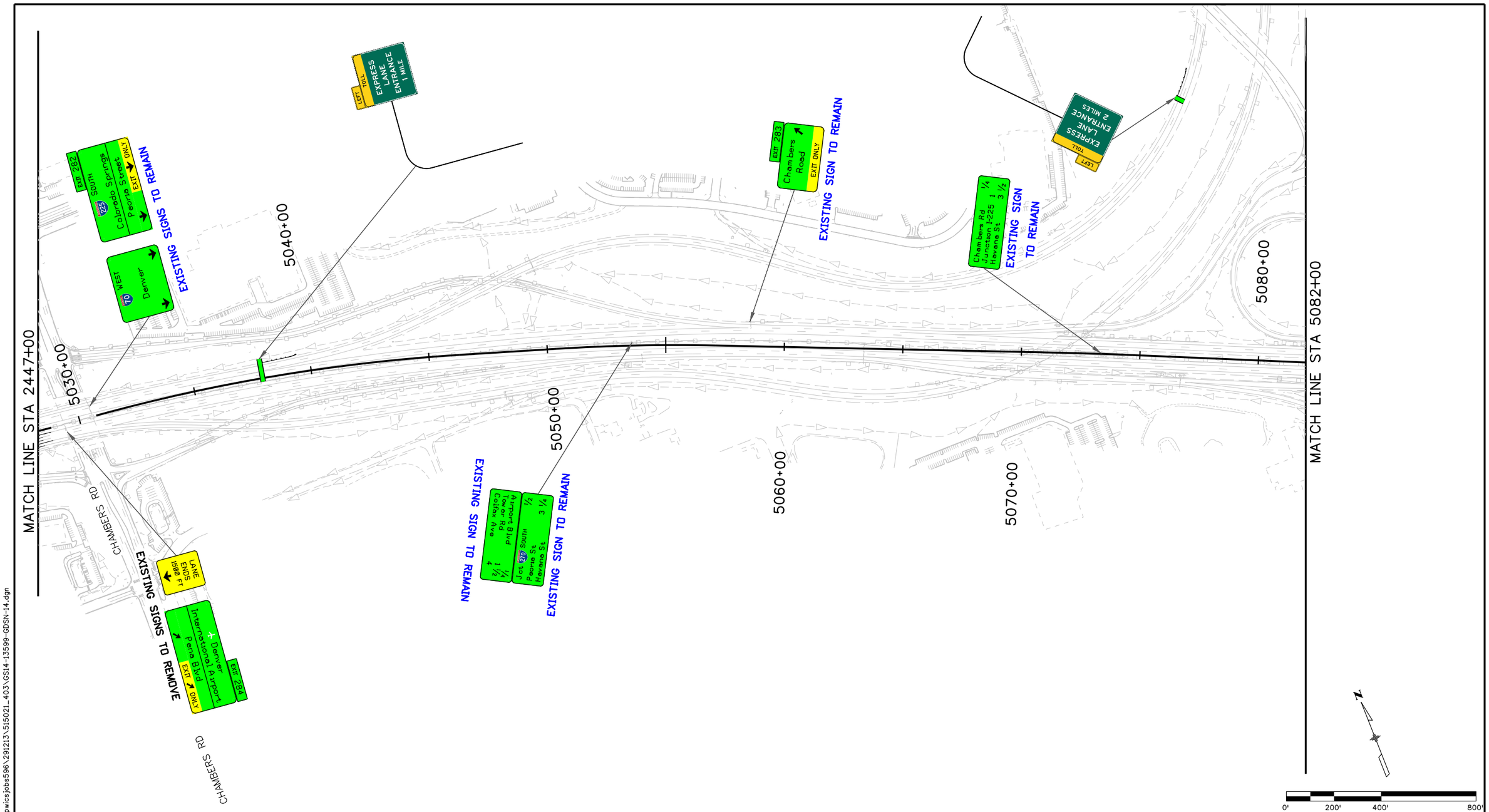
Revised:

Void:

CENTRAL 70
ROADWAY GUIDE SIGN PLAN
I-70 MAINLINE
STA 2394+00 TO STA 2447+00

Designer:
Detailer:
Sheet Subset: G. SIGN
Structure Numbers
Subset Sheets: GS13 of 15

Project No./Code
FBR 0704-234
19631
Sheet Number 357



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	Vert. Scale: As Noted		
	Unit Information		
	Unit Leader		

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Sheet Revisions		
Date:	Comments	Init.

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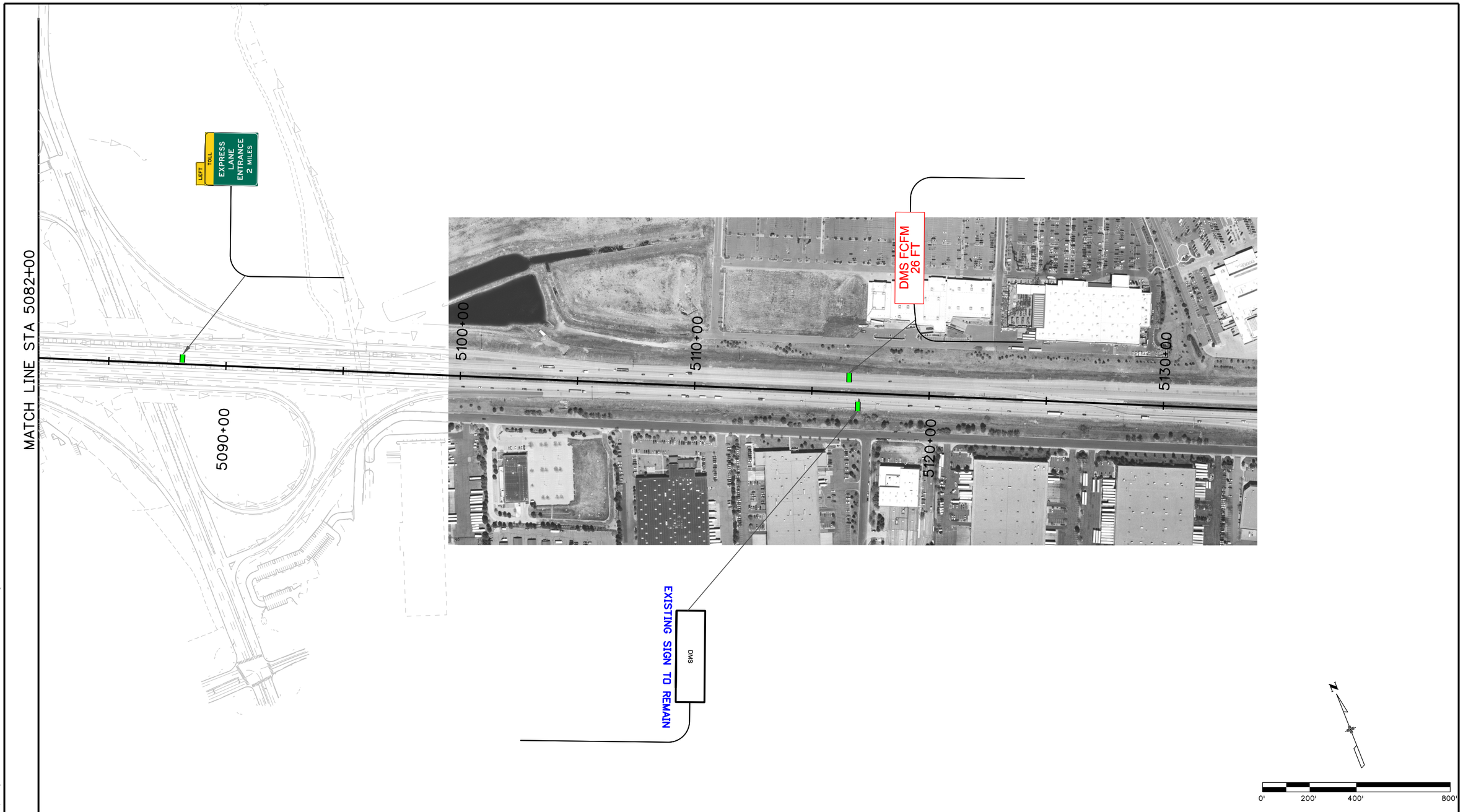
PROPOSAL	
No Revisions:	
Revised:	
Void:	

CENTRAL 70
ROADWAY GUIDE SIGN PLAN
I-70 MAINLINE
STA 2447+00 TO STA 5082+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	G. SIGN	Subset Sheets: GS14	of 15

Project No./Code	
FBR 0704-234	
19631	
Sheet Number	358



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Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

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Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY GUIDE SIGN PLAN
I-70 MAINLINE
STA 5082+00 TO STA 5134+00

Designer:
Detailer:
Sheet Subset: G. SIGN
Structure Numbers
Subset Sheets: GS15 of 15

Project No./Code
FBR 0704-234
19631
Sheet Number 359

LEGEND

CONSTRUCTION SITE ACCESS LOCATIONS

NOTE

1. FOR ADDITIONAL INFORMATION REGARDING CONSTRUCTION ACCESS LOCATIONS, SEE THE APPENDIX I: DRAFT MAINTENANCE MANAGEMENT PLAN AND THE MAINTENANCE OF TRAFFIC PLAN SET.

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Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

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Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
CONSTRUCTION SITE ACCESS PLAN
Designer:
Detailer:
Sheet Subset: ACCESS
Structure Numbers
Subset Sheets: API of 1

Project No./Code
FBR 0704-234
19631
Sheet Number 360

NOTES

1. ACCESS TO BORROW/WASTE SITE WILL BE VIA ADJACENT LOCAL ROADS OR AS OTHERWISE NOTED.

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Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

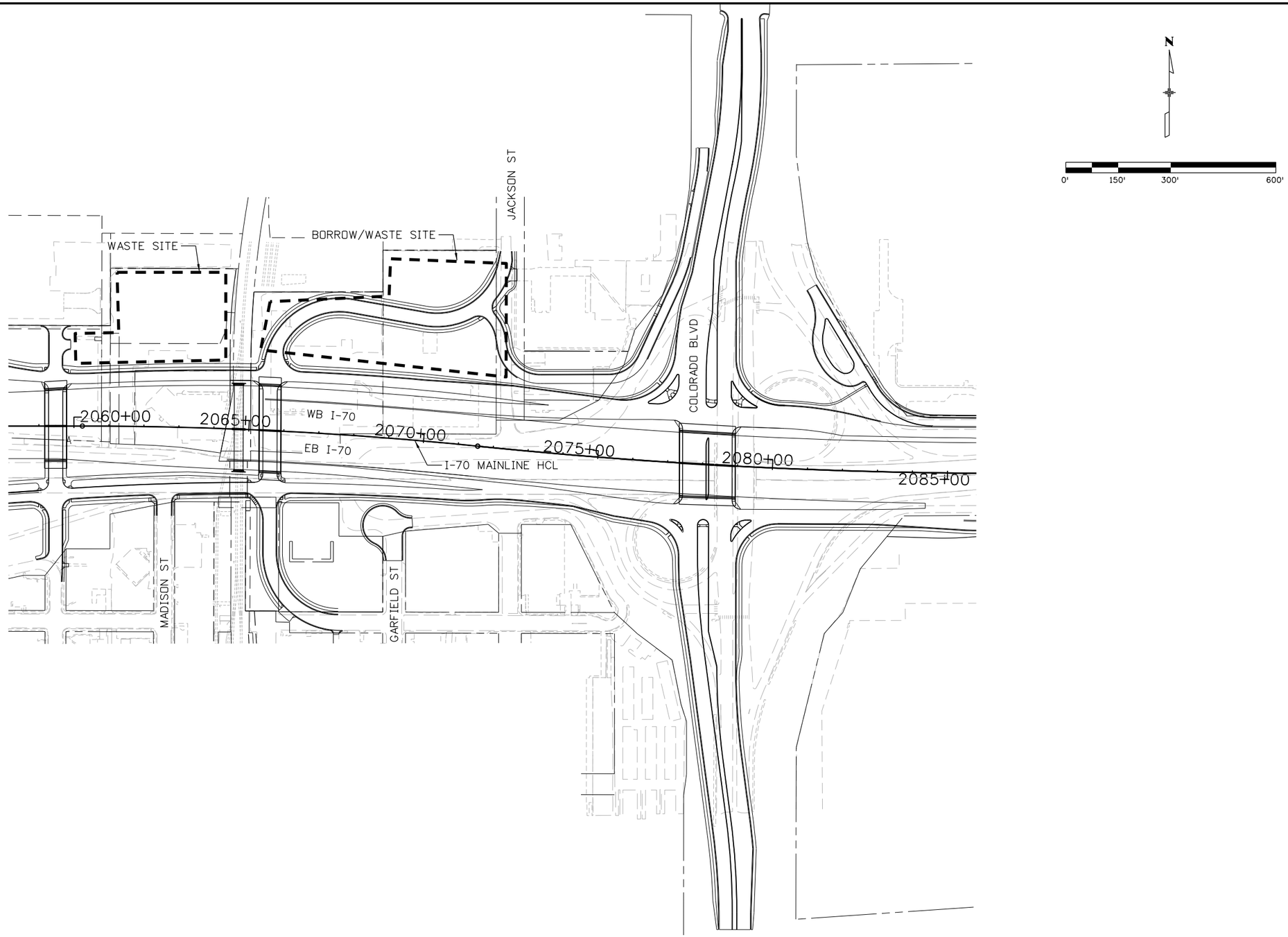
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
BORROW & WASTE KEY PLAN

Designer:
Detailer:
Sheet Subset: BORROW
Structure Numbers
Subset Sheets: BW1 of 8

Project No./Code
FBR 0704-234
19631
Sheet Number 361



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File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

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PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
BORROW & WASTE PLAN

Designer:
Detailer:
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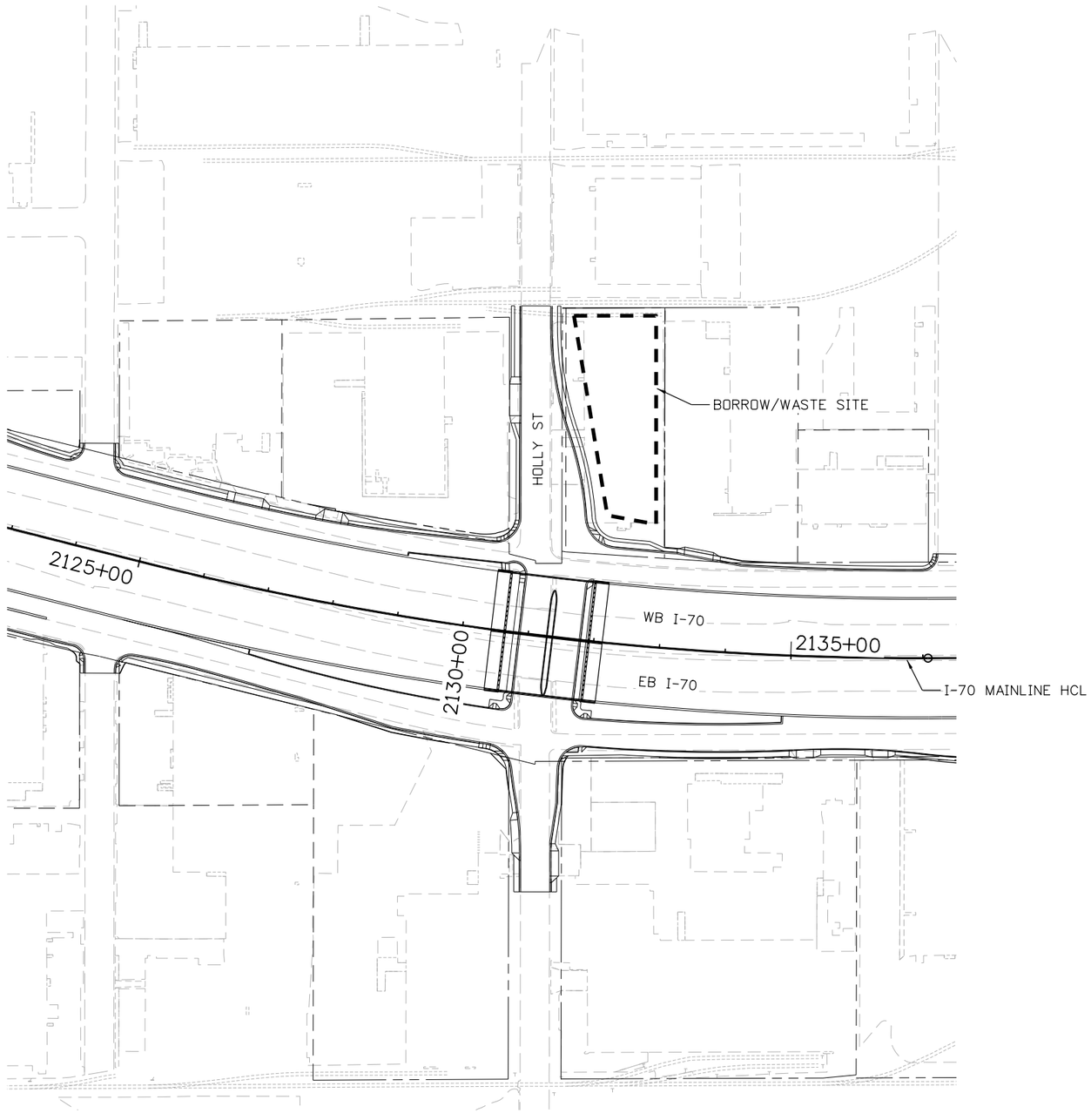
Structure Numbers
Subset Sheets: BW2 of 8

Project No./Code
FBR 0704-234
19631
Sheet Number 362



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Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

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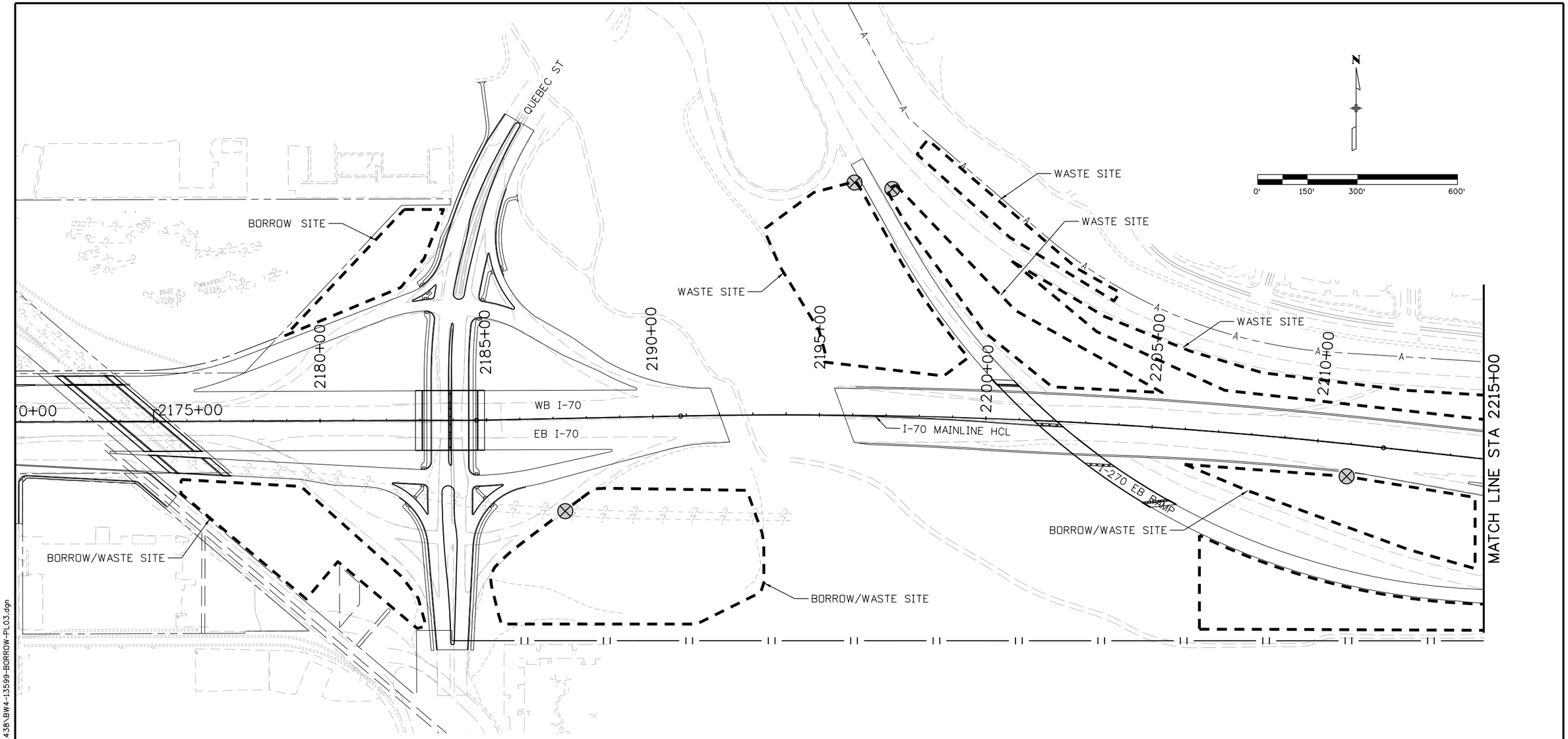
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
BORROW & WASTE PLAN

Designer:
Detailer:
Sheet Subset: BORROW
Structure Numbers
Subset Sheets: BW3 of 8

Project No./Code
FBR 0704-234
19631
Sheet Number 363



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File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
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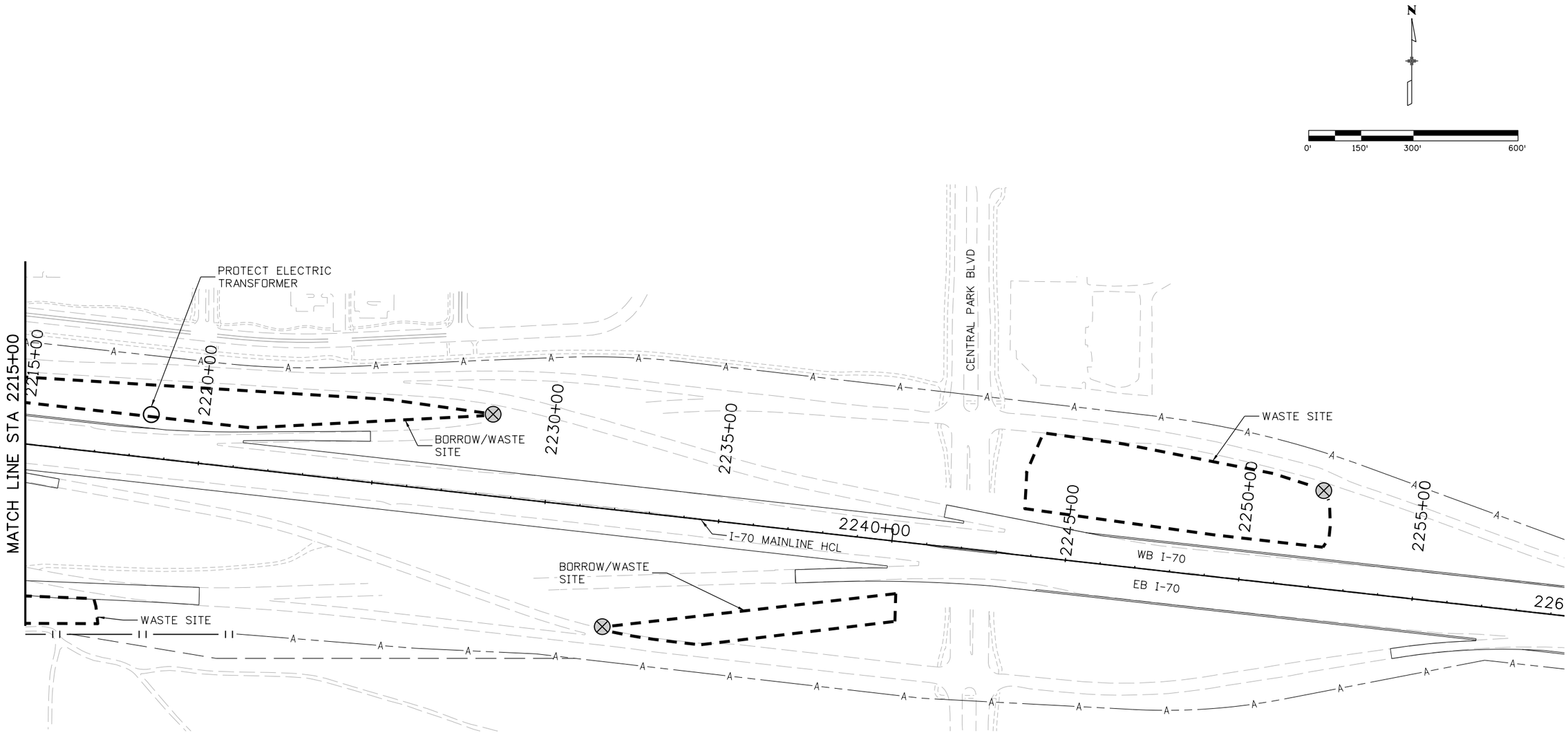
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
BORROW & WASTE PLAN

Designer:
Detailer:
Sheet Subset: BORROW
Structure Numbers
Subset Sheets: BW4 of 8

Project No./Code
FBR 0704-234
19631
Sheet Number 364



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Front Range Mobility Group	Horiz. Scale: As Noted					Revised:	Designer: / Detailer: / Structure Numbers	19631
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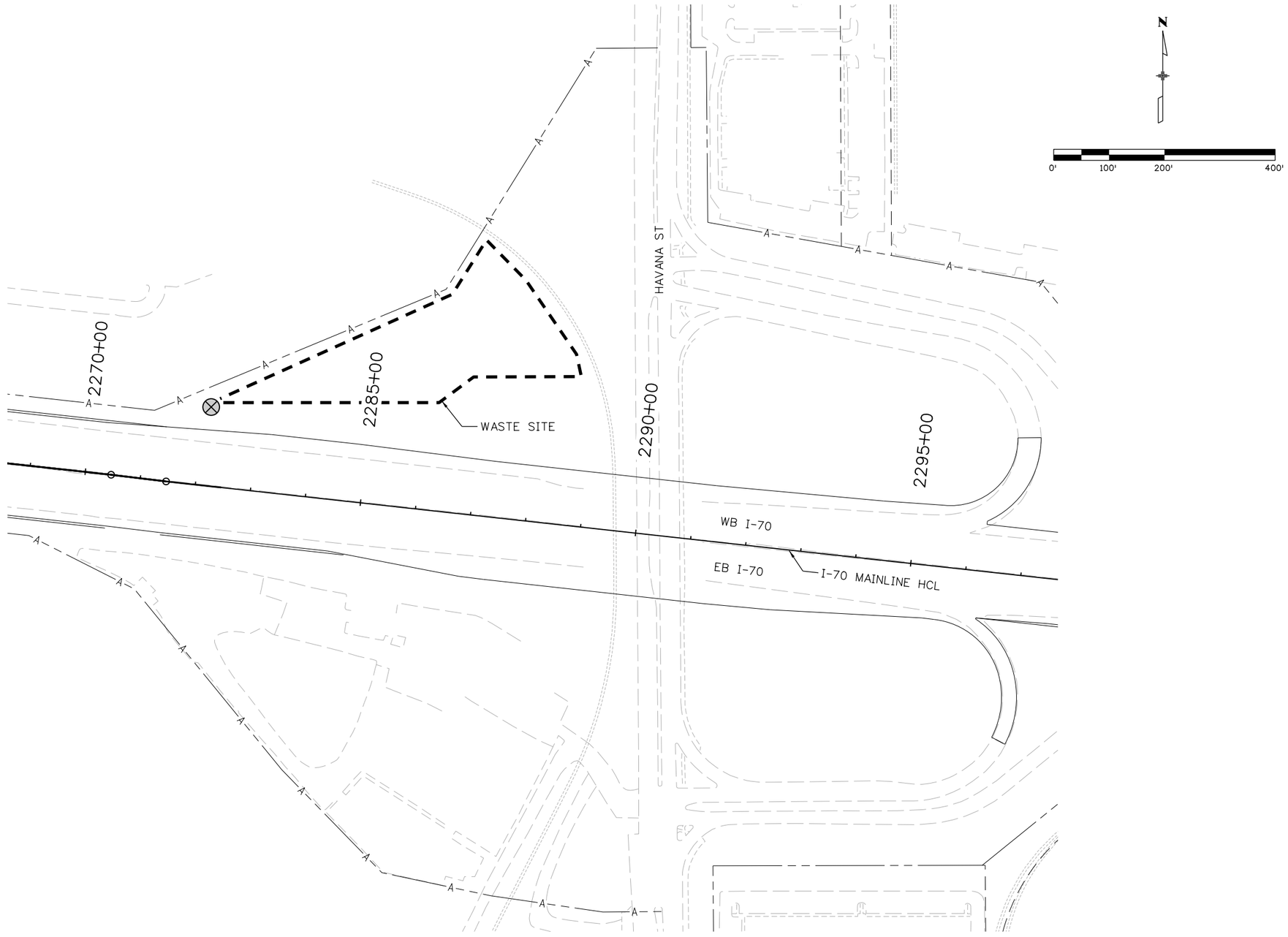
	Unit Information				Region 1 KJS	Void:	Sheet Subset: BORROW / Subset Sheets: BW5 of 8	Sheet Number 365
	Unit Leader							



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	Unit Information			
	Unit Leader			

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PROPOSAL	CENTRAL 70		Project No./Code
No Revisions:	BORROW & WASTE PLAN		FBR 0704-234
Revised:	Designer:	Structure Numbers	19631
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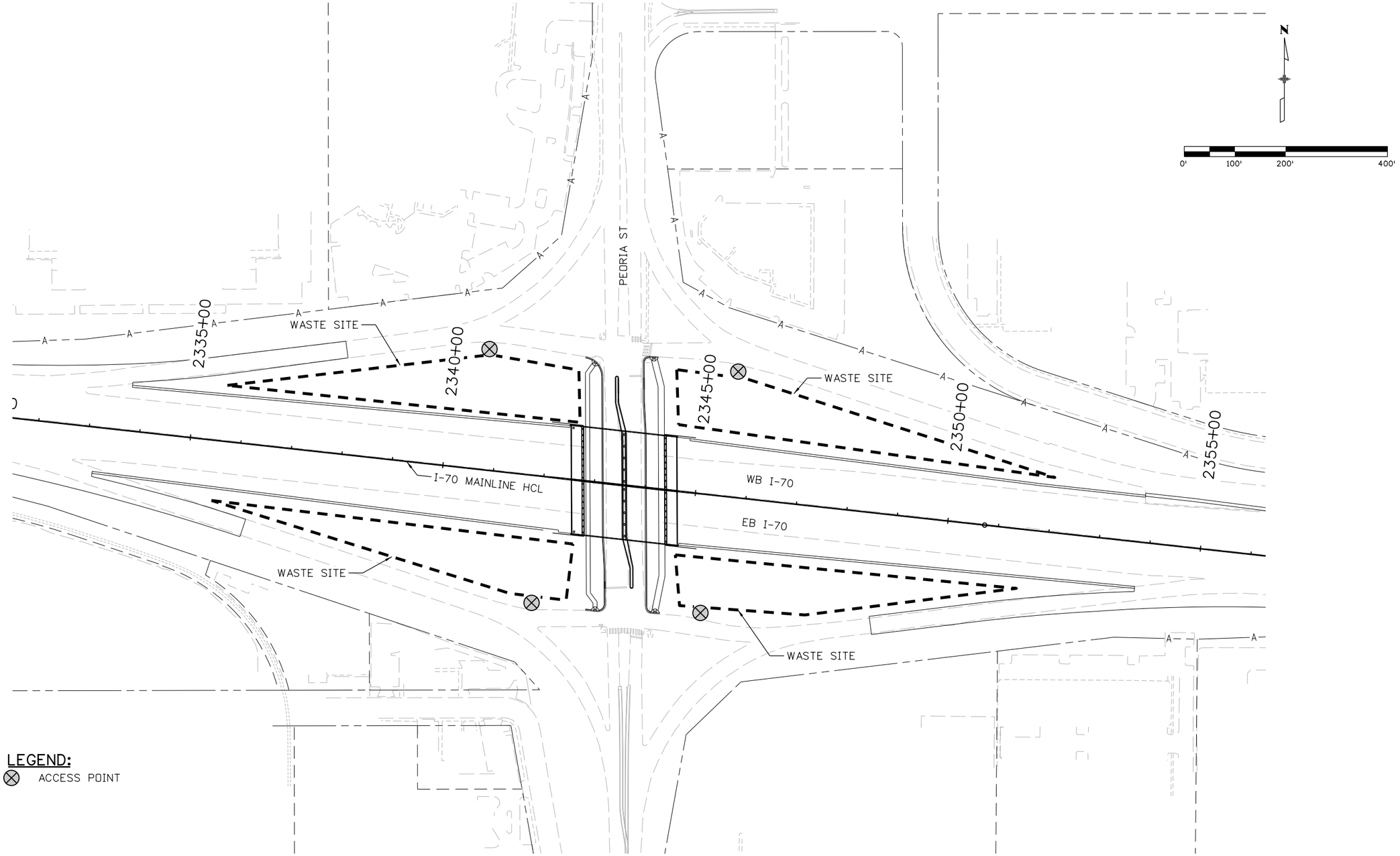

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Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

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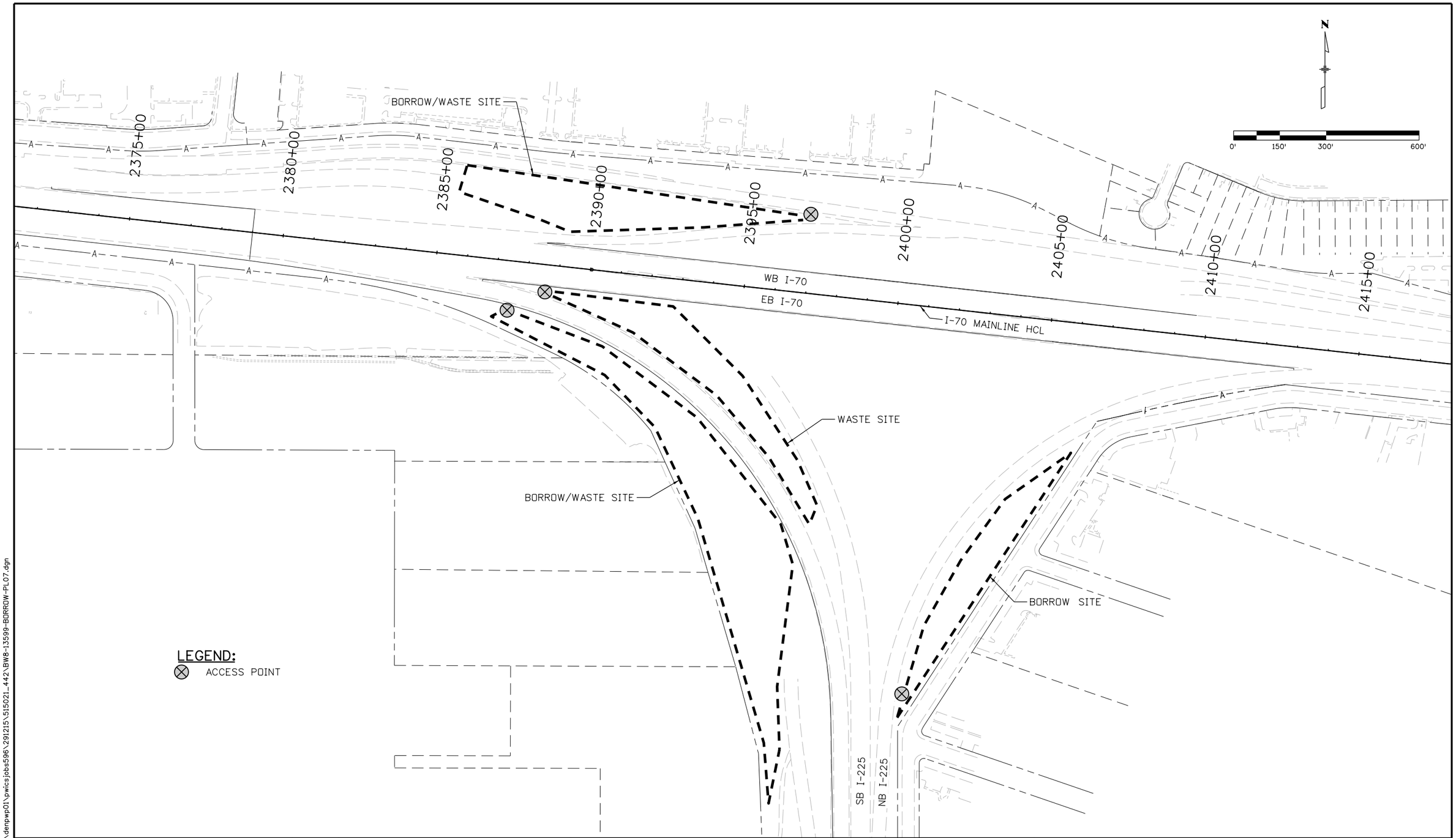
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
BORROW & WASTE PLAN
Designer:
Detailer:
Sheet Subset: BORROW
Structure Numbers
Subset Sheets: BW7 of 8

Project No./Code
FBR 0704-234
19631
Sheet Number 367



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Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

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PROPOSAL
No Revisions:
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Void:

CENTRAL 70
BORROW & WASTE PLAN
Designer:
Detailer:
Sheet Subset: BORROW
Structure Numbers
Subset Sheets: BW8 of 8

Project No./Code
FBR 0704-234
19631
Sheet Number 368

Front Range
Mobility Group

APPENDIX A

Part 1 of DRAFT DESIGN DRAWINGS

CENTRAL 70 PROJECT

PUBLIC DISCLOSURE

Administrative and Technical Proposal:

Front Range Mobility Group

THE EXTRA MILE

CONNECTING COMMUNITIES

APPENDIX A

Part 2 of DRAFT DESIGN DRAWINGS

b. Draft Drainage Drawings

Front Range Mobility Group

THE EXTRA MILE

CONNECTING COMMUNITIES

b. Draft Drainage Drawings

DRAINAGE SHEET INDEX

SHEET NO.	SHEET DESCRIPTION
D1	DRAINAGE - SHEET INDEX
D2	DRAINAGE PLAN - I-70 MAINLINE - STA 1000+00 TO STA 1004+00
D3	DRAINAGE PLAN - I-70 MAINLINE - STA 1004+00 TO STA 1017+00
D4	DRAINAGE PLAN - I-70 MAINLINE - STA 1017+00 TO STA 1031+00
D5	DRAINAGE PLAN - I-70 MAINLINE - STA 1031+00 TO STA 1045+00
D6	DRAINAGE PLAN - I-70 MAINLINE - STA 1045+00 TO STA 1059+00
D7	DRAINAGE PLAN - I-70 MAINLINE - STA 1059+00 TO STA 2002+00
D8	DRAINAGE PLAN - I-70 MAINLINE - STA 2002+00 TO STA 2016+00
D9	DRAINAGE PLAN - I-70 MAINLINE - STA 2016+00 TO STA 2030+00
D10	DRAINAGE PLAN - I-70 MAINLINE - STA 2030+00 TO STA 2044+00
D11	DRAINAGE PLAN - I-70 MAINLINE - STA 2044+00 TO STA 2058+00
D12	DRAINAGE PLAN - I-70 MAINLINE - STA 2058+00 TO STA 2072+00
D13	DRAINAGE PLAN - I-70 MAINLINE - STA 2072+00 TO STA 2086+00
D14	DRAINAGE PLAN - I-70 MAINLINE - STA 2086+00 TO STA 2100+00
D15	DRAINAGE PLAN - I-70 MAINLINE - STA 2100+00 TO STA 2114+00
D16	DRAINAGE PLAN - I-70 MAINLINE - STA 2114+00 TO STA 2128+00
D17	DRAINAGE PLAN - I-70 MAINLINE - STA 2128+00 TO STA 2142+00
D18	DRAINAGE PLAN - I-70 MAINLINE - STA 2142+00 TO STA 2156+00
D19	DRAINAGE PLAN - I-70 MAINLINE - STA 2156+00 TO STA 2170+00
D20	DRAINAGE PLAN - I-70 MAINLINE - STA 2170+00 TO STA 2182+00
D21	DRAINAGE PLAN - I-70 MAINLINE - STA 2182+00 TO STA 2196+00
D22	DRAINAGE PLAN - I-70 MAINLINE - STA 2196+00 TO STA 2210+00
D23	DRAINAGE PLAN - I-70 MAINLINE - STA 2210+00 TO STA 2224+00
D24	DRAINAGE PLAN - I-70 MAINLINE - STA 2224+00 TO STA 2238+00
D25	DRAINAGE PLAN - I-70 MAINLINE - STA 2238+00 TO STA 2252+00
D26	DRAINAGE PLAN - I-70 MAINLINE - STA 2252+00 TO STA 2266+00
D27	DRAINAGE PLAN - I-70 MAINLINE - STA 2266+00 TO STA 2280+00
D28	DRAINAGE PLAN - I-70 MAINLINE - STA 2280+00 TO STA 2294+00
D29	DRAINAGE PLAN - I-70 MAINLINE - STA 2294+00 TO STA 2308+00
D30	DRAINAGE PLAN - I-70 MAINLINE - STA 2308+00 TO STA 2322+00
D31	DRAINAGE PLAN - I-70 MAINLINE - STA 2322+00 TO STA 2336+00
D32	DRAINAGE PLAN - I-70 MAINLINE - STA 2336+00 TO STA 2350+00
D33	DRAINAGE PLAN - I-70 MAINLINE - STA 2350+00 TO STA 2364+00
D34	DRAINAGE PLAN - I-70 MAINLINE - STA 2364+00 TO STA 2378+00
D35	DRAINAGE PLAN - I-70 MAINLINE - STA 2378+00 TO STA 2392+00
D36	DRAINAGE PLAN - I-70 MAINLINE - STA 2392+00 TO STA 2406+00
D37	DRAINAGE PLAN - I-70 MAINLINE - STA 2406+00 TO STA 2420+00
D38	DRAINAGE PLAN - I-70 MAINLINE - STA 2420+00 TO STA 2434+00
D39	DRAINAGE PLAN - I-70 MAINLINE - STA 2434+00 TO STA 2448+00
D40	DRAINAGE PLAN - I-70 MAINLINE - STA 2448+00 TO STA 2462+00
D41	DRAINAGE PLAN - I-70 MAINLINE - STA 2462+00 TO STA 2475+00
D42	DRAINAGE PLAN - I-70 MAINLINE - STA 2475+00 TO STA 2481+45.97

SHEET NO.	SHEET DESCRIPTION
D43	DRAINAGE PLAN - SECONDARY ROAD - STA 2000+00 TO STA 2008+00 SOUTH
D44	DRAINAGE PLAN - SECONDARY ROAD - STA 2008+00 TO STA 2022+00 SOUTH
D45	DRAINAGE PLAN - SECONDARY ROAD - STA 2022+00 TO STA 2031+00 SOUTH
D46	DRAINAGE PLAN - SECONDARY ROAD - STA 2031+00 TO STA 2044+00 SOUTH
D47	DRAINAGE PLAN - SECONDARY ROAD - STA 2044+00 TO STA 2058+00 SOUTH
D48	DRAINAGE PLAN - SECONDARY ROAD - STA 2058+00 TO STA 2072+00 SOUTH
D49	DRAINAGE PLAN - SECONDARY ROAD - STA 2072+00 TO STA 2086+00 SOUTH
D50	DRAINAGE PLAN - SECONDARY ROAD - STA 2002+00 TO STA 2016+00 NORTH
D51	DRAINAGE PLAN - SECONDARY ROAD - STA 2016+00 TO STA 2030+00 NORTH
D52	DRAINAGE PLAN - SECONDARY ROAD - STA 2030+00 TO STA 2044+00 NORTH
D53	DRAINAGE PLAN - SECONDARY ROAD - STA 2044+00 TO STA 2050+00 NORTH
D54	DRAINAGE PLAN - SECONDARY ROAD - STA 2044+00 TO STA 2058+00 NORTH
D55	DRAINAGE PLAN - SECONDARY ROAD - STA 2058+00 TO STA 2072+00 NORTH
D56	DRAINAGE PLAN - SECONDARY ROAD - STA 2072+00 TO STA 2085+00 NORTH
D57	DRAINAGE PLAN - BRIGHTON BLVD - STA 500+00 TO 514+76
D58	DRAINAGE PLAN - YORK STREET - STA 500+00 TO 513+00
D59	DRAINAGE PLAN - YORK STREET - STA 513+00 TO 522+89
D60	DRAINAGE PLAN - STEELE ST/VASQUEZ BLVD - STA 500+00 TO 512+00
D61	DRAINAGE PLAN - STEELE ST/VASQUEZ BLVD - STA 512+00 TO 523+66
D62	DRAINAGE PLAN - MONROE STREET - STA 500+00 TO 508+00
D63	DRAINAGE PLAN - COLORADO BLVD - STA 500+00 TO 513+00
D64	DRAINAGE PLAN - COLORADO BLVD - STA 513+00 TO 527+33
D65	DRAINAGE PLAN - HOLLY STREET - STA 500+00 TO 510+93
D66	DRAINAGE PLAN - QUEBEC STREET - STA 500+00 TO 510+00
D67	DRAINAGE PLAN - QUEBEC STREET - STA 510+00 TO 522+66
D68	DRAINAGE PLAN - I-70 EB TO I-225 SB CONNECTOR - STA 235+00 TO 247+00
D69	DRAINAGE PLAN - I-70 EB TO I-225 SB CONNECTOR - STA 247+00 TO 257+00
D70	DRAINAGE PLAN - I-70 EB TO I-225 SB CONNECTOR - STA 257+00 TO 264+50
D71	DRAINAGE PLAN & PROFILE - OFFSITE DRAINAGE OUTFALL - COLORADO BLVD TO DAHLIA ST
D72	DRAINAGE PLAN & PROFILE - OFFSITE DRAINAGE OUTFALL - COLORADO BLVD
D73	DRAINAGE PLAN & PROFILE - EXISTING RACE STREET OUTFALL - STA 0+00 TO STA 16+00
D74	DRAINAGE PLAN & PROFILE - EXISTING RACE STREET OUTFALL - STA 16+00 TO STA 34+00
D75	DRAINAGE PLAN & PROFILE - EXISTING RACE STREET OUTFALL - STA 34+00 TO STA 48+00
D76	DRAINAGE PLAN & PROFILE - EXISTING RACE STREET OUTFALL - STA 48+00 TO STA 57+47
D77	DRAINAGE CROSS SECTION - SECONDARY ROAD - 46TH AVE
D78	I-70 MAINLINE - STA 2086+00 TO STA 2100+00 - DETAIL BLOWUP

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Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions

Date:	Comments	Init.

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PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE
SHEET INDEX

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers
Subset Sheets: D1 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 369

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Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

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PROPOSAL
No Revisions:
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Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 1000+00 TO STA 1004+00

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers
Subset Sheets: D2 of 78

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FBR 0704-234
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Front Range Mobility Group

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Vert. Scale:	As Noted
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Unit Leader	

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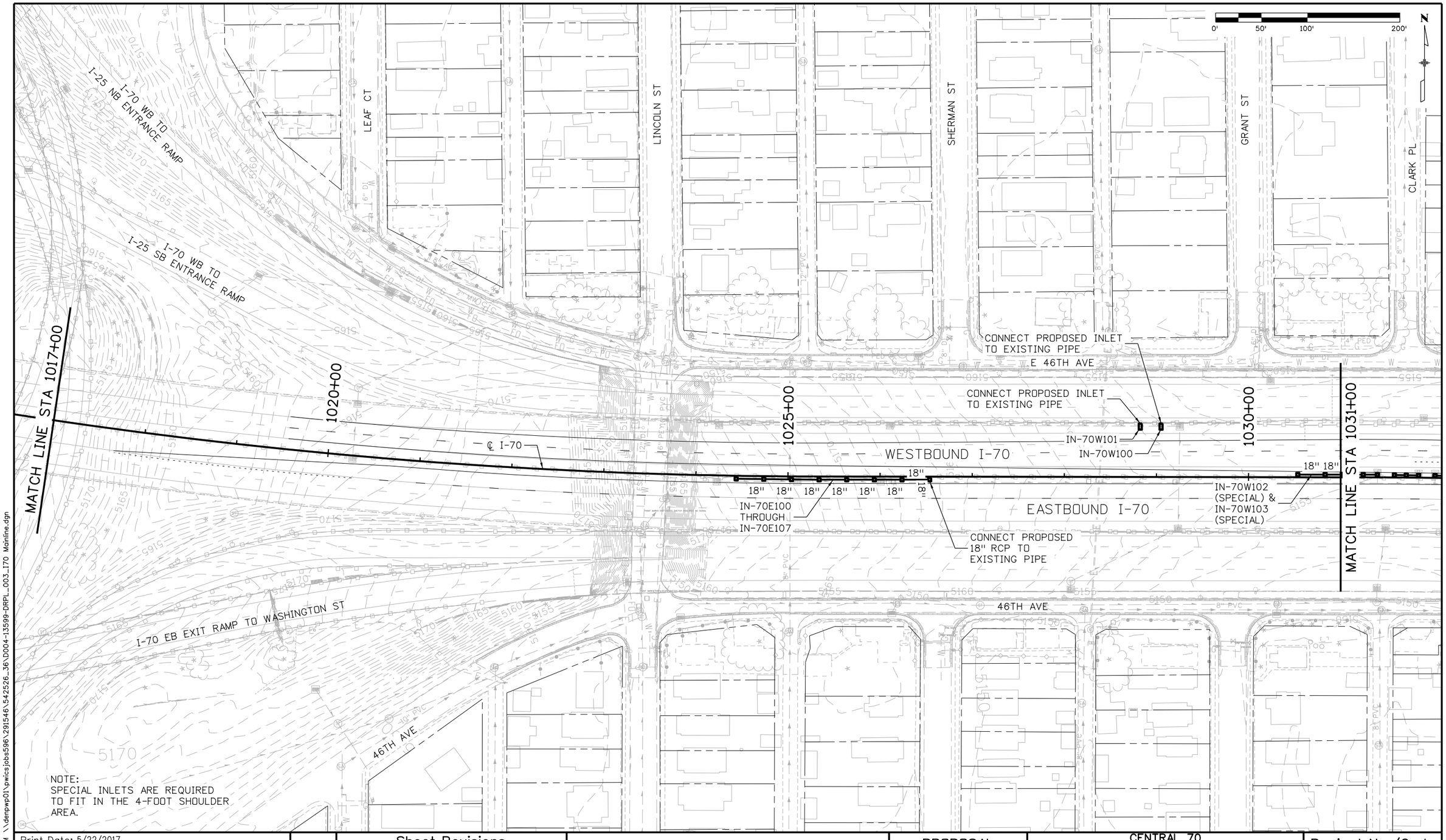
Void:	

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 1004+00 TO STA 1017+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	DRAINAGE	Subset Sheets: D3	of 78

Project No./Code	
FBR 0704-234	
19631	
Sheet Number	371



DENPWP01$ 11:09:45 AM \\denpwp01\pwics\jobs596\291546\542526_36\D004-13599-DRPL_003_I70 Mainline.dgn

Print Date: 5/22/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale:	As Noted
Vert. Scale:	As Noted
Unit Information	
Unit Leader	

Sheet Revisions		
Date:	Comments	Init.

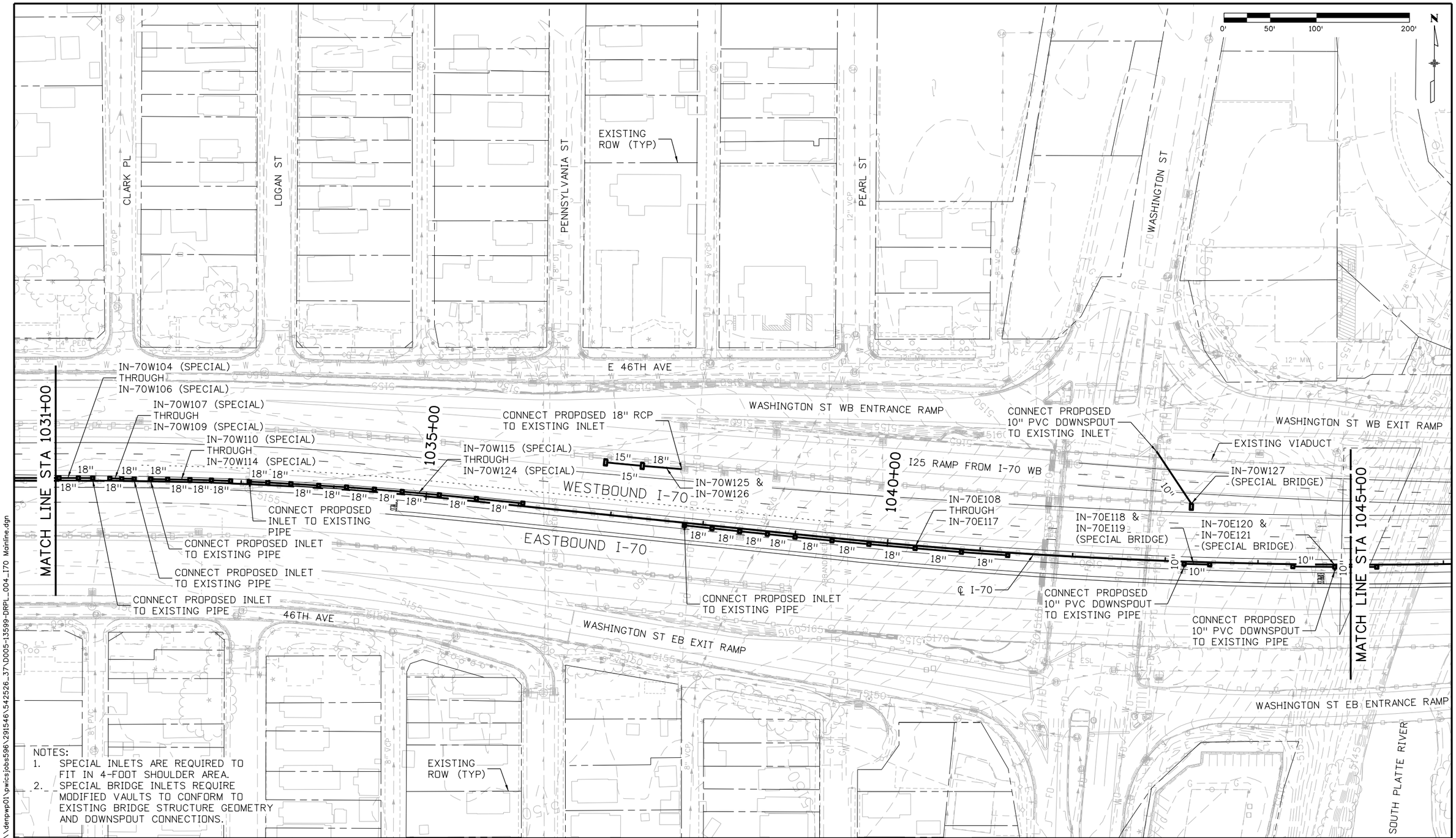
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 1017+00 TO STA 1031+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	DRAINAGE	Subset Sheets: D4	of 78

Project No./Code	
FBR 0704-234	
19631	
Sheet Number	372



NOTES:
1. SPECIAL INLETS ARE REQUIRED TO FIT IN 4-FOOT SHOULDER AREA.
2. SPECIAL BRIDGE INLETS REQUIRE MODIFIED VAULTS TO CONFORM TO EXISTING BRIDGE STRUCTURE GEOMETRY AND DOWNSPOUT CONNECTIONS.

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Print Date: 5/22/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

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Sheet Revisions		
Date:	Comments	Init.

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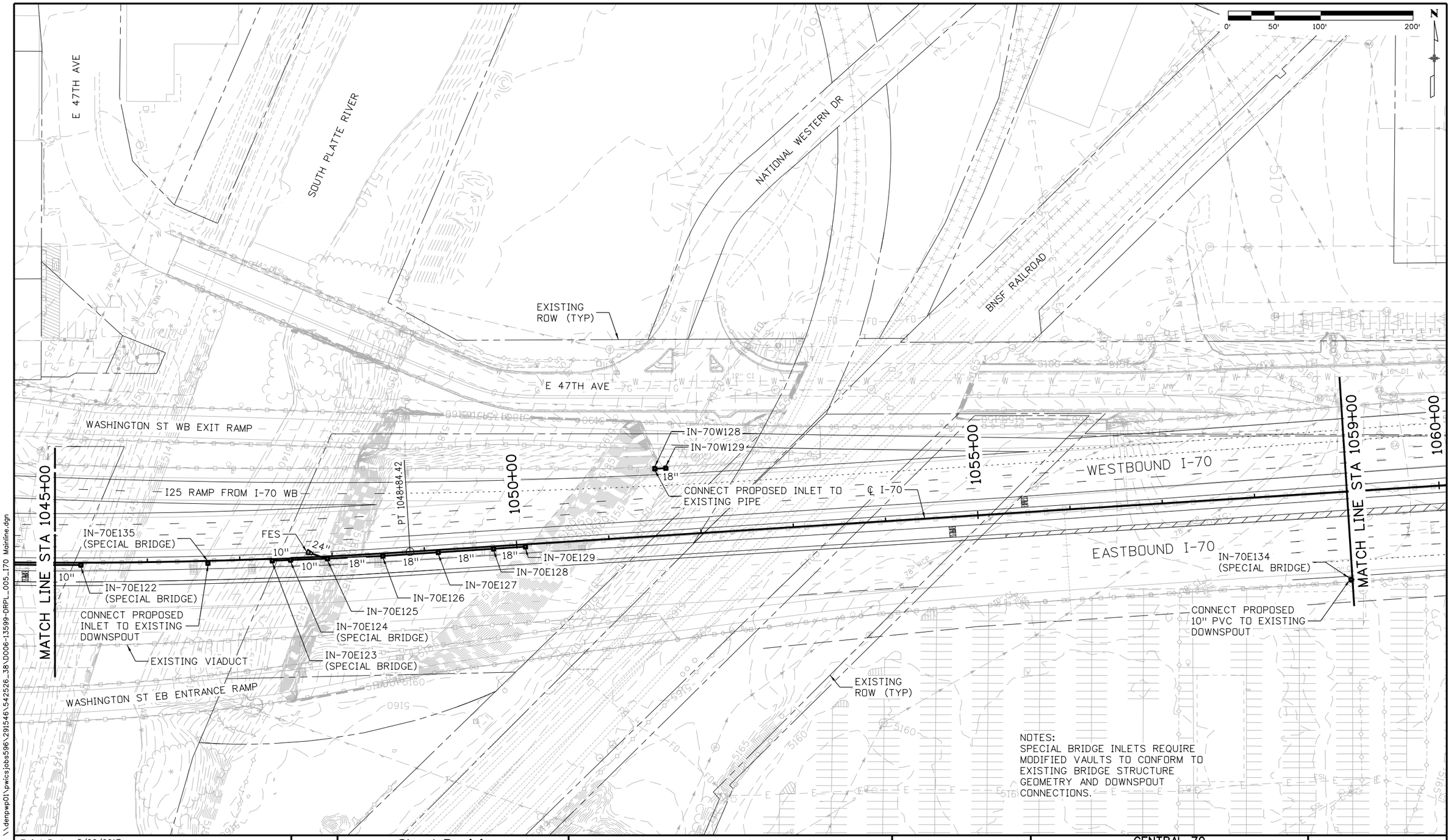
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 1031+00 TO STA 1045+00

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers
Subset Sheets: D5 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 373



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Print Date: 5/22/2017			
File Name: See sheet edge for information			
Front Range Mobility Group	Horiz. Scale: As Noted		
	Vert. Scale: As Noted		
	Unit Information		
	Unit Leader		

0000

Sheet Revisions		
Date:	Comments	Init.

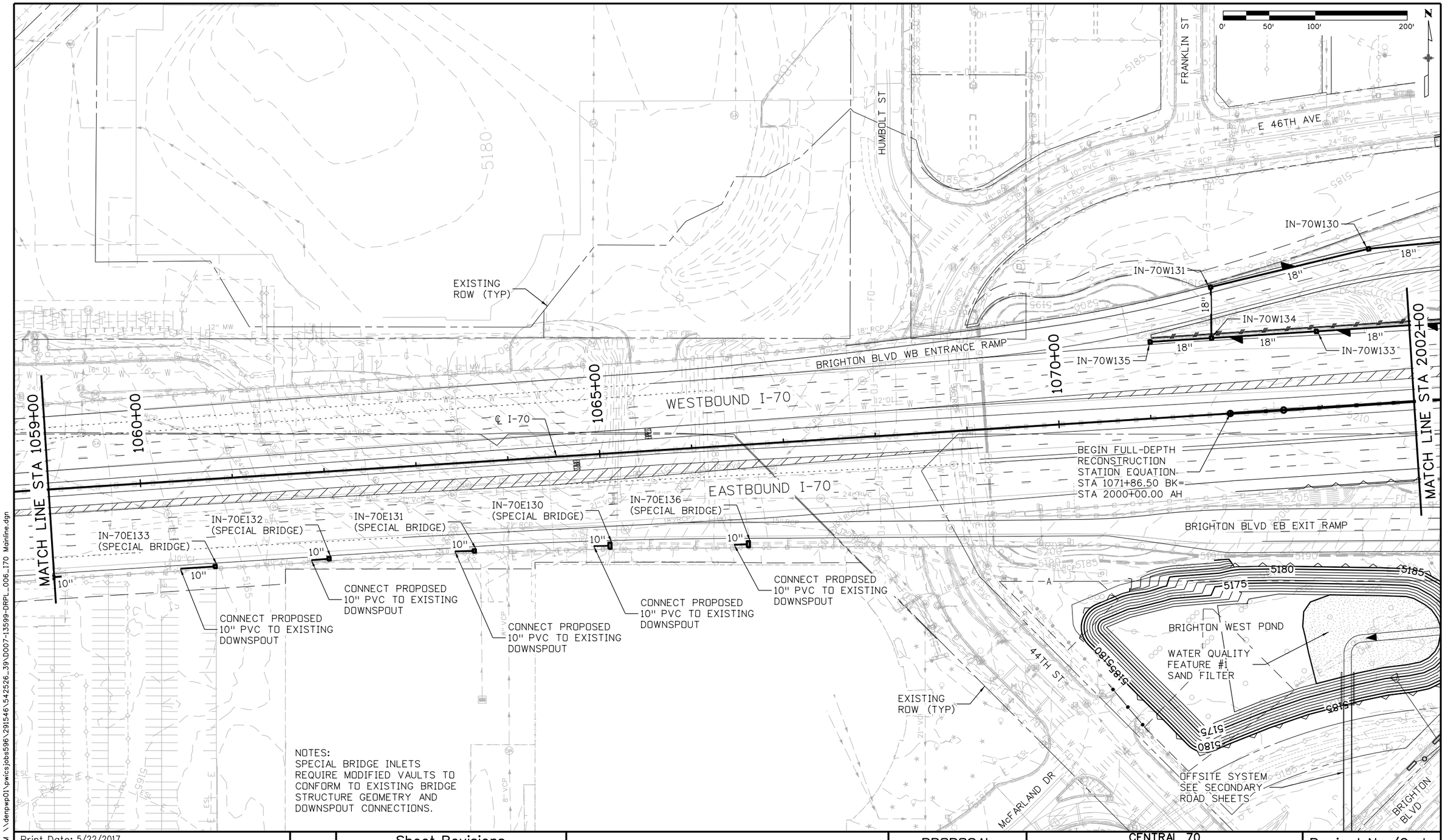
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 1045+00 TO STA 1059+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	DRAINAGE	Subset Sheets: D6	of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 374



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Print Date: 5/22/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

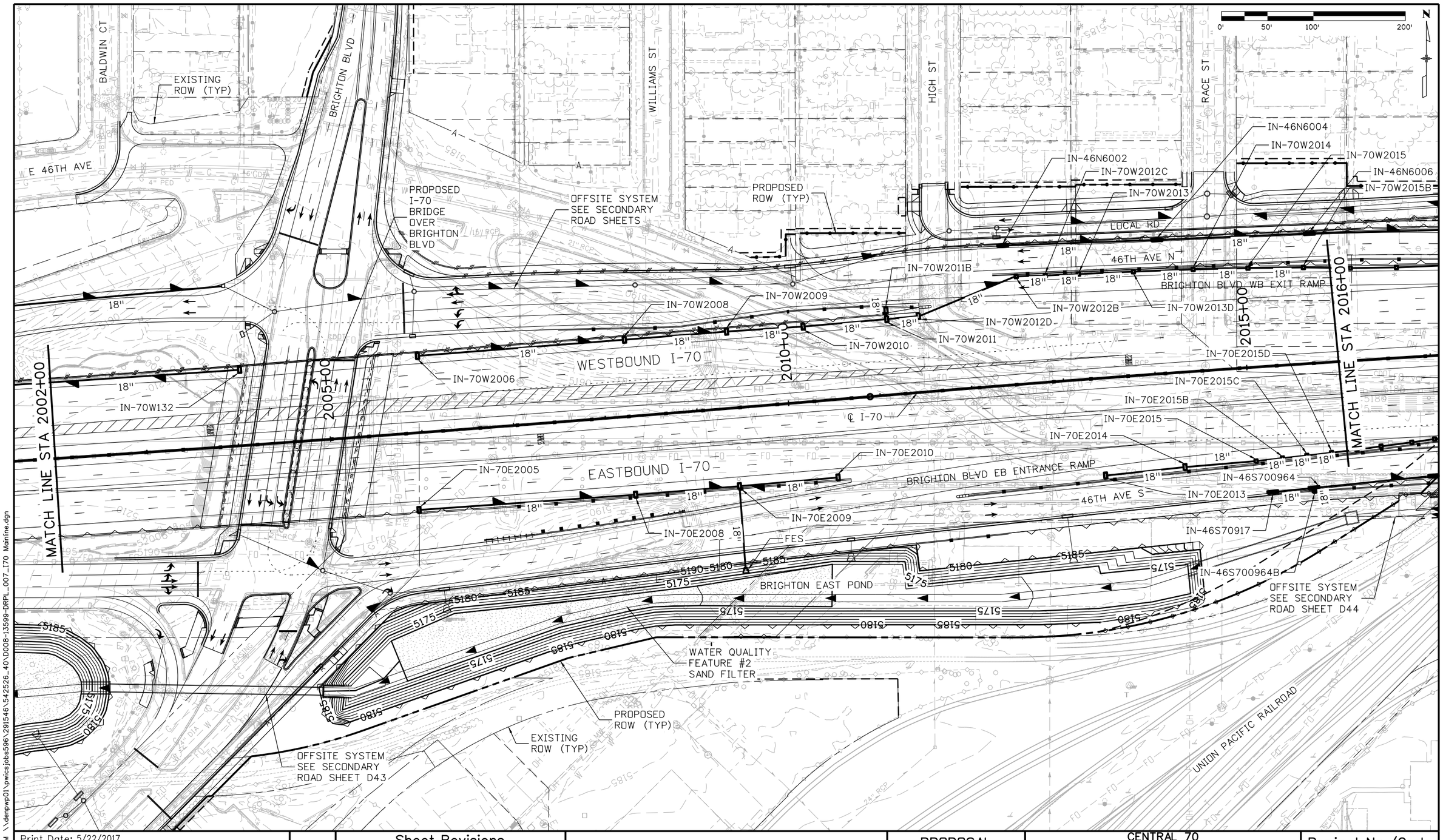
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 1059+00 TO STA 2002+00

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers
Subset Sheets: D7 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 375



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Print Date: 5/22/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale:	As Noted
Vert. Scale:	As Noted
Unit Information	
Unit Leader	

0000

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
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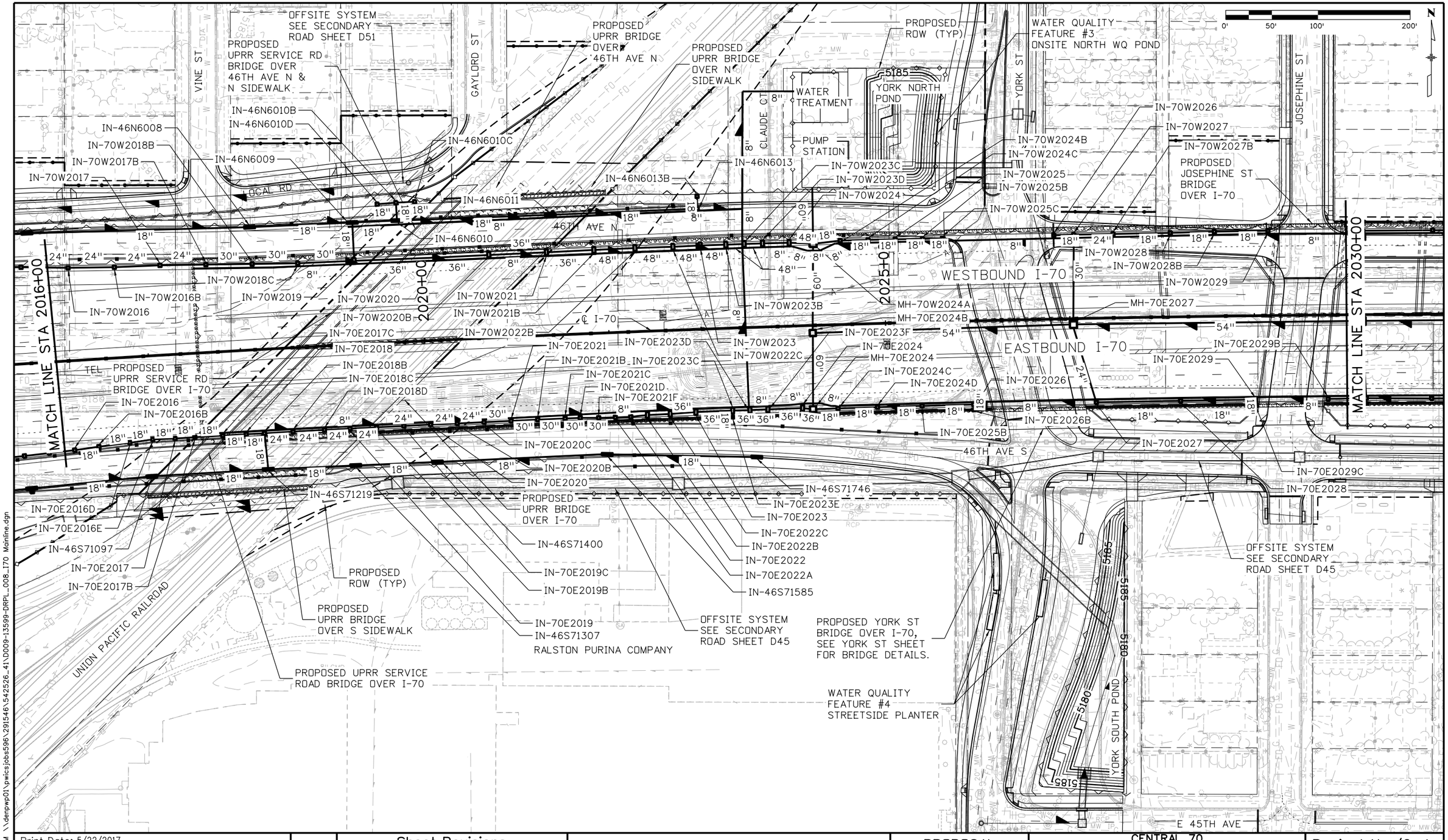
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2002+00 TO STA 2016+00

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers
Subset Sheets: D8 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 376



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Print Date: 5/22/2017		Sheet Revisions	
File Name: See sheet edge for information		Date: / Comments / Init.	
Front Range Mobility Group	Horiz. Scale: As Noted		
	Vert. Scale: As Noted		
	Unit Information		
	Unit Leader		

Colorado Department of Transportation
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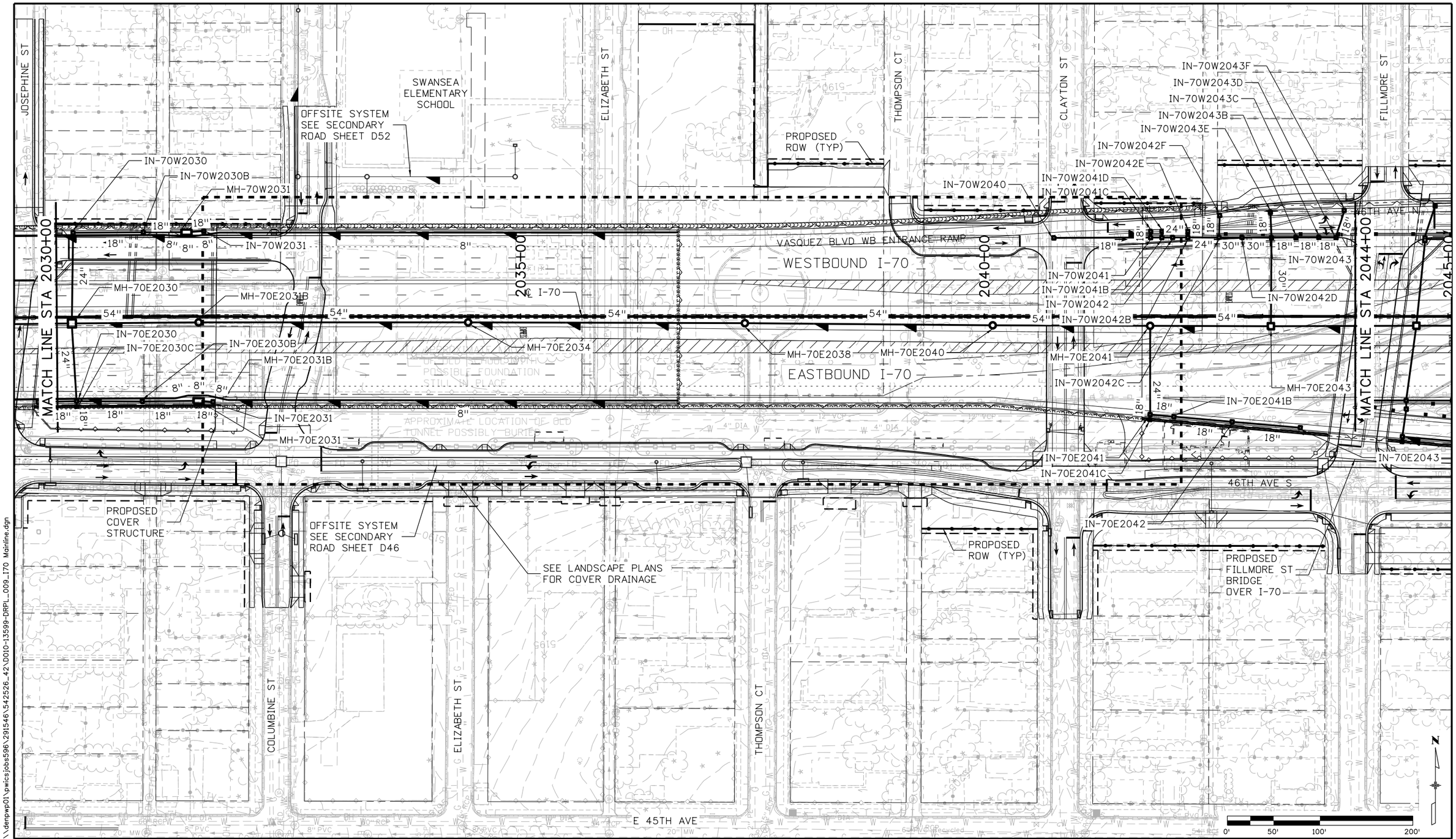
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2016+00 TO STA 2030+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	DRAINAGE	Subset Sheets: D9	of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 377



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Print Date: 5/22/2017

File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale:	As Noted
Vert. Scale:	As Noted
Unit Information	
Unit Leader	

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
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Phone: 303-757-9934 FAX: 303-757-9907

Region 1 KJS

PROPOSAL

No Revisions:

Revised:

Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2030+00 TO STA 2044+00

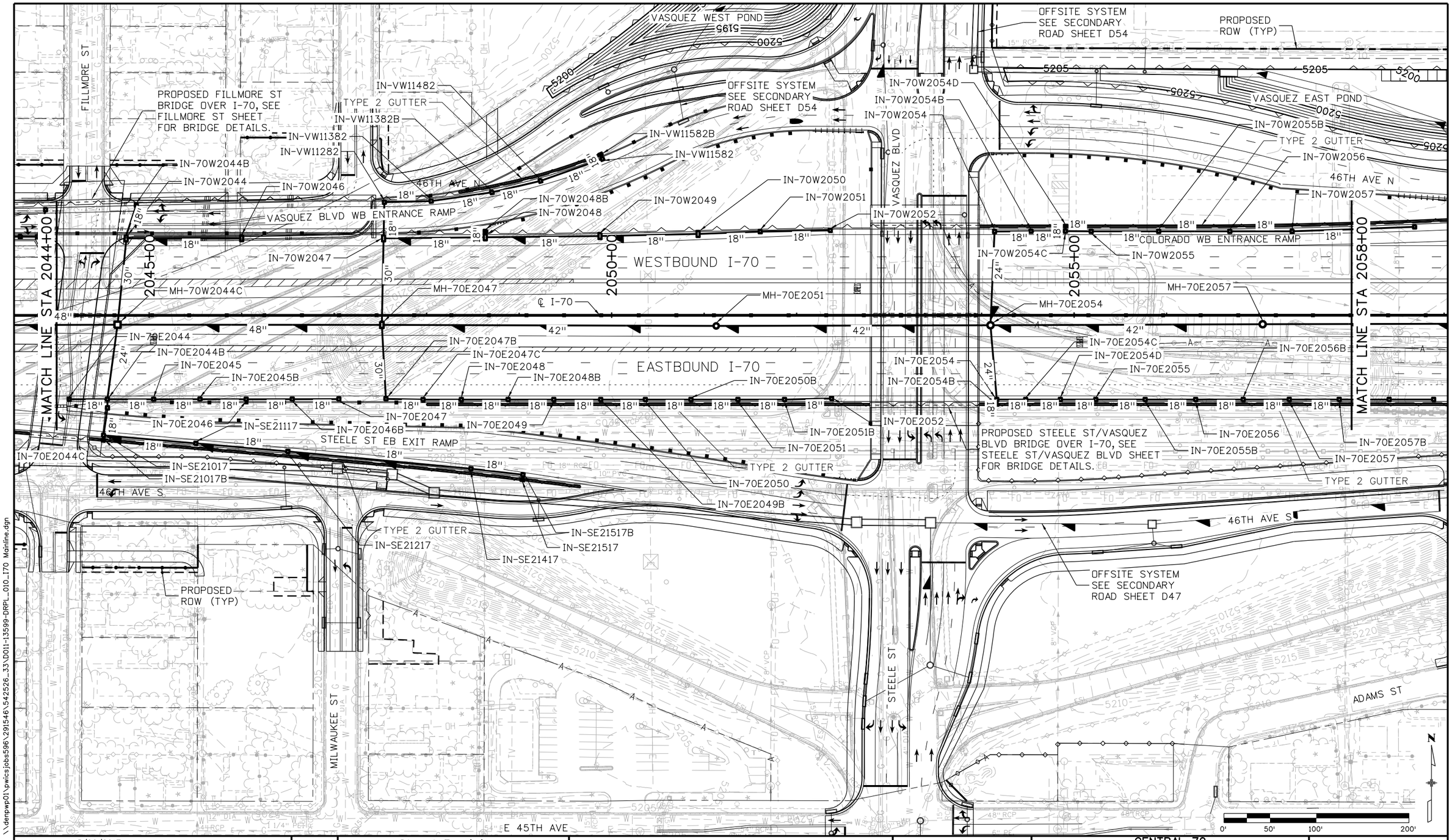
Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	DRAINAGE	Subset Sheets: D10	of 78

Project No./Code

FBR 0704-234

19631

Sheet Number 378



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Print Date: 5/22/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale:	As Noted
Vert. Scale:	As Noted
Unit Information	
Unit Leader	

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
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Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2044+00 TO STA 2058+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	DRAINAGE	Subset Sheets: D11	of 78

Project No./Code	
FBR 0704-234	
19631	
Sheet Number	379

VASQUEZ EAST POND
PROPOSED COOK ST BRIDGE OVER I-70
PROPOSED ROW (TYP)
OFFSITE SYSTEM SEE SECONDARY ROAD SHEET D55
46TH AVE N
MATCH LINE STA 2058+00
2060+00
2065+00
2070+00
MATCH LINE STA 2072+00
BNSF MARKET LEAD RR
MONROE ST
JACKSON ST
EXISTING ROW (TYP)
COLORADO BLVD WB ENTRANCE RAMP
WESTBOUND I-70
℄ I-70
EASTBOUND I-70
COLORADO BLVD EB EXIT RAMP
46TH AVE S
TYPE 2 GUTTER
PROPOSED BNSF BRIDGE OVER I-70
PROPOSED MONROE ST BRIDGE OVER I-70, SEE MONROE ST SHEET FOR BRIDGE DETAILS.
OFFSITE SYSTEM SEE SECONDARY ROAD SHEET D48
COOK ST
ADAMS ST
MADISON ST
GARFIELD ST
PROPOSED ROW (TYP)
E 45TH AVE
0' 50' 100' 200'

IN-70W2064B
IN-70W2064
IN-70W2060D
IN-70W2060
IN-70W2060B
IN-70W2060C
IN-70W2061
IN-70W2061B
IN-70W2062
IN-70W2062B
IN-70W2064C
IN-70W2066
IN-70W2063B
IN-70W2063
IN-70W2058B
IN-70W2058
MH-70W2059
MH-70W2064
IN-70E2060
IN-70E2062
IN-70E2062B
IN-70E2063B
IN-70E2059
IN-70E2058
IN-70E2061B
IN-70E2061
IN-70E2060C
IN-70E2062C
IN-70E2060B
IN-70E2064B
IN-70E2064
IN-70E2064C
IN-70E2065
IN-COW10900
IN-COW11100
IN-COW11000
IN-COW11300
IN-COW11200
IN-COW11400
IN-COW11500
IN-70W2065
MH-70E2066
IN-70W2067A
IN-70W2069A
IN-70E2066
IN-C0E21644
IN-70E2067
IN-C0E21844
IN-70E2071
IN-70W2060D
IN-C0E22044B
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IN-C0E22044
IN-C0E21644B
IN-C0E21744
IN-C0E21944

Print Date: 5/22/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2058+00 TO STA 2072+00

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers:
Subset Sheets: D12 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 380

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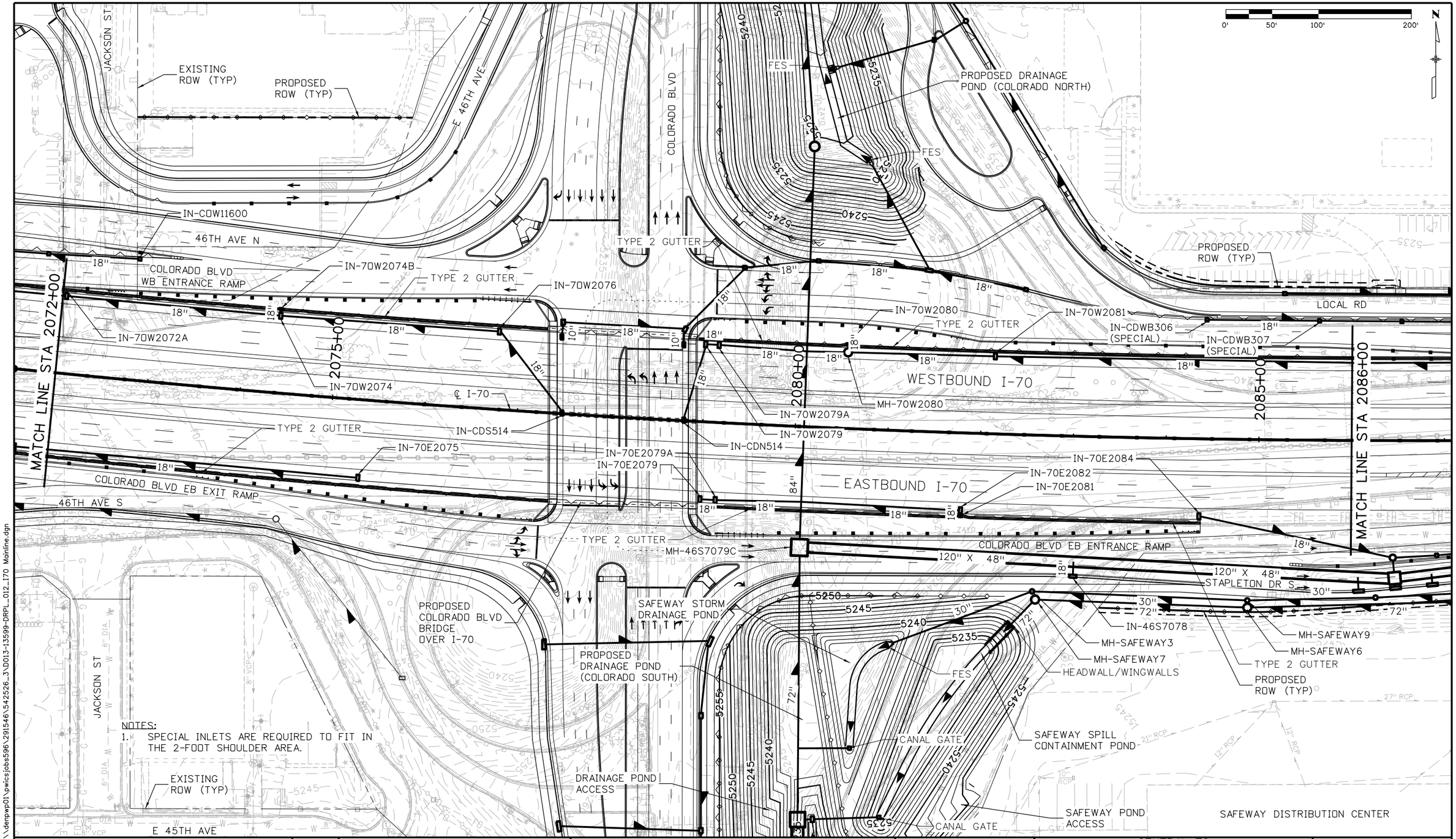

DENPWP02$ 11:10:14 AM \\denpwp01\pwicsjobs596\291546\542526_3\D013-13599-DRPL_012_I70 Mainline.dgn

Print Date: 5/22/2017	Sheet Revisions		
File Name: See sheet edge for information	Date:	Comments	Init.
Horiz. Scale: As Noted			
Vert. Scale: As Noted			
Unit Information			
Unit Leader			

Front Range Mobility Group

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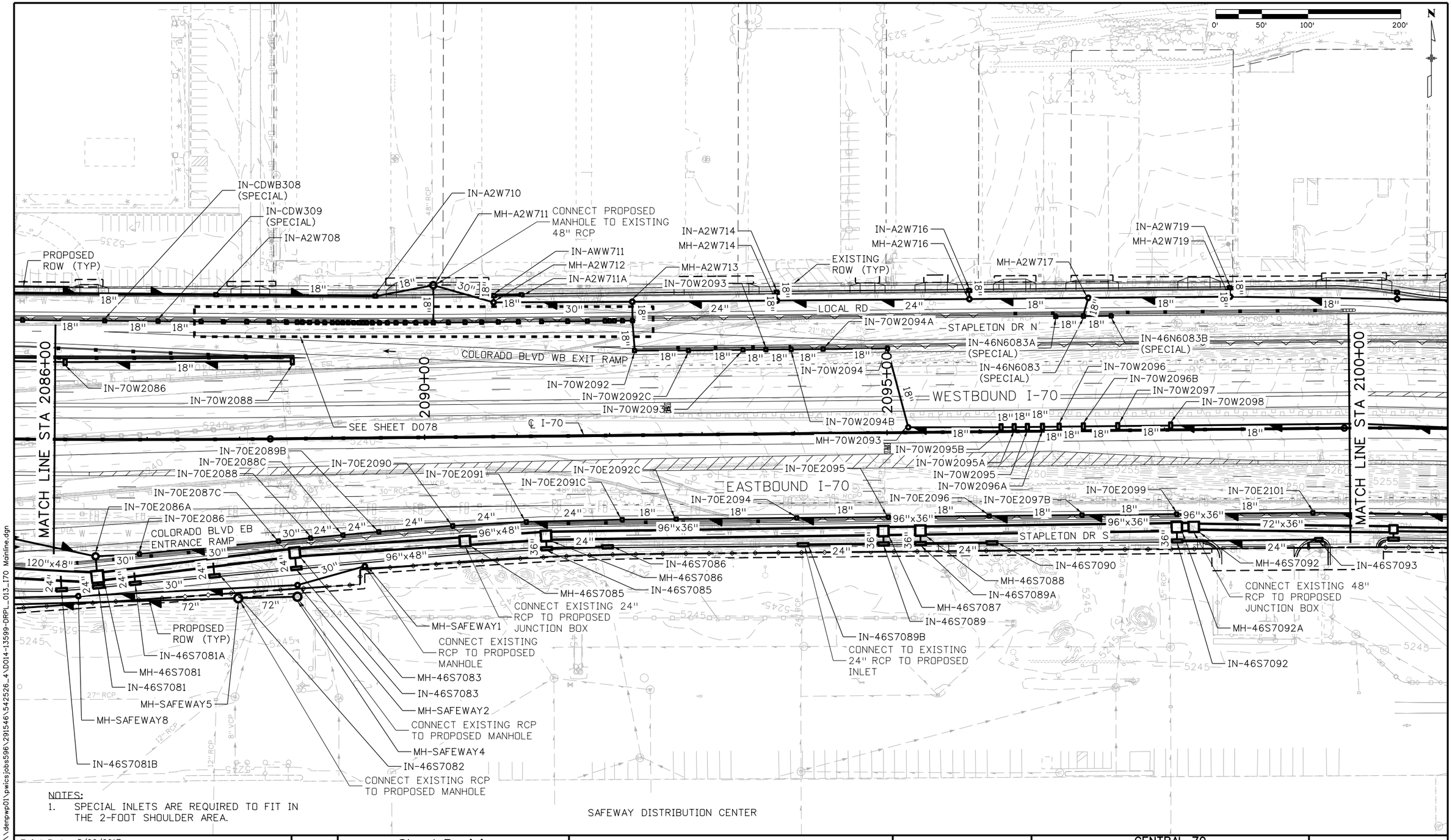
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL	CENTRAL 70 DRAINAGE PLAN I-70 MAINLINE STA 2072+00 TO STA 2086+00		Project No./Code
No Revisions:			FBR 0704-234
Revised:	Designer:	Structure Numbers	19631
Void:	Detailer:		Sheet Number 381
	Sheet Subset: DRAINAGE	Subset Sheets: D13 of 78	

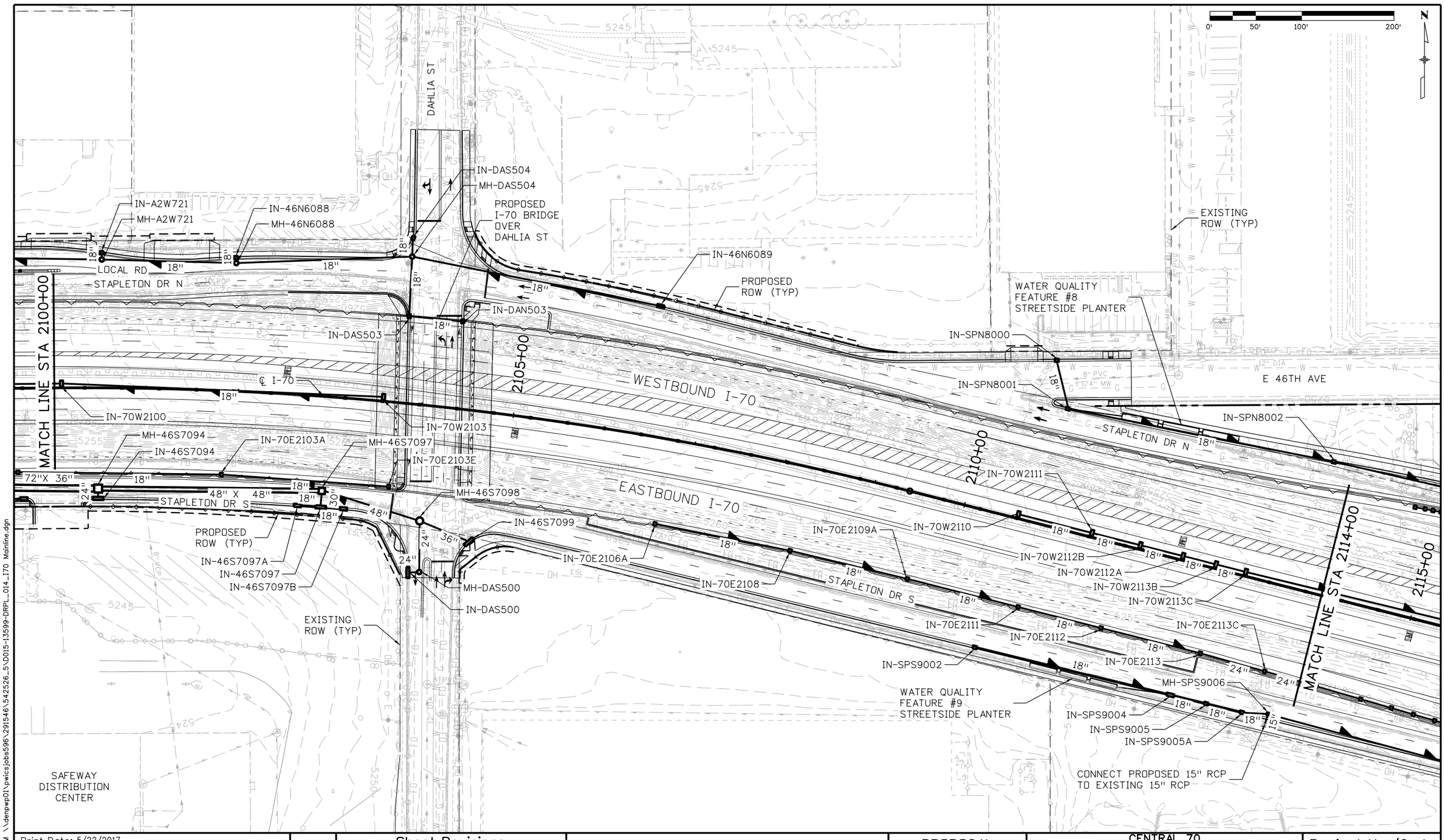


NOTES:
1. SPECIAL INLETS ARE REQUIRED TO FIT IN THE 2-FOOT SHOULDER AREA.

DENPWP02$ 11:11:31 AM \\denpwp01\pwicsjobs596\291546\542526_4\D014-13599-DRPL_013_I70 Mainline.dgn

Print Date: 5/22/2017		Sheet Revisions			Colorado Department of Transportation
File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907
Front Range Mobility Group	Horiz. Scale: As Noted				Region 1 KJS
	Vert. Scale: As Noted				
	Unit Information				
	Unit Leader				

PROPOSAL	CENTRAL 70 DRAINAGE PLAN I-70 MAINLINE STA 2086+00 TO STA 2100+00			Project No./Code
No Revisions:	Designer:	Structure Numbers		FBR 0704-234
Revised:	Detailer:			19631
Void:	Sheet Subset: DRAINAGE	Subset Sheets: D14 of 78		Sheet Number 382



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Print Date: 5/22/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
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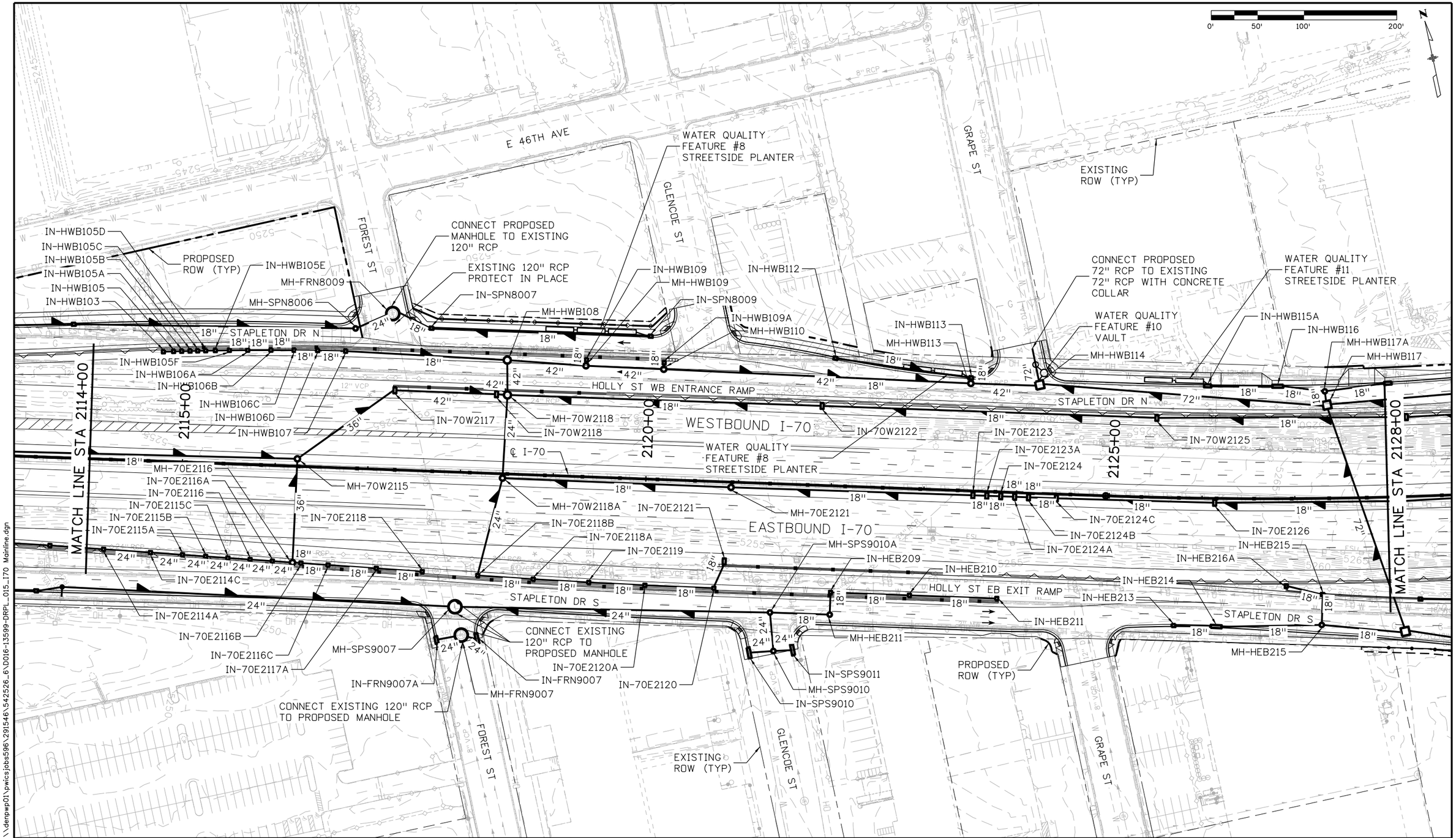
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2100+00 TO STA 2114+00

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers:
Subset Sheets: D15 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 383



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Print Date: 5/22/2017			
File Name: See sheet edge for information			
Front Range Mobility Group	Horiz. Scale: As Noted		
	Vert. Scale: As Noted		
	Unit Information		
	Unit Leader		

Sheet Revisions		
Date:	Comments	Init.

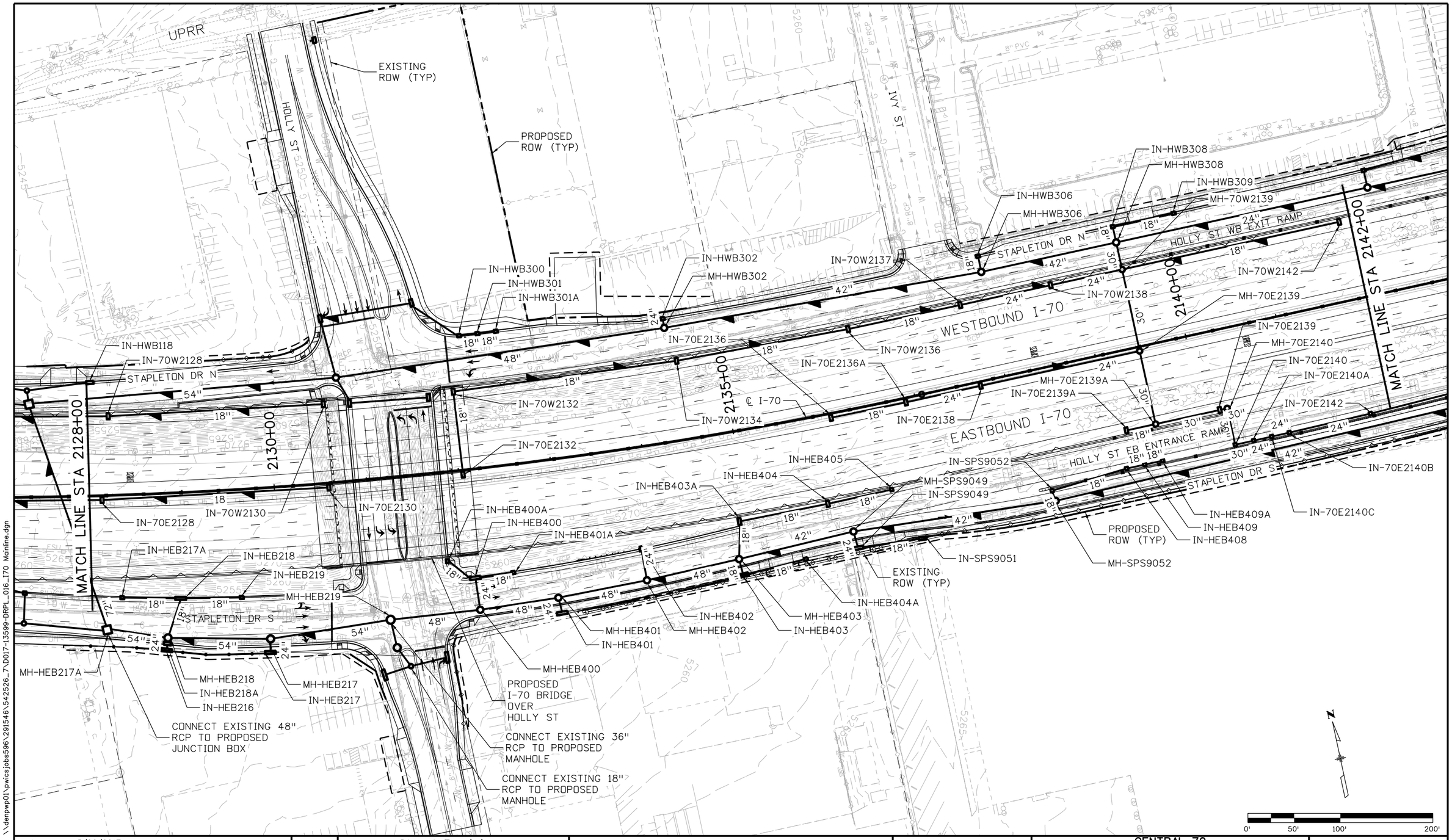
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2114+00 TO STA 2128+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	DRAINAGE	Subset Sheets: D16	of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 384



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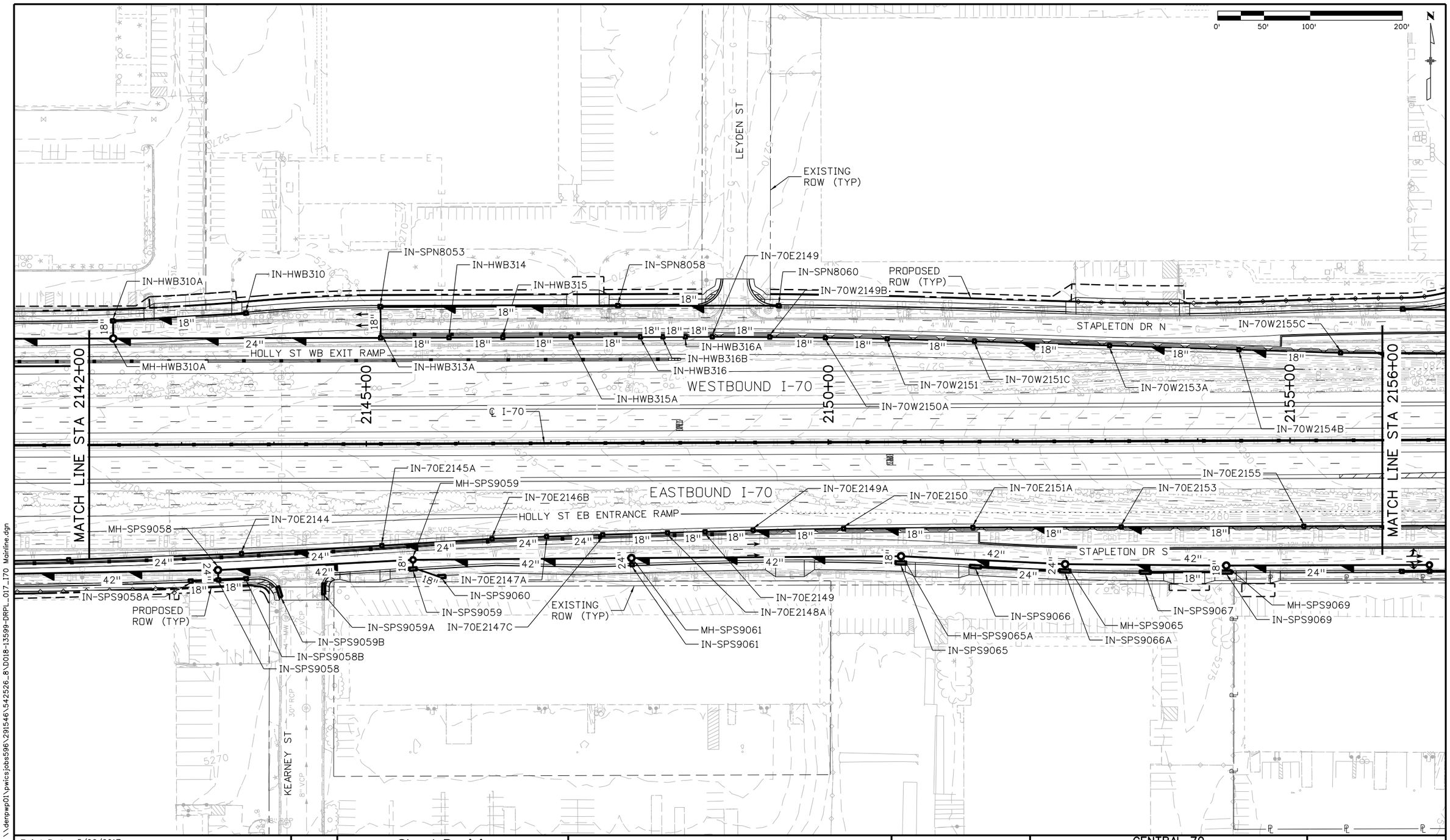
Print Date: 5/22/2017		Sheet Revisions			Colorado Department of Transportation
File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907
Front Range Mobility Group	Horiz. Scale: As Noted				Region 1 KJS
	Vert. Scale: As Noted				
	Unit Information				
	Unit Leader				

PROPOSAL	CENTRAL 70 DRAINAGE PLAN I-70 MAINLINE STA 2128+00 TO STA 2142+00		Project No./Code
No Revisions:			FBR 0704-234
Revised:	Designer:	Structure Numbers	19631
Void:	Detailer:		Sheet Number 385
	Sheet Subset: DRAINAGE	Subset Sheets: D17 of 78	



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Print Date: 5/22/2017		Sheet Revisions	
File Name: See sheet edge for information		Date:	Comments	Init.
Front Range Mobility Group	Horiz. Scale: As Noted			
	Vert. Scale: As Noted			
	Unit Information			
	Unit Leader			

Colorado Department of Transportation
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Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2142+00 TO STA 2156+00

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers
Subset Sheets: D18 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 386

CONNECT PROPOSED 18" RCP TO EXISTING 18" RCP WITH CONCRETE COLLAR

0' 50' 100' 200'

N

DENVER ROCK ISLAND RR

EXISTING ROW (TYP)

MONACO ST

IN-MON508
IN-MOS508
IN-MON505
MH-MON505
IN-MOS505
PROPOSED I-70 BRIDGE OVER MONACO ST
IN-SPN8064
MH-SPN8066
IN-MOS504
IN-SPN8071
MH-SPN8071
MH-SPN8073
IN-SPN8072
MH-SPN8072
PROPOSED ROW (TYP)
IN-SPN8075
MH-SPN8075
STAPLETON DR N
IN-70W2161
IN-70W2159
IN-70W2163B
IN-70W2164
IN-70W2166C
IN-70W2169B
IN-70W2169A
IN-70W2168C
IN-70W2168B
IN-70W2168A
IN-70W2170A
IN-70W2167B
IN-70W2167A
IN-70W2163A
IN-70W2162B
IN-70W2162A
IN-70W2160B
IN-70W2160A
IN-70W2158C
IN-70W2158B
IN-70W2158A
IN-70W2157A
IN-MON504
MH-MON504
2160+00
2165+00
MATCH LINE STA 2156+00
MATCH LINE STA 2170+00
WESTBOUND I-70
℄ I-70
IN-70W2165
IN-70W2166A
IN-70W2166B
EASTBOUND I-70
IN-70E2159
IN-70E2161
IN-70E2157
IN-70E2158C
IN-70E2158B
IN-70E2158A
IN-70E2162B
IN-70E2163
IN-70E2164
IN-70E2165
IN-70E2166
IN-70E2167
IN-70E2168
IN-70E2168D
IN-70E2165A
IN-SPS9088A
IN-70E2169B
QUEBEC ST EB EXIT RAMP
IN-SPS9013B
IN-SPS9087B
STAPLETON DR S TO QUEBEC ST
STAPLETON DR S
MH-SPS9081
IN-70E2162A
IN-SPS9013
IN-SPS9013A
MH-SPS9013
IN-SPS9081B
IN-SPS9081
IN-SPS9081A
MH-MON501
IN-SPS9071
MH-SPS907
IN-SPS9070
IN-SPS9071A
IN-MOS501
MH-MON501
IN-MON501
IN-MOS500
MH-MON500
IN-MON500
CONNECT EXISTING 18" RCP TO PROPOSED MANHOLE
EXISTING ROW (TYP)
IN-SPS9103
IN-SPS9086
MH-SPS9087
IN-SPS9104
IN-SPS9087A
CONNECT EXISTING RCP TO PROPOSED INLET
MH-SPS9088
IN-70E2168E
IN-70E2168A
IN-70E2169B
IN-70E2169C
IN-70E2169A
IN-SPS9109
PROPOSED ROW (TYP)
IN-SPS9088
ONEIDA ST

DENPWP02$ 11:11:39 AM \\denpwp01\pwicsjobs596\291546\542526_9\D019-13599-DRPL_018_I70 Mainline.dgn

Print Date: 5/22/2017			
File Name: See sheet edge for information			
Front Range Mobility Group	Horiz. Scale: As Noted		
	Vert. Scale: As Noted		
	Unit Information		
	Unit Leader		

Sheet Revisions

Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL

No Revisions:

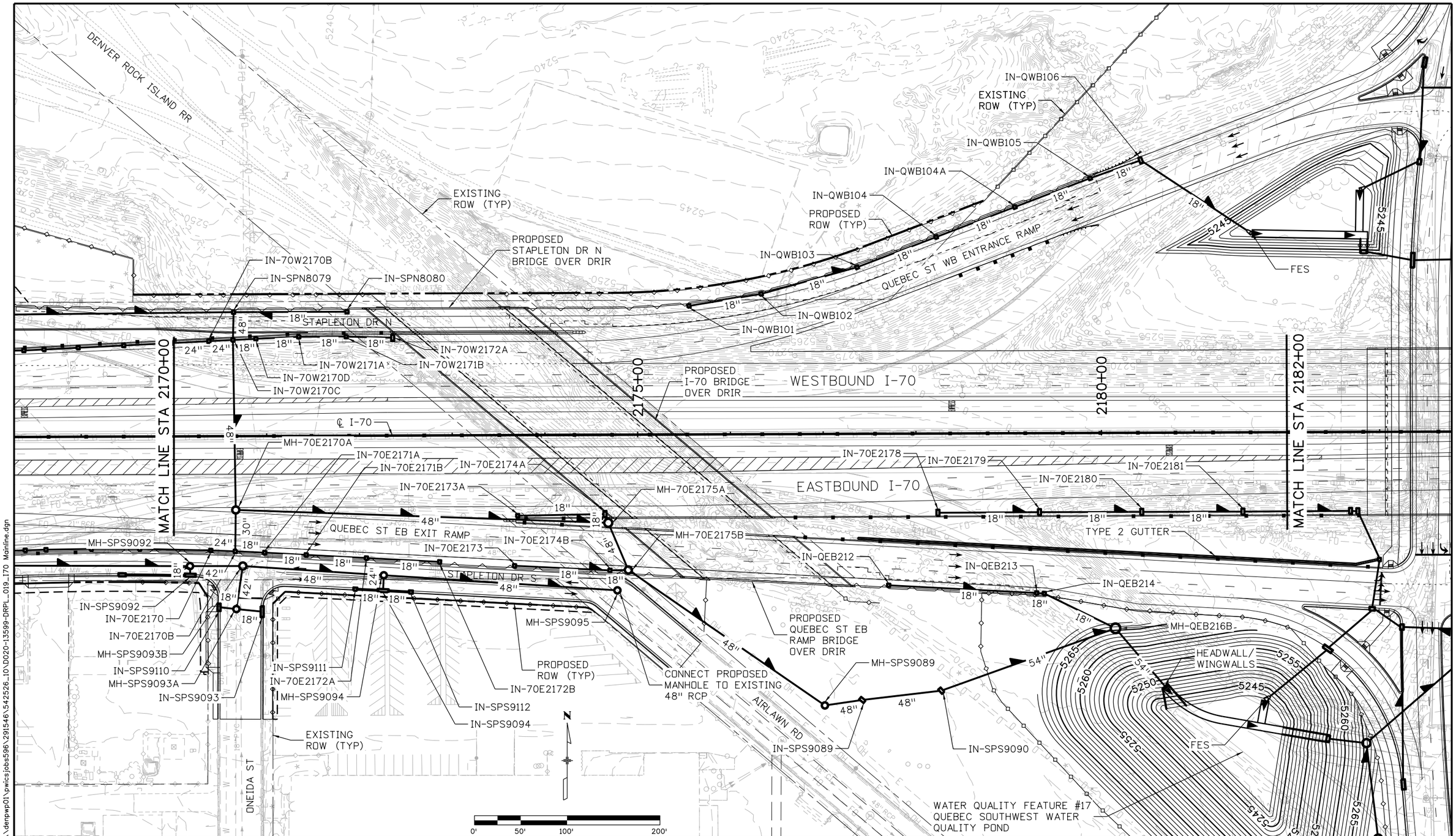
Revised:

Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2156+00 TO STA 2170+00

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers
Subset Sheets: D19 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 387



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Print Date: 5/22/2017

File Name: See sheet edge for information

Horiz. Scale: As Noted

Vert. Scale: As Noted

Unit Information

Unit Leader

Front Range Mobility Group

0000

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL

No Revisions:

Revised:

Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2170+00 TO STA 2182+00

Designer:

Detailer:

Sheet Subset: DRAINAGE

Structure Numbers

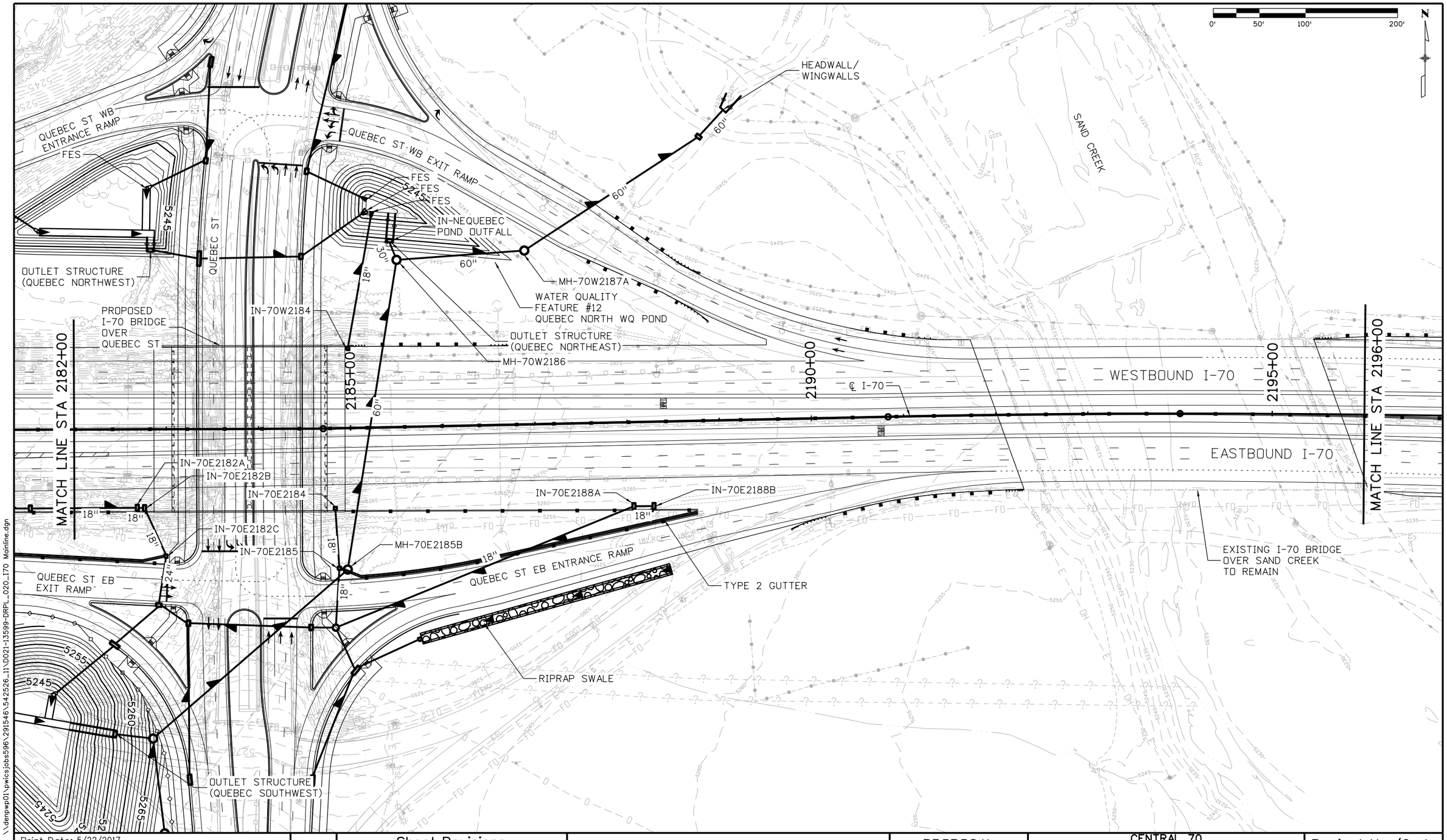
Subset Sheets: D20 of 78

Project No./Code

FBR 0704-234

19631

Sheet Number 388



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Print Date: 5/22/2017

File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted

Vert. Scale: As Noted

Unit Information

Unit Leader

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL

No Revisions:

Revised:

Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2182+00 TO STA 2196+00

Designer:

Detailer:

Sheet Subset: DRAINAGE

Structure Numbers

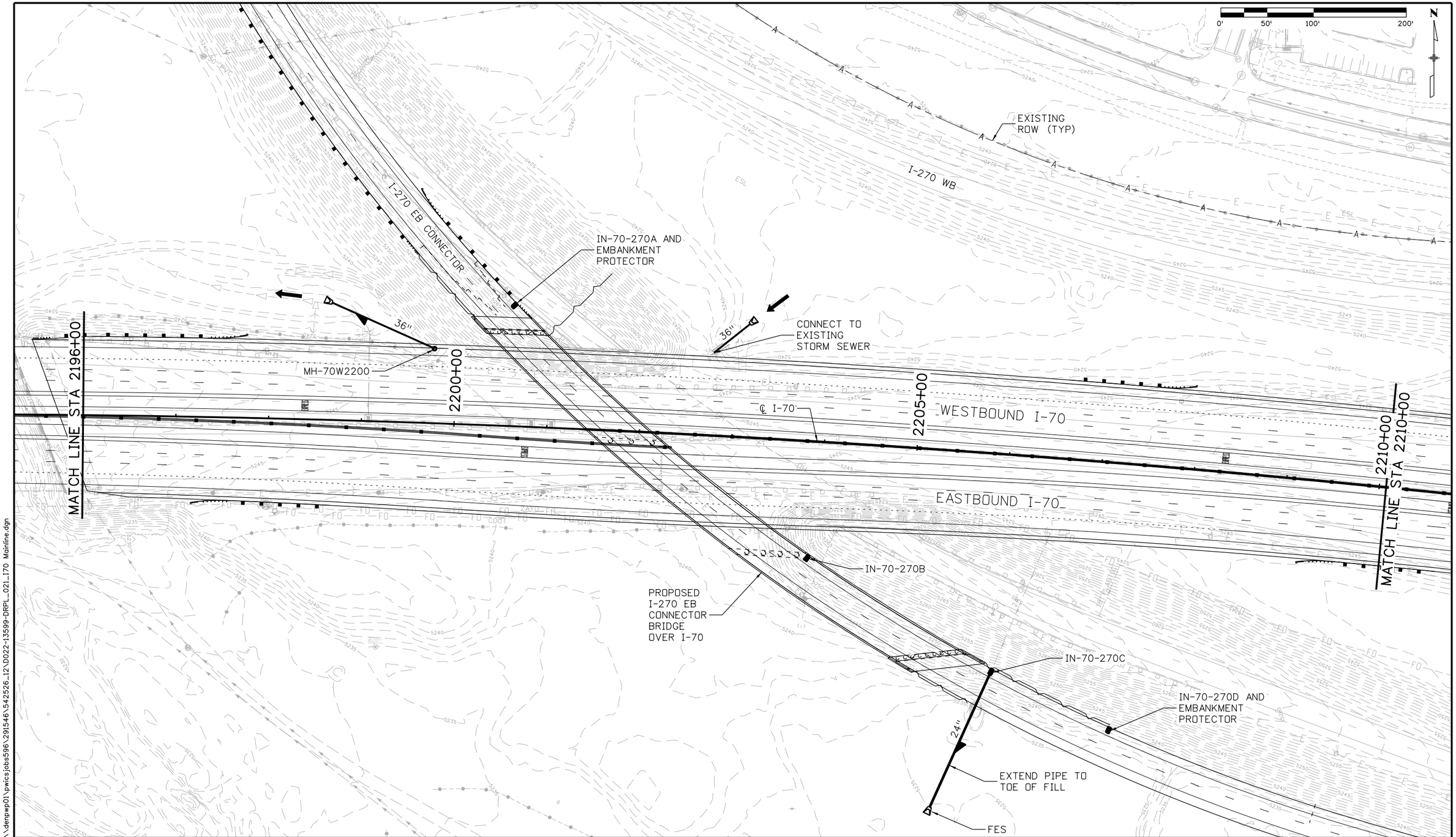
Subset Sheets: D21 of 78

Project No./Code

FBR 0704-234

19631

Sheet Number 389



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Print Date: 5/22/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

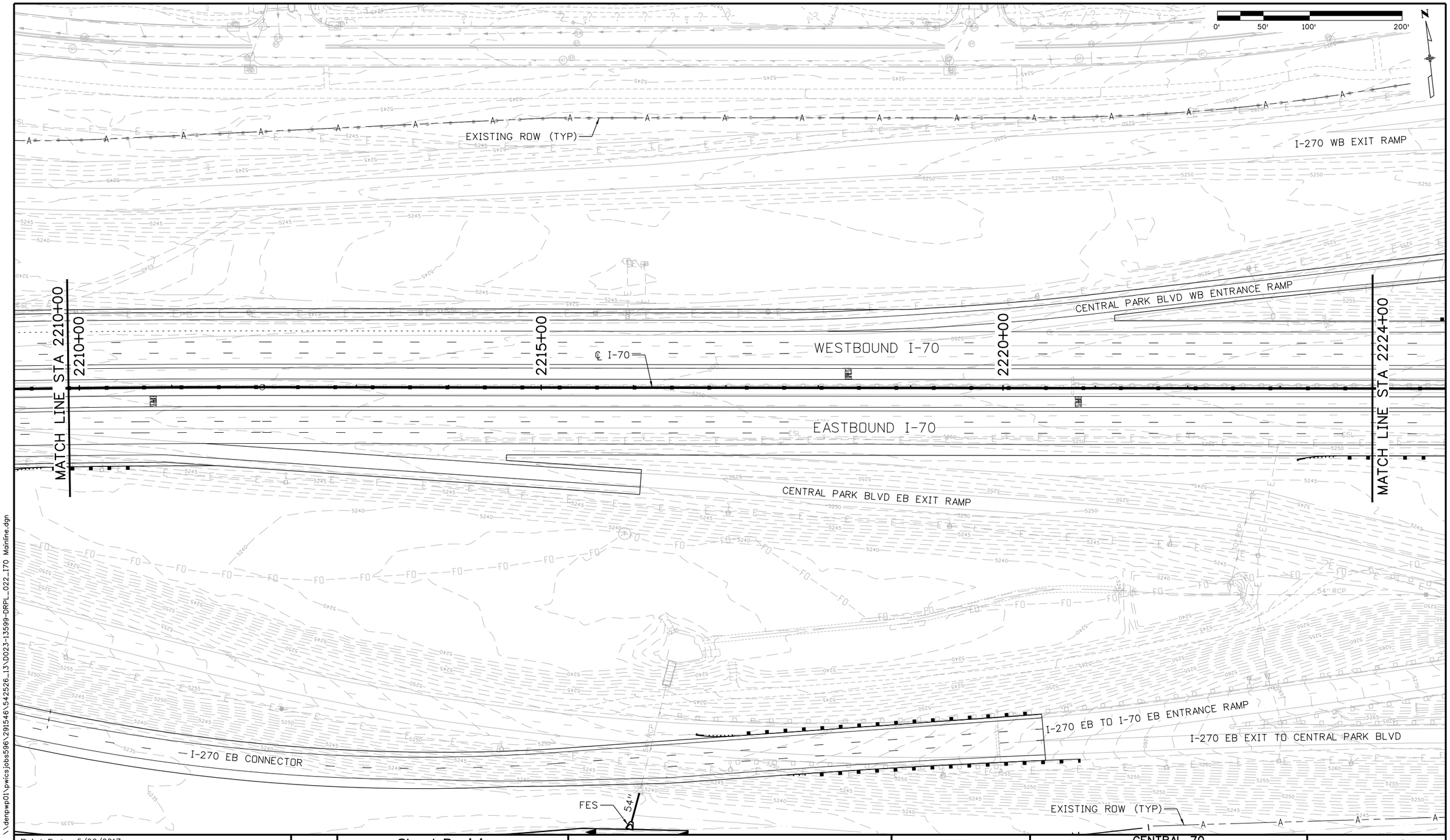
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2196+00 TO STA 2210+00

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers
Subset Sheets: D22 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 390



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Print Date: 5/22/2017

File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale:	As Noted
Vert. Scale:	As Noted
Unit Information	
Unit Leader	

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL

No Revisions:

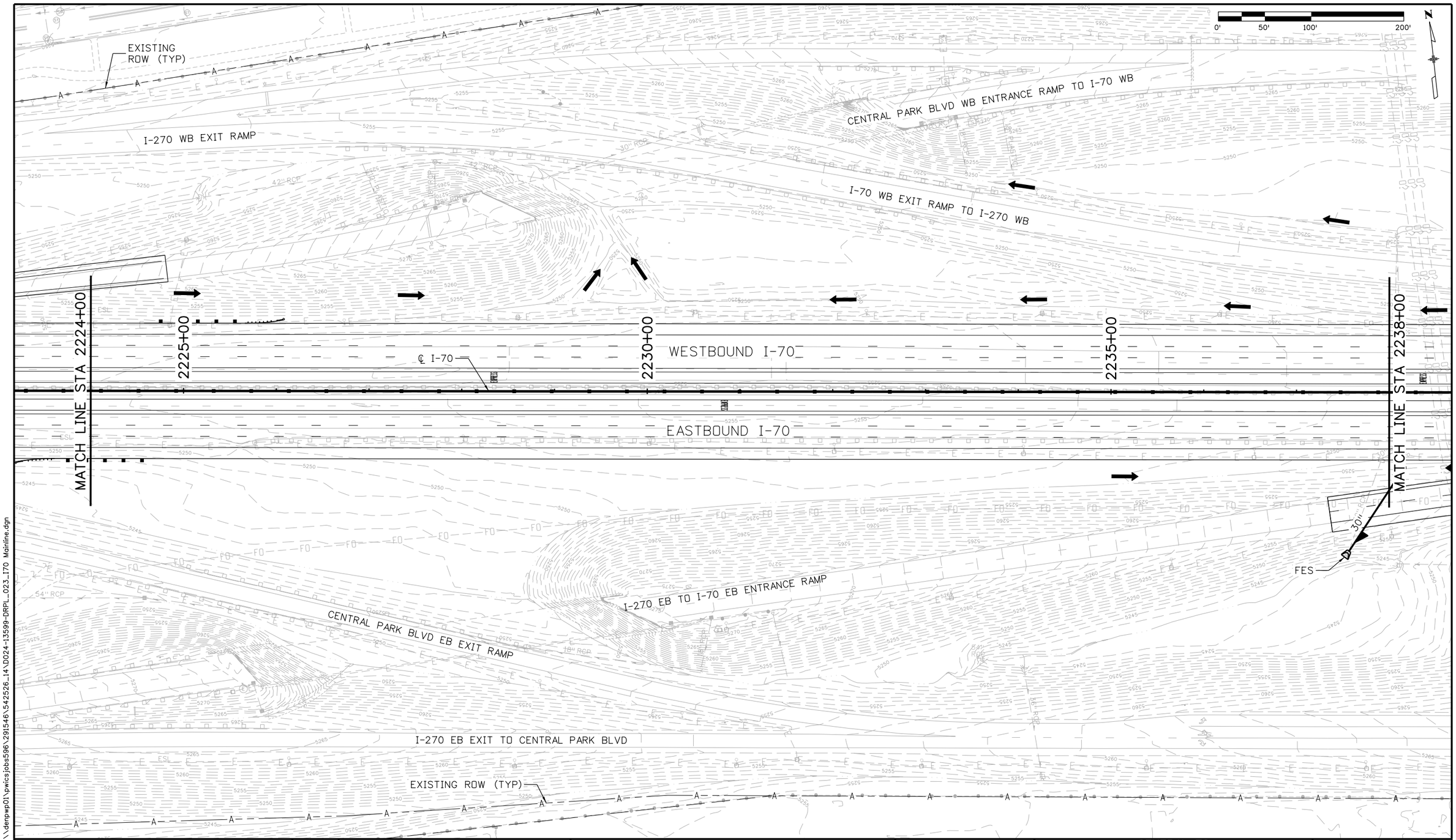
Revised:

Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2210+00 TO STA 2224+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	DRAINAGE	Subset Sheets:	D23 of 78

Project No./Code	
FBR 0704-234	
19631	
Sheet Number	391



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Print Date: 5/22/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

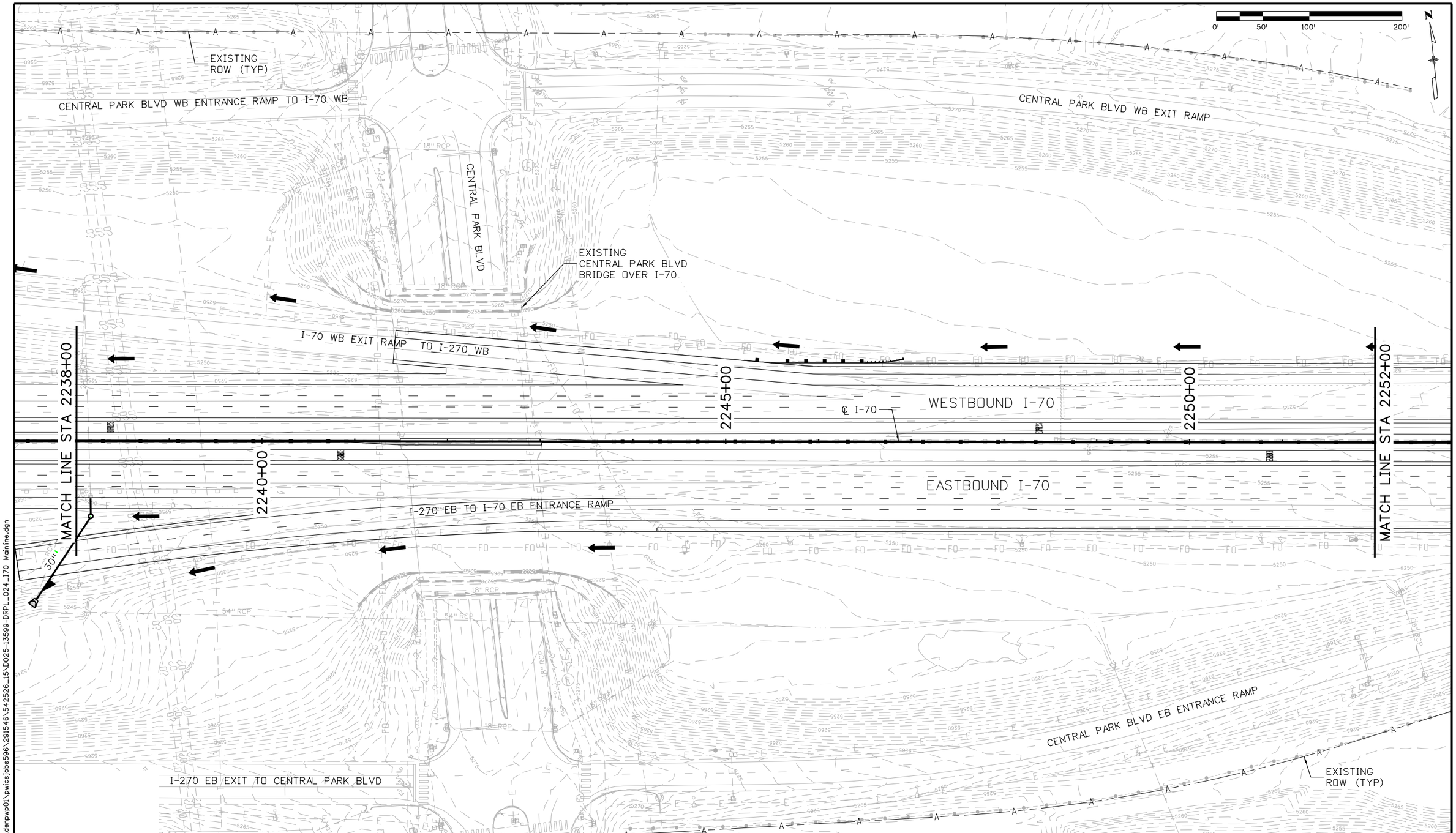
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2224+00 TO STA 2238+00

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers
Subset Sheets: D24 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 392



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Print Date: 5/22/2017			
File Name: See sheet edge for information			
Front Range Mobility Group	Horiz. Scale: As Noted		
	Vert. Scale: As Noted		
	Unit Information		
	Unit Leader		

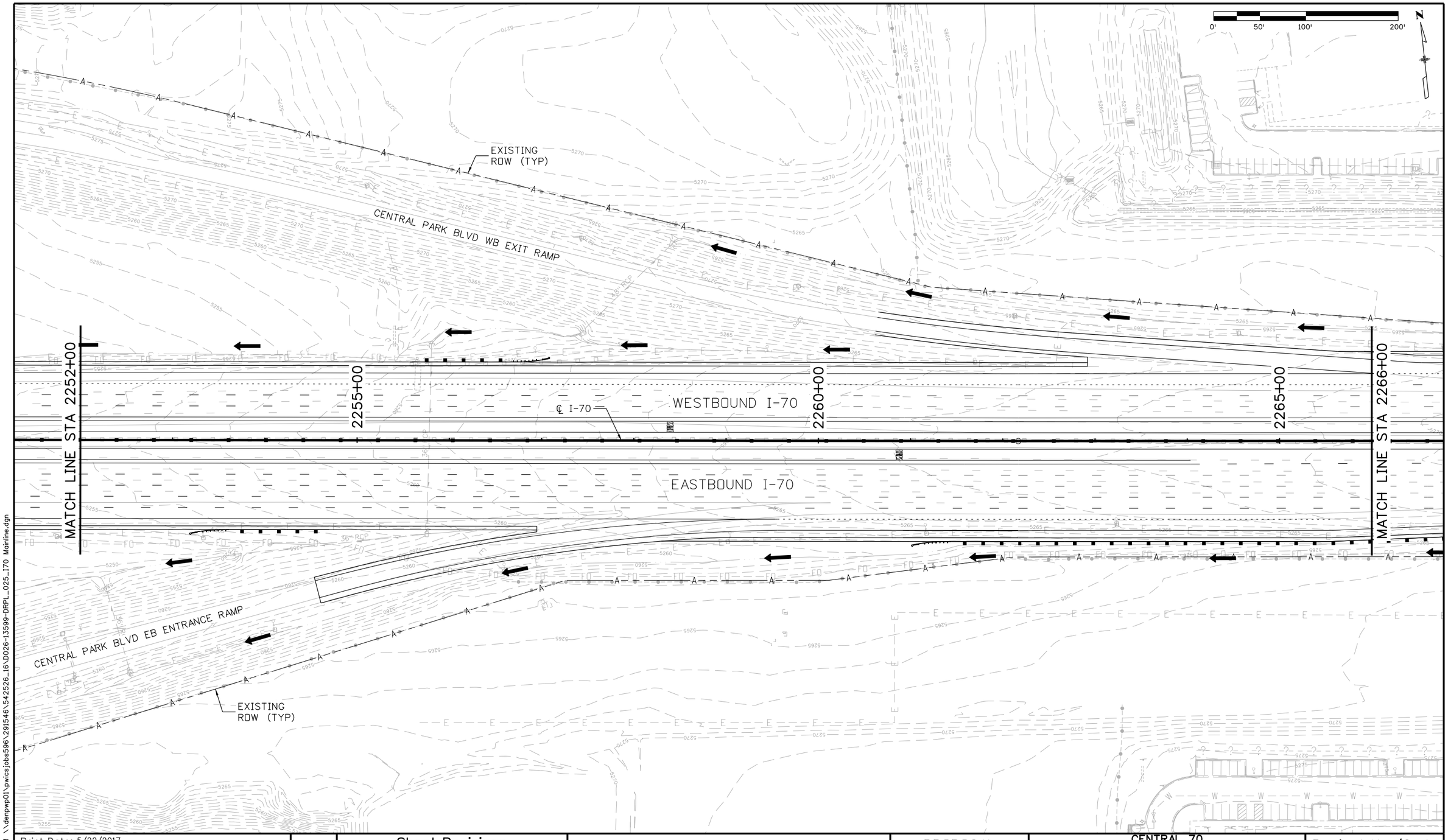
0000

Sheet Revisions

Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL	CENTRAL 70 DRAINAGE PLAN I-70 MAINLINE STA 2238+00 TO STA 2252+00			Project No./Code
No Revisions:	Designer:	Structure Numbers		FBR 0704-234
Revised:	Detailer:			19631
Void:	Sheet Subset: DRAINAGE	Subset Sheets: D25 of 78		Sheet Number 393



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Print Date: 5/22/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale:	As Noted
Vert. Scale:	As Noted
Unit Information	
Unit Leader	

Sheet Revisions		
Date:	Comments	Init.

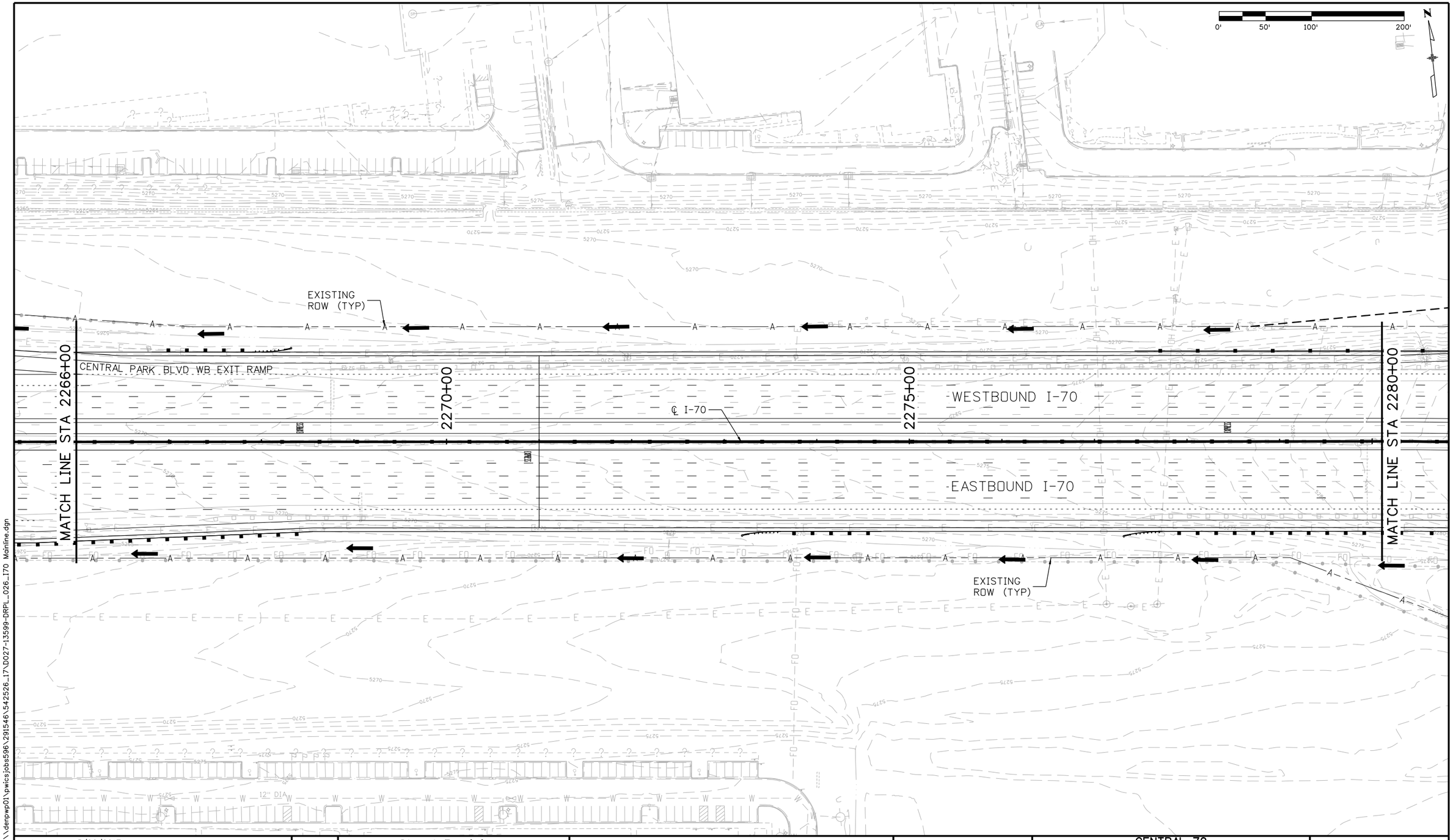
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2252+00 TO STA 2266+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	DRAINAGE	Subset Sheets: D26	of 78

Project No./Code	
FBR 0704-234	
19631	
Sheet Number	394



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Print Date: 5/22/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
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Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2266+00 TO STA 2280+00

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers:
Subset Sheets: D27 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 395

DISCHARGE TO EXISTING DITCH

24"

HAVANA ST WB ENTRANCE RAMP

IN-HAV1

IN-HAV2

IN-HAV3

EXISTING ROW (TYP)

EXISTING I-70 BRIDGE OVER UPRR SPUR

EXISTING I-70 BRIDGE OVER HAVANA ST

HAVANA ST

MATCH LINE STA 2280+00

2285+00

2290+00

MATCH LINE STA 2294+00

℄ I-70

WESTBOUND I-70

EASTBOUND I-70

EXISTING ROW (TYP)

CDOT MAINTENANCE FACILITY YARD

EXISTING UPRR SPUR TRACK

5285

5290

5280

0' 50' 100' 200'

DENPWP01$ 12:48:42 PM \\denpwp01\pwics\jobs596\291588\542526_18\D028-13599-DRPL_027_170 Mainline.dgn

Print Date: 5/22/2017

File Name: See sheet edge for information

Horiz. Scale: As Noted

Vert. Scale: As Noted

Unit Information

Unit Leader

Front Range Mobility Group

0000

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907

Region 1 KJS

PROPOSAL

No Revisions:

Revised:

Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2280+00 TO STA 2294+00

Designer:

Detailer:

Sheet Subset: DRAINAGE

Structure Numbers

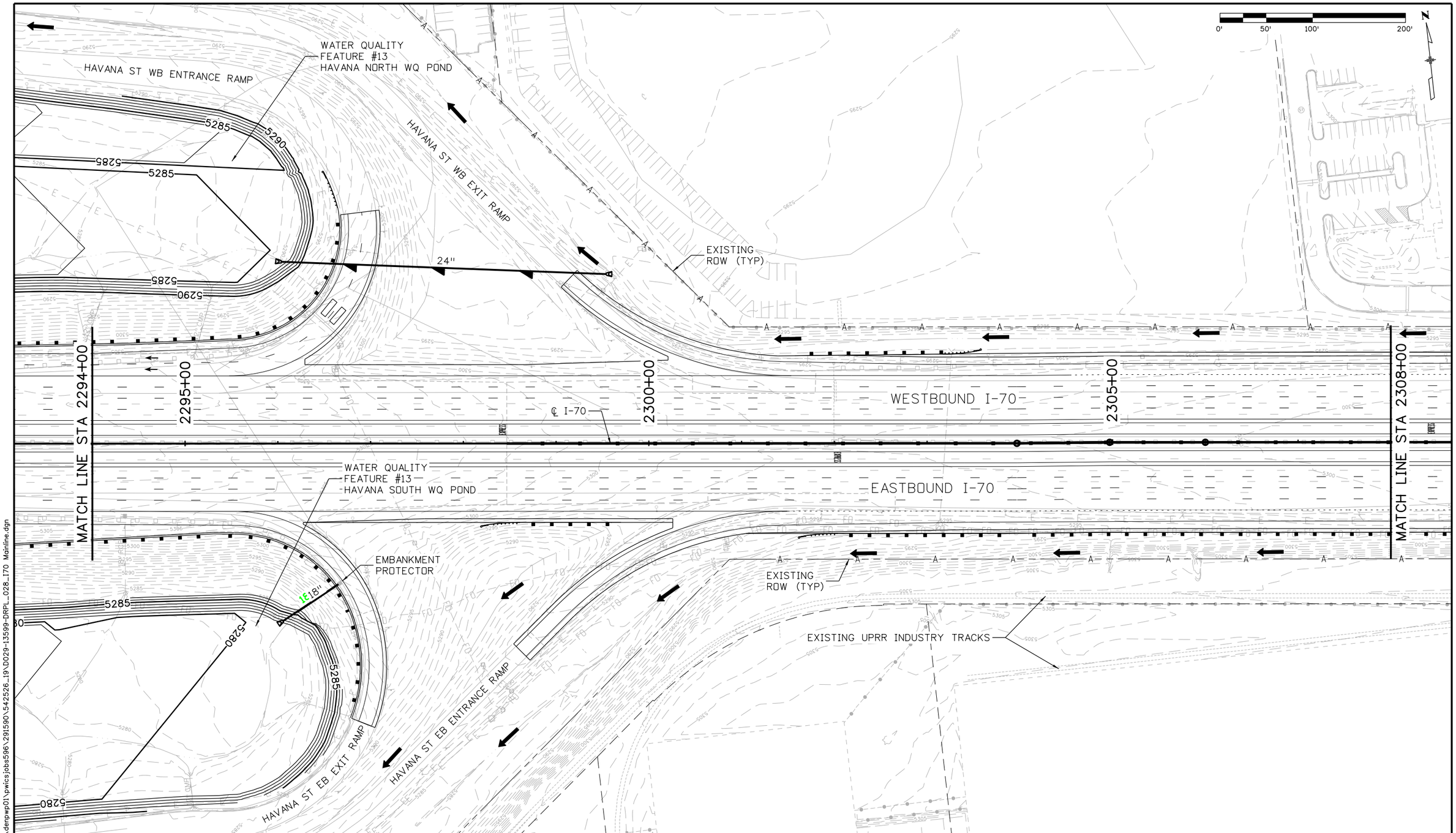
Subset Sheets: D28 of 78

Project No./Code

FBR 0704-234

19631

Sheet Number 396



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Print Date: 5/22/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale:	As Noted
Vert. Scale:	As Noted
Unit Information	
Unit Leader	

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

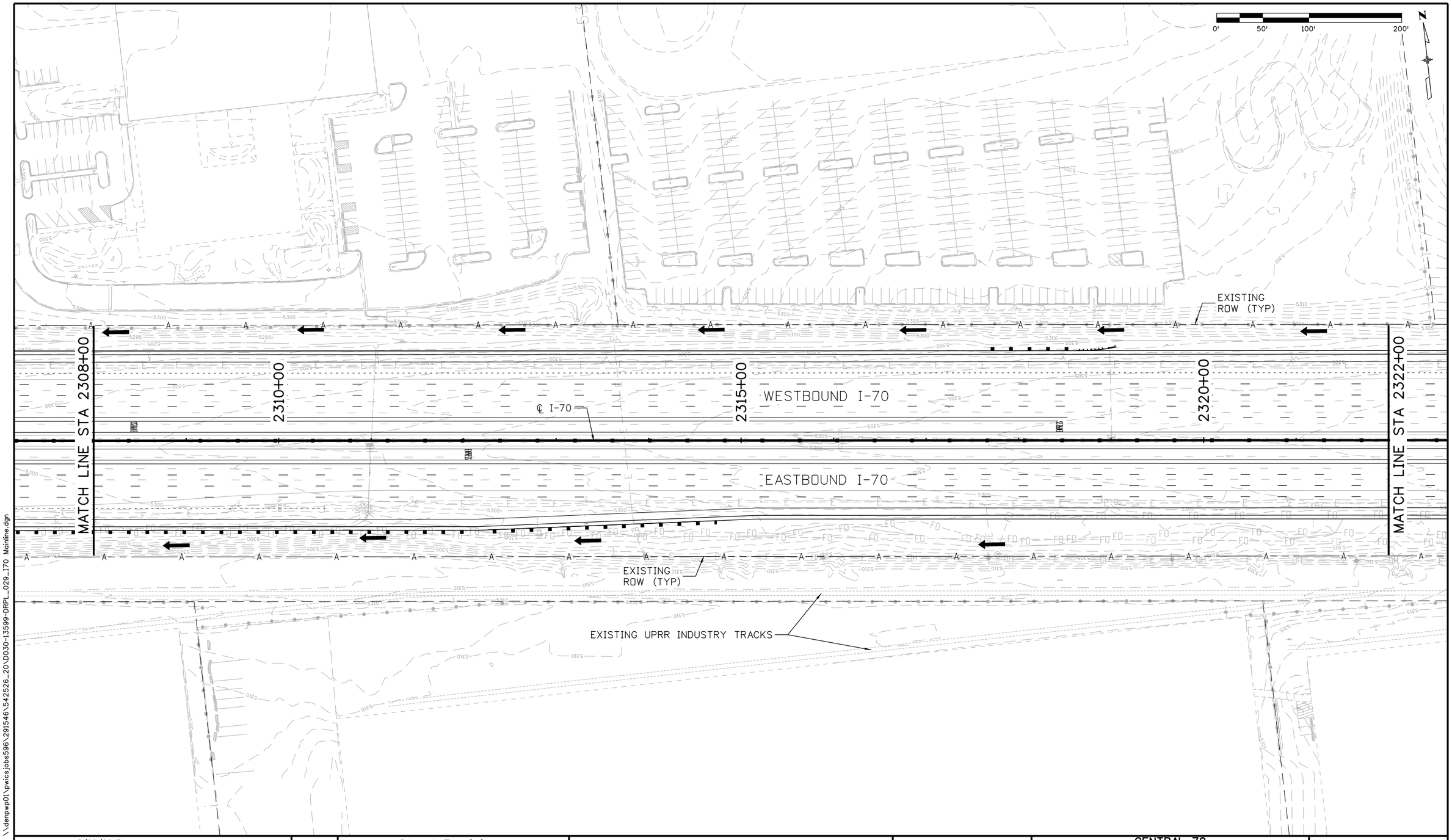
PROPOSAL

No Revisions:	
Revised:	
Void:	

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2294+00 TO STA 2308+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	DRAINAGE	Subset Sheets: D29	of 78

Project No./Code	FBR 0704-234
	19631
Sheet Number	397



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Print Date: 5/22/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale:	As Noted
Vert. Scale:	As Noted
Unit Information	
Unit Leader	

Sheet Revisions		
Date:	Comments	Init.

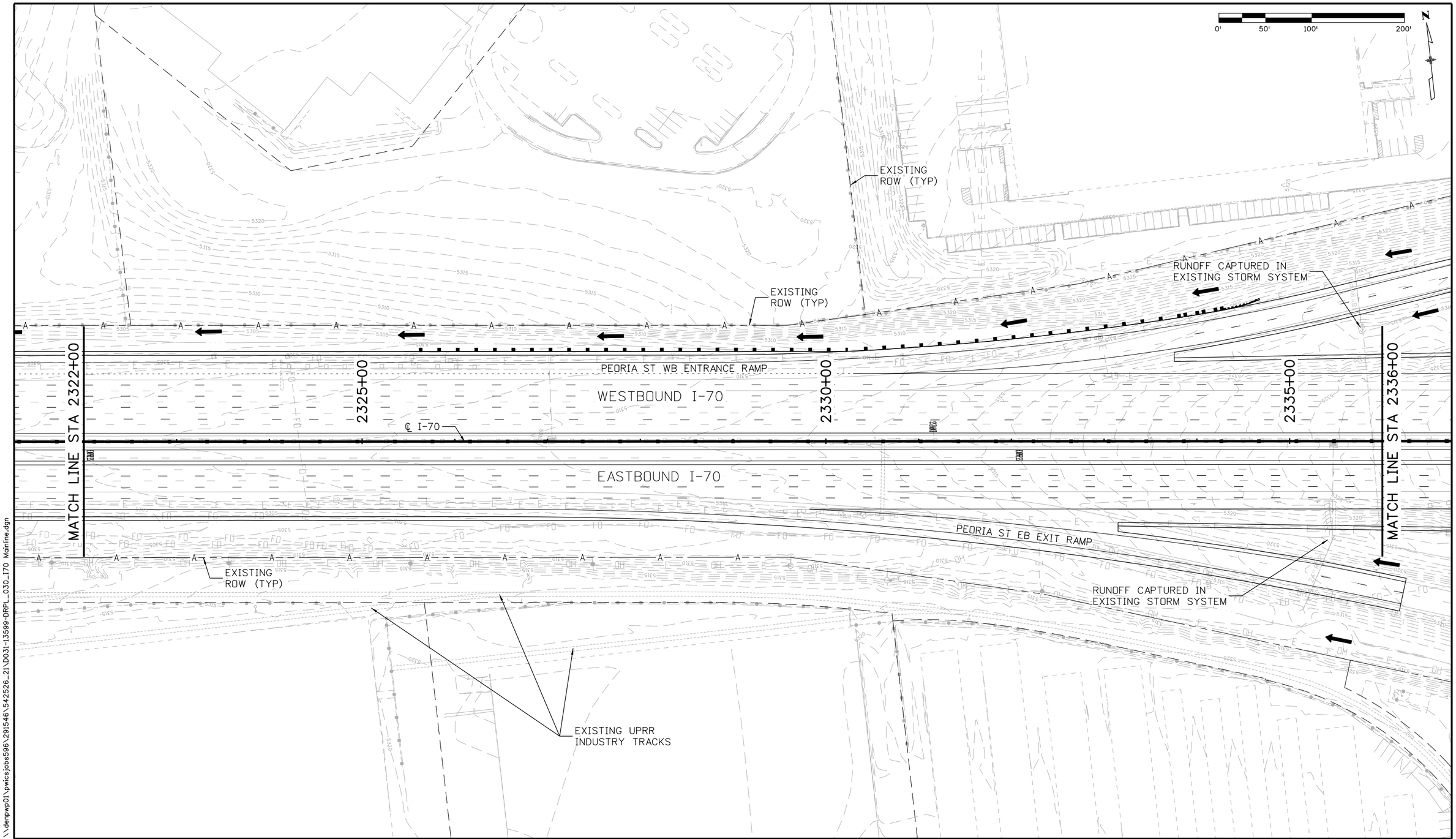
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2308+00 TO STA 2322+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	DRAINAGE	Subset Sheets: D30	of 78

Project No./Code	
FBR 0704-234	
19631	
Sheet Number	398



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Print Date: 5/22/2017

File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted

Vert. Scale: As Noted

Unit Information

Unit Leader

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL

No Revisions:

Revised:

Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2322+00 TO STA 2336+00

Designer:

Detailer:

Sheet Subset: DRAINAGE

Structure Numbers

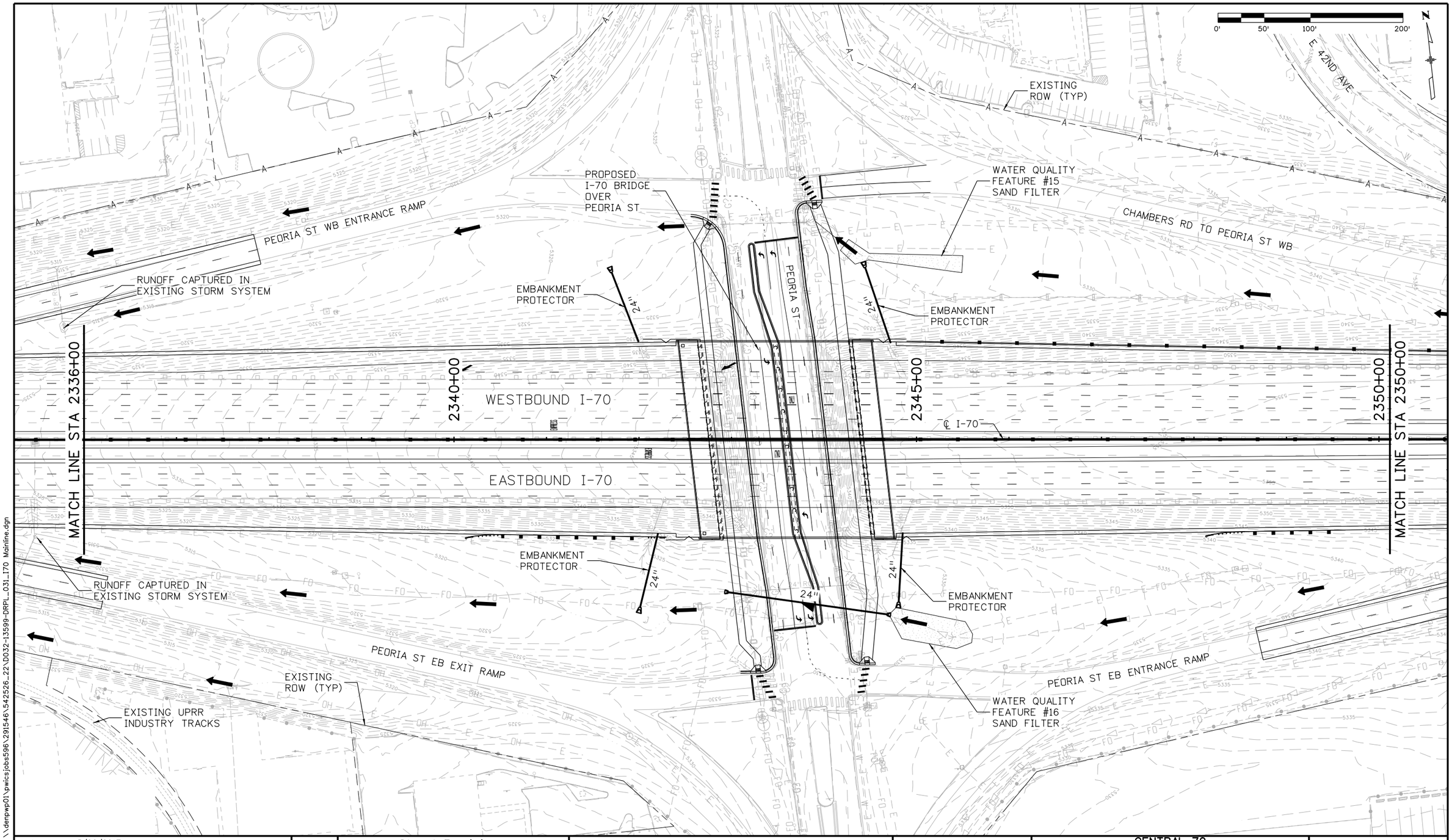
Subset Sheets: D31 of 78

Project No./Code

FBR 0704-234

19631

Sheet Number 399



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Print Date: 5/22/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale:	As Noted
Vert. Scale:	As Noted
Unit Information	
Unit Leader	

Sheet Revisions		
Date:	Comments	Init.

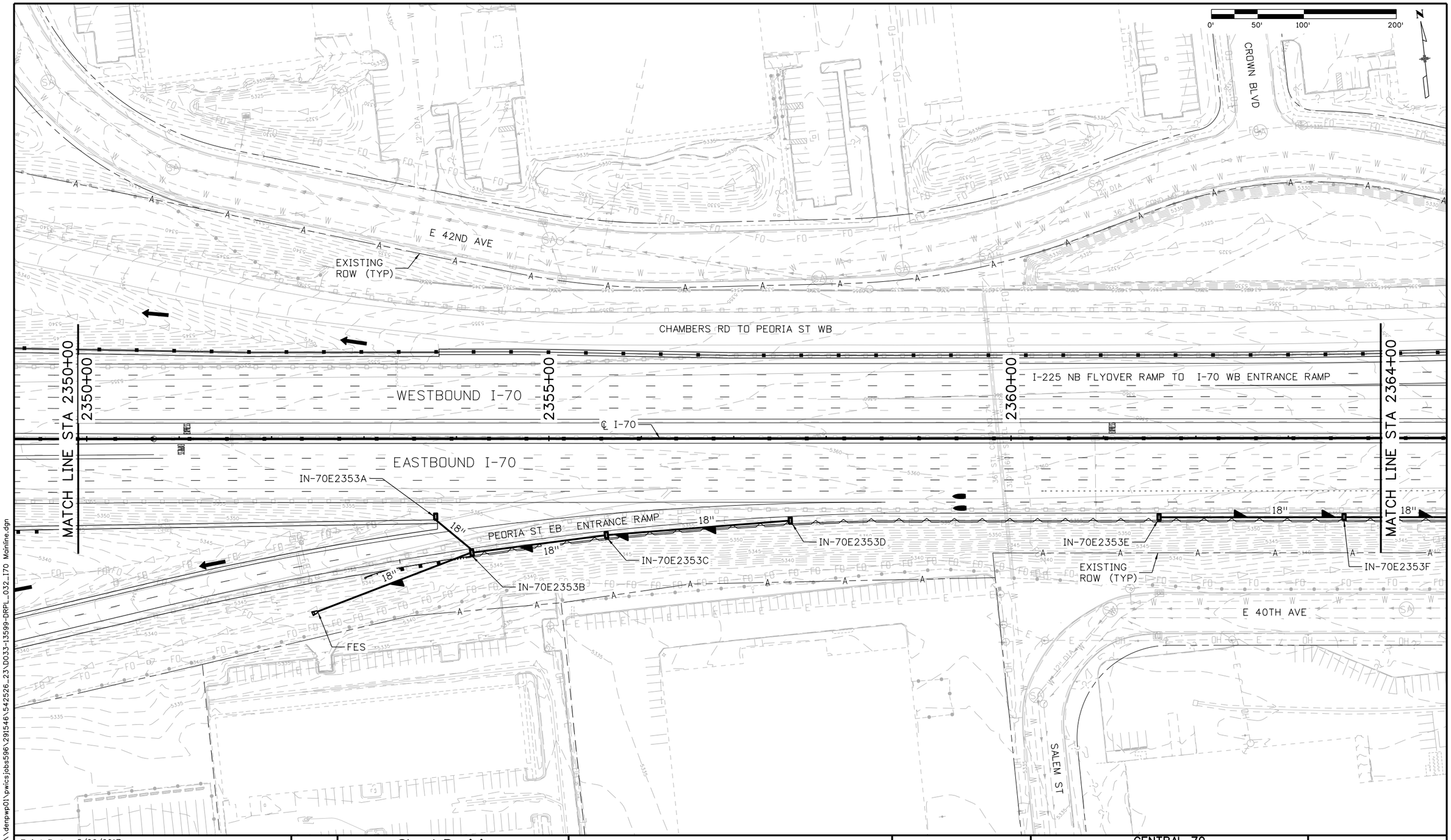
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2336+00 TO STA 2350+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	DRAINAGE	Subset Sheets: D32	of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 400



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Print Date: 5/22/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale:	As Noted
Vert. Scale:	As Noted
Unit Information	
Unit Leader	

0000

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

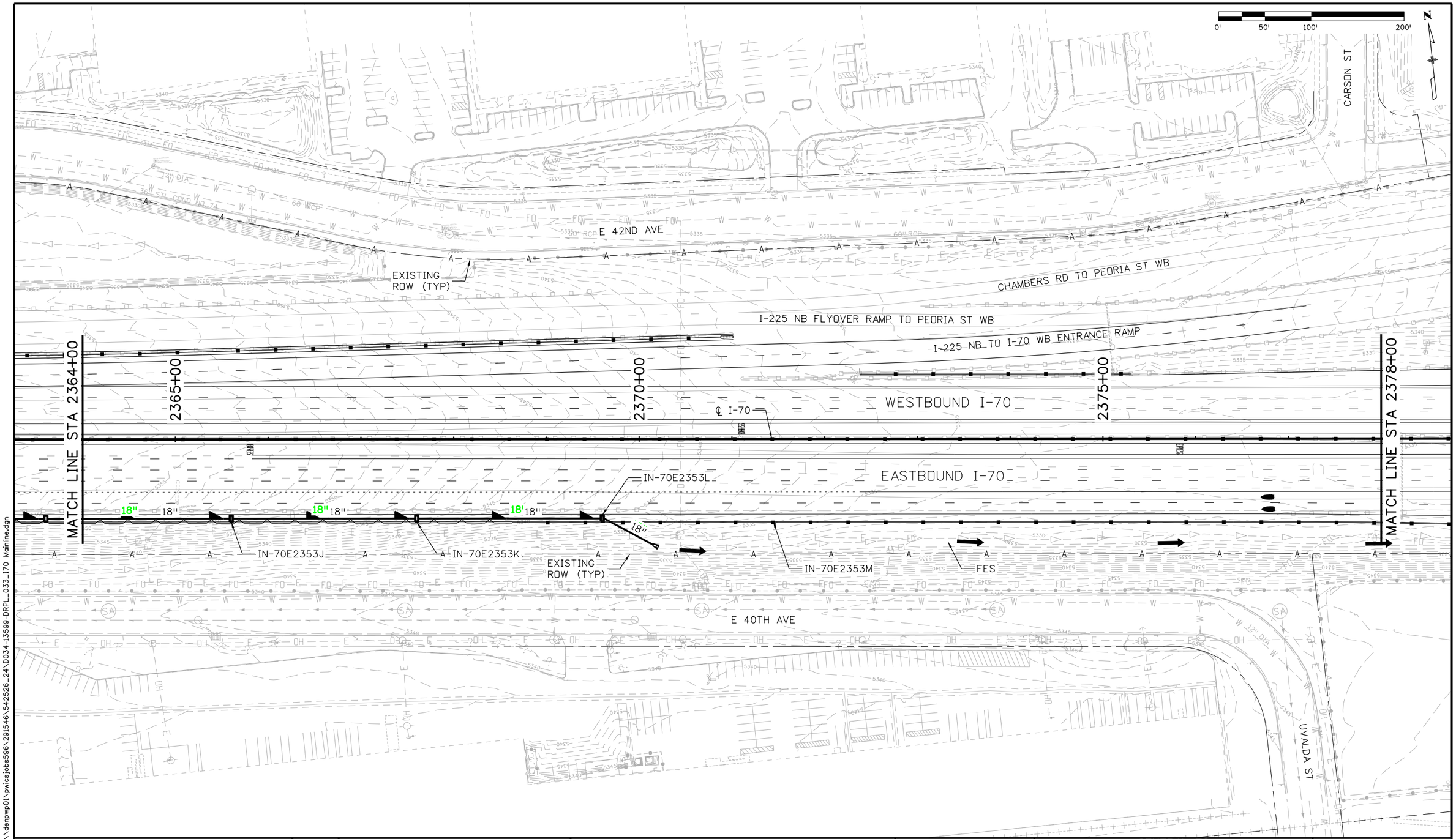
PROPOSAL

No Revisions:	
Revised:	
Void:	

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2350+00 TO STA 2364+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	DRAINAGE	Subset Sheets: D33	of 78

Project No./Code	
FBR 0704-234	
19631	
Sheet Number	401



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Print Date: 5/22/2017

File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale:	As Noted
Vert. Scale:	As Noted
Unit Information	
Unit Leader	

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL

No Revisions:

Revised:

Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2364+00 TO STA 2378+00

Designer:

Detailer:

Sheet Subset: DRAINAGE

Structure Numbers

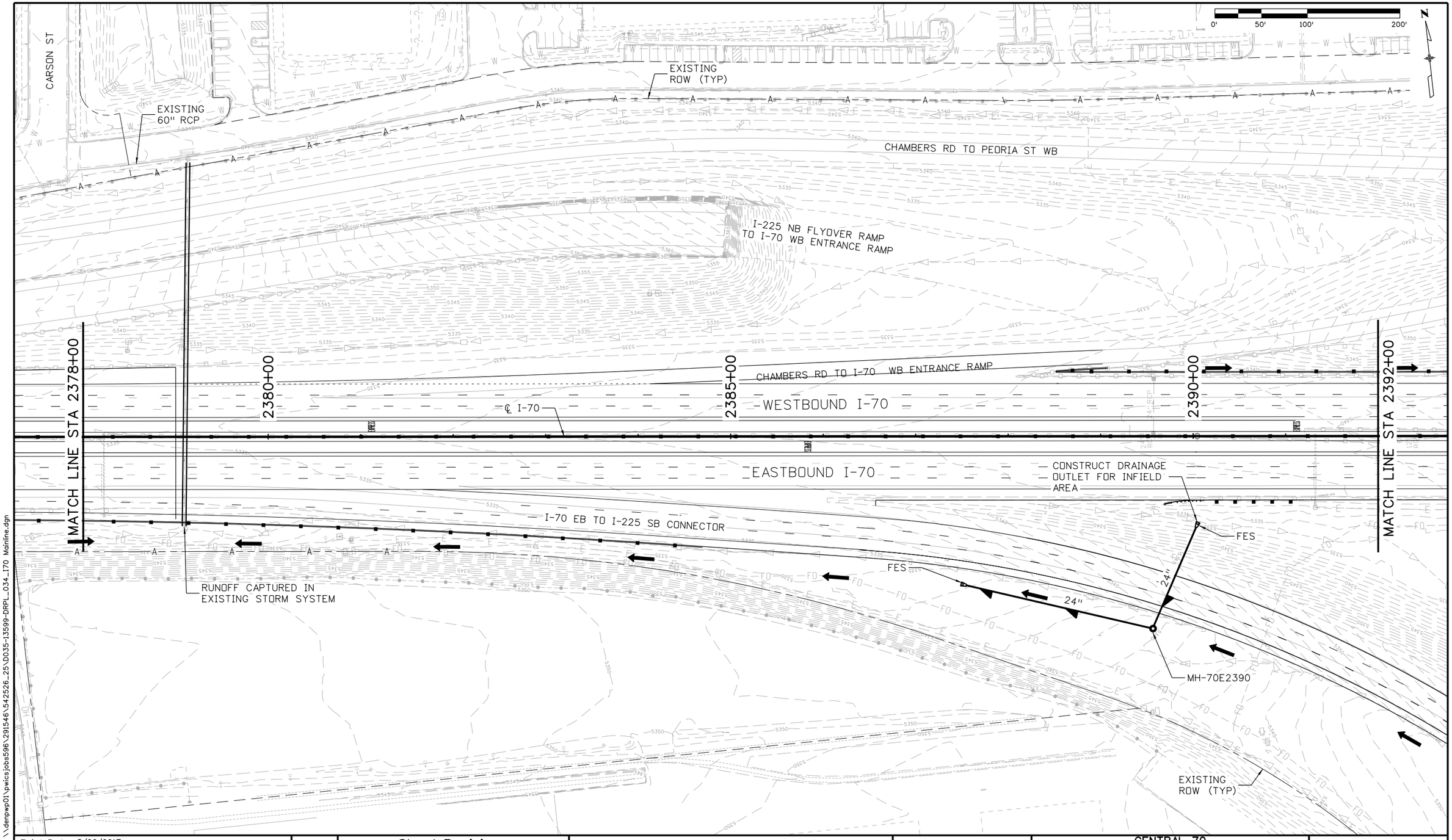
Subset Sheets: D34 of 78

Project No./Code

FBR 0704-234

19631

Sheet Number 402



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Print Date: 5/22/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale:	As Noted
Vert. Scale:	As Noted
Unit Information	
Unit Leader	

Sheet Revisions		
Date:	Comments	Init.

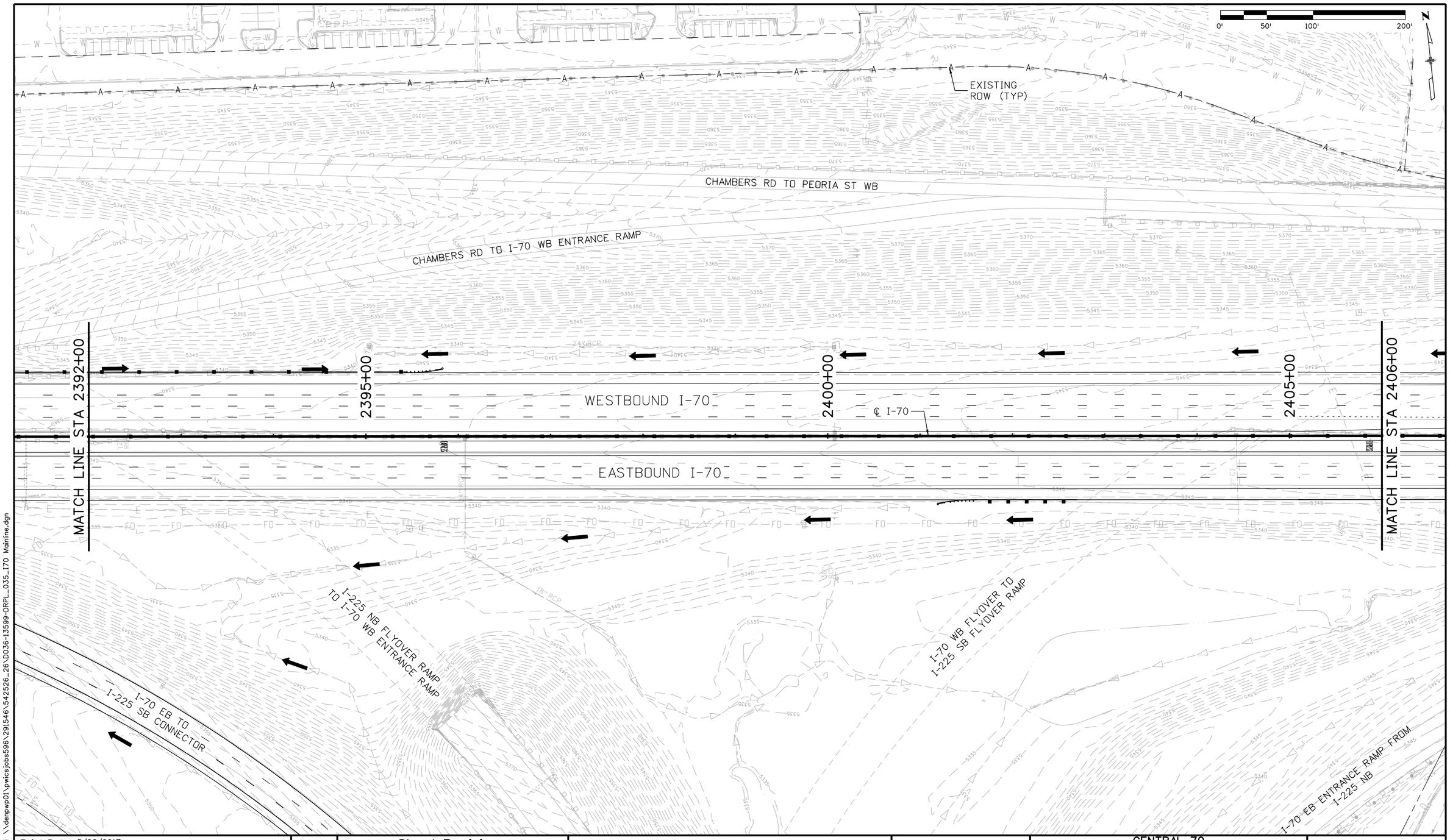
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2378+00 TO STA 2392+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	DRAINAGE	Subset Sheets: D35	of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 403



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Print Date: 5/22/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

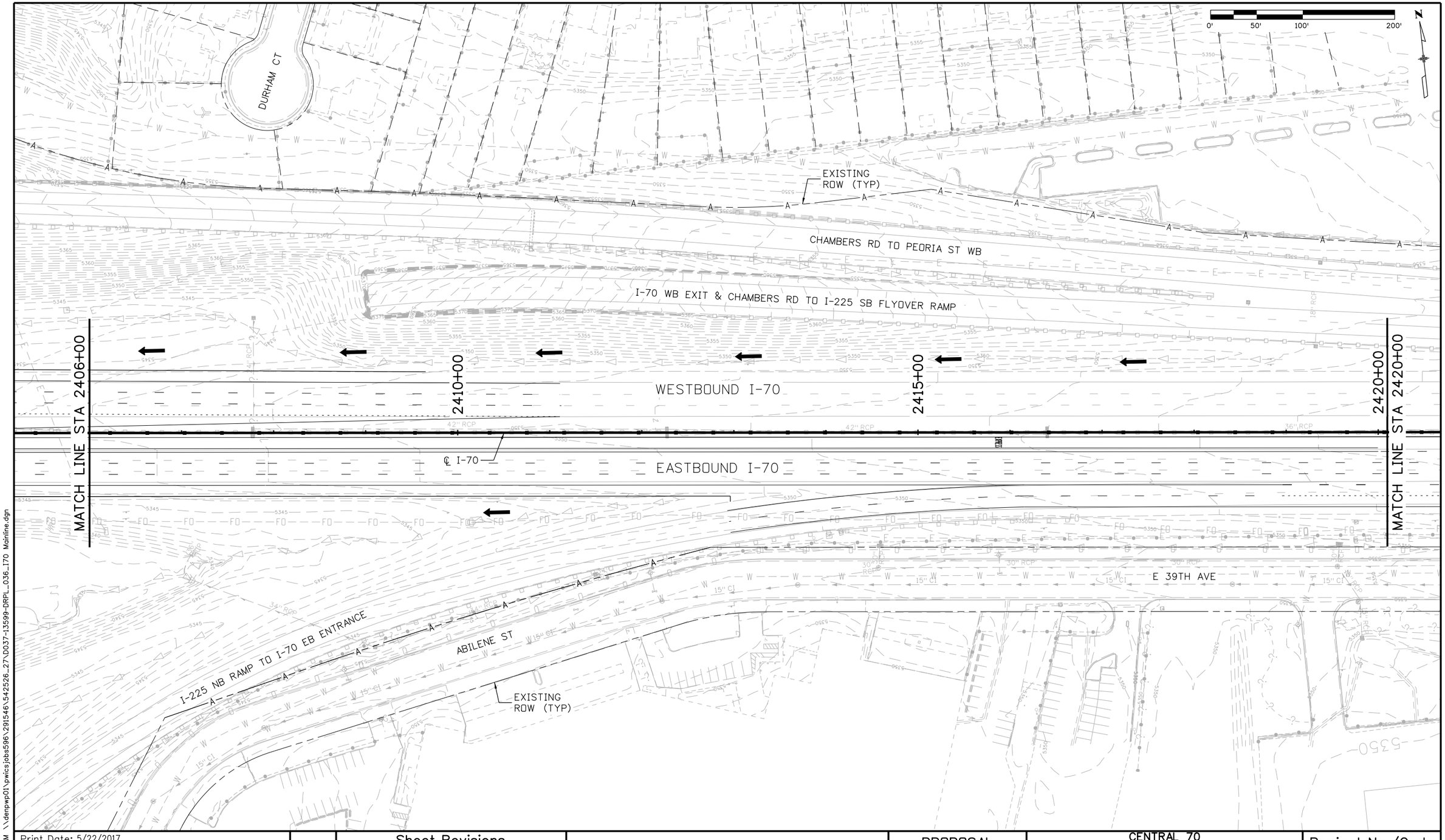
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2392+00 TO STA 2406+00

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers
Subset Sheets: D36 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 404



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Print Date: 5/22/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale:	As Noted
Vert. Scale:	As Noted
Unit Information	
Unit Leader	

Sheet Revisions		
Date:	Comments	Init.

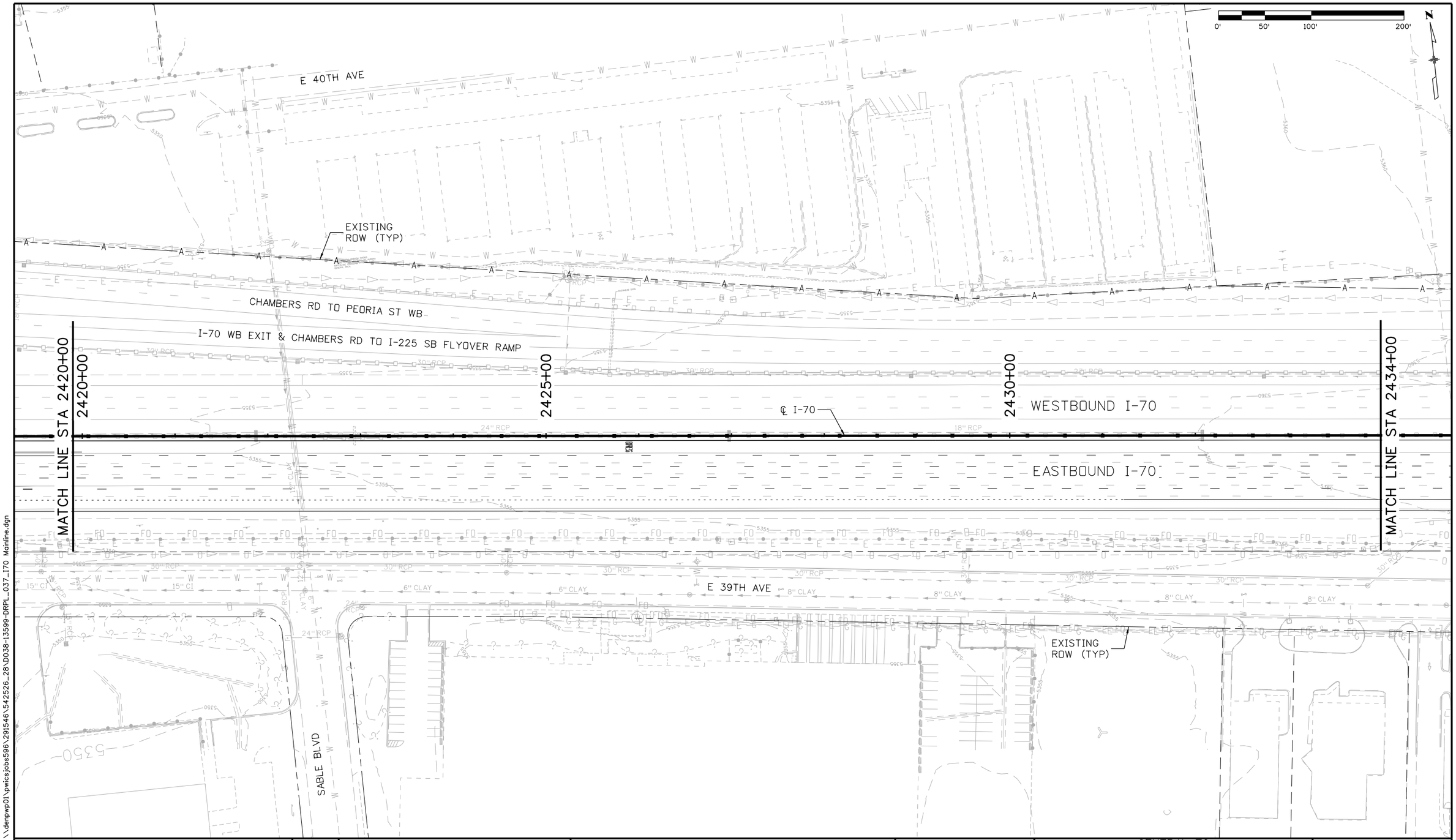
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2406+00 TO STA 2420+00

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers
Subset Sheets: D37 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 405



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Print Date: 5/22/2017			
File Name: See sheet edge for information			
Front Range Mobility Group	Horiz. Scale: As Noted		
	Vert. Scale: As Noted		
	Unit Information		
	Unit Leader		

0000

Sheet Revisions

Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

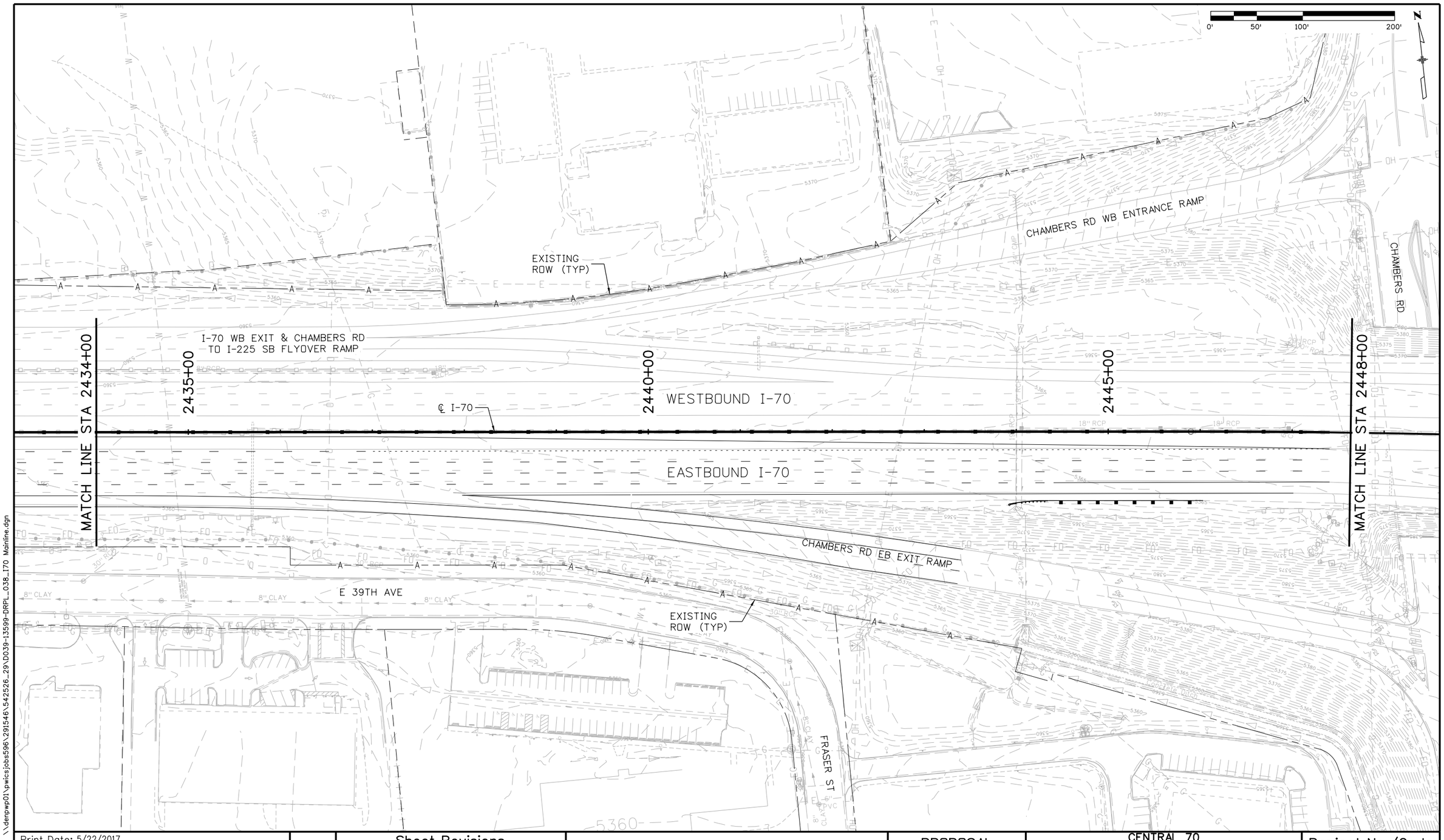
PROPOSAL

No Revisions:	
Revised:	
Void:	

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2420+00 TO STA 2434+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	DRAINAGE	Subset Sheets: D38	of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 406



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Print Date: 5/22/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

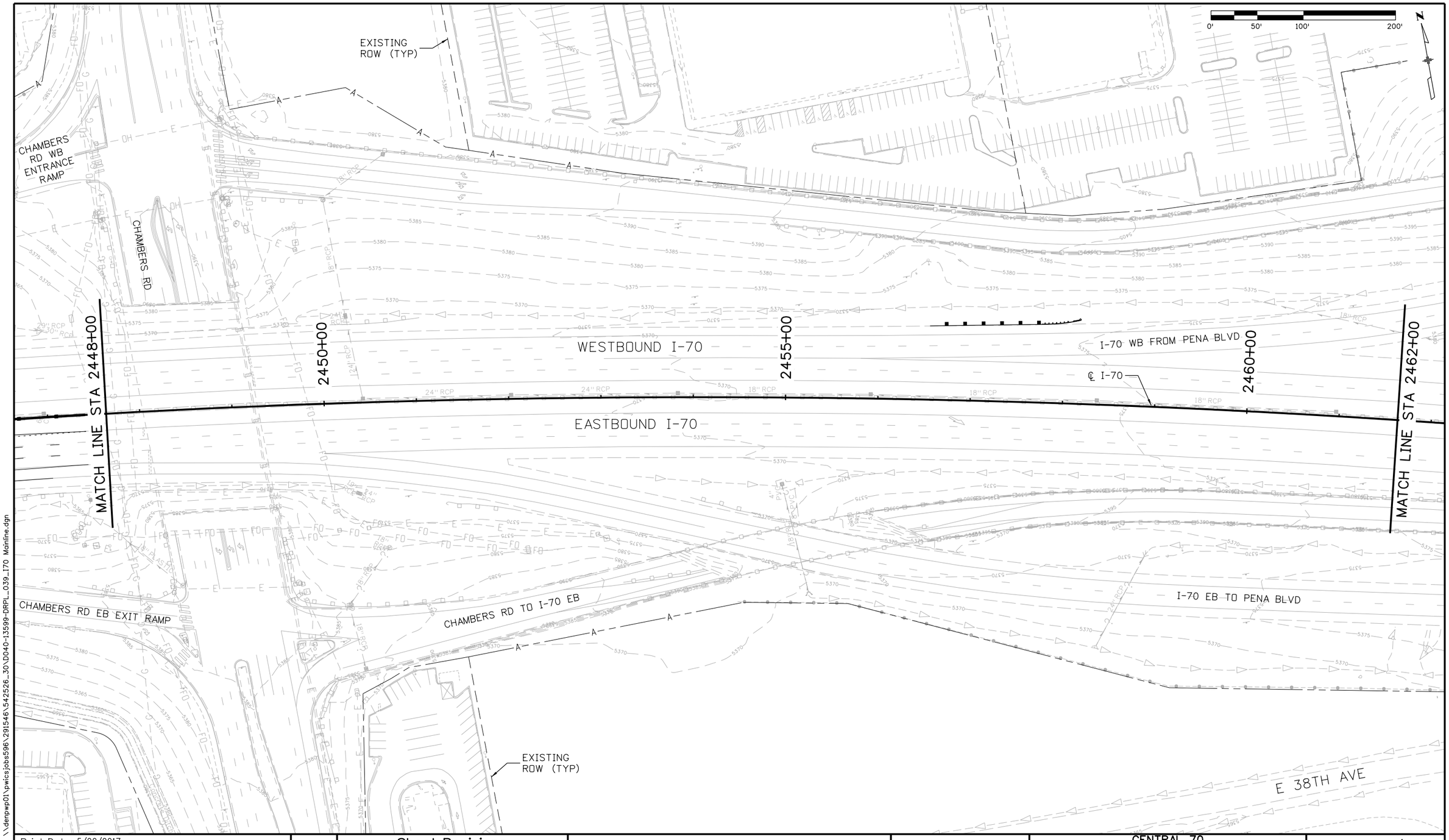
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2434+00 TO STA 2448+00

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers
Subset Sheets: D39 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 407



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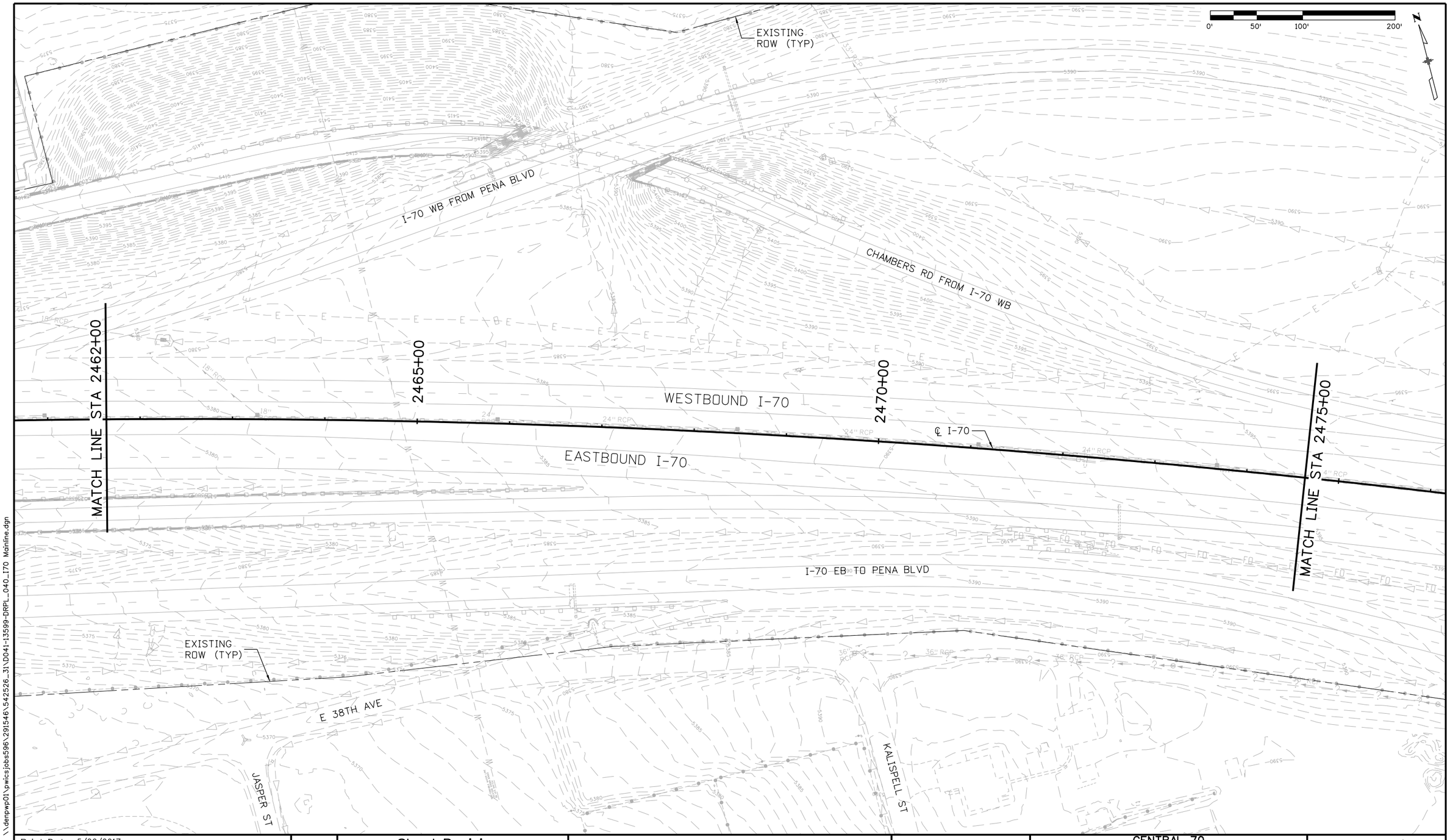
Print Date: 5/22/2017		Sheet Revisions			Colorado Department of Transportation
File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907
Front Range Mobility Group	Horiz. Scale: As Noted				Region 1 KJS
	Vert. Scale: As Noted				
	Unit Information				
	Unit Leader				

PROPOSAL	CENTRAL 70 DRAINAGE PLAN I-70 MAINLINE STA 2448+00 TO STA 2462+00			Project No./Code
No Revisions:	Designer:	Structure Numbers		FBR 0704-234
Revised:	Detailer:			19631
Void:	Sheet Subset: DRAINAGE	Subset Sheets: D40 of 78		Sheet Number 408



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Print Date: 5/22/2017			
File Name: See sheet edge for information			
Front Range Mobility Group	Horiz. Scale: As Noted		
	Vert. Scale: As Noted		
	Unit Information		
	Unit Leader		

Sheet Revisions		
Date:	Comments	Init.

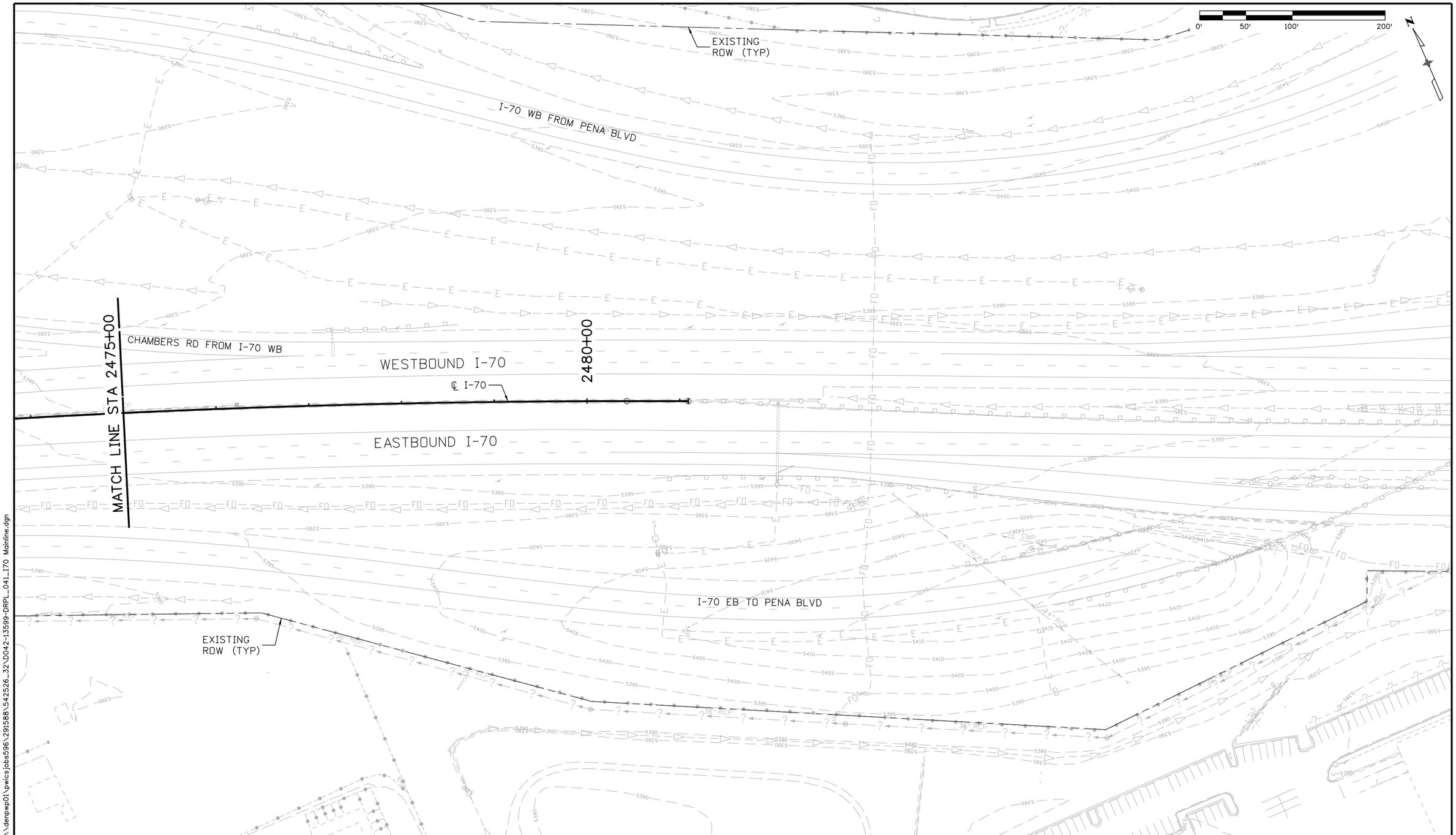
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2462+00 TO STA 2475+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	DRAINAGE	Subset Sheets: D41	of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 409



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Print Date: 5/22/2017

File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted

Vert. Scale: As Noted

Unit Information

Unit Leader

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL

No Revisions:

Revised:

Void:

CENTRAL 70
DRAINAGE PLAN
I-70 MAINLINE
STA 2475+00 TO STA 2481+45.97

Designer:

Detailer:

Sheet Subset: DRAINAGE

Structure Numbers

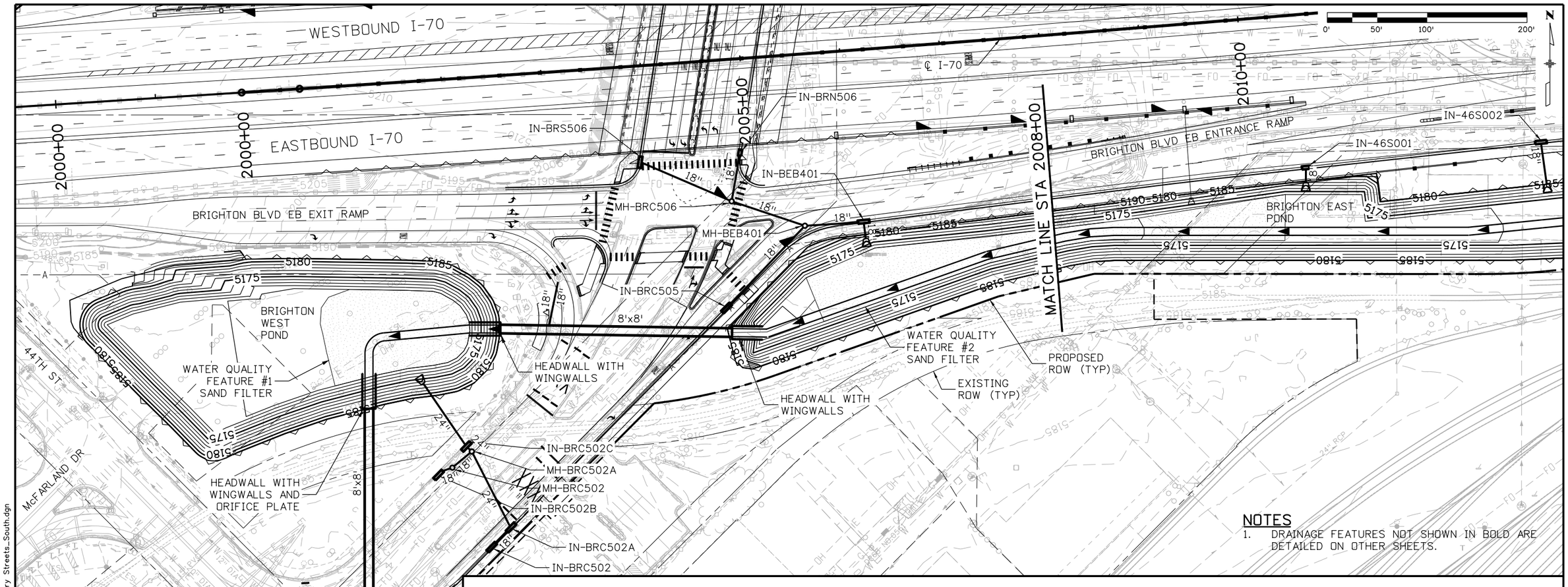
Subset Sheets: D42 of 78

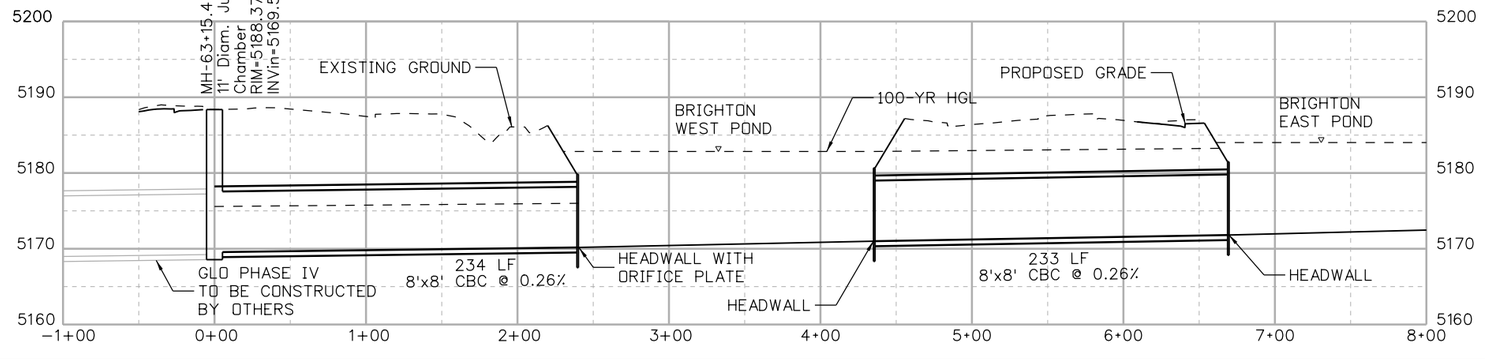
Project No./Code

FBR 0704-234

19631

Sheet Number 410





NOTES

1. DRAINAGE FEATURES NOT SHOWN IN BOLD ARE DETAILED ON OTHER SHEETS.

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Print Date: 5/22/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

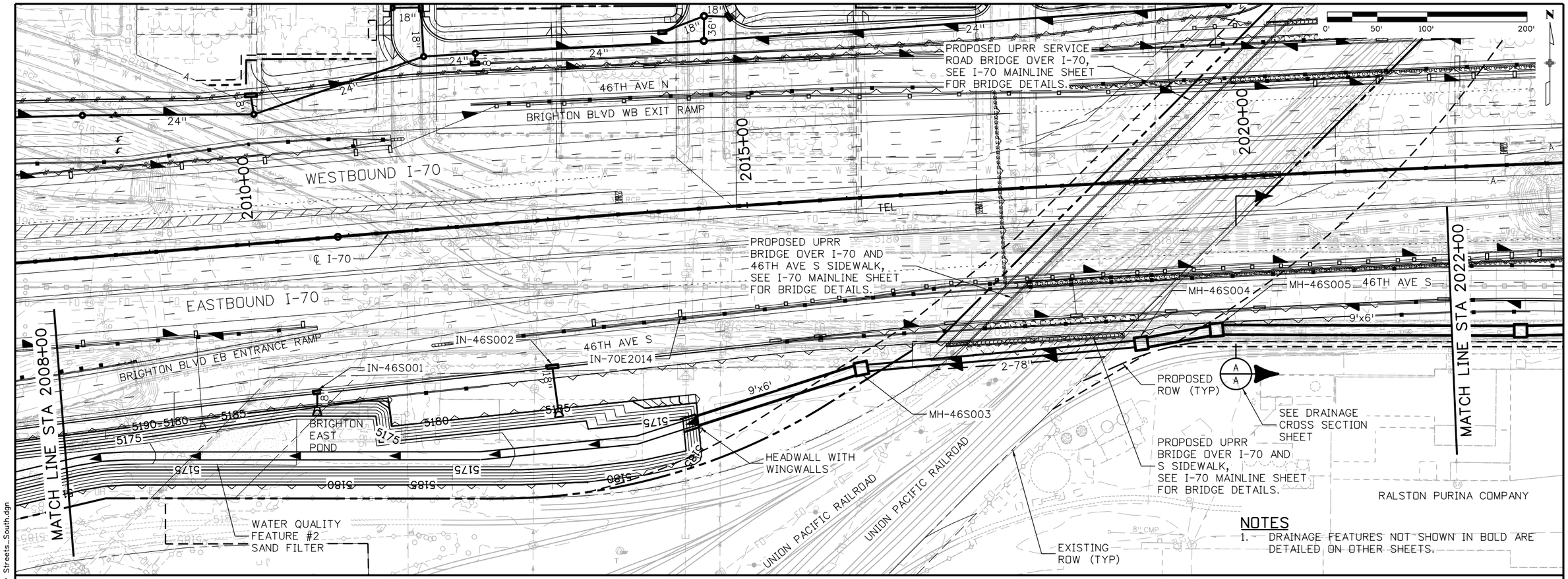
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

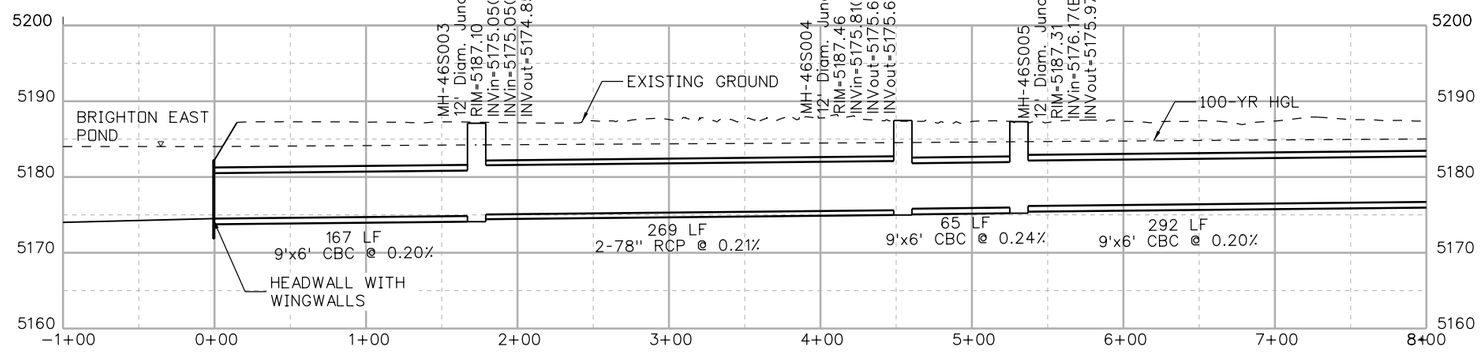
PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
SECONDARY ROAD
STA 2000+00 TO STA 2008+00 SOUTH

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers
Subset Sheets: D43 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 411





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1. DRAINAGE FEATURES NOT SHOWN IN BOLD ARE DETAILED ON OTHER SHEETS.

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Print Date: 5/22/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

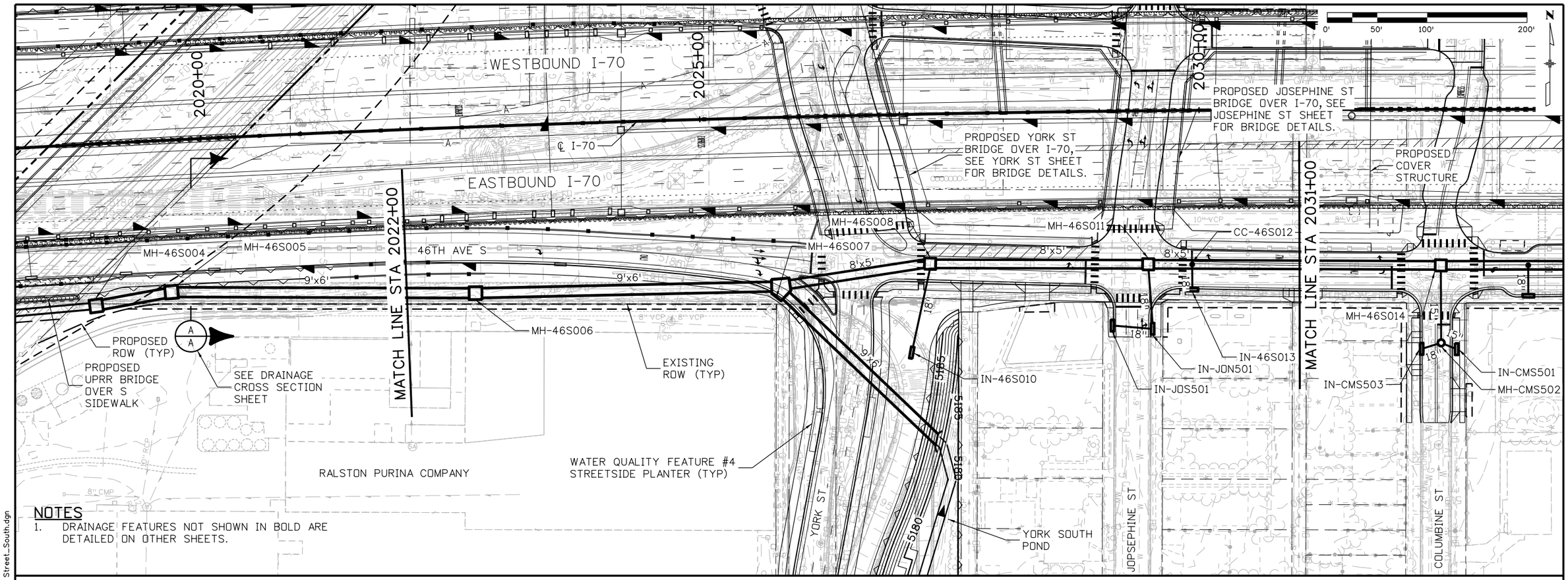
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
SECONDARY ROAD
STA 2008+00 TO STA 2022+00 SOUTH

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers:
Subset Sheets: D44 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 412



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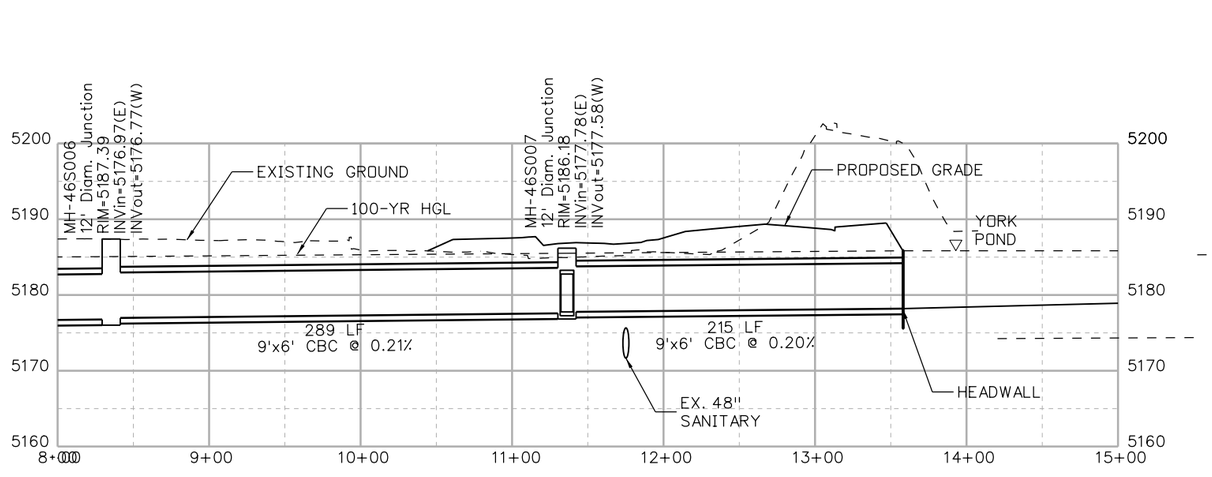
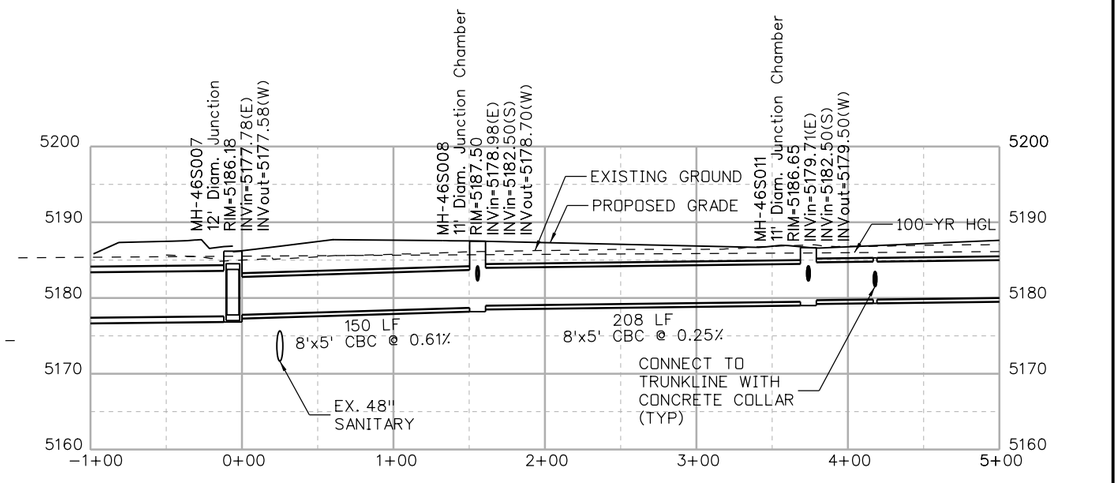
1. DRAINAGE FEATURES NOT SHOWN IN BOLD ARE DETAILED ON OTHER SHEETS.





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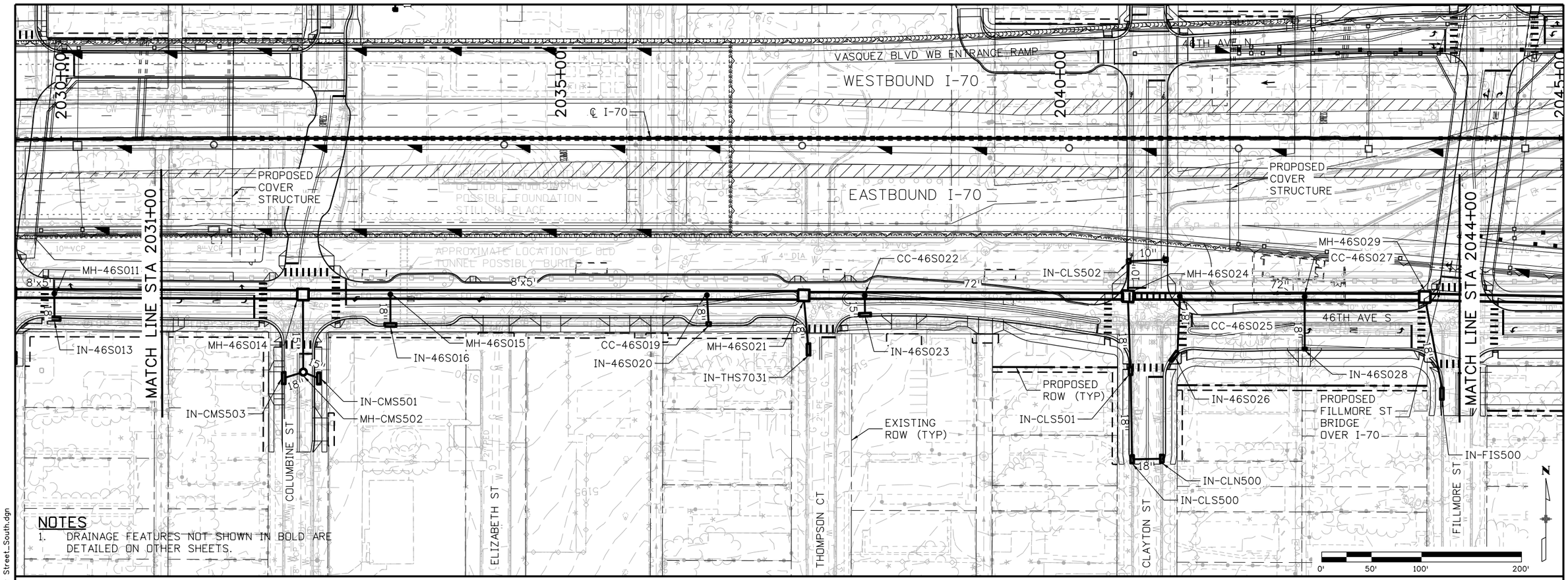
Print Date: 5/22/2017	Sheet Revisions	Colorado Department of Transportation	PROPOSAL
File Name: See sheet edge for information	Date: Comments: Init.	2000 South Holly Street, Denver, CO 80222, Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:
Horiz. Scale: As Noted		Region 1 KJS	Revised:
Vert. Scale: As Noted			Void:
Unit Information			
Unit Leader			

Front Range Mobility Group

CENTRAL 70
DRAINAGE PLAN
SECONDARY ROAD
STA 2022+00 TO STA 2031+00 SOUTH

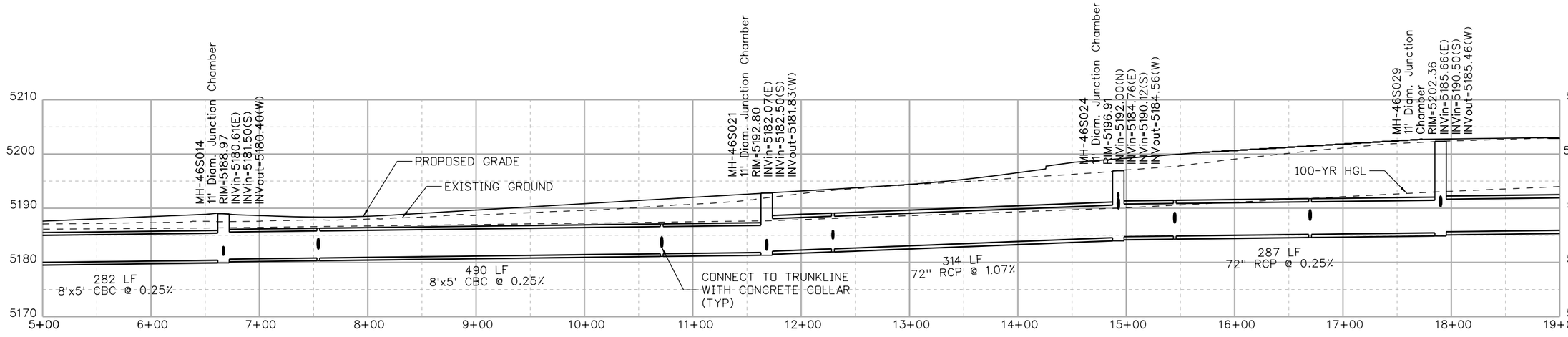
Designer:		Structure Numbers	
Detailer:			
Sheet Subset: DRAINAGE		Subset Sheets: D45 of 78	

Project No./Code
FBR 0704-234
19631
Sheet Number 413



NOTES

1. DRAINAGE FEATURES NOT SHOWN IN BOLD ARE DETAILED ON OTHER SHEETS.



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Print Date: 5/22/2017		Sheet Revisions	
File Name: See sheet edge for information		Date: / Comments / Init.	
Front Range Mobility Group	Horiz. Scale: As Noted		
	Vert. Scale: As Noted		
	Unit Information		
	Unit Leader		

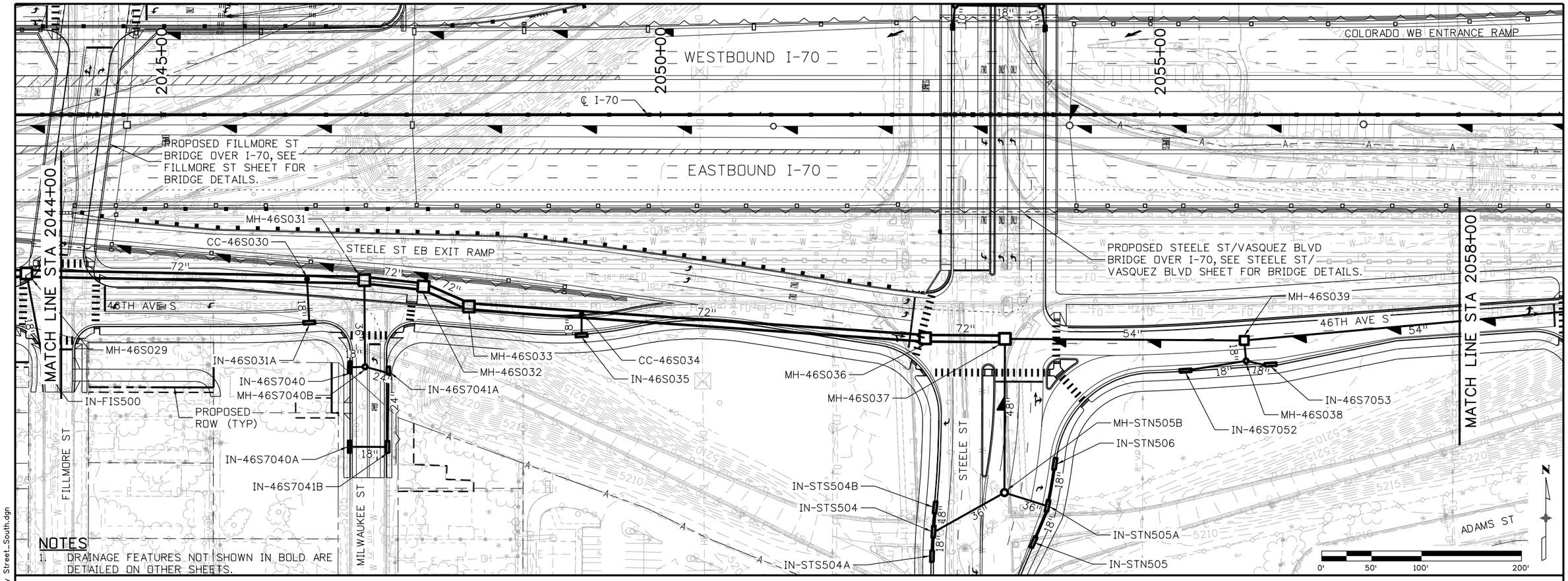
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
SECONDARY ROAD
STA 2031+00 TO STA 2044+00 SOUTH

Designer:
Detailer:
Structure Numbers:
Sheet Subset: DRAINAGE
Subset Sheets: D46 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 414



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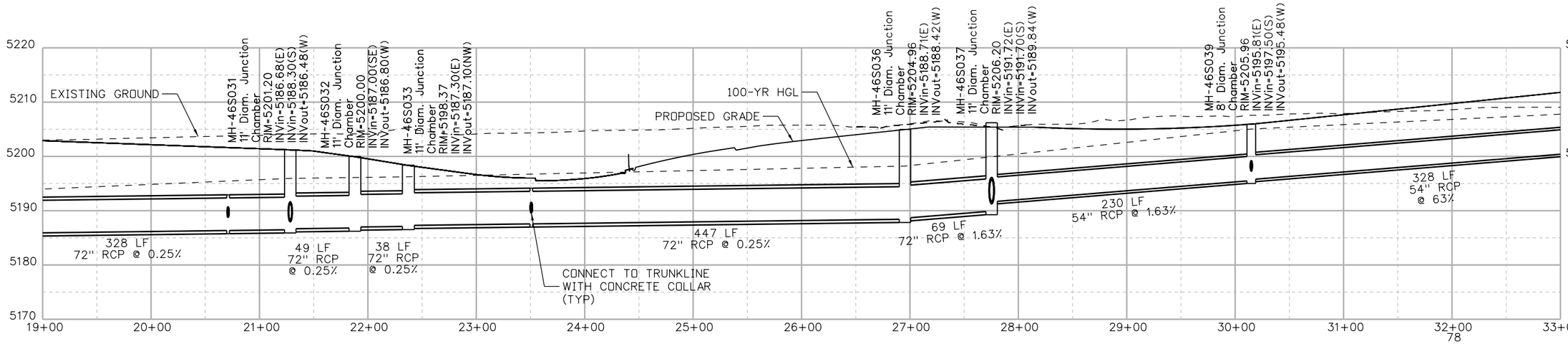
1. DRAINAGE FEATURES NOT SHOWN IN BOLD ARE DETAILED ON OTHER SHEETS.



Print Date: 5/22/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
SECONDARY ROAD
STA 2044+00 TO STA 2058+00 SOUTH

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers:
Subset Sheets: D47 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 415

DENPWP03$ 11:11:38 AM \\denpwp01\pwics\jobs596\291546\542526.88\D047-13599-DRPL_046_Secondary Street_South.dgn

COLORADO BLVD WB ENTRANCE RAMP

WESTBOUND I-70

EASTBOUND I-70

COLORADO BLVD EB EXIT RAMP

℄ I-70

MATCH LINE STA 2058+00

MATCH LINE STA 2072+00

2060+00

2065+00

2070+00

IN-C0S505

IN-C0N505

PROPOSED COOK ST BRIDGE OVER I-70, SEE COOK ST SHEET FOR BRIDGE DETAILS.

PROPOSED COOK ST BRIDGE OVER I-70

MH-C0S503A

IN-C0N504

IN-C0S503

MH-46S042

MH-46S044A

MH-46S046

MH-46S043

MH-46S042A

IN-46S7056

MH-46S041

MH-46S040

MH-C0S502

IN-46S045

MH-46S044

IN-46S047

PROPOSED BNSF MARKET LEAD RR BRIDGE OVER I-70, SEE I-70 MAINLINE SHEET FOR BRIDGE DETAILS.

MH-C0S501

IN-C0S501A

COOK ST

ADAMS ST

IN-C0N501

MADISON ST

EXISTING ROW (TYP)

IN-MNS50S

IN-MNS504

MONROE ST

PROPOSED MONROE ST BRIDGE OVER I-70, SEE MONROE ST SHEET FOR BRIDGE DETAILS.

IN-MNN505A

IN-MNN504

MH-46S051

46TH AVE S

MH-46S053

IN-46S054

IN-46S055

MH-46S056

IN-46S058

IN-46S061

IN-MNN503

IN-MNS503

MH-MNN503B

MH-MNN503A

MH-MNN502A

IN-MNS502

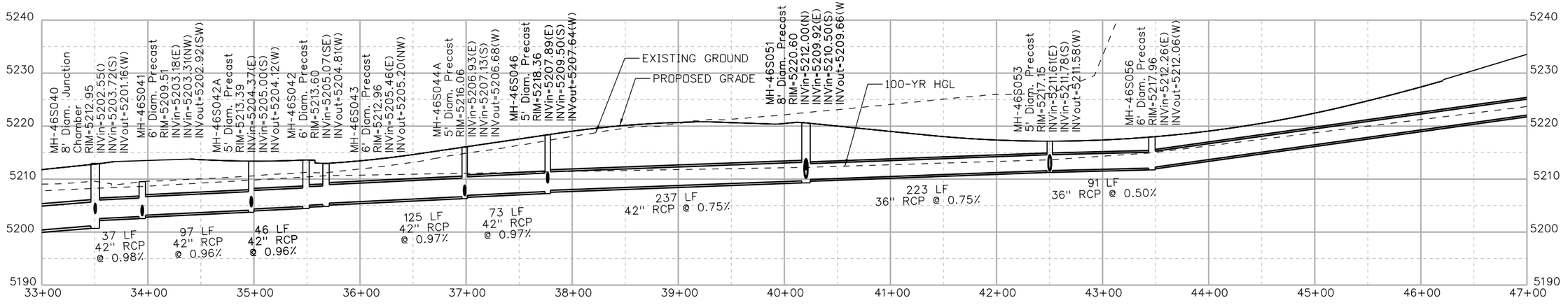
GARFIELD ST

JACKSON ST

NOTES

1. DRAINAGE FEATURES NOT SHOWN IN BOLD ARE DETAILED ON OTHER SHEETS.

0' 50' 100' 200'



Print Date: 5/22/2017

File Name: See sheet edge for information

Horiz. Scale: As Noted

Vert. Scale: As Noted

Unit Information

Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation

2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907

Region 1 KJS

PROPOSAL

No Revisions:

Revised:

Void:

CENTRAL 70
DRAINAGE PLAN
SECONDARY ROAD
STA 2058+00 TO STA 2072+00 SOUTH

Designer:

Detailer:

Sheet Subset: DRAINAGE

Structure Numbers

Subset Sheets: D48 of 78

Project No./Code

FBR 0704-234

19631

Sheet Number 416

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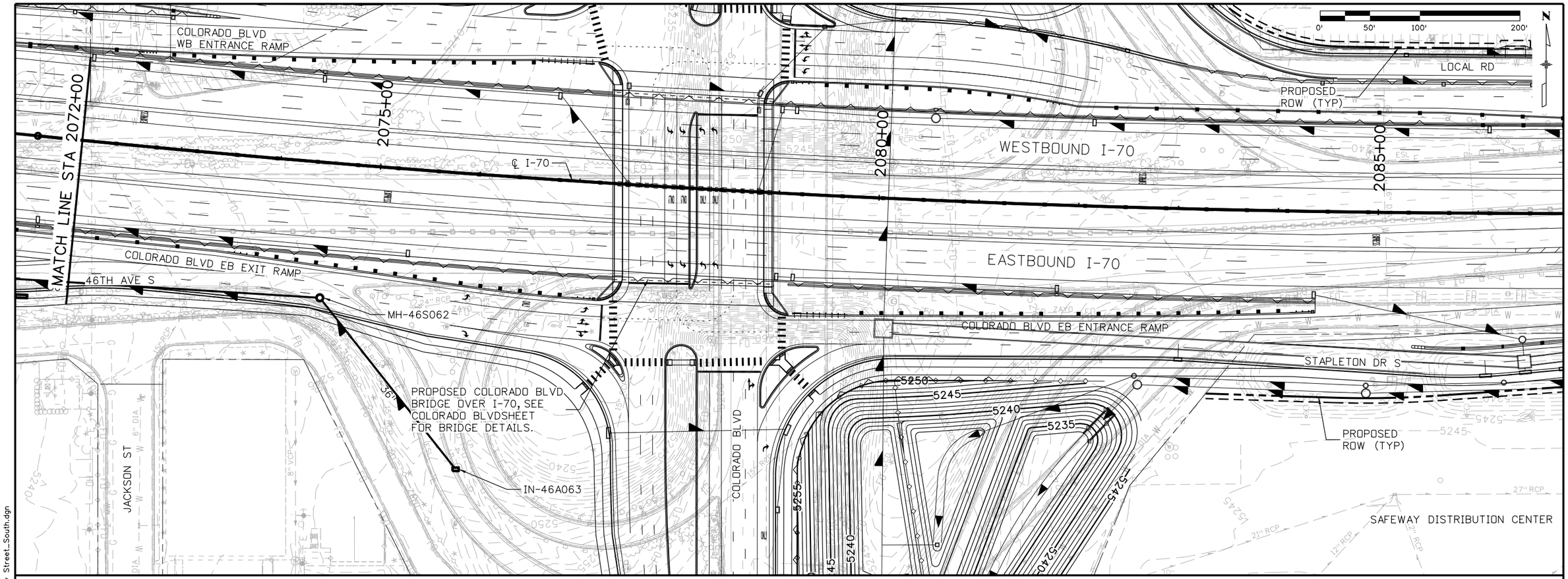

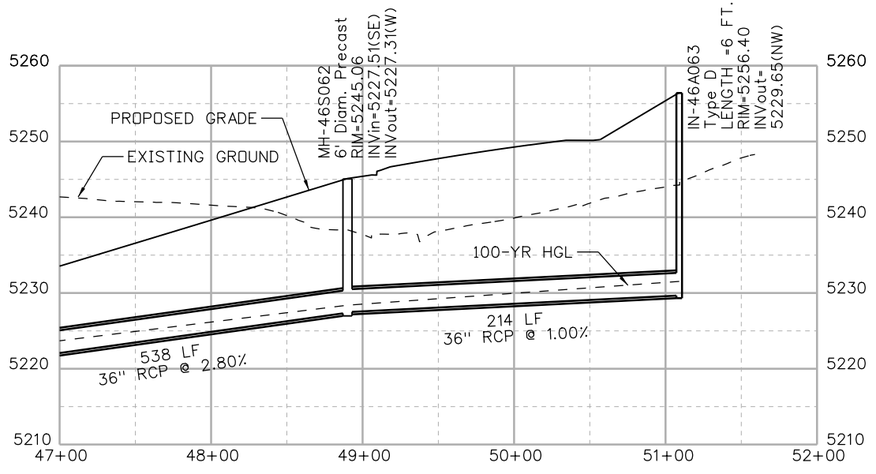

NOTES

1. DRAINAGE FEATURES NOT SHOWN IN BOLD ARE DETAILED ON OTHER SHEETS.

Print Date: 5/22/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
SECONDARY ROAD
STA 2072+00 TO STA 2086+00 SOUTH

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers
Subset Sheets: D49 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 417

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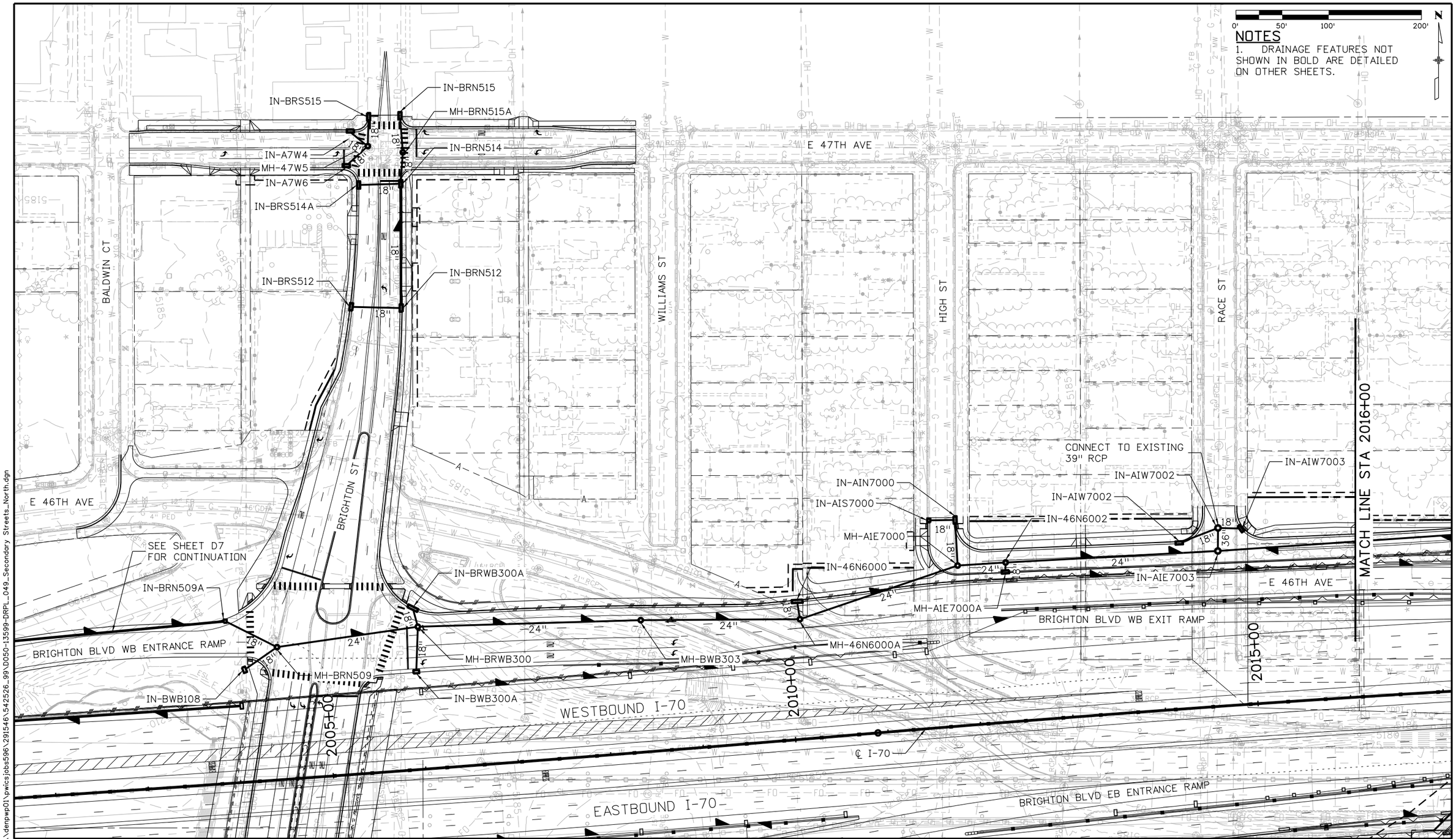

DENPWP01$ 11:08:21 AM \\denpwp01\pwricsjobs596\291546\542526_99\D050-13599-DRPL_049_Secondary Streets_North.dgn

Print Date: 5/22/2017		Sheet Revisions	
File Name: See sheet edge for information		Date:	Comments / Init.
Front Range Mobility Group	Horiz. Scale: As Noted		
	Vert. Scale: As Noted		
	Unit Information		
	Unit Leader		

0000

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
SECONDARY ROAD
STA 2002+00 TO STA 2016+00 NORTH

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers:
Subset Sheets: D50 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 418

0' 50' 100' 200' N

NOTES

1. DRAINAGE FEATURES NOT SHOWN IN BOLD ARE DETAILED ON OTHER SHEETS.

E 47TH AVE

VINE ST

GAYLORD ST

JOSEPHINE ST

YORK ST

UNION PACIFIC RAILROAD

CONNECT TO EXISTING 21" RCP 47TH AVE

MH-47N031

24"

SEE EXISTING RACE STREET OUTFALL SHEETS (D73-D76) FOR PROFILE OF EXISTING 72" RCP STORM SEWER

72" RCP

YORK NORTH POND WATER QUALITY FEATURE #3

IN-YRS513

5185

WATER TREATMENT

PUMP STATION

MH-YRN513 CONNECT TO EXISTING 72" STORM

18"

MH-YRN513A

MH-YRN512 CONNECT YORK NORTH POND OUTFLOW TO EXISTING 72" STORM SEWER FLOWING NORTH IN YORK STREET

60"

IN-A1W7009

MH-A1E7008

24"

MH-A1E7009

ROADWAY SUBDRAINAGE LINE TO PUMP STATION AND WATER TREATMENT

DRAIN LINE FROM LOWERED SECTION TO PUMP STATION

MATCH LINE STA 2016+00

2020+00

2025+00

2030+00

MATCH LINE STA 2030+00

WESTBOUND I-70

℄ I-70

EASTBOUND I-70

46TH AVE S

9'x6'

8'x5'

10" VCP

DENPWP02$ 11:10:55 AM \\denpwp01\pwics\jobs596\291546\542526_100\D051-13599-DRPL_050_Secondary Streets_North.dgn

Print Date: 5/22/2017

File Name: See sheet edge for information

Horiz. Scale: As Noted

Vert. Scale: As Noted

Unit Information

Unit Leader

Front Range Mobility Group

0000

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907

Region 1 KJS

PROPOSAL

No Revisions:

Revised:

Void:

CENTRAL 70
DRAINAGE PLAN
SECONDARY ROAD
STA 2016+00 TO STA 2030+00 NORTH

Designer:

Detailer:

Sheet Subset: DRAINAGE

Structure Numbers

Subset Sheets: D51 of 78

Project No./Code

FBR 0704-234

19631

Sheet Number 419

NOTES
1. DRAINAGE FEATURES NOT SHOWN IN BOLD ARE DETAILED ON OTHER SHEETS.

MATCH LINE STA 2030+00

MH-47N032

24"

24"

MH-47N033

COLUMBINE ST

24"

MH-47N034

24"

JOSEPHINE ST

SWANSEA ELEMENTARY SCHOOL

MH-47N035

CONNECT 24" RCP FROM COVER TO MH-47N035

IN-47N039

ELIZABETH ST

MH-47N036

18"

18"

18"

18"

MH-47N038

MH-47N037

E 47TH AVE

EXISTING ROW (TYP)

PROPOSED ROW (TYP)

THOMPSON CT

CLAYTON ST

FILLMORE ST

VASQUEZ BLVD WB ENTRANCE RAMP

WESTBOUND I-70

46TH AVE N

2035+00

2040+00

2045+00

MATCH LINE STA 2030+00

MATCH LINE STA 2044+00

I-70

PROPOSED COVER STRUCTURE

EASTBOUND I-70

PROPOSED COVER STRUCTURE

APPROXIMATE LOCATION OF OLD TUNNEL POSSIBLY BURIED

8'x5'

8'x5'

72"

72"

10"

10"

0' 50' 100' 200'

N

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Print Date: 5/22/2017		0000	
File Name: See sheet edge for information			
Front Range Mobility Group	Horiz. Scale: As Noted		
	Vert. Scale: As Noted		
	Unit Information		
	Unit Leader		

Sheet Revisions

Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
SECONDARY ROAD
STA 2030+00 TO STA 2044+00 NORTH

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers
Subset Sheets: D52 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 420

CONNECT TO EXISTING
34" RCP

CONSTRUCT PORTION OF
CCD N. RACE STREET
OUTFALL MASTER PLAN

MH-46N001

MH-46N002

MH-46N003

MH-46N004

60"

60"

42"

42"

E 48TH AVE

E 47TH AVE

THOMPSON CT

CLAYTON ST

FILLMORE ST

MILWAUKEE ST

MATCH LINE STA 2050+00

MATCH LINE D54

NOTES

1. CCD N RACE STREET MASTER PLAN CALLS FOR 60" PIPE, BUT NO DETENTION IS ACCOUNTED FOR. PIPE DIAMETER MAY DECREASE ONCE DISCUSSIONS WITH CCD TAKE PLACE.

2. DRAINAGE FEATURES NOT SHOWN IN BOLD ARE DETAILED ON OTHER SHEETS.

0' 50' 100' 200'

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Print Date: 5/22/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
SECONDARY ROAD
STA 2044+00 TO STA 2050+00 NORTH

Designer:
Detailer:
Sheet Subset:
Structure Numbers
Subset Sheets: D53 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 421

NOTES

1. DRAINAGE FEATURES NOT SHOWN IN BOLD ARE DETAILED ON OTHER SHEETS.

MH-46N004
42"
MH-46N005
MH-46N006
MH-46N007
MH-46N008
MH-46N009
MH-46N010
MH-46N013
E 47TH AVE
MATCH LINE STA 2050+00
CONSTRUCT PORTION OF CCD N RACE STREET OUTFALL MASTER PLAN
IN-STS518
IN-STN518
IN-STS517
IN-STN517
IN-STS515
IN-STS514
IN-STN516
IN-STN515
MH-STN513
IN-STN514
HEADWALL AND WINGWALLS WITH ORIFICE PLATE
VASQUEZ WEST POND
VASQUEZ EAST POND
PROPOSED ROW (TYP)
IN-STS512A
MH-STS512
VASQUEZ BLVD
MH-STS511
IN-STS51A
MH-STS510A
MH-STN510A
IN-STN510
IN-STS510
FILLMORE ST
MILWAUKEE ST
46TH AVE N
VASQUEZ BLVD WB ENTRANCE RAMP
COLORADO WB ENTRANCE RAMP
WESTBOUND I-70
℄ I-70
MATCH LINE STA 2044+00
2045+00
2050+00
2055+00
MATCH LINE STA 2058+00
5190
5195
5200
5205
0' 50' 100' 200'

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Print Date: 5/22/2017			
File Name: See sheet edge for information			
Front Range Mobility Group	Horiz. Scale: As Noted	0000	
	Vert. Scale: As Noted		
	Unit Information		
	Unit Leader		

Sheet Revisions

Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

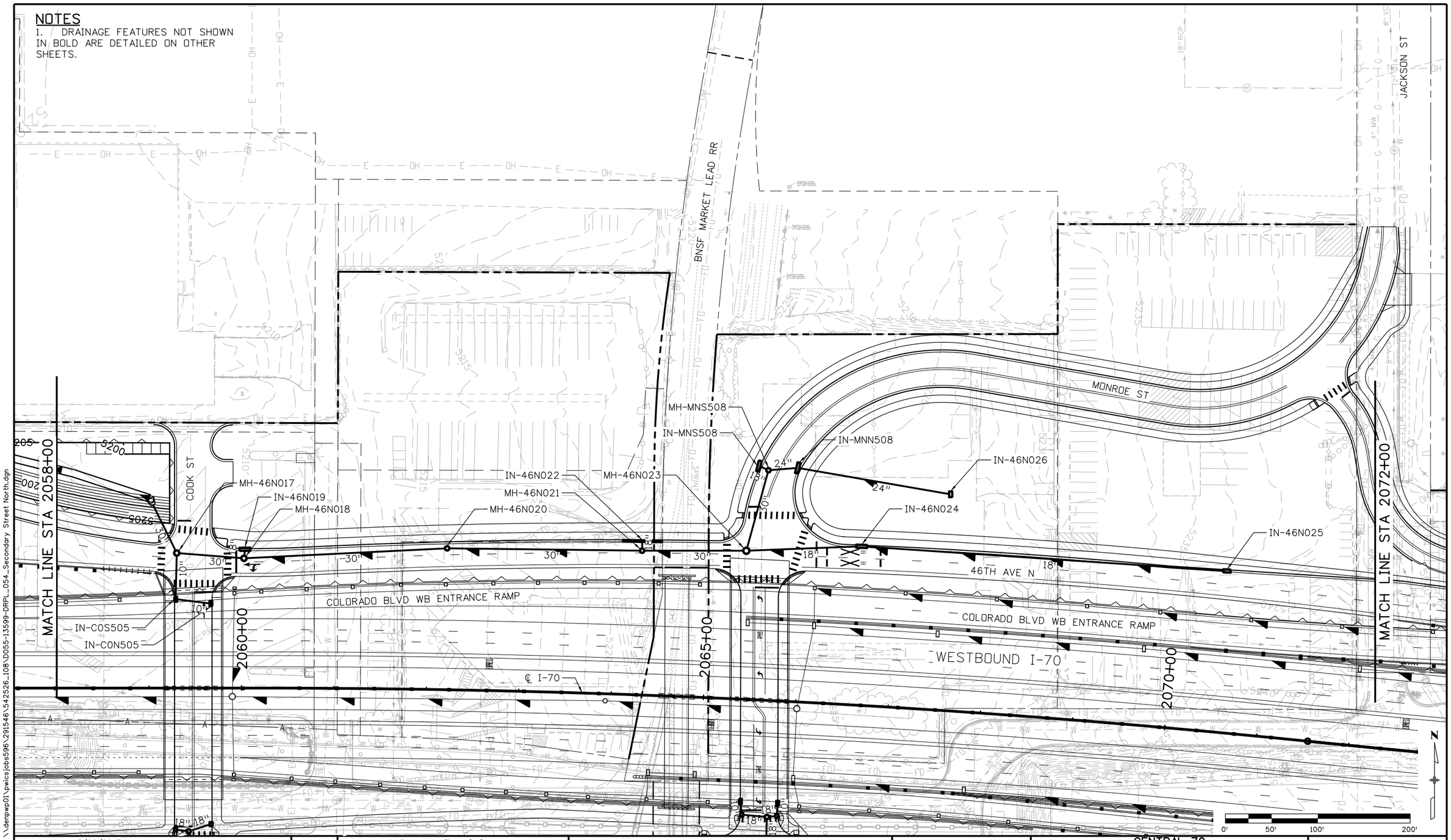
CENTRAL 70
DRAINAGE PLAN
SECONDARY ROAD
STA 2044+00 TO STA 2058+00 NORTH

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers:
Subset Sheets: D54 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 422

NOTES

1. DRAINAGE FEATURES NOT SHOWN IN BOLD ARE DETAILED ON OTHER SHEETS.



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Print Date: 5/22/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale:	As Noted
Vert. Scale:	As Noted
Unit Information	
Unit Leader	

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Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL

No Revisions:

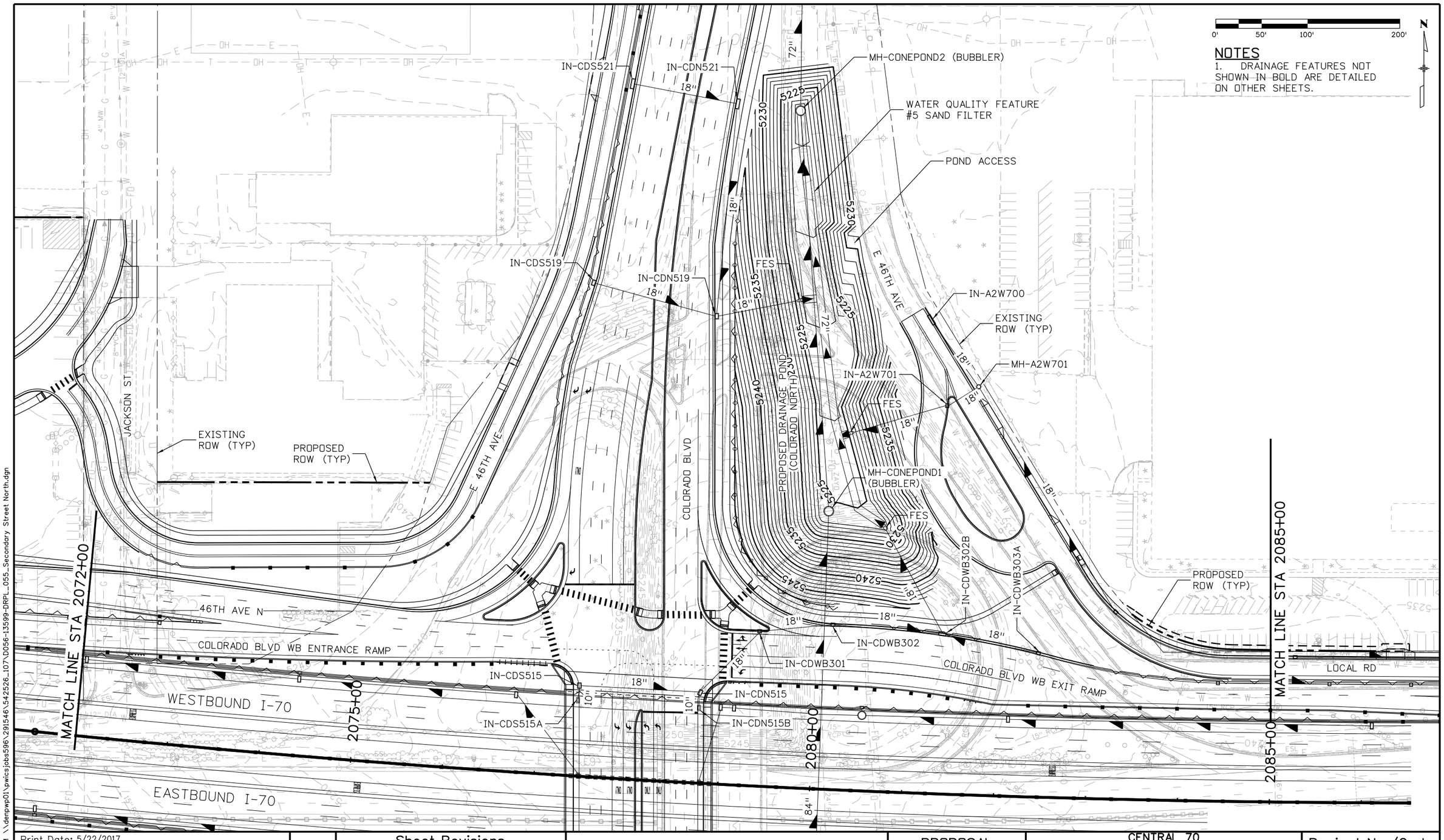
Revised:

Void:

CENTRAL 70
DRAINAGE PLAN
SECONDARY ROAD
STA 2058+00 TO STA 2072+00 NORTH

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	DRAINAGE	Subset Sheets: D55	of 78

Project No./Code	
FBR 0704-234	
19631	
Sheet Number	423



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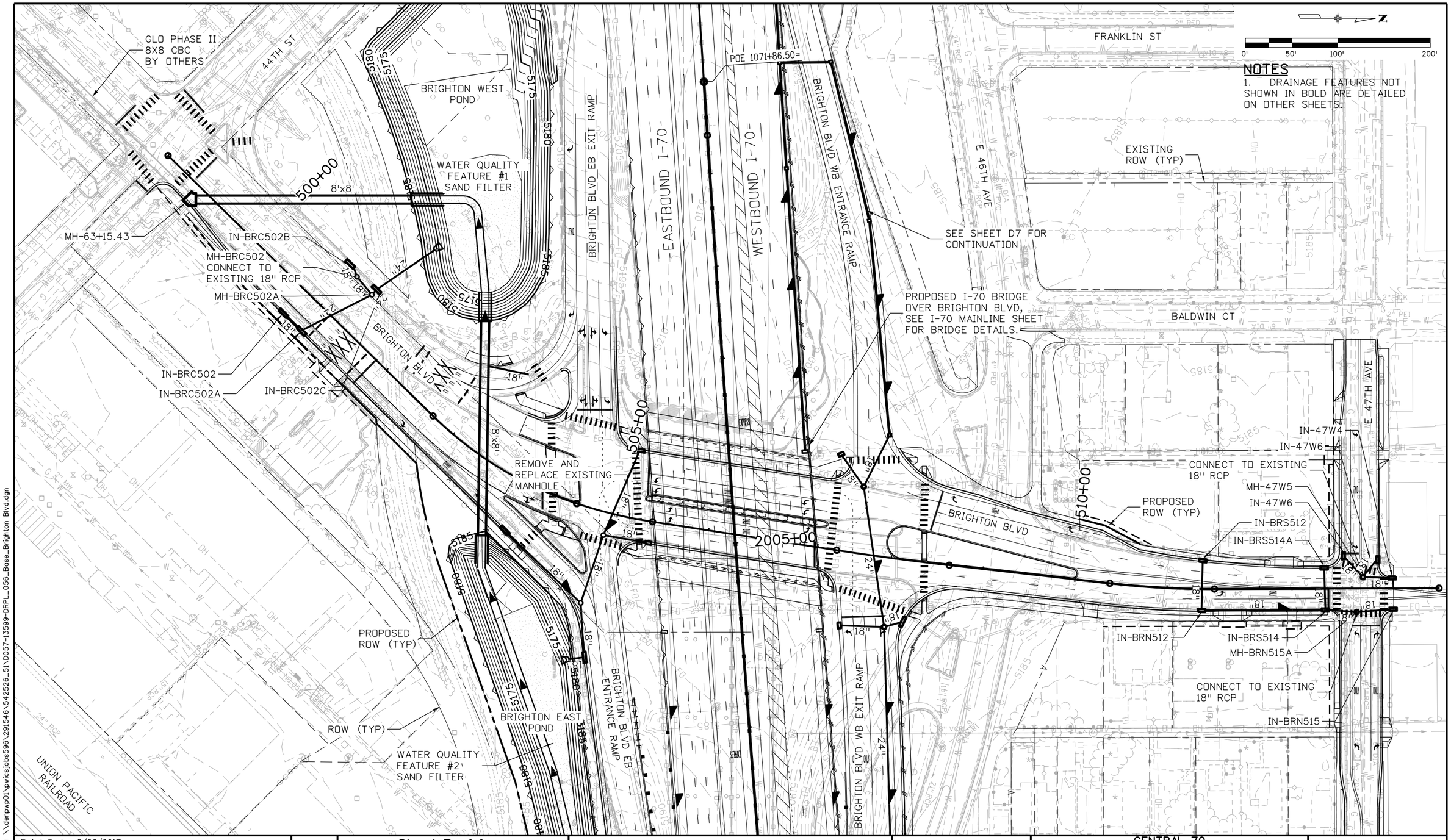
Print Date: 5/22/2017		0000	Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 DRAINAGE PLAN SECONDARY ROAD STA 2072+00 TO STA 2085+00 NORTH	Project No./Code
File Name: See sheet edge for information			Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:	Designer:	FBR 0704-234
Front Range Mobility Group	Horiz. Scale: As Noted						Revised:	Detailer: Structure Numbers	19631
	Vert. Scale: As Noted								
	Unit Information					Region 1 KJS	Void:	Sheet Subset: DRAINAGE Subset Sheets: D56 of 78	Sheet Number 424
	Unit Leader								



NOTES

1. DRAINAGE FEATURES NOT SHOWN IN BOLD ARE DETAILED ON OTHER SHEETS.

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Print Date: 5/22/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale:	As Noted
Vert. Scale:	As Noted
Unit Information	
Unit Leader	

Sheet Revisions		
Date:	Comments	Init.

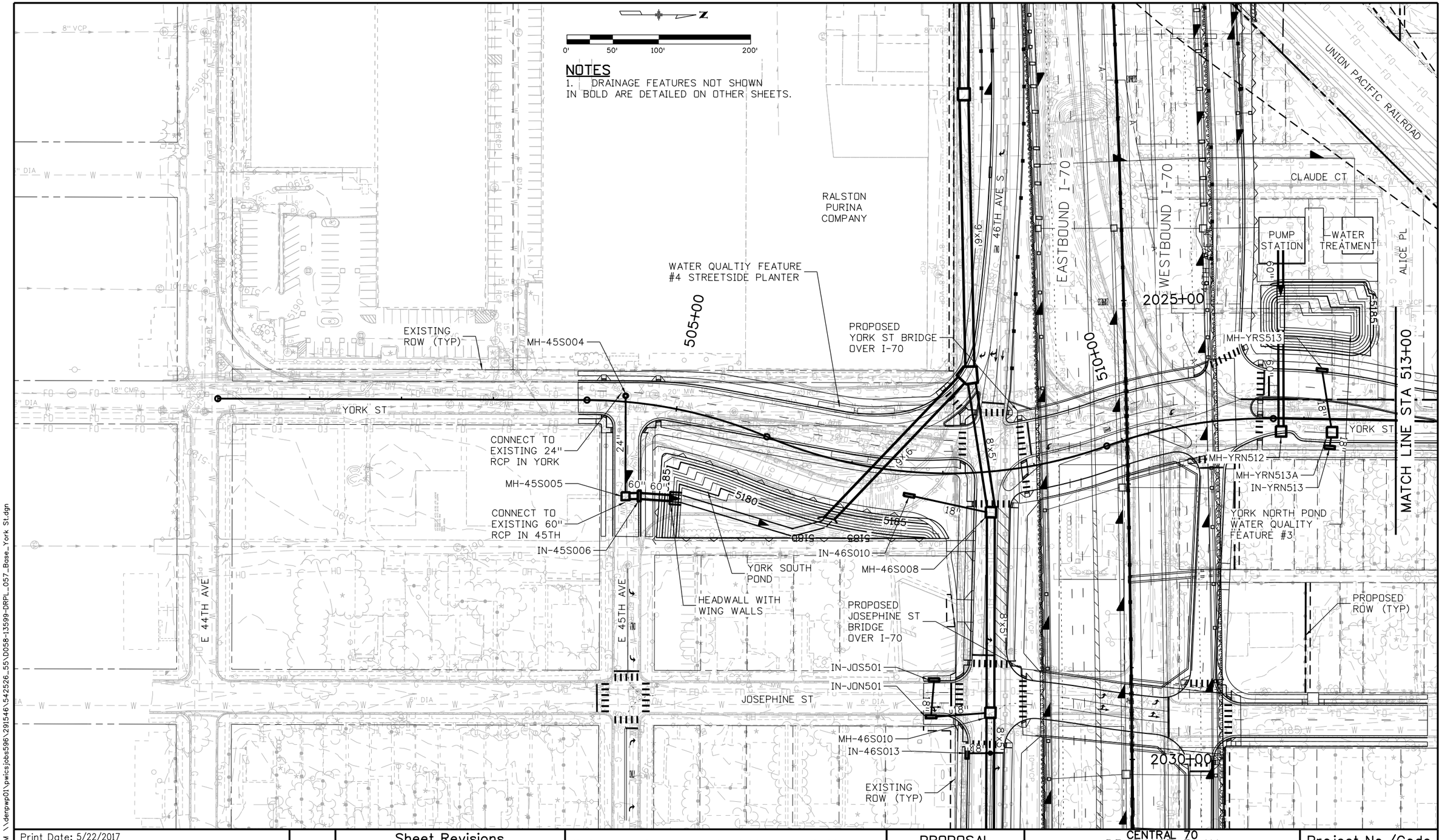
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
BRIGHTON BLVD
STA 500+00 TO 514+76

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	DRAINAGE	Subset Sheets: D57	of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 425



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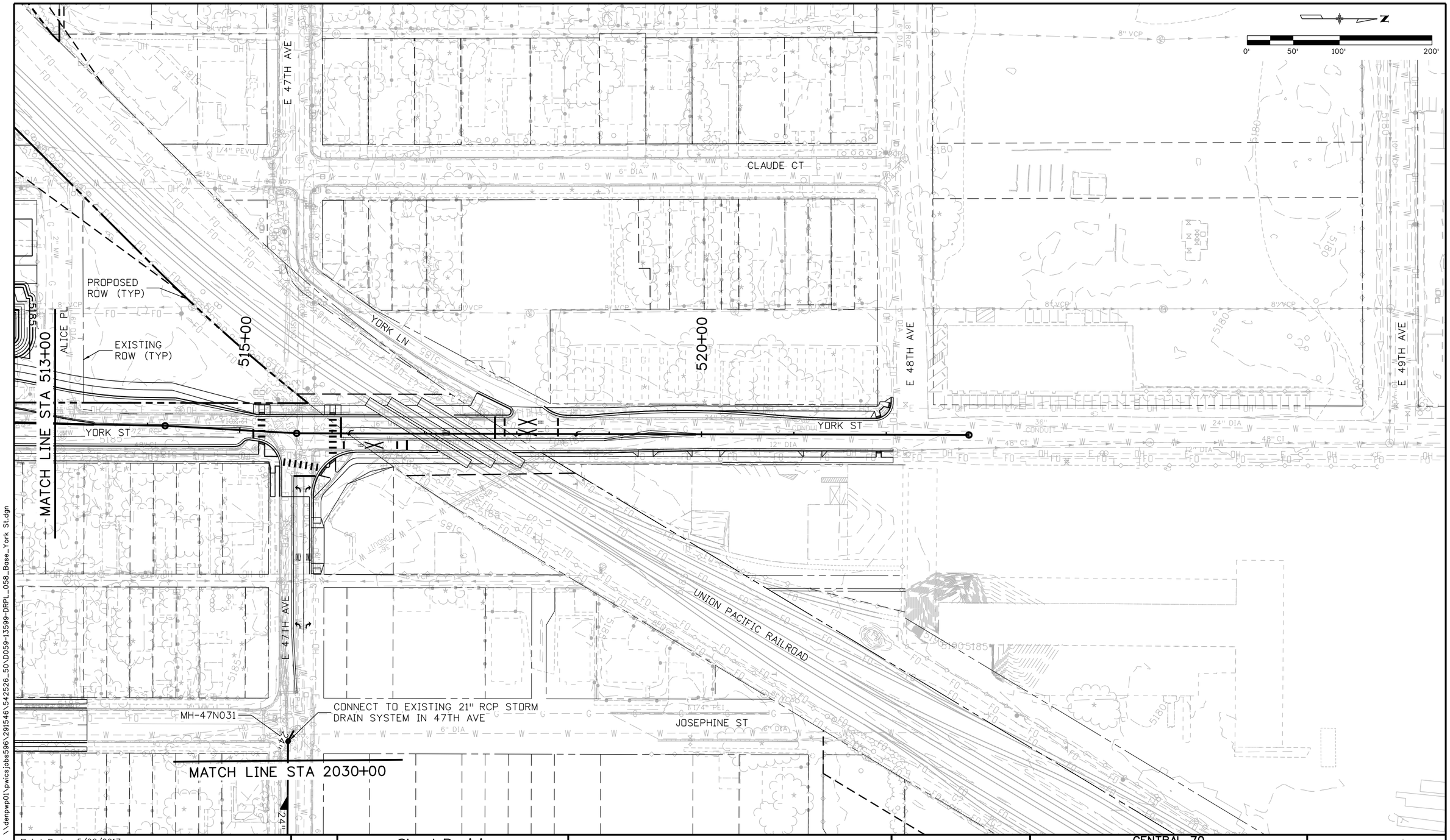
Print Date: 5/22/2017		Sheet Revisions			Colorado Department of Transportation
File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street
Front Range Mobility Group	Horiz. Scale: As Noted				Denver, CO 80222
	Vert. Scale: As Noted				Phone: 303-757-9934 FAX: 303-757-9907
	Unit Information				Region 1 KJS
	Unit Leader				

PROPOSAL	CENTRAL 70 DRAINAGE PLAN YORK STREET STA 500+00 TO 513+00		Project No./Code
No Revisions:	Designer:	Structure Numbers:	FBR 0704-234
Revised:	Detailer:		19631
Void:	Sheet Subset: DRAINAGE	Subset Sheets: D58 of 78	Sheet Number 426



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Print Date: 5/22/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

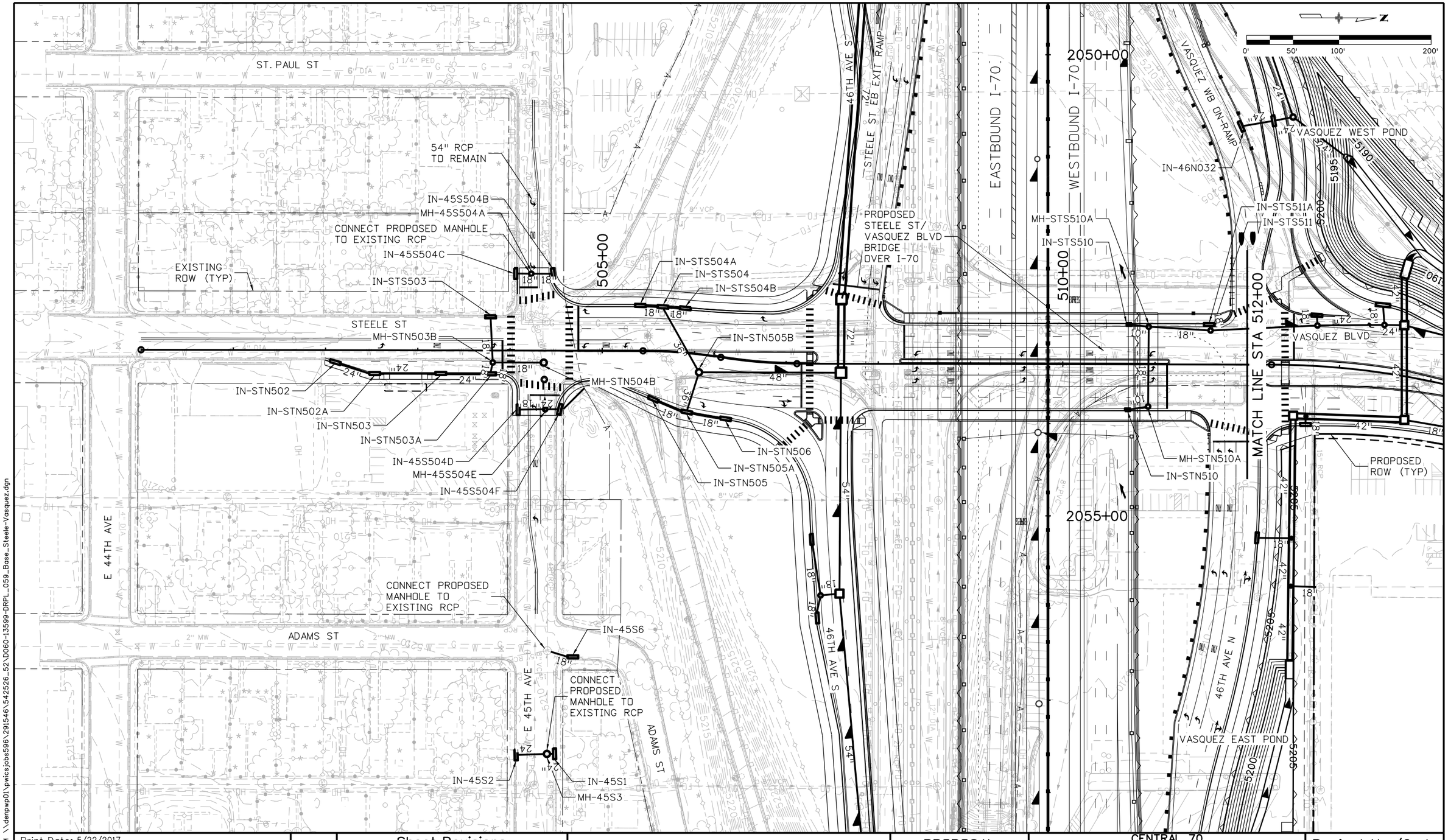
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
YORK STREET
STA 513+00 TO 522+89

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers
Subset Sheets: D59 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 427



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Print Date: 5/22/2017

File Name: See sheet edge for information

Horiz. Scale: As Noted

Vert. Scale: As Noted

Unit Information

Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL

No Revisions:

Revised:

Void:

CENTRAL 70
DRAINAGE PLAN
STEELE ST/VASQUEZ BLVD
STA 500+00 TO 512+00

Designer:

Detailer:

Structure Numbers

Sheet Subset: DRAINAGE

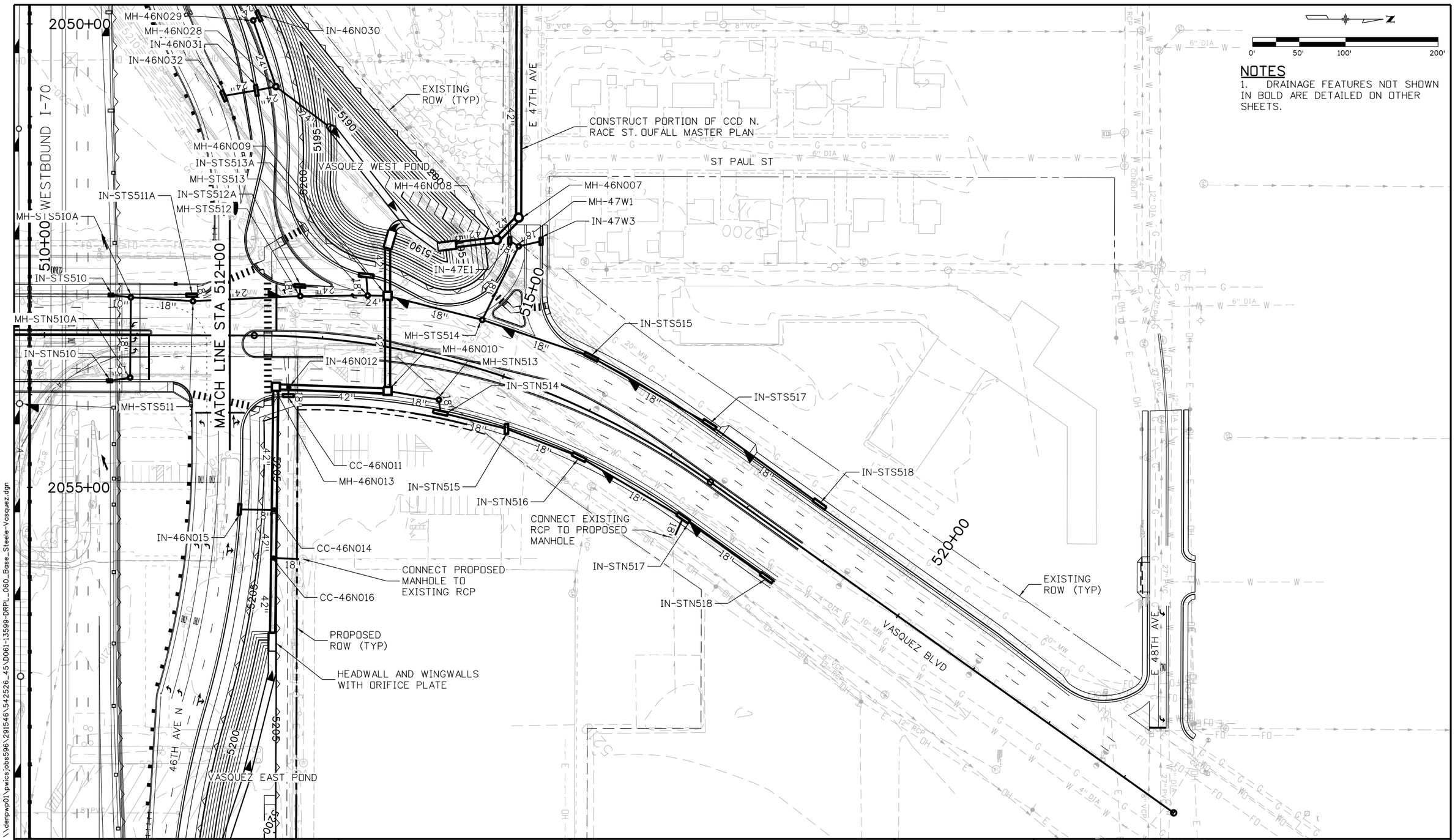
Subset Sheets: D60 of 78

Project No./Code

FBR 0704-234

19631

Sheet Number 428



NOTES

1. DRAINAGE FEATURES NOT SHOWN IN BOLD ARE DETAILED ON OTHER SHEETS.

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Print Date: 5/22/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

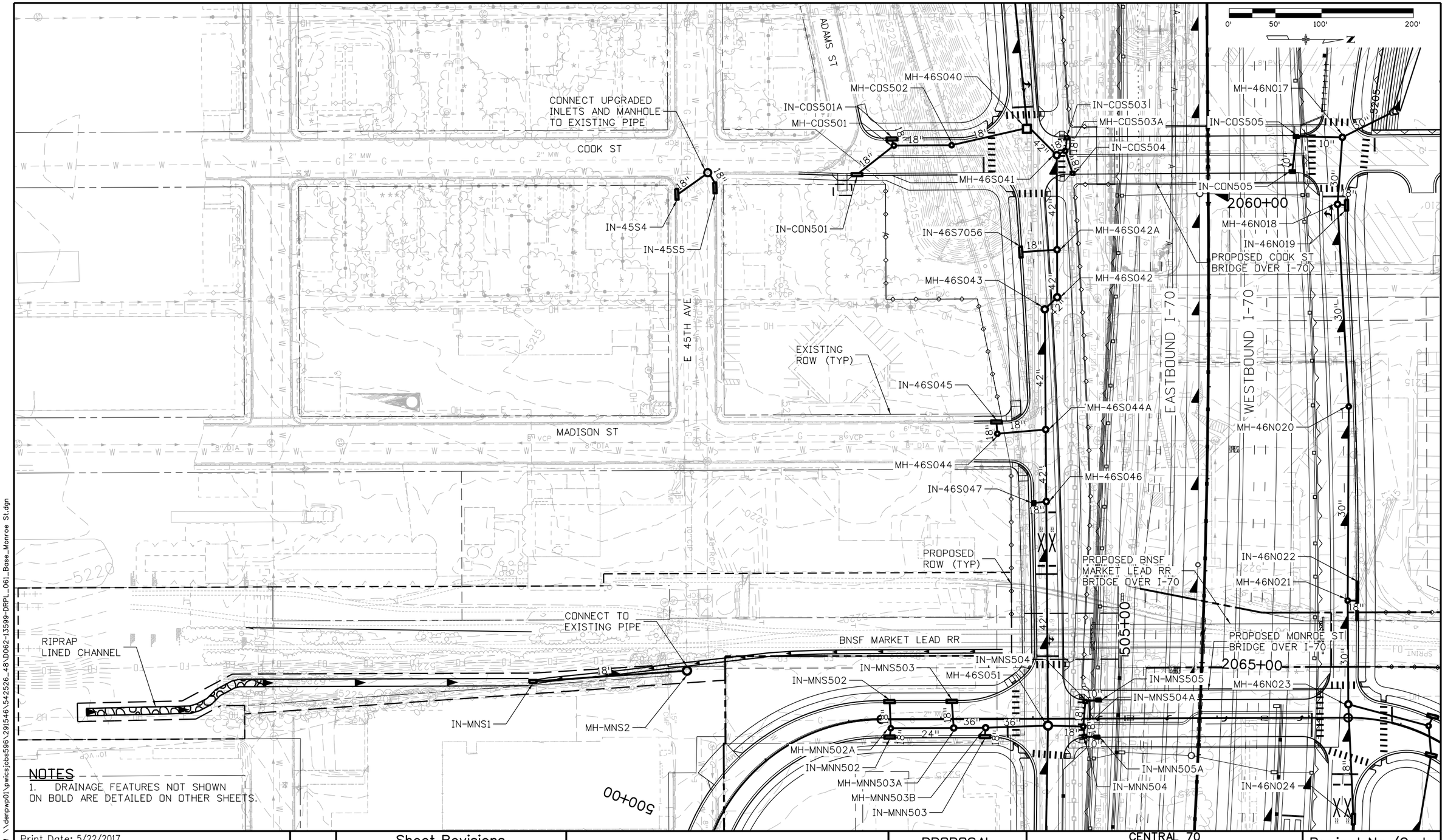
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
STEELE ST/VASQUEZ BLVD
STA 512+00 TO 523+66

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers
Subset Sheets: D61 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 429



NOTES

1. DRAINAGE FEATURES NOT SHOWN ON BOLD ARE DETAILED ON OTHER SHEETS.

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Print Date: 5/22/2017

File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted

Vert. Scale: As Noted

Unit Information

Unit Leader

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation

2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907

Region 1 KJS

PROPOSAL

No Revisions:

Revised:

Void:

CENTRAL 70
DRAINAGE PLAN
MONROE STREET
STA 500+00 TO 508+00

Designer:

Detailer:

Sheet Subset: DRAINAGE

Structure Numbers

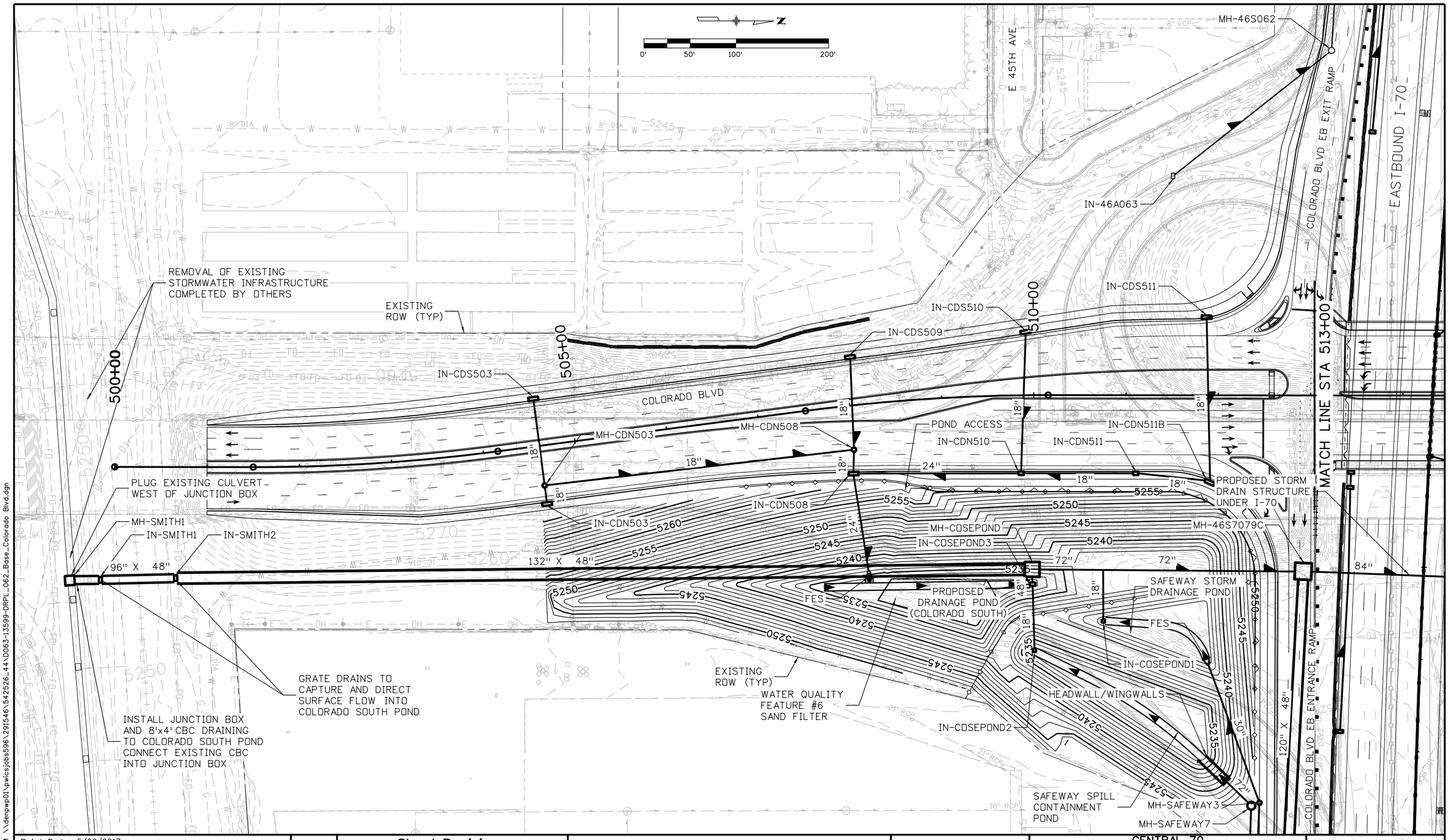
Subset Sheets: D62 of 78

Project No./Code

FBR 0704-234

19631

Sheet Number 430



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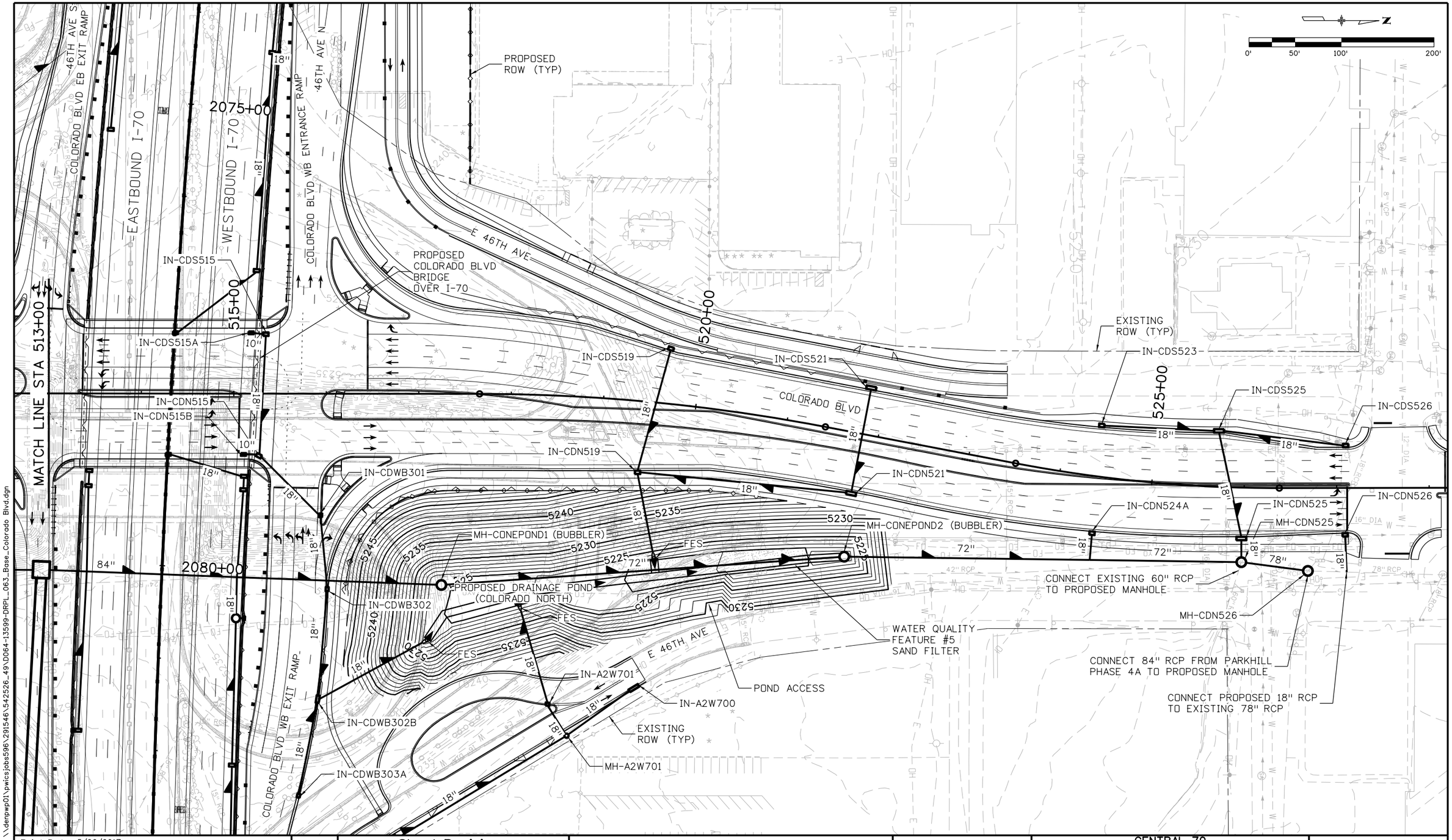
Print Date: 5/22/2017	Sheet Revisions			Colorado Department of Transportation
File Name: See sheet edge for information	Date:	Comments	Init.	2000 South Holly Street, Denver, CO 80222, Phone: 303-757-9934 FAX: 303-757-9907
Horiz. Scale: As Noted				Region 1 KJS
Vert. Scale: As Noted				
Unit Information				
Unit Leader				

Front Range Mobility Group

PROPOSAL	CENTRAL 70 DRAINAGE PLAN COLORADO BLVD STA 500+00 TO 513+00		Project No./Code
No Revisions:	Designer:	Structure Numbers:	FBR 0704-234
Revised:	Detailer:		19631
Void:	Sheet Subset: DRAINAGE	Subset Sheets: D63 of 78	Sheet Number 431



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Print Date: 5/22/2017

File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale:	As Noted
Vert. Scale:	As Noted
Unit Information	
Unit Leader	

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Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL

No Revisions:

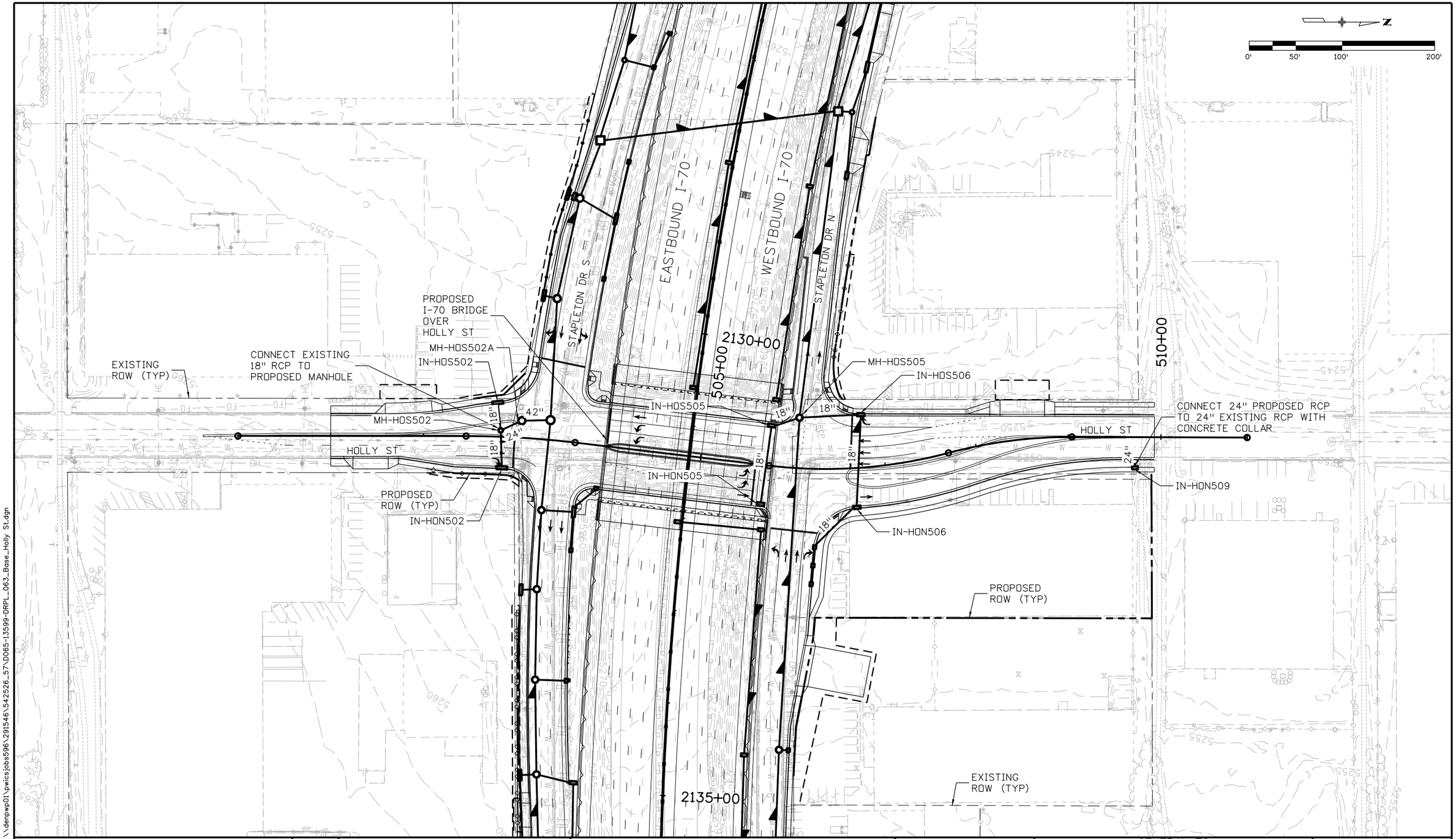
Revised:

Void:

CENTRAL 70
DRAINAGE PLAN
COLORADO BLVD
STA 513+00 TO 527+33

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	DRAINAGE	Subset Sheets: D64	of 78

Project No./Code	
FBR 0704-234	
19631	
Sheet Number	432



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Print Date: 5/22/2017

File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale:	As Noted
Vert. Scale:	As Noted
Unit Information	
Unit Leader	

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL

No Revisions:

Revised:

Void:

CENTRAL 70
DRAINAGE PLAN
HOLLY STREET
STA 500+00 TO 510+93

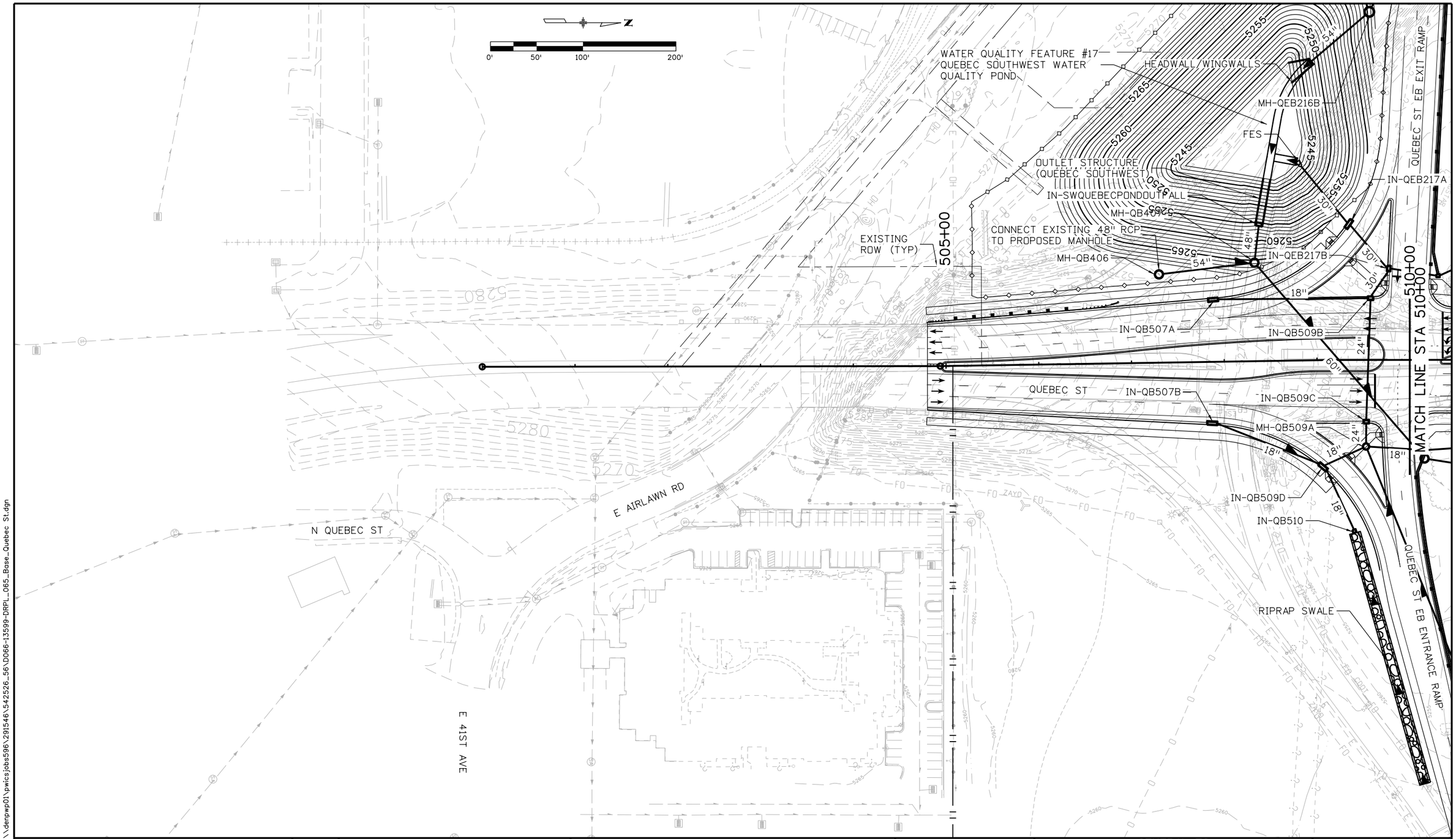
Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	DRAINAGE	Subset Sheets:	D65 of 78

Project No./Code

FBR 0704-234

19631

Sheet Number 433



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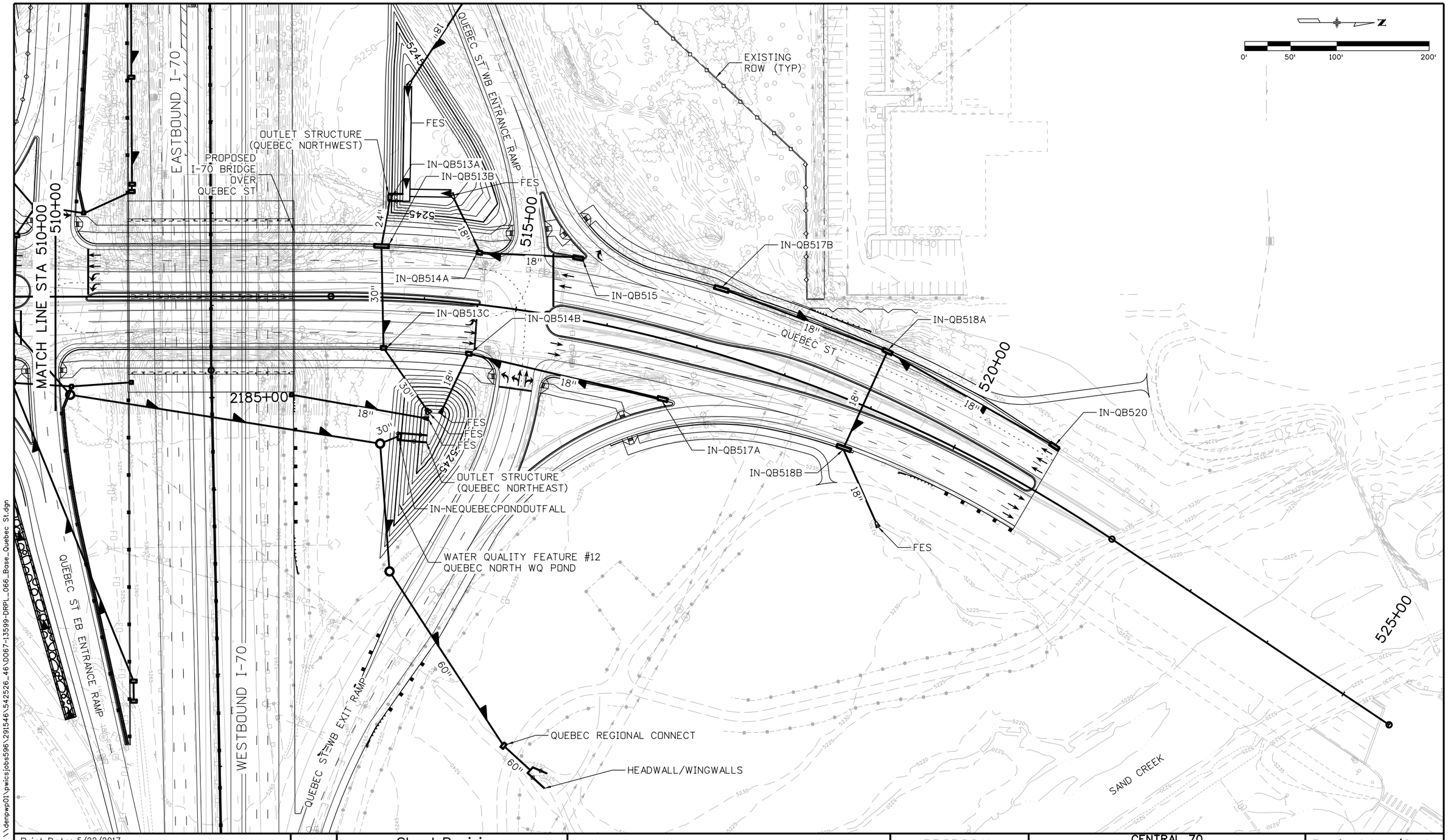
Print Date: 5/22/2017		Sheet Revisions			Colorado Department of Transportation
File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907
Front Range Mobility Group	Horiz. Scale: As Noted				Region 1 KJS
	Vert. Scale: As Noted				
	Unit Information				
	Unit Leader				

PROPOSAL	CENTRAL 70 DRAINAGE PLAN QUEBEC STREET STA 500+00 TO 510+00			Project No./Code
No Revisions:	Designer:	Structure Numbers		FBR 0704-234
Revised:	Detailer:			19631
Void:	Sheet Subset: DRAINAGE	Subset Sheets: D66	of 78	Sheet Number 434



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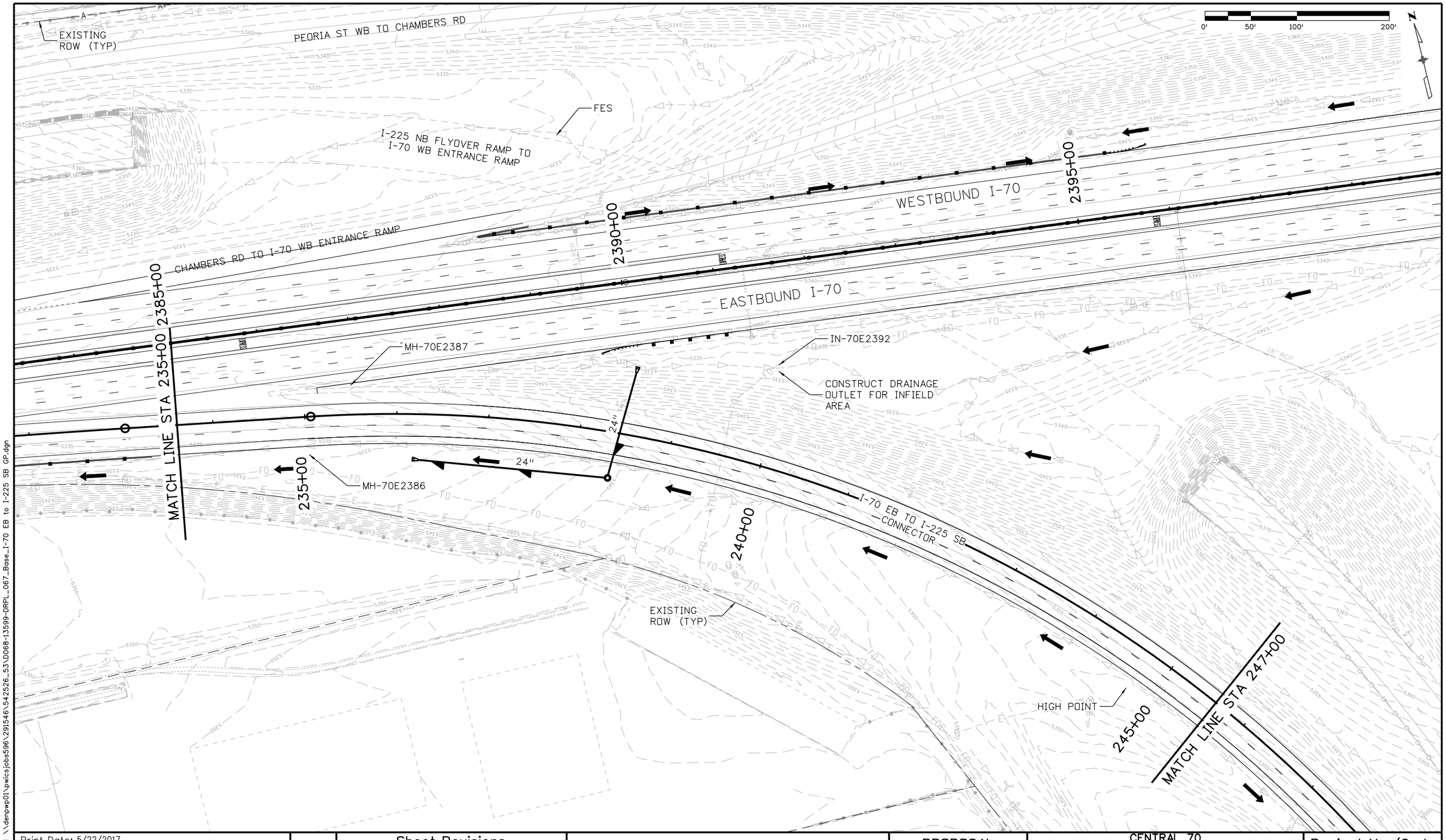
Print Date: 5/22/2017		Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 DRAINAGE PLAN QUEBEC STREET STA 510+00 TO 522+66		Project No./Code
File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:			FBR 0704-234
Front Range Mobility Group	Horiz. Scale: As Noted					Revised:	Designer:	Structure Numbers	19631
	Vert. Scale: As Noted						Detailer:		
	Unit Information					Void:	Sheet Subset: DRAINAGE	Subset Sheets: D67 of 78	Sheet Number 435
	Unit Leader				Region 1 KJS				



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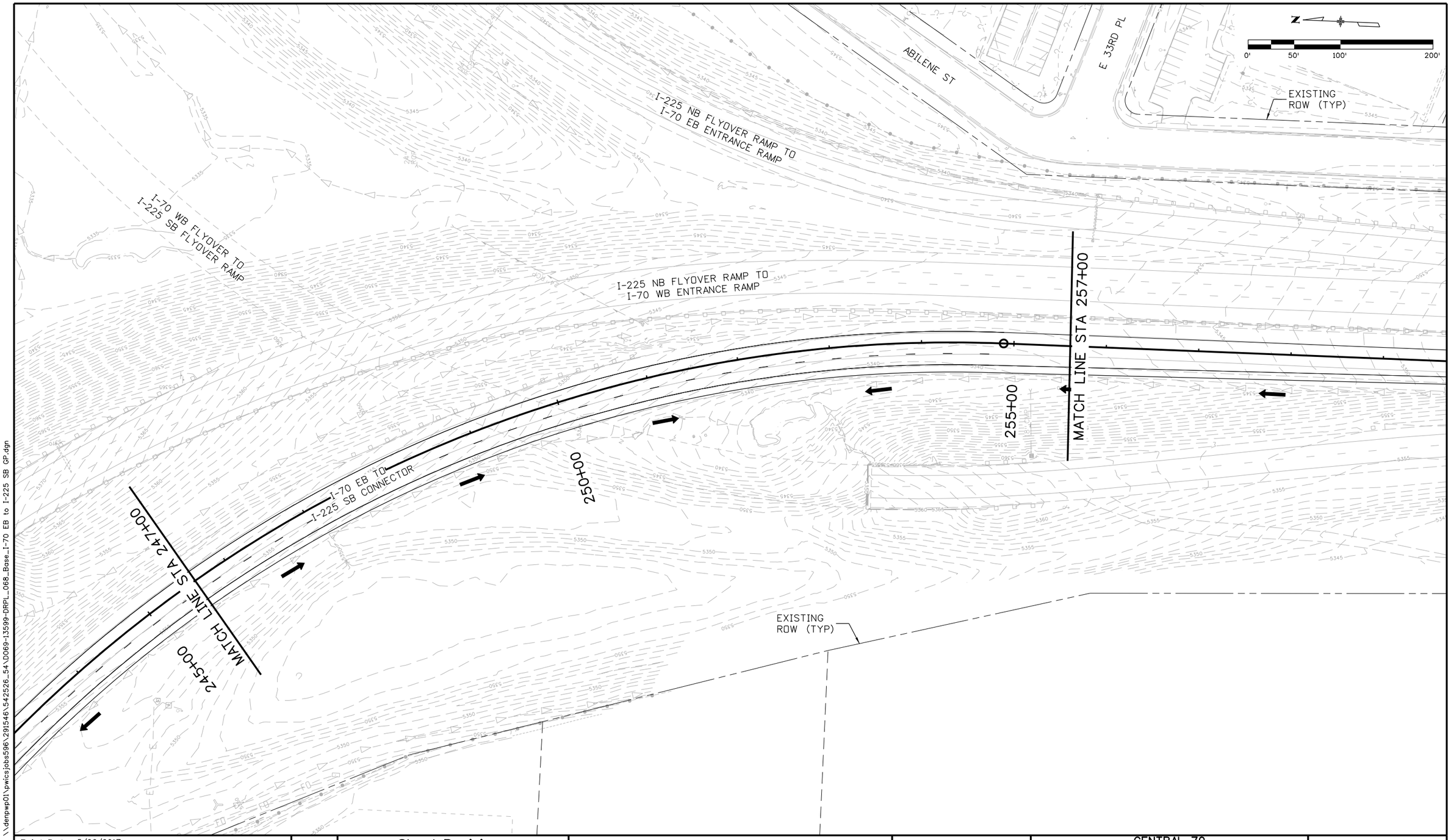
Print Date: 5/22/2017		0000	Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 DRAINAGE PLAN I-70 EB TO I-225 SB CONNECTOR STA 235+00 TO 247+00		Project No./Code
File Name: See sheet edge for information			Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:			FBR 0704-234
Front Range Mobility Group	Horiz. Scale: As Noted						Revised:	Designer:	Structure Numbers	19631
	Vert. Scale: As Noted							Detailer:		
	Unit Information					Region 1 KJS	Void:	Sheet Subset: DRAINAGE	Subset Sheets: D68 of 78	Sheet Number 436
	Unit Leader									



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Print Date: 5/22/2017

File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted

Vert. Scale: As Noted

Unit Information

Unit Leader

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL

No Revisions:

Revised:

Void:

CENTRAL 70
DRAINAGE PLAN
I-70 EB TO I-225 SB CONNECTOR
STA 247+00 TO 257+00

Designer:

Detailer:

Sheet Subset: DRAINAGE

Structure Numbers

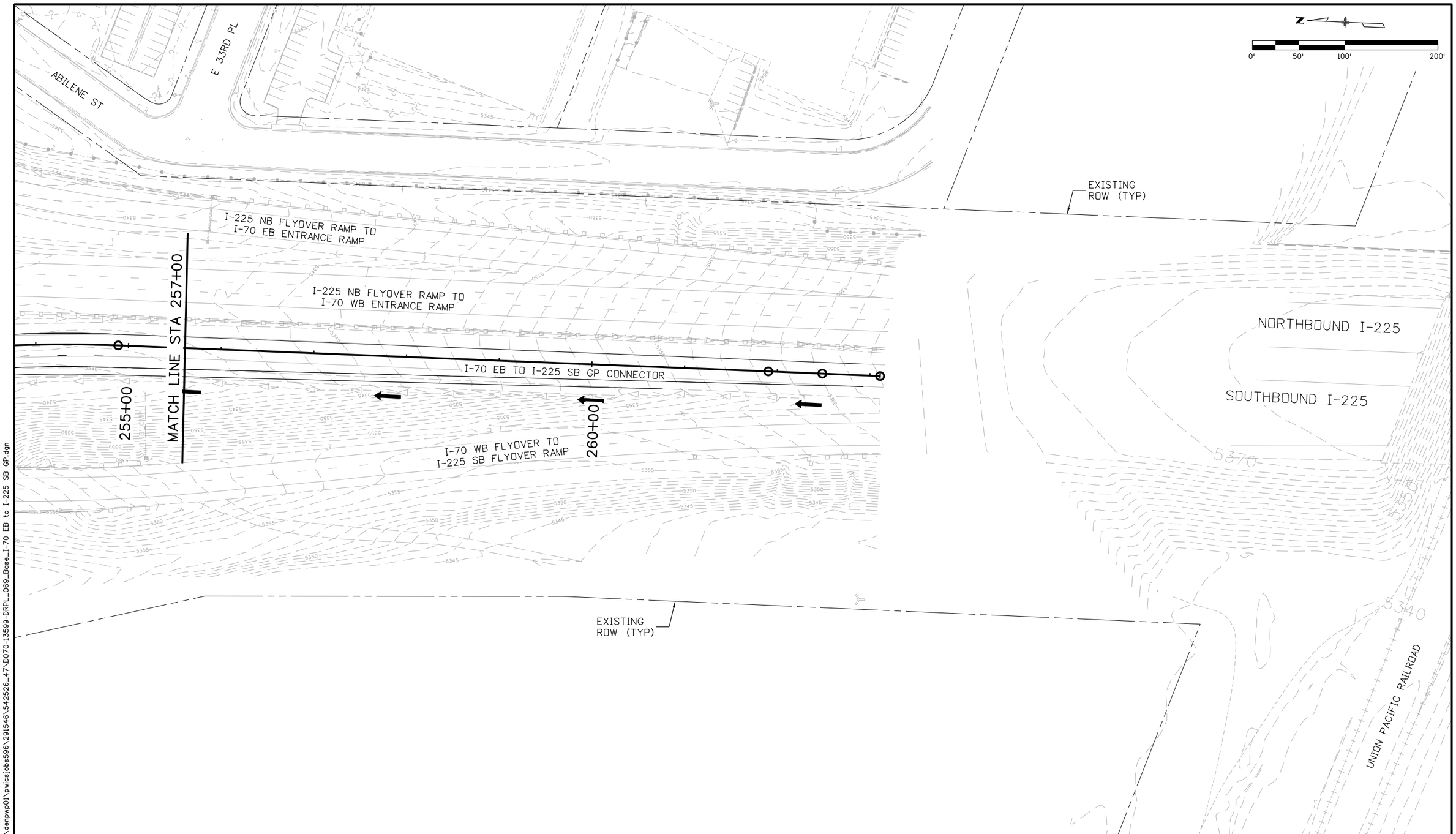
Subset Sheets: D69 of 78

Project No./Code

FBR 0704-234

19631

Sheet Number 437



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Print Date: 5/22/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

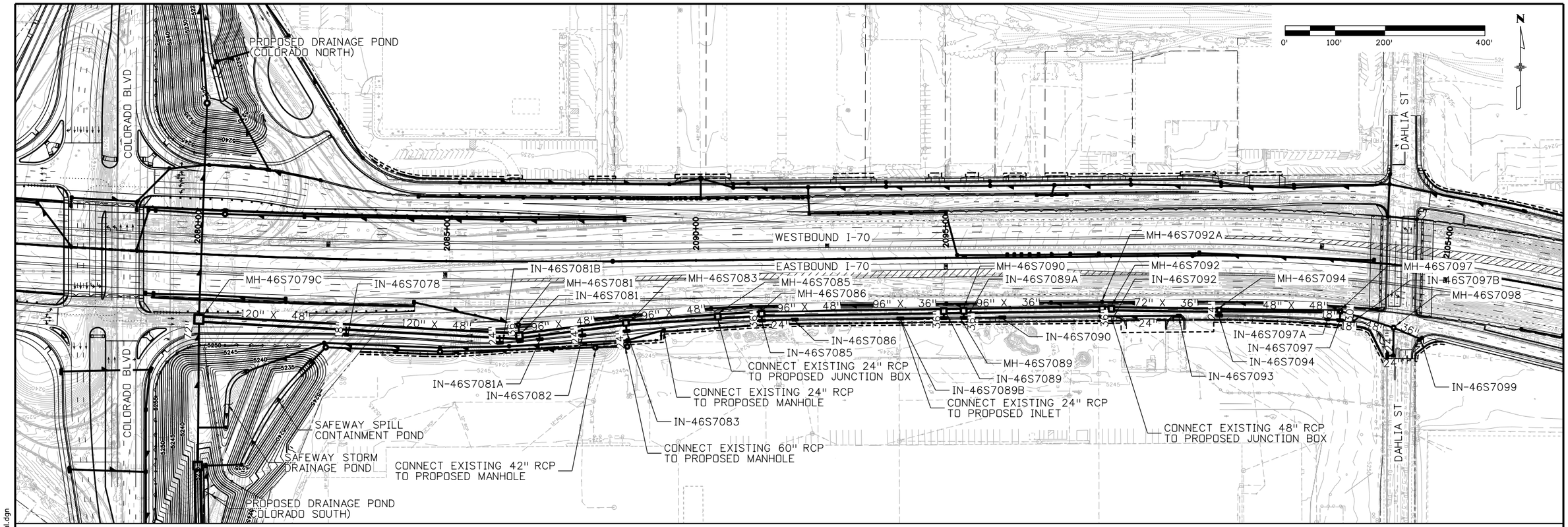
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

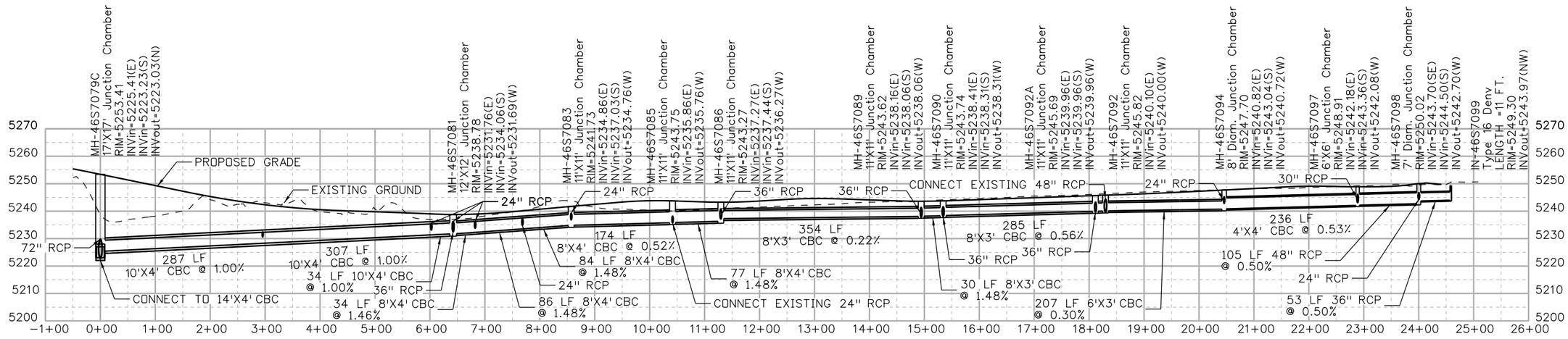
PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN
I-70 EB TO I-225 SB CONNECTOR
STA 257+00 TO 264+50

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers
Subset Sheets: D70 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 438





Print Date: 5/22/2017	Sheet Revisions			Colorado Department of Transportation	PROPOSAL
File Name: See sheet edge for information	Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:
Horiz. Scale: As Noted				Region 1 KJS	Revised:
Vert. Scale: As Noted					Void:
Unit Information					
Unit Leader					

Front Range Mobility Group

CENTRAL 70
DRAINAGE PLAN & PROFILE
OFFSITE DRAINAGE OUTFALL
COLORADO BLVD TO DAHLIA ST

Designer:	Structure Numbers	
Detailer:		
Sheet Subset: DRAINAGE	Subset Sheets: D71 of 78	

Project No./Code
FBR 0704-234
19631
Sheet Number 439

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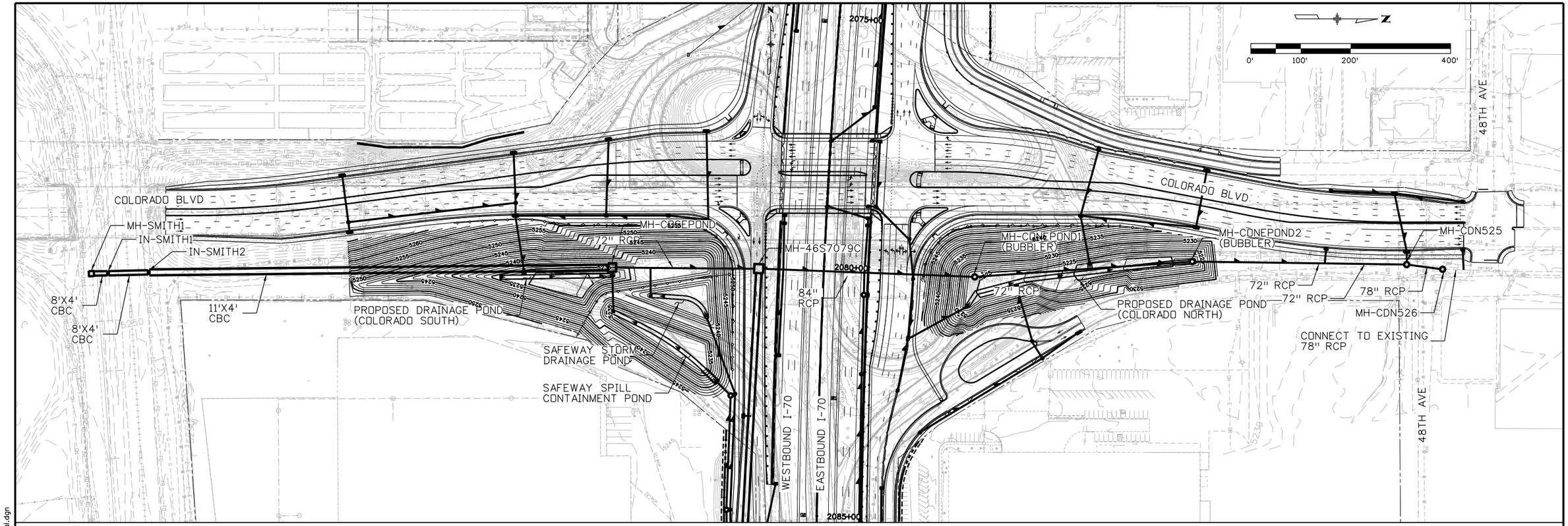

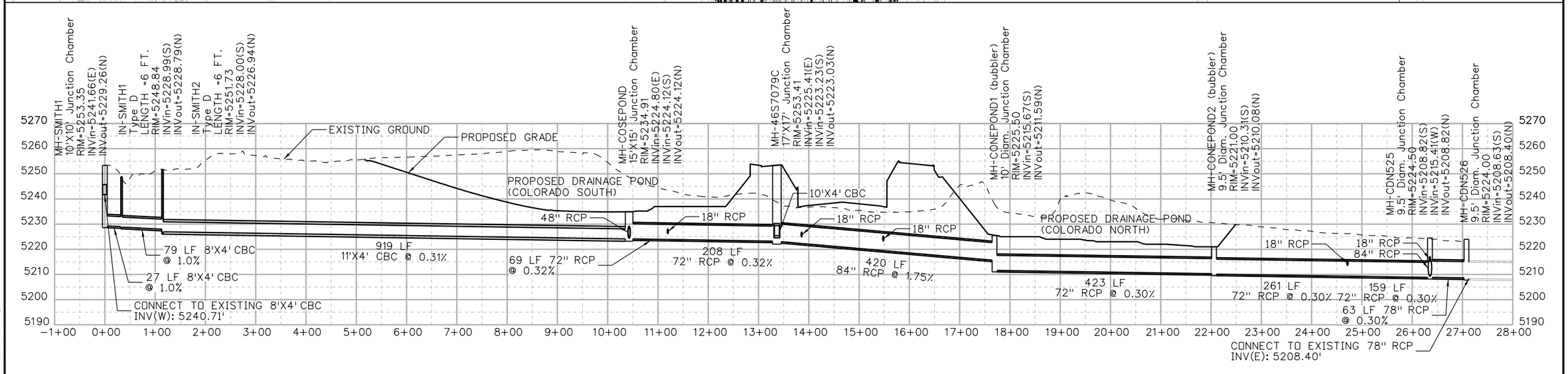

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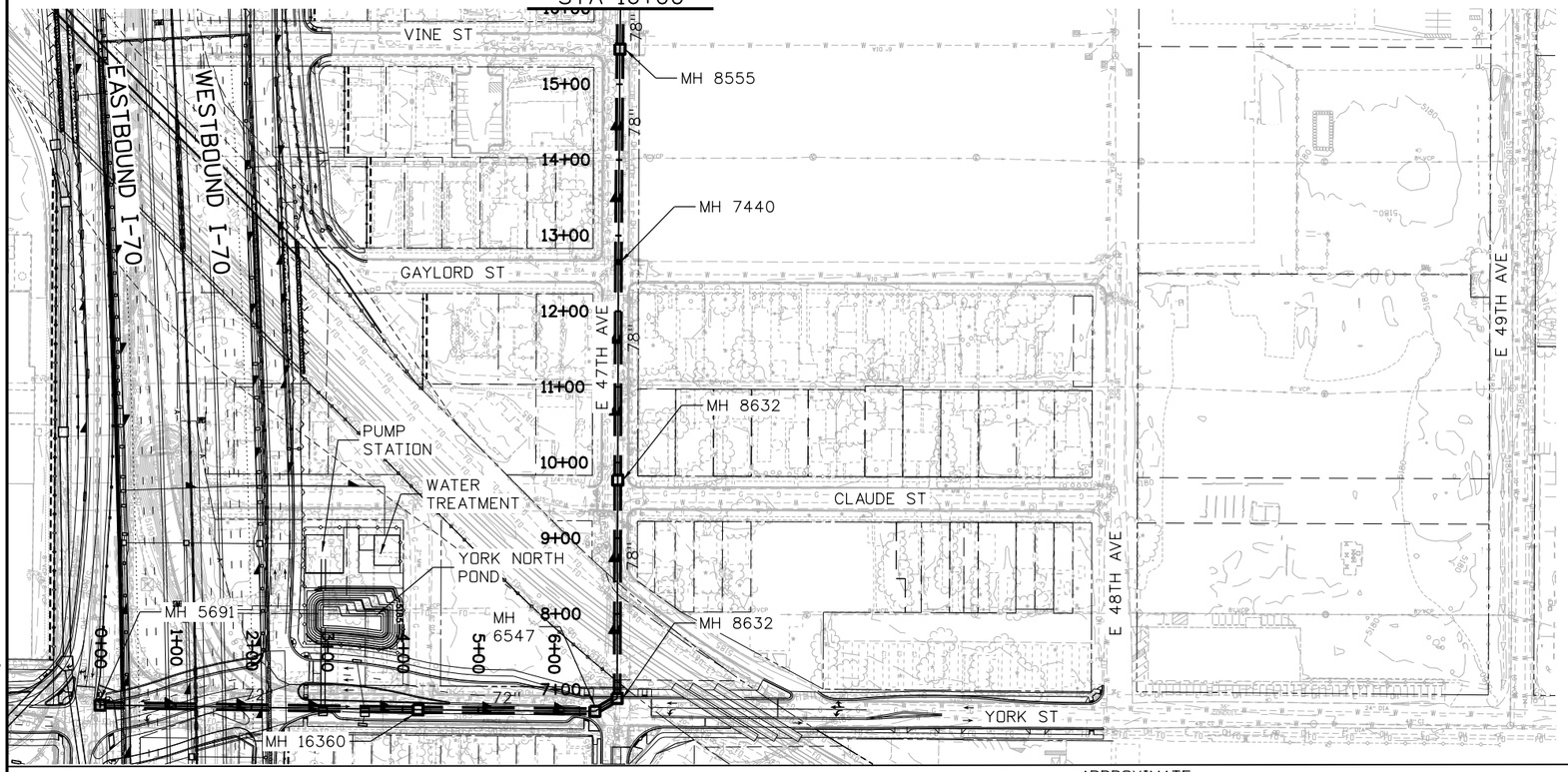
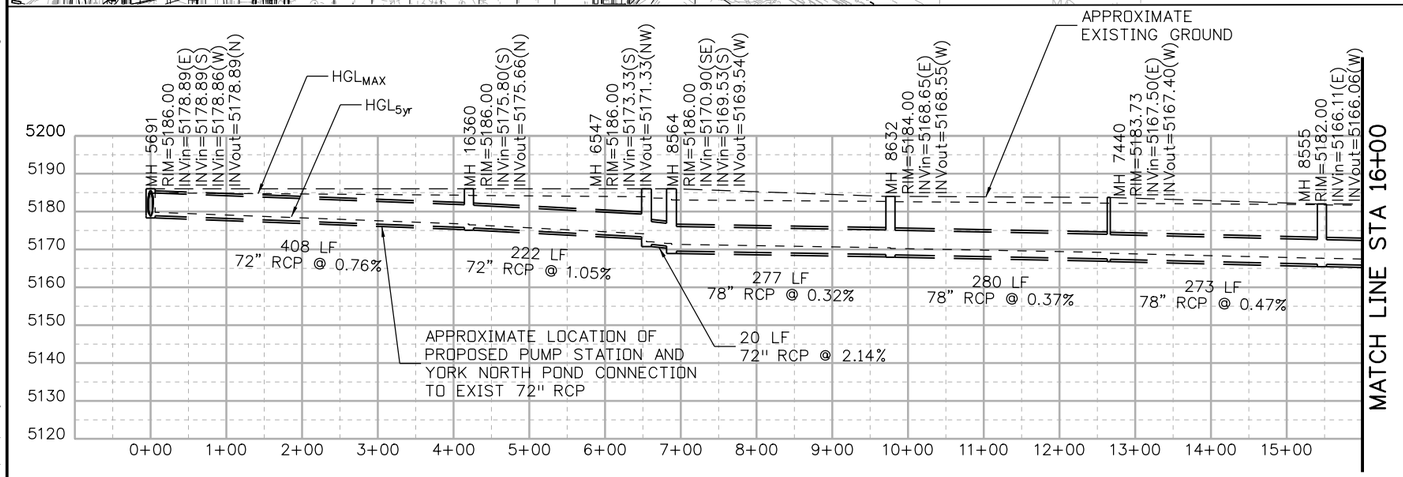
Print Date: 5/22/2017			Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 DRAINAGE PLAN & PROFILE OFFSITE DRAINAGE OUTFALL COLORADO BLVD		Project No./Code
File Name: See sheet edge for information			Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:			FBR 0704-234
Front Range Mobility Group	Horiz. Scale: As Noted						Revised:	Designer:	Structure Numbers	19631
	Vert. Scale: As Noted							Detailer:		
	Unit Information					Region 1 KJS	Void:	Sheet Subset: DRAINAGE	Subset Sheets: D72 of 78	Sheet Number 440
	Unit Leader									





NOTES:

1. THE RFP DESIGN DISCHARGES 343 cfs ACROSS THE YORK STREET DRAINAGE BRIDGE INTO THE EXISTING 72" RCP DURRING THE 100-YEARE EVENT. THE FRMG DESIGN DISCHARGES 170 cfs TO THE EXISTING 72" RCP DURRING THE 100-YEARE EVENT.
2. MAX FLOW IS BASED ON FLOW IN PIPE BEFORE SURCHARGING THROUGH INLETS AT INTERSECTION OF VINE AND RACE STREETS WITH 47TH, AND IS APPROXIMATELY EQUAL TO THE FRMG AND RFP 10-YEAR EVENTS.
3. TOTAL FLOWS ARE ENTIRE BASIN FLOWS CALCULATED AT THE OUTFALL TO THE SOUTH PLATTE RIVER. THUS, THE COMPUTED STREET FLOWS LISTED ARE CONSERVATIVE AS THEY INCLUDE FLOW GENERATED BY PORTIONS OF THE BASIN DOWNSTREAM OF ANY POINT IN QUESTION.
4. TOTAL AND STREET FLOWS OF THE EXISTING SYSTEM ARE NOT SHOWN SINCE THEY INCLUDE SIGNIFICANT OVERLAND FLOW FROM THE LARGER MONTCLAIRE BASIN. BOTH THE FRMG AND RFP FLOWS ARE LOWER THAN EXISTING CONDITIONS.
5. FOR THE PURPOSE OF THIS EXERCISE, LOCAL FLOWS NORTH OF I-70 CONTRIBUTING TO THE RACE STREET OUTFALL WERE ESTIMATED TO BE 330 cfs AND 866 cfs FOR THE 5-YEAR AND 100-YEAR EVENTS RESPECTIVELY.

	TOTAL FLOW	STREET FLOW
Q_{max}	478 cfs	0 cfs
$Q_{FRMG\ 5yr}$	414 cfs	0 cfs
$Q_{FRMG\ 100yr}$	1036 cfs	558 cfs
$Q_{RFP\ 5yr}$	418 cfs	0 cfs
$Q_{RFP\ 100yr}$	1209 cfs	731 cfs

FLOW TABLE LEGEND:
Q_{max} = MAXIMUM FLOW BEFORE PIPE SURCHARGES
$Q_{FRMG\ 5yr}$ = FRONT RANGE MOBILITY GROUP COMPUTED 5-YEAR WITH LOCAL FLOW
$Q_{FRMG\ 100yr}$ = FRONT RANGE MOBILITY GROUP COMPUTED 100-YEAR WITH LOCAL FLOW
$Q_{RFP\ 5yr}$ = RFP 5-YEAR WITH LOCAL FLOW
$Q_{RFP\ 100yr}$ = RFP 100-YEAR WITH LOCAL FLOW

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Print Date: 5/22/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

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Sheet Revisions

Date:	Comments	Init.

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Region 1 KJS

PROPOSAL
No Revisions:
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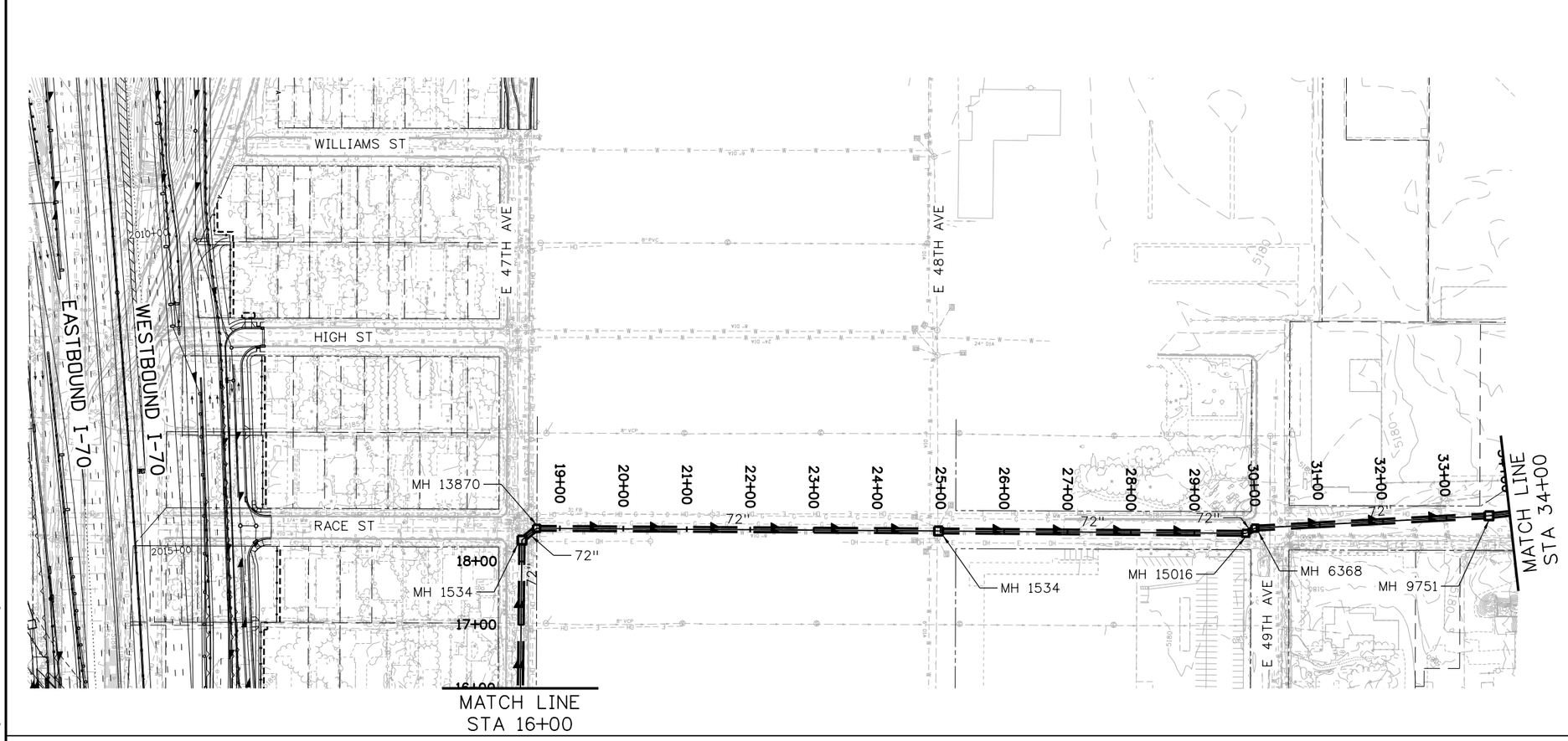
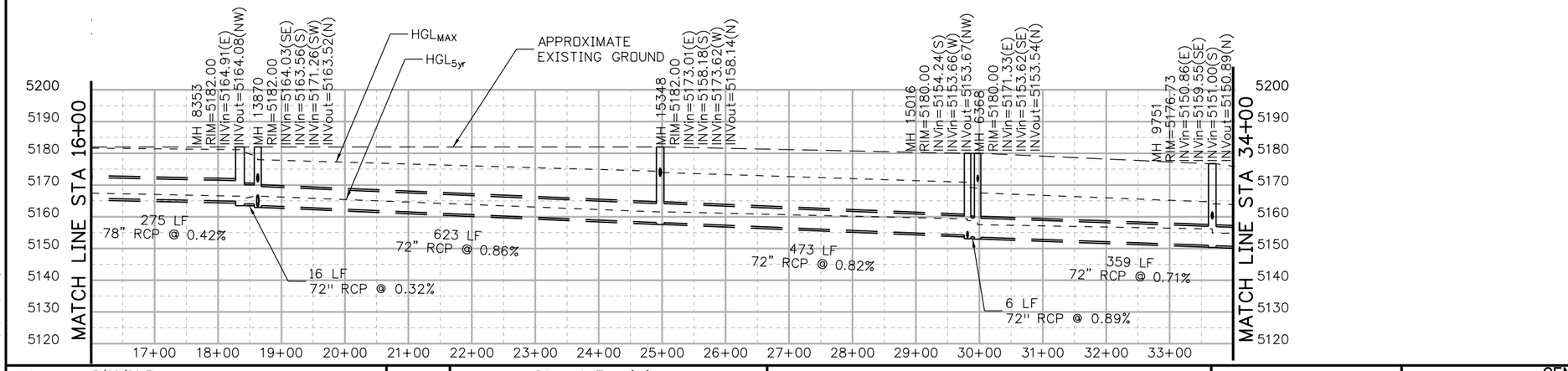
CENTRAL 70
DRAINAGE PLAN & PROFILE
EXISTING RACE STREET OUTFALL
STA 0+00 TO STA 16+00

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers:
Subset Sheets: D73 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 441





Print Date: 5/22/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

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Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
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Revised:
Void:

CENTRAL 70
DRAINAGE PLAN & PROFILE
EXISTING RACE STREET OUTFALL
STA 16+00 TO STA 34+00

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers:
Subset Sheets: D74 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 442

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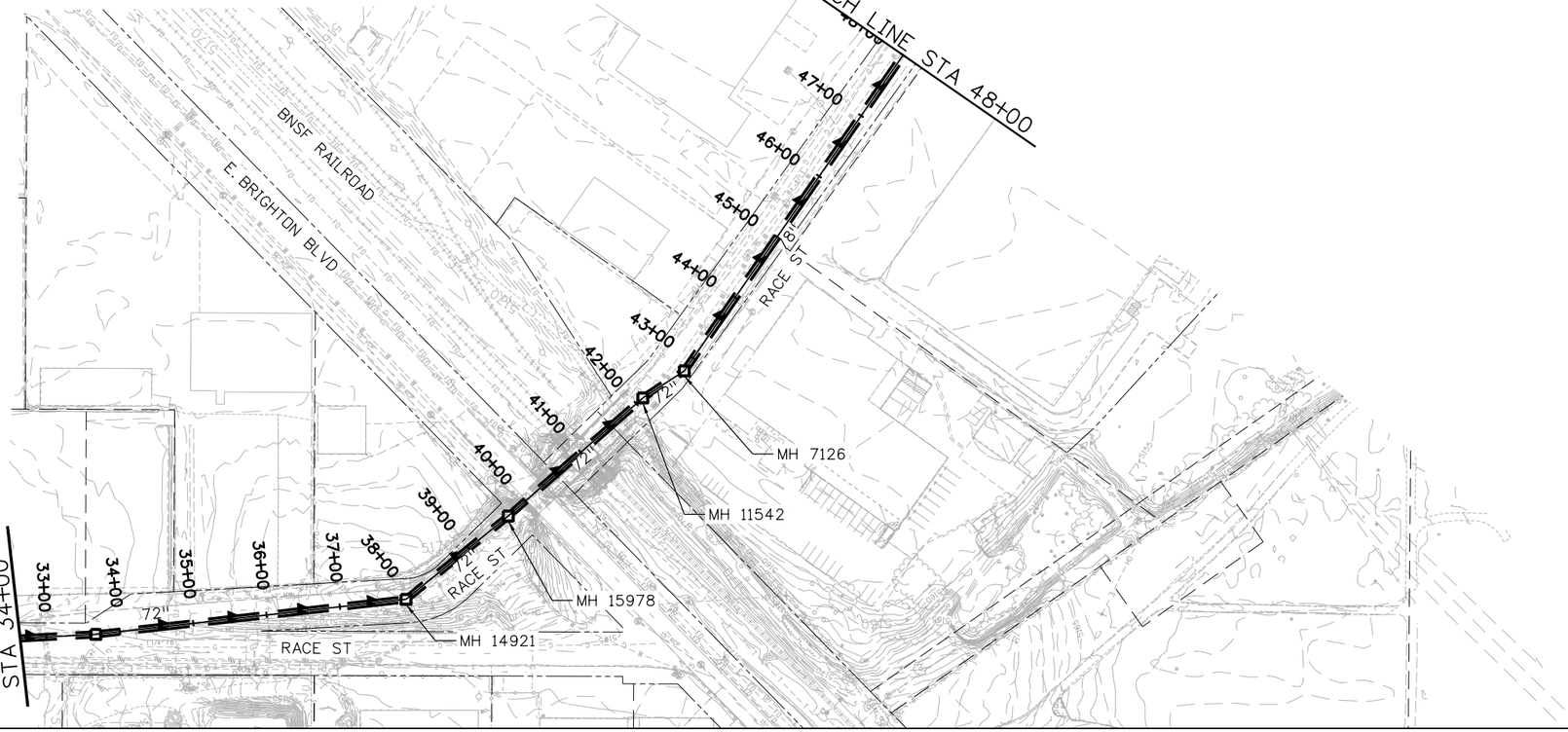

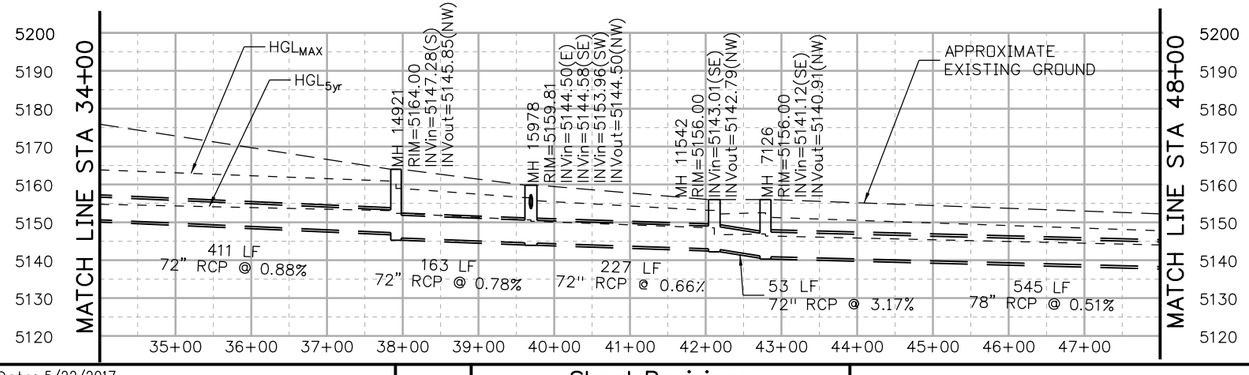

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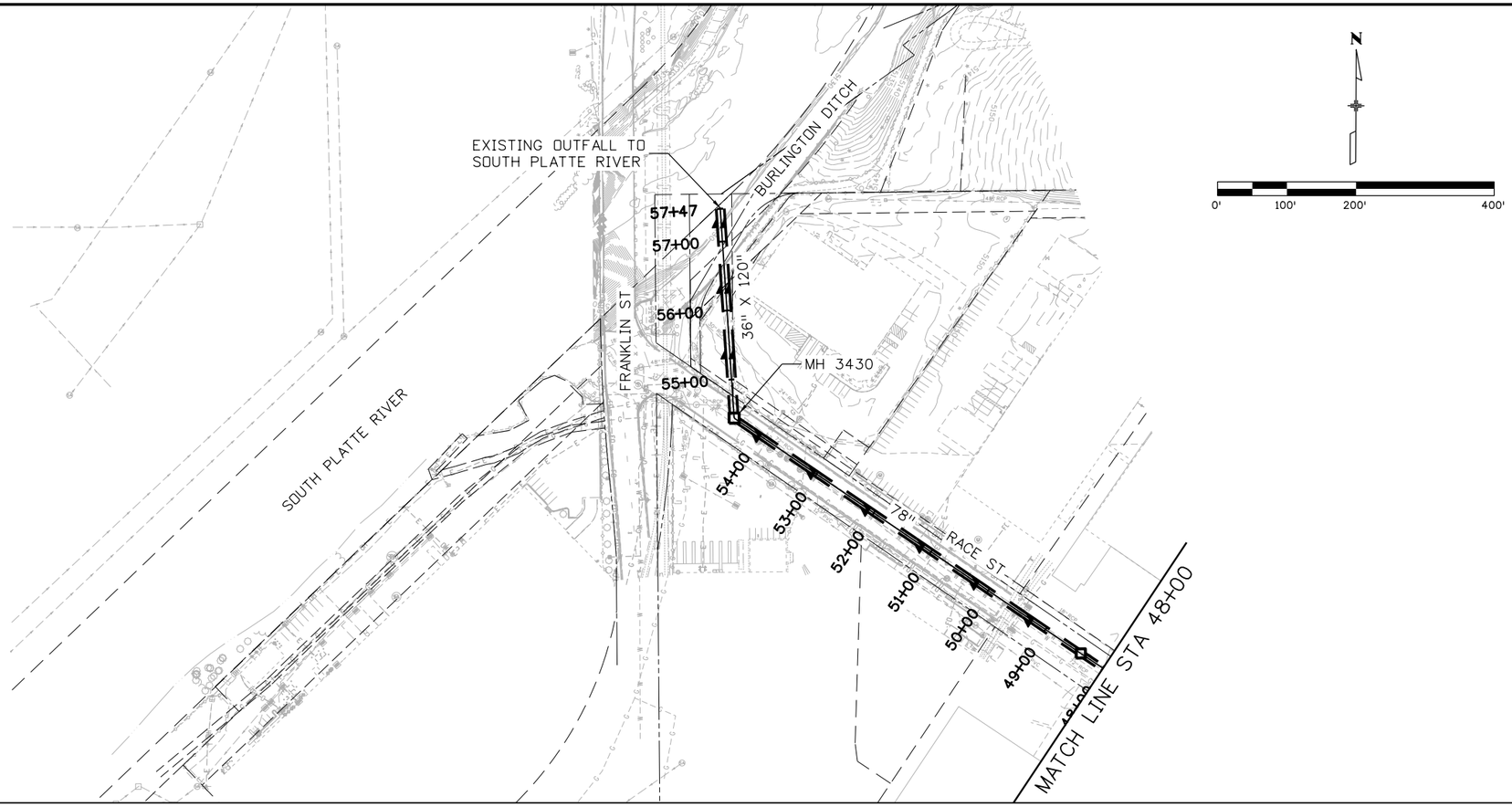
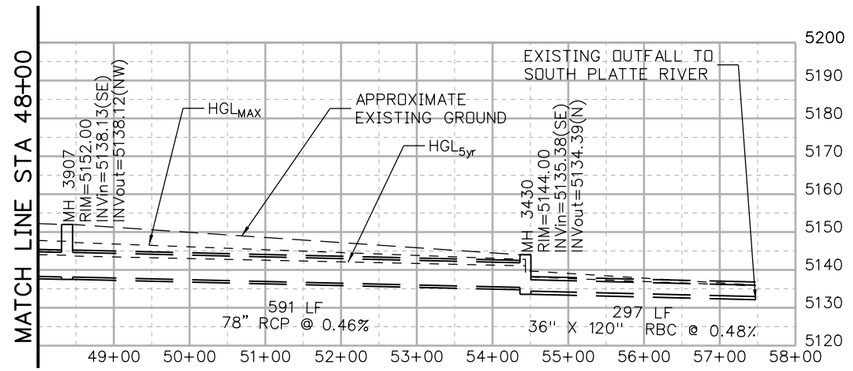
Print Date: 5/22/2017		0000	Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 DRAINAGE PLAN & PROFILE EXISTING RACE STREET OUTFALL STA 34+00 TO STA 48+00	Project No./Code
File Name: See sheet edge for information			Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:		FBR 0704-234
Front Range Mobility Group	Horiz. Scale: As Noted						Revised:	Designer:	19631
	Vert. Scale: As Noted							Detailer:	
	Unit Information					Region 1 KJS	Void:	Structure Numbers	
	Unit Leader							Sheet Subset: DRAINAGE	Subset Sheets: D75 of 78	Sheet Number 443





Print Date: 5/22/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

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Sheet Revisions		
Date:	Comments	Init.

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Region 1 KJS

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No Revisions:
Revised:
Void:

CENTRAL 70
DRAINAGE PLAN & PROFILE
EXISTING RACE STREET OUTFALL
STA 48+00 TO STA 57+47

Designer:
Detailer:
Sheet Subset: DRAINAGE
Structure Numbers:
Subset Sheets: D76 of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 444

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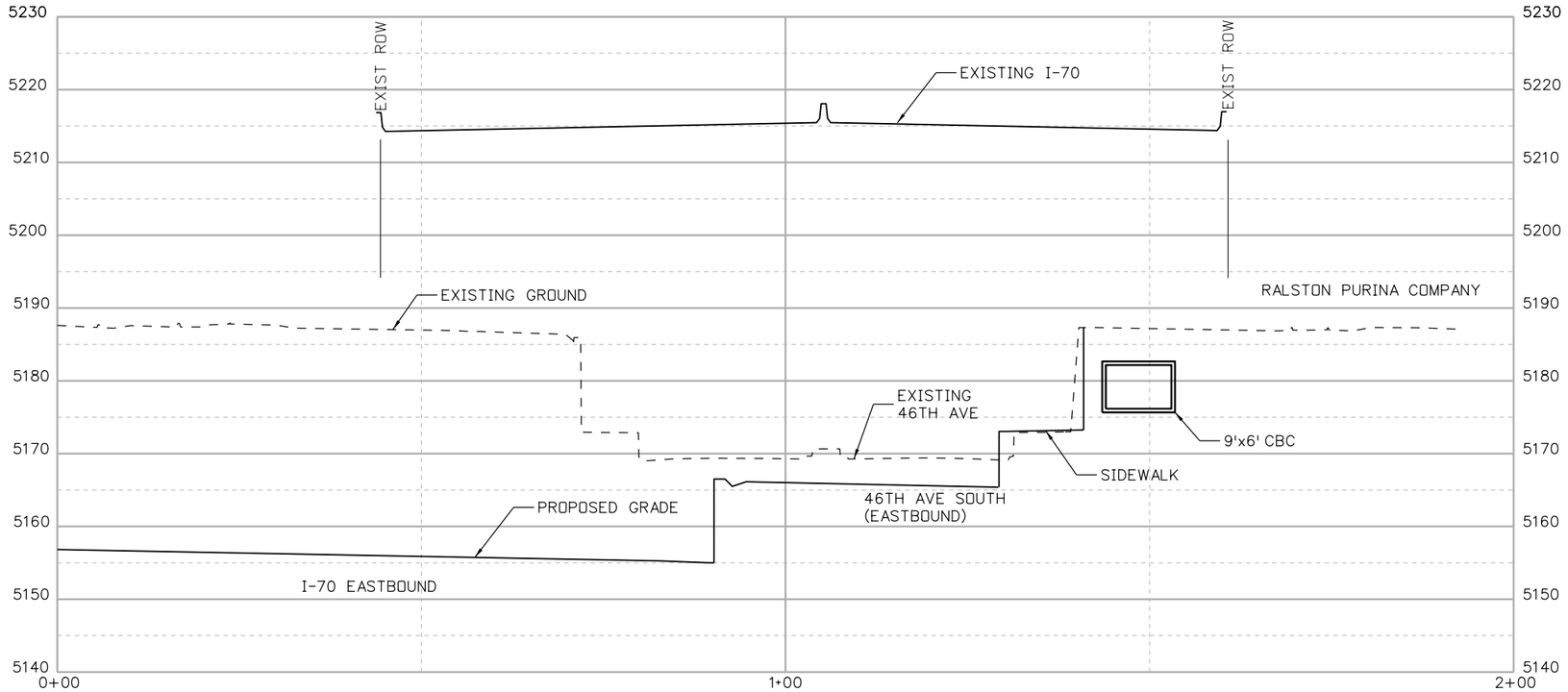

SECTION A-A

(PROFILE STATION 5+50)

NOTES

1. THIS SECTION IS PROVIDED AS REQUIRED BY CONDITION OF ATC20 AND ATC21 APPROVAL.

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Print Date: 5/22/2017

File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted

Vert. Scale: As Noted

Unit Information

Unit Leader

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation

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Denver, CO 80222
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Region 1 KJS

PROPOSAL

No Revisions:

Revised:

Void:

CENTRAL 70

DRAINAGE CROSS SECTION
46TH AVENUE

Designer:

Detailer:

Sheet Subset: DRAINAGE

Structure Numbers

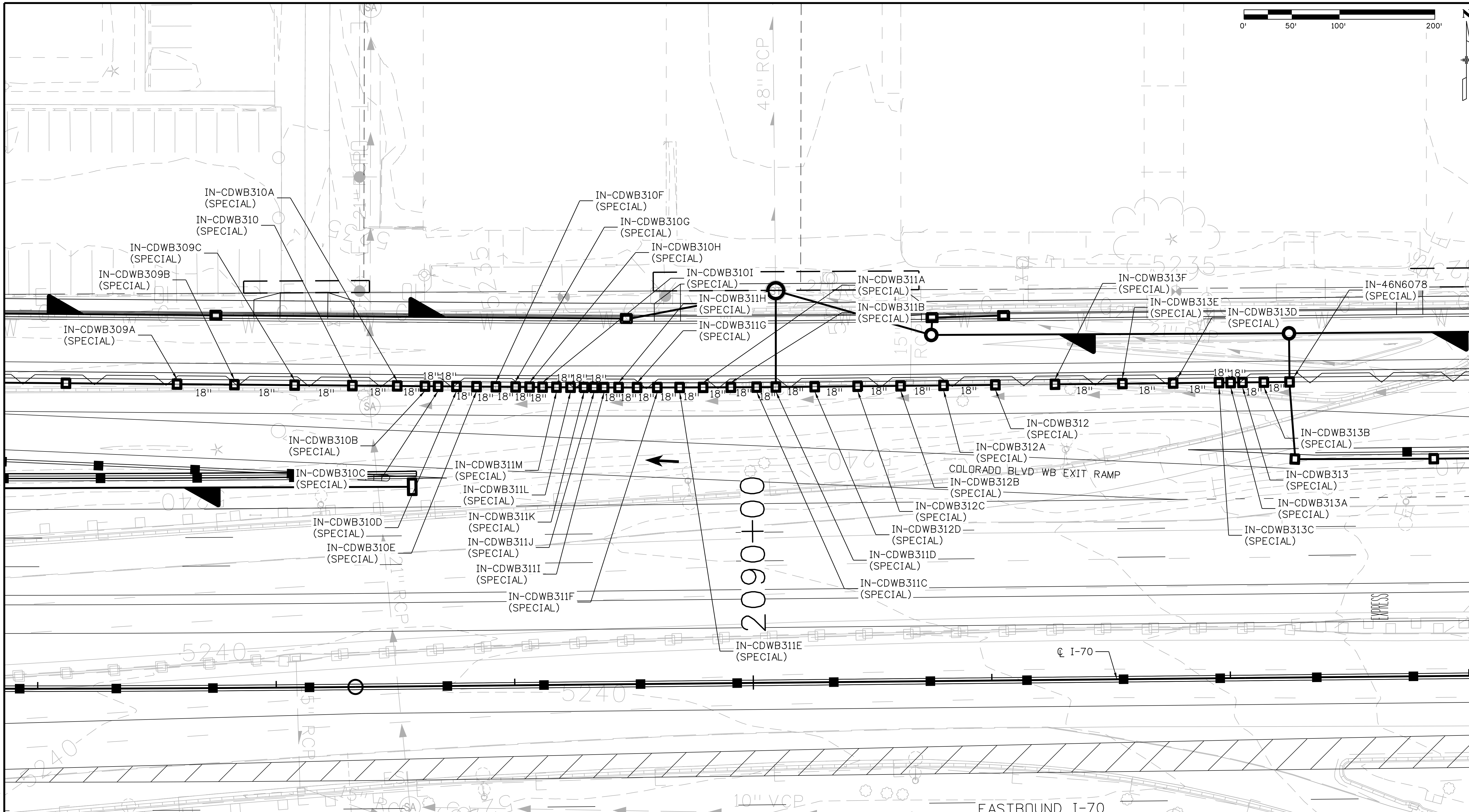
Subset Sheets: D77 of 78

Project No./Code

FBR 0704-234

19631

Sheet Number 445



NOTES

1. SPECIAL INLETS ARE REQUIRED TO FIT IN THE 2 FOOT SHOULDER AREA.

Print Date: 5/22/2017		
File Name: See sheet edge for information		
Front Range Mobility Group	Horiz. Scale:	As Noted
	Vert. Scale:	As Noted
	Unit Information	
	Unit Leader	

Sheet Revisions

Date:	Comments	Init.

Colorado Department of Transportation
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Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
I-70 MAINLINE
STA 2086+00 TO STA 2100+00
DETAIL BLOWUP

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	DRAINAGE	Subset Sheets: D78	of 78

Project No./Code
FBR 0704-234
19631
Sheet Number 446

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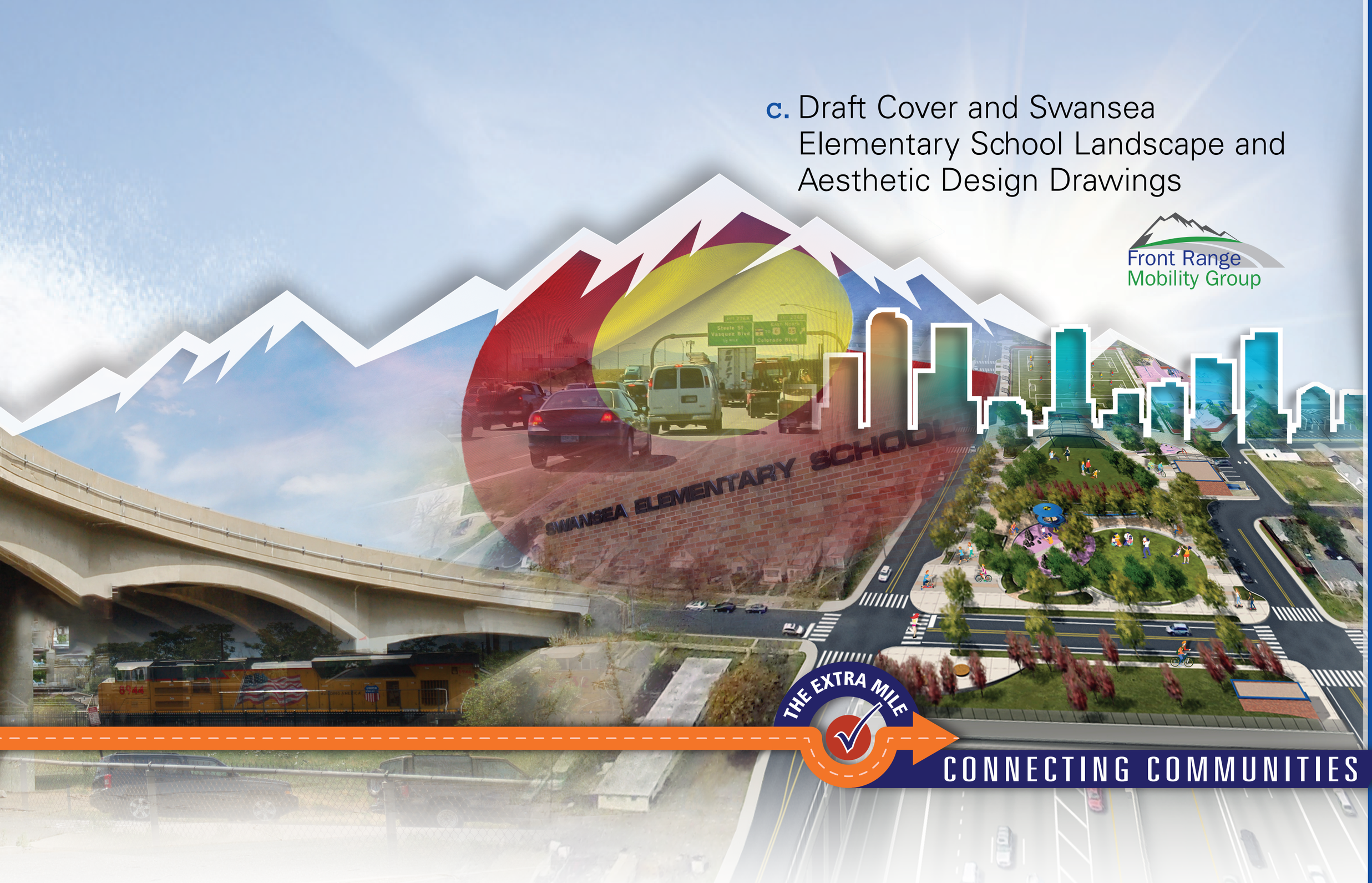
c. Draft Cover and Swansea Elementary School Landscape and Aesthetic Design Drawings

Front Range Mobility Group



THE EXTRA MILE

CONNECTING COMMUNITIES

DRAFT COVER AND SWANSEA ELEMENTARY SCHOOL LANDSCAPE AND AESTHETIC DESIGN DRAWINGS

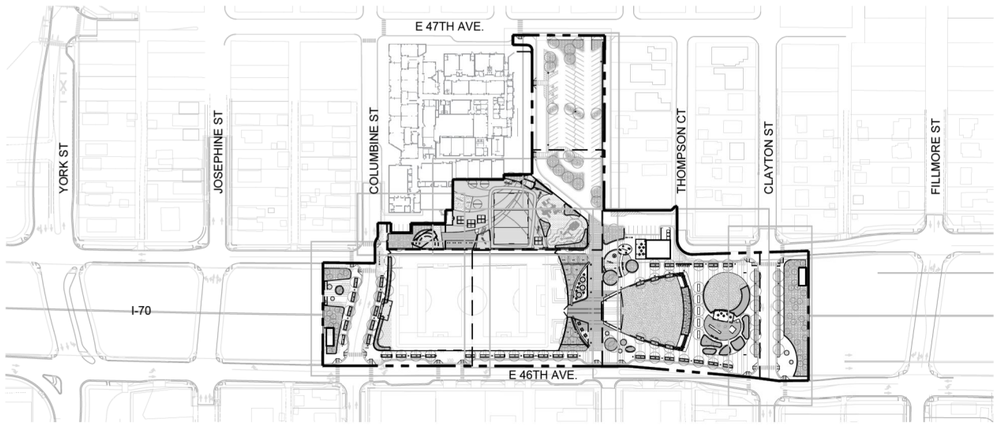
SHEET INDEX (LANDSCAPE SHEETS ONLY)

SHEET NO.	TITLE
L0.00	COVER SHEET
L0.01	PLANNING AREA REFERENCE PLAN
L0.02	PLANNING AREA REFERENCE PLAN
L0.03	PLANNING AREA 1 SITE REFERENCE PLAN
L0.04	PLANNING AREA 2 SITE REFERENCE PLAN
L1.01	LAYOUT AND MATERIAL PLAN
L1.02	LAYOUT AND MATERIAL PLAN
L1.03	LAYOUT AND MATERIAL PLAN
L1.04	LAYOUT AND MATERIAL PLAN
L1.05	LAYOUT AND MATERIAL PLAN
L1.06	LAYOUT AND MATERIAL PLAN
L2.01	DETAILS
L2.02	DETAILS
L2.03	DETAILS
L2.04	DETAILS
L2.05	DETAILS
L2.06	DETAILS
L2.07	DETAILS
L2.08	DETAILS
L2.09	DETAILS
L2.10	DETAILS
L2.11	REFERENCE SECTIONS AND ELEVATIONS REFERENCE PLAN
L2.12	REFERENCE SECTIONS AND ELEVATIONS
L2.13	REFERENCE SECTIONS AND ELEVATIONS
L2.14	REFERENCE SECTIONS AND ELEVATIONS
L2.15	REFERENCE SECTIONS AND ELEVATIONS
L2.16	REFERENCE SECTIONS AND ELEVATIONS
L2.17	REFERENCE SECTIONS AND ELEVATIONS
L3.01	LIGHTING AND FURNISHING PLAN
L3.02	LIGHTING AND FURNISHING PLAN
L3.03	LIGHTING AND FURNISHING PLAN
L3.04	LIGHTING AND FURNISHING PLAN
L3.05	LIGHTING AND FURNISHING PLAN
L3.06	LIGHTING AND FURNISHING PLAN
L4.01	PLANTING PLAN
L4.02	PLANTING PLAN
L4.03	PLANTING PLAN
L4.04	PLANTING PLAN
L4.05	PLANTING PLAN
L4.06	PLANTING PLAN
LG100	GRADING AND DRAINAGE REFERENCE PLAN
LG101	GRADING AND DRAINAGE PLAN
LG102	GRADING AND DRAINAGE PLAN
LG103	GRADING AND DRAINAGE PLAN
LG104	GRADING AND DRAINAGE PLAN
LG105	GRADING AND DRAINAGE PLAN
LI100	IRRIGATION NOTES
LI101	IRRIGATION PLAN - SCHOOL
LI102	IRRIGATION PLAN - SCHOOL
LI103	IRRIGATION PLAN - COVER
LI104	IRRIGATION PLAN - COVER
LI105	IRRIGATION PLAN - COVER

TABLE OF ABBREVIATIONS

APPROX	APPROXIMATE	MH	MANHOLE
ARCH	ARCHITECT	MIN	MINIMUM
AVG	AVERAGE	MISC	MISCELLANEOUS
B&B	BALLED AND BURLAPPED	MTD	MOUNTED
BC	BOTTOM OF CURB	MTL	METAL
BF	BOTTOM OF FOOTING	N	NORTH
BLDG	BUILDING	NIC	NOT IN CONTRACT
BM	BENCHMARK	NO	NUMBER
BOC	BACK OF CURB	NOM	NOMINAL
BR	BOTTOM OF RAMP	NTS	NOT TO SCALE
BRG	BEARING	OC	ON CENTER
BS	BOTTOM OF STEP	OD	OUTSIDE DIAMETER
BW	BOTTOM OF WALL	OPP	OPPOSITE
CAL	CALIPER	PA	PLANTING AREA
CAP	CAPACITY	PAR	PARALLEL
CF	CUBIC FEET	PC	POINT OF CURVATURE
CHAM	CHAMFER	PE	POLYURETHANE
CIP	CAST IN PLACE	PERF	PERFORATED
CJ	CONTROL JOINT	PED	PEDESTRIAN
CL	CENTER LINE	PI	POINT OF INTERSECTION
CLR	CLEARANCE	PL	PROPERTY LINE
CM	CENTIMETER	PT	POINT, POINT OF TANGENCY
CO	CLEAN OUT	PVC	POLYVINYL CHLORIDE
COMP	COMPACTED	PVMT	PAVEMENT
CONC	CONCRETE	PVR	PAVER
CONST	CONSTRUCTION	QTY	QUANTITY
CONT	CONTINUOUS	R	RADIUS
CONTR	CONTRACTOR	RECEP	RECEPTACLE
CU	CUBIC	RF, RFF	REFFRFNCF
CY	CUBIC YARD	REINF	REINFORCE(D)
DBL	DOUBLE	REM	REMOVE
DF	DIRECTION OF FLOW	REQD	REQUIRED
DEG	DEGREE	REV	REVISION, REVISED
DEMO	DEMOLISH, DEMOLITION	ROW	RIGHT OF WAY
DIA	DIAMETER	RT	RIGHT
DIM	DIMENSION	S	SOUTH
DTL	DETAIL	SAN	SANITARY
DWG	DRAWING	SCH	SCHEDULE
E	EAST	SD	STORM DRAIN
EA	EACH	SEC	SECTION
EJ	EXPANSION JOINT	SF	SQUARE FOOT (FEET)
EL	ELEVATION	SHT	SHEET
ELEC	ELECTRICAL	SI	STORM INLET
ENG	ENGINEER	SIM	SIMILAR
EQ	EQUAL	SNT	SEALANT
EQUIP	EQUIPMENT	SPECS	SPECIFICATIONS
EST	ESTIMATE	SQ	SQUARE
E.W.	EACH WAY	ST	STORM SEWER
EXIST	EXISTING	SY	SQUARE YARD
EXP	EXPANSION, EXPOSED	STA	STATION
FF	FINISHED FLOOR ELEVATION	STD	STANDARD
FG	FINISHED GRADE	STL	STEEL
FIN	FINISH	STRL	STRUCTURAL
FI	FI OW I INF	SYM	SYMMFTRICAI
FOC	FACE OF CURB	T&B	TOP AND BOTTOM
FT	FOOT (FEET)	TBC	TOP OF BACK CURB
FTG	FOOTING	TC	TOP OF CURB
GA	GAUGE	TF	TOP OF FOOTING
GAL	GALVANIZED	THK	THICK
GC	GENERAL CONTRACT(OR)	TOC	TOP OF CONCRETE
GEN	GENERAL	TOPO	TOPOGRAPHY
HORIZ	HORIZONTAL	TSL	TOP OF SLAB
HP	HIGH POINT	TRAS	TRANSFORMER
HT	HEIGHT	TR	TOP OF RAMP
ID	INSIDE DIAMETER	TS	TOP OF STEP
INV	INVERT ELEVATION	TW	TOP OF WALL
IN	INCH(ES)	TYP	TYPICAL
INCL	INCLUDE(D)	VAR	VARIES
INL	INLET	VERT	VERTICAL
IRR	IRRIGATION	VEH	VEHICLE
JT	JOINT	VOL	VOLUME
LIN	LINEAR	W/	WITH
LF	LINEAR FEET	W/O	WITHOUT
LP	LOW POINT	WT	WEIGHT
LT	LIGHT	WL	WEIR LEVEL
MATL	MATERIAL	WWF	WELDED WIRE FABRIC
MAX	MAXIMUM	YD	YARD
MEMB	MEMBRANE	@	AT

VICINITY MAP, NTS



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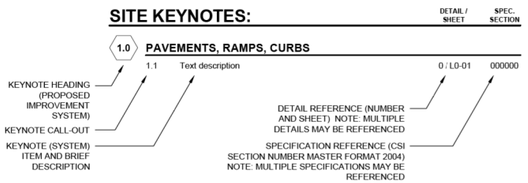

MATERIAL LEGEND

- 1.1 — CIP CONCRETE, SAWCUT JOINTS, STANDARD GRAY
- 1.2A — CIP CONCRETE PAVING, SAWCUT JOINTS , LIGHT SANDSCAPE FINISH AND INTEGRAL COLOR
- 1.2B — CIP CONCRETE PAVING, SAWCUT JOINTS, MEDIUM SANDSCAPE FINISH, INTEGRAL COLOR
- 1.3 — CONCRETE UNIT PAVER TYPE 1
- 1.4 — CONCRETE UNIT PAVER TYPE 2
- 1.5 — CONCRETE UNIT PAVER TYPE 3
- 1.8 — ASPHALT, INTEGRAL COLOR AND STRIPING
- 1.9 — RUBBERIZED PLAY TILE
- 1.10 — FIBAR PLAY SURFACE

LIGHTING AND FURNISHING LEGEND

- 7.1 — PEDESTRIAN LIGHTING
- 7.2 — CENTRAL PLAZA LIGHTING
- 7.3 — FIELD LIGHTING
- 7.4 — PARKING LOT LIGHTING
- 7.5 — ACCENT LIGHTING
- 7.6 — TREE ACCENT LIGHTING
- 7.7 — ELECTRICAL OUTLET
- 6.1 — PRECAST CONCRETE SEATING POD
- 6.2 — BIKE RACK
- 6.3 — TABLES AND CHAIRS
- 6.4 — TRASH/RECYCLING RECEPTACLE
- 6.5 — BENCH
- 6.7 — REMOVABLE BOLLARD
- 6.9 — DRINKING FOUNTAIN
- 6.10 — PICNIC TABLE

PLANTING LEGEND

- 9.5 — ENHANCED LANDSCAPE
- 9.6 — TRANSITIONAL LANDSCAPE
- 9.7 — NATURALIZED TURF

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
1.0	**PAVEMENTS, RAMPS, AND CURBS**		
1.1	CIP Concrete Paving, Sawcut Joints, Standard Grey, Broom Finish	1 / L2-01	
1.2A	CIP Concrete Paving, Sawcut Joints, Light Sandscape Finish, Integral color	1 / L2-01	
1.2B	CIP Concrete Paving, Sawcut Joints, Medium Sandscape Finish, Integral color	1 / L2-01	
1.3	Concrete/Stone Unit Pavers Type 1	2 / L2-01	
1.4	Concrete/Stone Unit Pavers Type 2	2 / L2-01	
1.5	Concrete/Stone Unit Pavers Type 3	2 / L2-01	
1.6	CIP Concrete Band	3 / L2-01	
1.7	Precast Concrete Band	3 / L2-01	
1.8	Playground Asphalt		REF CCD STDS
1.9	Rubberized Play Tiles		REF CCD/DPS STD
1.10	Protective Play Surface		REF CCD/DPS STD
1.11	Asphalt Parking Paving / Parking Striping		REF CCD STDS
1.12	Playground Pit ADA Ramp	4 / L2-01	
1.13	ADA Ramp		REF CCD STDS
1.14	CIP Concrete Curb and Gutter		REF CCD STDS
2.0	**NOT USED**		
3.0	**STEPS, CURBS AND WALLS**		
3.1	CIP Concrete Mural Wall	4,5 / L2-02	
3.2	CIP Concrete Curb	5 / L2-01	
3.3A	CIP Concrete Wall, 8" Wide	7 / L2-01	
3.3B	CIP Concrete Wall, 12" Wide	8 / L2-01	
3.3C	CIP Concrete Wall, 18" Wide	9 / L2-01	
3.4A	Precast Concrete Seat Wall, 18" Wide	10 / L2-01	
3.4B	Precast Concrete Seat Wall, 36" Wide	1,2 / L2-02	
3.5	Precast Concrete Retaining Wall	3 / L2-02	
3.6	Precast Concrete Step	1 / L2-03	
3.7	CMU Screen Wall	2 / L2-03	
3.8	Trash Enclosure	3 / L2-03	
4.0	**RAILINGS, BARRIERS AND FENCING**		
4.1	Stainless Steel Handrail	4 / L2-03	
4.2A	Custom Fencing Type 1	1 / L2-04	
4.2B	Custom Fencing Type 2	2 / L2-04	
4.3A	Fencing Gates Type 1	1 / L2-05	
4.3B	Fencing Gates Type 2	4 / L2-05	
4.3C	Fencing Gates Type 3	3 / L2-05	
4.3D	Fencing Gates Type 4	2 / L2-05	
5.0	**SPECIALTY ELEMENTS**		
5.1	Shade Structure, Events Lawn Pavilion	1,2 / L2-06	
5.2	Shade Structure, Type 1	1 / L2-07	
5.3	Shade Structure, Type 2	1 / L2-08	
5.4	Overlook	1 / L2-09	
5.5	Concessions/Restroom Building		REF SCHED 10
5.6	Maintenance Building		REF SCHED 10
5.7	Splash Pad Water Elements		REF SCHED 10
5.8	Tot Lot Play Elements		REF SCHED 10
5.9	Playground Play Elements		REF SCHED 10
5.10	Synthetic Turf		REF SCHED 10
5.11	Removable Soccer Goal		REF CCD STDS
5.12	Basketball Goal		REF DPS STDS
5.13	Primary Play Structure at School Playground		REF DPS STDS
5.14	Intermediate Play Structure at School Playground		REF DPS STDS
5.15	Swings at School Playground		REF DPS STDS
5.16	Painted Courts : Hop Scotch		REF DPS STDS
5.17	Painted Court : Hop Scotch ADA		REF DPS STDS
5.18	Painted Court : Foursquare		REF DPS STDS
5.19	Painted Court : Tether Ball		REF DPS STDS
5.20	Shade Structure at School Playground		REF DPS STDS
5.21	Sandstone Boulder		
6.0	**FURNISHINGS**		
6.1A	8' Diameter Precast Concrete Seating Pod	1 / L2-10	
6.1B	10' Diameter Precast Concrete Seating Pod	2 / L2-10	
6.2A	Bike Rack		REF SCHED 10
6.2B	Bike Share		REF SCHED 10
6.3	Tables and Chairs		REF SCHED 10
6.4	Trash/Recycle Receptacle		REF SCHED 10
6.5	Bench		REF SCHED 10
6.6	Custom Aluminum Bench	3 / L2-10	
6.7	Removable Bollard		REF SCHED 10
6.8	Interpretive Sign		REF CDOT STDS
6.9	Drinking Fountain		REF SCHED 10
6.10	Picnic Table		REF SCHED 10
6.11	Tree Grate		REF SCHED 10
7.0	**SITE LIGHTING AND ELECTRICAL**		
7.1	Pedestrian Lighting		REF SCHED 10
7.2	Central Plaza Lighting		REF SCHED 10
7.3	Field Lighting		REF SCHED 10
7.4	Parking Lot Lighting		REF SCHED 10
7.5	Accent Lighting		REF SCHED 10
7.6	Tree Accent Lighting		REF SCHED 10
7.7	Electrical Outlets		REF SCHED 10
8.0	**REFERENCE SECTIONS AND ELEVATIONS**		
8.1	46th Avenue at Multi-Use Field	1 / L2-12	
8.2	Clayton Street Cover Extension, South	2 / L2-12	
8.3	Columbine Street Cover Extension, North	1 / L2-13	
8.4	Clayton Street Cover Extension, North	3 / L2-12	
8.5	Columbine Street Cover Extension, South	2 / L2-13	
8.6	46th Avenue at Event Lawn	1 / L2-14	
8.7	Tot Lot and Splash Pad	2,3 / L2-14	
8.8	Multi-Use Field Fencing	4 / L2-14	
8.9	Columbine Street	1 / L2-15	
8.10	Central Plaza Space and Event Lawn	2,3 / L2-15, 1,2,3 / L2-16	
8.11	East Side Community Space	1,2,3 / L2-17	
9.0	**PLANTING AND LANDSCAPE**		
9.1	Ornamental Tree Planting Over Structure		REF SCHED 10
9.2	Street Tree Planting Over Structure		REF SCHED 10
9.3	Shade Tree Planting Over Structure		REF SCHED 10
9.4	Shade Tree Planting Off Structure		REF SCHED 10
9.5	Enhanced Landscape		REF SCHED 10
9.6	Transitional Landscape		REF SCHED 10
9.7	Naturalized Turf		REF SCHED 10

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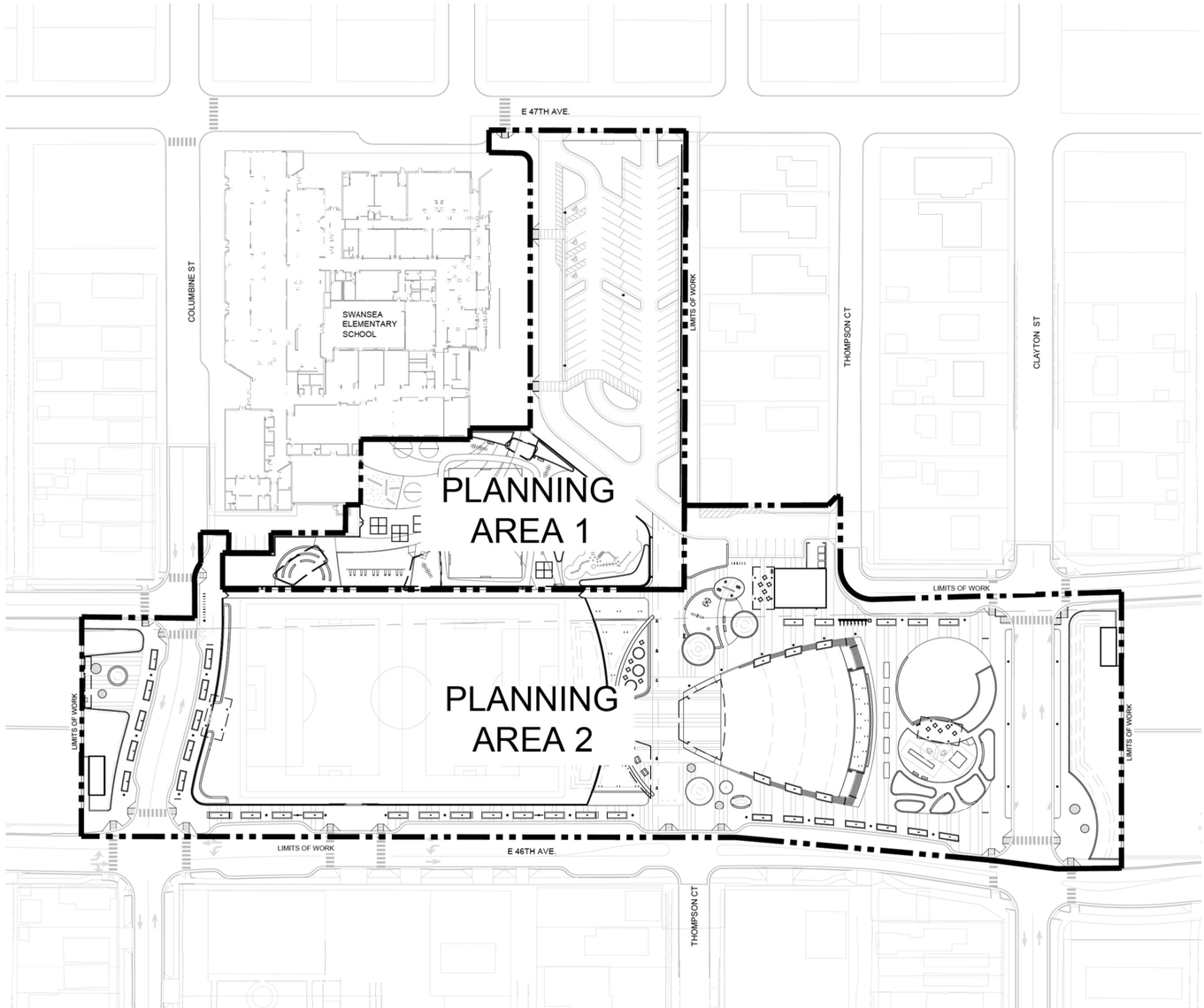
Print Date: 5/16/2017		Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 LANDSCAPE AND AESTHETIC COVER SHEET	Project No./Code
File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street, Denver, CO 80222, Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:		FBR 0704-234
Front Range Mobility Group	Horiz. Scale: As Noted				Region 1 KJS	Revised:	Designer:	19631
	Vert. Scale: As Noted						Detailer: Structure Numbers	
	Unit Information					Void:	Sheet Subset: LANDSCAPE Subset Sheets: L0-00 of	Sheet Number 447
	Unit Leader							



1 PLANNING AREA REFERENCE PLAN
1" = 60'

NORTH
0 30' 60' 120'
ORIGINAL SCALE: 1"=60'-0"

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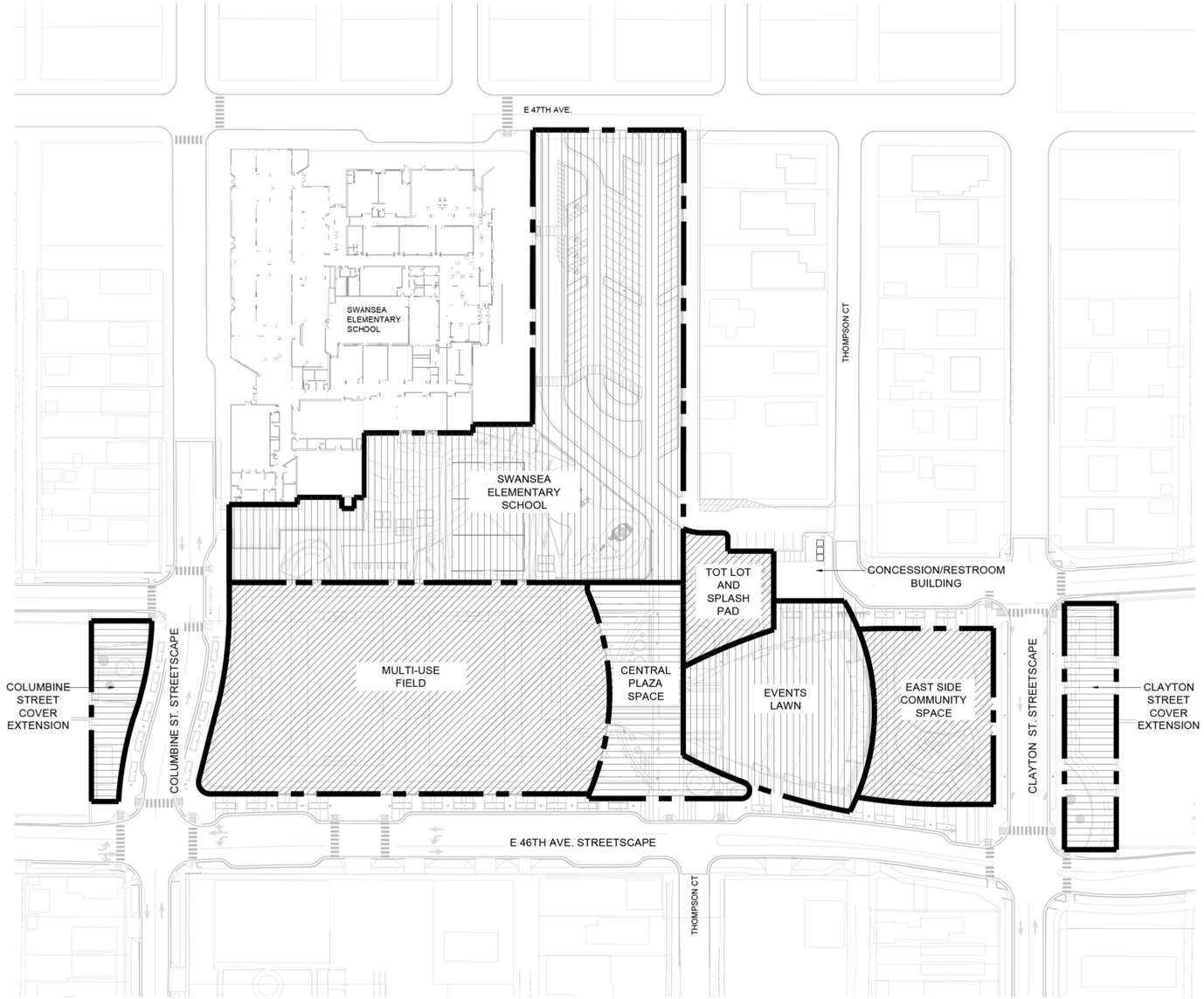
Print Date: 5/5/2017			Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 LANDSCAPE AND AESTHETIC PLANNING AREA REFERENCE PLAN		Project No./Code
File Name: See sheet edge for information			Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:			FBR 0704-234
Front Range Mobility Group	Horiz. Scale: As Noted						Revised:	Designer:	Structure Numbers	19631
	Vert. Scale: As Noted							Detailer:		
	Unit Information						Void:	Sheet Subset: LANDSCAPE	Subset Sheets: LO-01 of	Sheet Number 448
	Unit Leader					Region 1 KJS				

NOTE: PROGRAM AREA REFERENCE PLAN REFERS TO DISTINCT PROGRAM AREAS AS DEFINED IN SCHEDULE 10, SECTION 14.



1 PROGRAM AREA REFERENCE PLAN
1" = 60'

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Print Date: 5/5/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

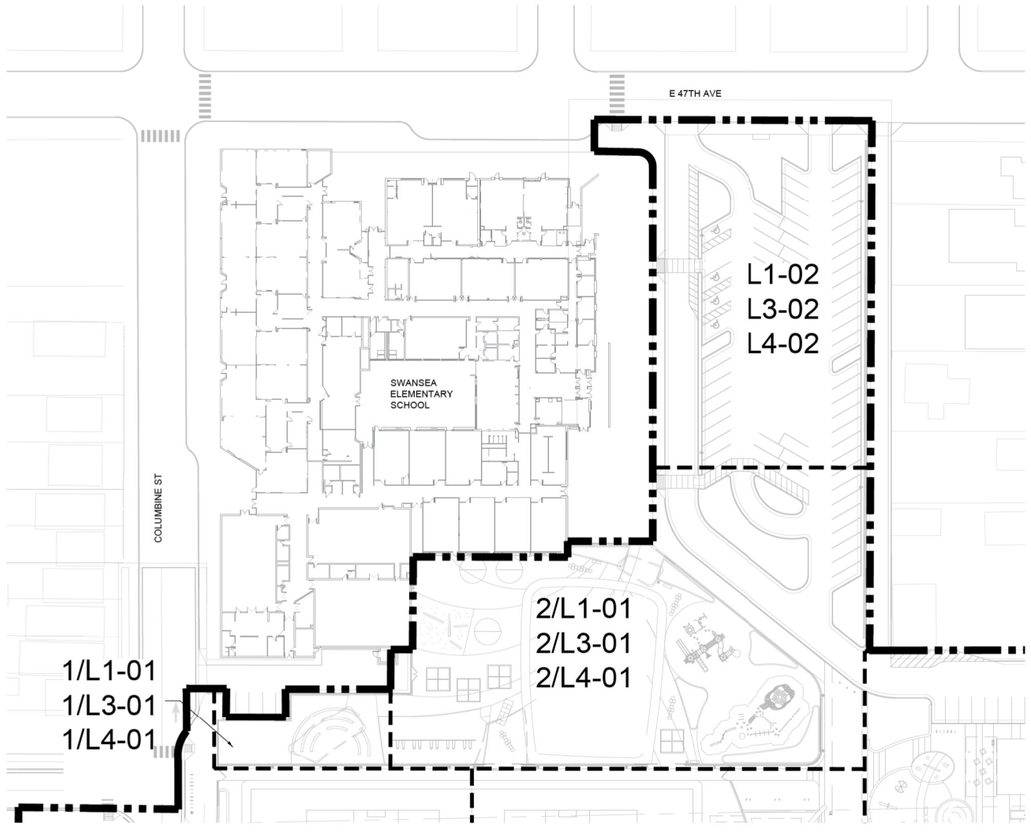
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

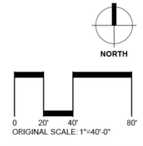
CENTRAL 70
LANDSCAPE AND AESTHETIC
PROGRAM AREA REFERENCE PLAN

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: L0-02 of

Project No./Code
FBR 0704-234
19631
Sheet Number 449



1 PLANNING AREA 1 SITE REFERENCE PLAN
1" = 40'



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Print Date: 5/5/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
LANDSCAPE AND AESTHETIC
PLANNING AREA 1
SITE REFERENCE PLAN

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers:
Subset Sheets: LO-03 of

Project No./Code
FBR 0704-234
19631
Sheet Number 450

1 PLANNING AREA 2 SITE REFERENCE PLAN
1" = 40'

NORTH

0 20' 40' 80'
ORIGINAL SCALE: 1"=40'-0"

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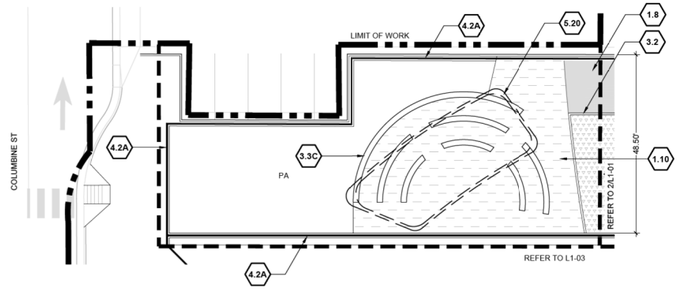
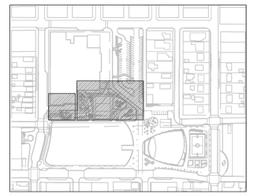
Print Date: 5/5/2017		Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 LANDSCAPE AND AESTHETIC PLANNING AREA 2 SITE REFERENCE PLAN	Project No./Code
File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:		FBR 0704-234
Front Range Mobility Group	Horiz. Scale: As Noted					Revised:	Designer: / Detailer: / Structure Numbers	19631
	Vert. Scale: As Noted							
	Unit Information				Region 1 KJS	Void:	Sheet Subset: LANDSCAPE / Subset Sheets: L0-04 of	Sheet Number 451
	Unit Leader							

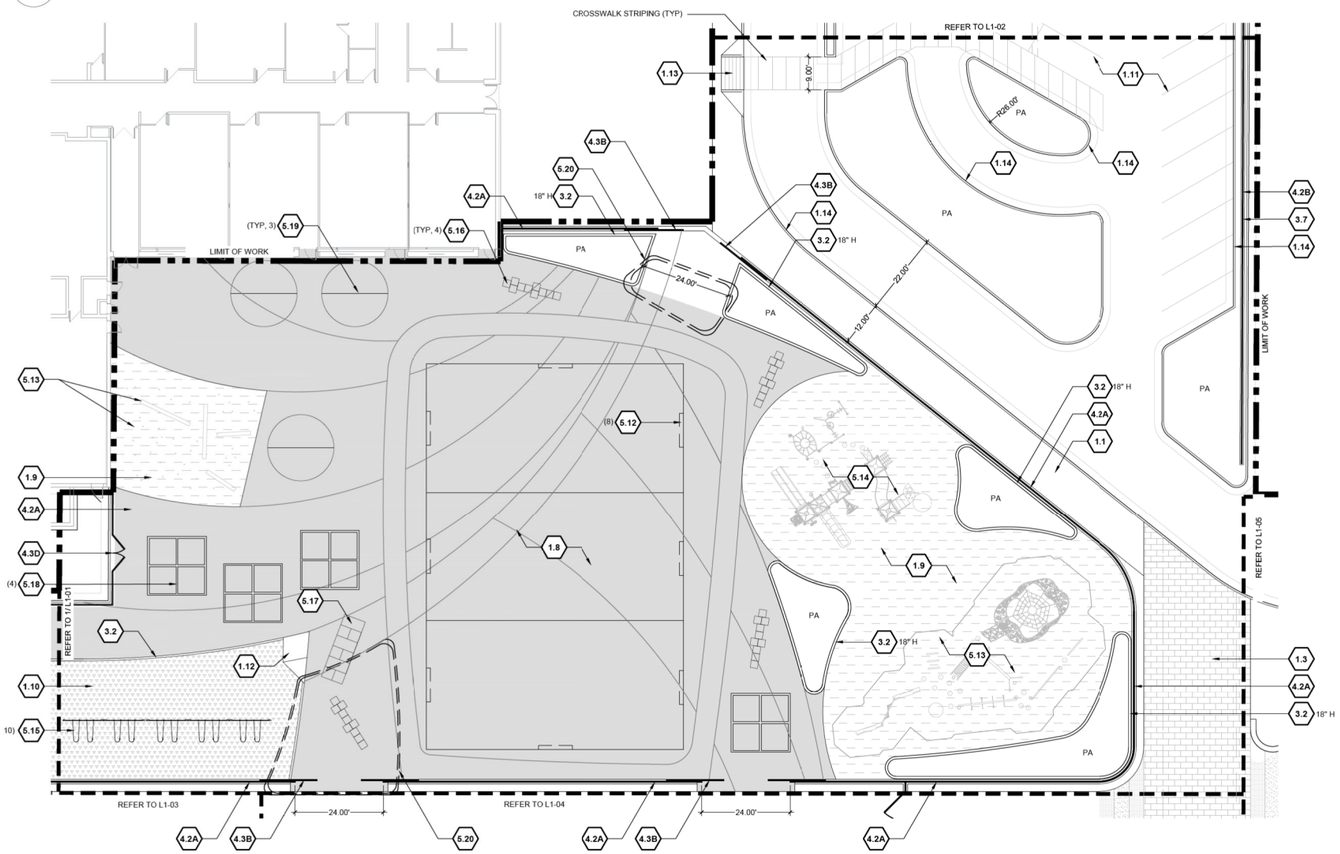




KEY PLAN

1 LAYOUT AND MATERIALS PLAN

1" = 16'-0"



2 LAYOUT AND MATERIALS PLAN

1" = 16'-0"

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
1.0	**PAVEMENTS, RAMPS, AND CURBS**		
1.1	CIP Concrete Paving, Sawcut Joints, Standard Grey, Broom Finish	1 / L2-01	
1.2A	CIP Concrete Paving, Sawcut Joints, Light Sandscape Finish, Integral color	1 / L2-01	
1.2B	CIP Concrete Paving, Sawcut Joints, Medium Sandscape Finish, Integral color	1 / L2-01	
1.3	Concrete/Stone Unit Pavers Type 1	2 / L2-01	
1.4	Concrete/Stone Unit Pavers Type 2	2 / L2-01	
1.5	Concrete/Stone Unit Pavers Type 3	2 / L2-01	
1.6	CIP Concrete Band	3 / L2-01	
1.7	Precast Concrete Band	3 / L2-01	
1.8	Playground Asphalt		REF CCD STDS
1.9	Rubberized Play Tiles		REF CCD/DPS STDS
1.10	Protective Play Surface		REF CCD/DPS STDS
1.11	Asphalt Parking Paving / Parking Striping		REF CCD STDS
1.12	Playground Pit ADA Ramp	4 / L2-01	
1.13	ADA Ramp		REF CCD STDS
1.14	CIP Concrete Curb and Gutter		REF CCD STDS
2.0	**NOT USED**		
3.0	**STEPS, CURBS AND WALLS**		
3.1	CIP Concrete Mural Wall	4,5 / L2-02	
3.2	CIP Concrete Curb	5 / L2-01	
3.3A	CIP Concrete Wall, 8" Wide	7 / L2-01	
3.3B	CIP Concrete Wall, 12" Wide	8 / L2-01	
3.3C	CIP Concrete Wall, 18" Wide	9 / L2-01	
3.4A	Precast Concrete Seat Wall, 18" Wide	10 / L2-01	
3.4B	Precast Concrete Seat Wall, 36" Wide	1,2 / L2-02	
3.5	Precast Concrete Retaining Wall	3 / L2-02	
3.6	Precast Concrete Step	1 / L2-03	
3.7	CMU Screen Wall	2 / L2-03	
3.8	Trash Enclosure	3 / L2-03	
4.0	**RAILINGS, BARRIERS AND FENCING**		
4.1	Stainless Steel Handrail	4 / L2-03	
4.2A	Custom Fencing Type 1	1 / L2-04	
4.2B	Custom Fencing Type 2	2 / L2-04	
4.3A	Fencing Gates Type 1	1 / L2-05	
4.3B	Fencing Gates Type 2	4 / L2-05	
4.3C	Fencing Gates Type 3	3 / L2-05	
4.3D	Fencing Gates Type 4	2 / L2-05	
5.0	**SPECIALTY ELEMENTS**		
5.1	Shade Structure, Events Lawn Pavilion	1,2 / L2-06	
5.2	Shade Structure, Type 1	1 / L2-07	
5.3	Shade Structure, Type 2	1 / L2-08	
5.4	Overlook	1 / L2-09	
5.5	Concessions/Restroom Building		REF SCHED 10
5.6	Maintenance Building		REF SCHED 10
5.7	Splash Pad Water Elements		REF SCHED 10
5.8	Tot Lot Play Elements		REF SCHED 10
5.9	Playground Play Elements		REF SCHED 10
5.10	Synthetic Turf		REF SCHED 10
5.11	Removable Soccer Goal		REF CCD STDS
5.12	Basketball Goal		REF DPS STDS
5.13	Primary Play Structure at School Playground		REF DPS STDS
5.14	Intermediate Play Structure at School Playground		REF DPS STDS
5.15	Swings at School Playground		REF DPS STDS
5.16	Painted Courts : Hop Scotch		REF DPS STDS
5.17	Painted Court : Hop Scotch ADA		REF DPS STDS
5.18	Painted Court : Foursquare		REF DPS STDS
5.19	Painted Court : Tether Ball		REF DPS STDS
5.20	Shade Structure at School Playground		REF DPS STDS
5.21	Sandstone Boulder		

MATERIAL LEGEND

- 1.1 — CIP CONCRETE, SAWCUT JOINTS, STANDARD GRAY
- 1.2A — CIP CONCRETE PAVING, SAWCUT JOINTS , LIGHT SANDSCAPE FINISH AND INTEGRAL COLOR
- 1.2B — CIP CONCRETE PAVING, SAWCUT JOINTS, MEDIUM SANDSCAPE FINISH, INTEGRAL COLOR
- 1.3 — CONCRETE UNIT PAVER TYPE 1
- 1.4 — CONCRETE UNIT PAVER TYPE 2
- 1.5 — CONCRETE UNIT PAVER TYPE 3
- 1.8 — ASPHALT, INTEGRAL COLOR AND STRIPING
- 1.9 — RUBBERIZED PLAY TILE
- 1.10 — FIBAR PLAY SURFACE

NORTH

0 8' 16' 32'

ORIGINAL SCALE: 1"=16'-00"

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Print Date: 5/5/2017

File Name: See sheet edge for information

Horiz. Scale: As Noted

Vert. Scale: As Noted

Unit Information

Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation

2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907

Region 1 KJS

PROPOSAL

No Revisions:

Revised:

Void:

CENTRAL 70
LANDSCAPE AND AESTHETIC
LAYOUT AND MATERIAL PLAN

Designer:

Detailer:

Sheet Subset: LANDSCAPE

Structure Numbers

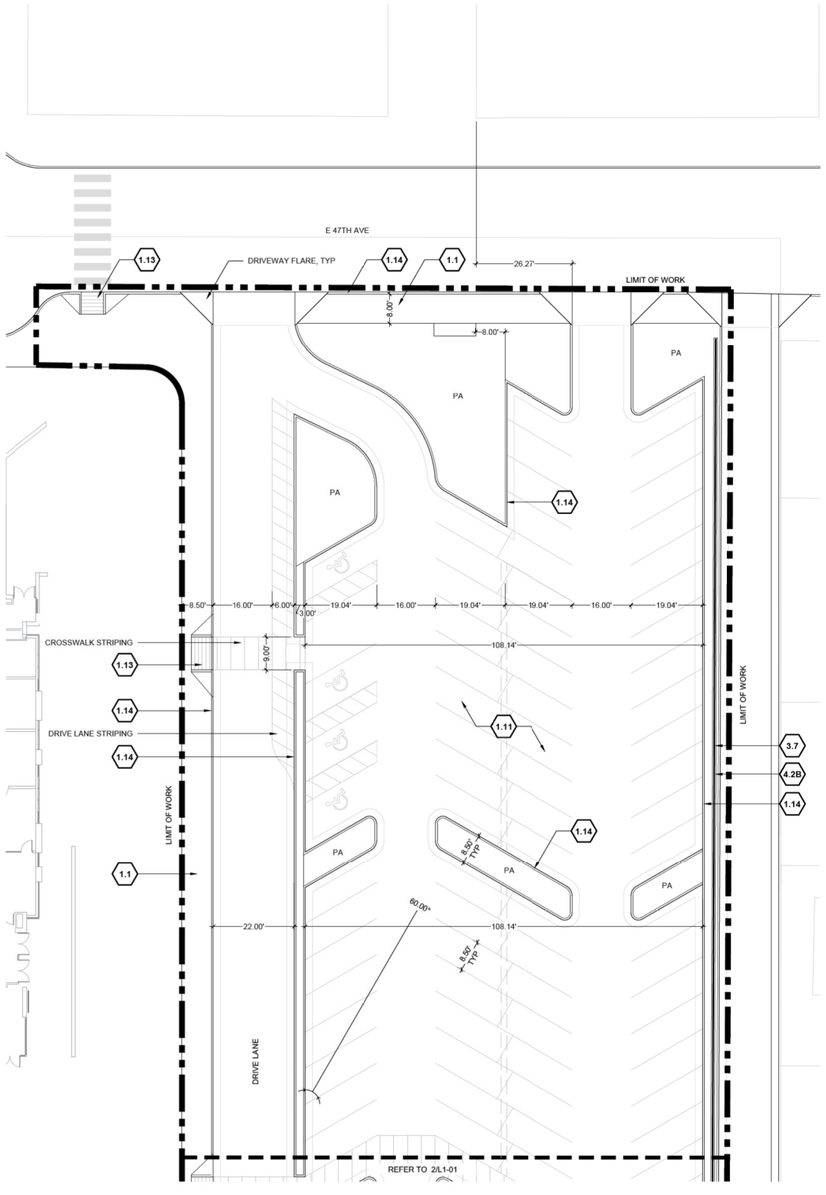
Subset Sheets: L1-01 of

Project No./Code

FBR 0704-234

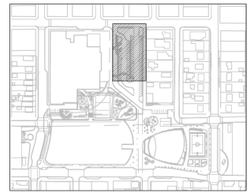
19631

Sheet Number 452



1 LAYOUT AND MATERIALS PLAN

1" = 16'-0"



KEY PLAN

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
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1.4	Concrete/Stone Unit Pavers Type 2	2 / L2-01	
1.5	Concrete/Stone Unit Pavers Type 3	2 / L2-01	
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1.7	Precast Concrete Band	3 / L2-01	
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1.10	Protective Play Surface		REF CCD/DPS STDS
1.11	Asphalt Parking Paving / Parking Striping		REF CCD STDS
1.12	Playground Pit ADA Ramp	4 / L2-01	
1.13	ADA Ramp		REF CCD STDS
1.14	CIP Concrete Curb and Gutter		REF CCD STDS
2.0	**NOT USED**		
3.0	**STEPS, CURBS AND WALLS**		
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3.4A	Precast Concrete Seat Wall, 18" Wide	10 / L2-01	
3.4B	Precast Concrete Seat Wall, 36" Wide	1,2 / L2-02	
3.5	Precast Concrete Retaining Wall	3 / L2-02	
3.6	Precast Concrete Step	1 / L2-03	
3.7	CMU Screen Wall	2 / L2-03	
3.8	Trash Enclosure	3 / L2-03	
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4.2A	Custom Fencing Type 1	1 / L2-04	
4.2B	Custom Fencing Type 2	2 / L2-04	
4.3A	Fencing Gates Type 1	1 / L2-05	
4.3B	Fencing Gates Type 2	4 / L2-05	
4.3C	Fencing Gates Type 3	3 / L2-05	
4.3D	Fencing Gates Type 4	2 / L2-05	
5.0	**SPECIALTY ELEMENTS**		
5.1	Shade Structure, Events Lawn Pavilion	1,2 / L2-06	
5.2	Shade Structure, Type 1	1 / L2-07	
5.3	Shade Structure, Type 2	1 / L2-08	
5.4	Overlook	1 / L2-09	
5.5	Concessions/Restroom Building		REF SCHED 10
5.6	Maintenance Building		REF SCHED 10
5.7	Splash Pad Water Elements		REF SCHED 10
5.8	Tot Lot Play Elements		REF SCHED 10
5.9	Playground Play Elements		REF SCHED 10
5.10	Synthetic Turf		REF SCHED 10
5.11	Removable Soccer Goal		REF CCD STDS
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5.21	Sandstone Boulder		

MATERIAL LEGEND

- 1.1 CIP CONCRETE, SAWCUT JOINTS, STANDARD GRAY
- 1.2A CIP CONCRETE PAVING, SAWCUT JOINTS , LIGHT SANDSCAPE FINISH AND INTEGRAL COLOR
- 1.2B CIP CONCRETE PAVING, SAWCUT JOINTS, MEDIUM SANDSCAPE FINISH, INTEGRAL COLOR
- 1.3 CONCRETE UNIT PAVER TYPE 1
- 1.4 CONCRETE UNIT PAVER TYPE 2
- 1.5 CONCRETE UNIT PAVER TYPE 3
- 1.8 ASPHALT, INTEGRAL COLOR AND STRIPING
- 1.9 RUBBERIZED PLAY TILE
- 1.10 FIBAR PLAY SURFACE

NORTH 0 8' 16' 32'
ORIGINAL SCALE: 1"=16'-00"

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Print Date: 5/5/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

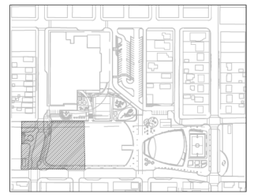
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

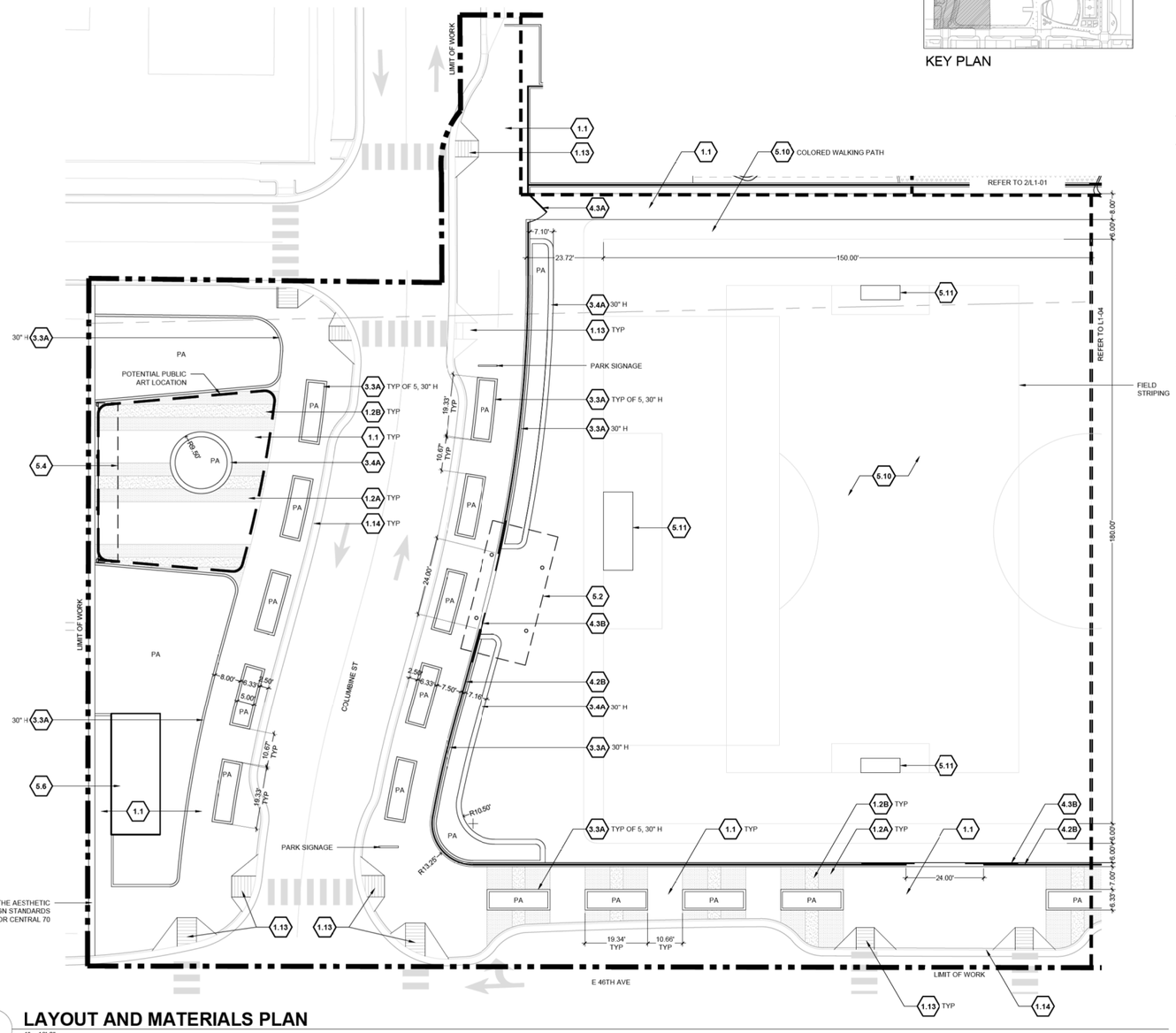
CENTRAL 70
LANDSCAPE AND AESTHETIC
LAYOUT AND MATERIAL PLAN

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: L1-02 of

Project No./Code
FBR 0704-234
19631
Sheet Number 453



KEY PLAN



1 LAYOUT AND MATERIALS PLAN

1" = 16'-0"

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
1.0	**PAVEMENTS, RAMPS, AND CURBS**		
1.1	CIP Concrete Paving, Sawcut Joints, Standard Grey, Broom Finish	1 / L2-01	
1.2A	CIP Concrete Paving, Sawcut Joints, Light Sandscape Finish, Integral color	1 / L2-01	
1.2B	CIP Concrete Paving, Sawcut Joints, Medium Sandscape Finish, Integral color	1 / L2-01	
1.3	Concrete/Stone Unit Pavers Type 1	2 / L2-01	
1.4	Concrete/Stone Unit Pavers Type 2	2 / L2-01	
1.5	Concrete/Stone Unit Pavers Type 3	2 / L2-01	
1.6	CIP Concrete Band	3 / L2-01	
1.7	Precast Concrete Band	3 / L2-01	
1.8	Playground Asphalt		REF CCD STDS
1.9	Rubberized Play Tiles		REF CCD/DPS STDS
1.10	Protective Play Surface		REF CCD/DPS STDS
1.11	Asphalt Parking Paving / Parking Striping		REF CCD STDS
1.12	Playground Pit ADA Ramp	4 / L2-01	
1.13	ADA Ramp		REF CCD STDS
1.14	CIP Concrete Curb and Gutter		REF CCD STDS
2.0	**NOT USED**		
3.0	**STEPS, CURBS AND WALLS**		
3.1	CIP Concrete Mural Wall	4,5 / L2-02	
3.2	CIP Concrete Curb	5 / L2-01	
3.3A	CIP Concrete Wall, 8" Wide	7 / L2-01	
3.3B	CIP Concrete Wall, 12" Wide	8 / L2-01	
3.3C	CIP Concrete Wall, 18" Wide	9 / L2-01	
3.4A	Precast Concrete Seat Wall, 18" Wide	10 / L2-01	
3.4B	Precast Concrete Seat Wall, 36" Wide	1,2 / L2-02	
3.5	Precast Concrete Retaining Wall	3 / L2-02	
3.6	Precast Concrete Step	1 / L2-03	
3.7	CMU Screen Wall	2 / L2-03	
3.8	Trash Enclosure	3 / L2-03	
4.0	**RAILINGS, BARRIERS AND FENCING**		
4.1	Stainless Steel Handrail	4 / L2-03	
4.2A	Custom Fencing Type 1	1 / L2-04	
4.2B	Custom Fencing Type 2	2 / L2-04	
4.3A	Fencing Gates Type 1	1 / L2-05	
4.3B	Fencing Gates Type 2	4 / L2-05	
4.3C	Fencing Gates Type 3	3 / L2-05	
4.3D	Fencing Gates Type 4	2 / L2-05	
5.0	**SPECIALTY ELEMENTS**		
5.1	Shade Structure, Events Lawn Pavilion	1,2 / L2-06	
5.2	Shade Structure, Type 1	1 / L2-07	
5.3	Shade Structure, Type 2	1 / L2-08	
5.4	Overlook	1 / L2-09	
5.5	Concessions/Restroom Building		REF SCHED 10
5.6	Maintenance Building		REF SCHED 10
5.7	Splash Pad Water Elements		REF SCHED 10
5.8	Tot Lot Play Elements		REF SCHED 10
5.9	Playground Play Elements		REF SCHED 10
5.10	Synthetic Turf		REF SCHED 10
5.11	Removable Soccer Goal		REF CCD STDS
5.12	Basketball Goal		REF DPS STDS
5.13	Primary Play Structure at School Playground		REF DPS STDS
5.14	Intermediate Play Structure at School Playground		REF DPS STDS
5.15	Swings at School Playground		REF DPS STDS
5.16	Painted Courts : Hop Scotch		REF DPS STDS
5.17	Painted Court : Hop Scotch ADA		REF DPS STDS
5.18	Painted Court : Foursquare		REF DPS STDS
5.19	Painted Court : Tether Ball		REF DPS STDS
5.20	Shade Structure at School Playground		REF DPS STDS
5.21	Sandstone Boulder		

MATERIAL LEGEND

- 1.1 CIP CONCRETE, SAWCUT JOINTS, STANDARD GRAY
- 1.2A CIP CONCRETE PAVING, SAWCUT JOINTS, LIGHT SANDSCAPE FINISH AND INTEGRAL COLOR
- 1.2B CIP CONCRETE PAVING, SAWCUT JOINTS, MEDIUM SANDSCAPE FINISH, INTEGRAL COLOR
- 1.3 CONCRETE UNIT PAVER TYPE 1
- 1.4 CONCRETE UNIT PAVER TYPE 2
- 1.5 CONCRETE UNIT PAVER TYPE 3
- 1.8 ASPHALT, INTEGRAL COLOR AND STRIPING
- 1.9 RUBBERIZED PLAY TILE
- 1.10 FIBAR PLAY SURFACE

NORTH

0 8' 16' 32'

ORIGINAL SCALE: 1"=16'-00"

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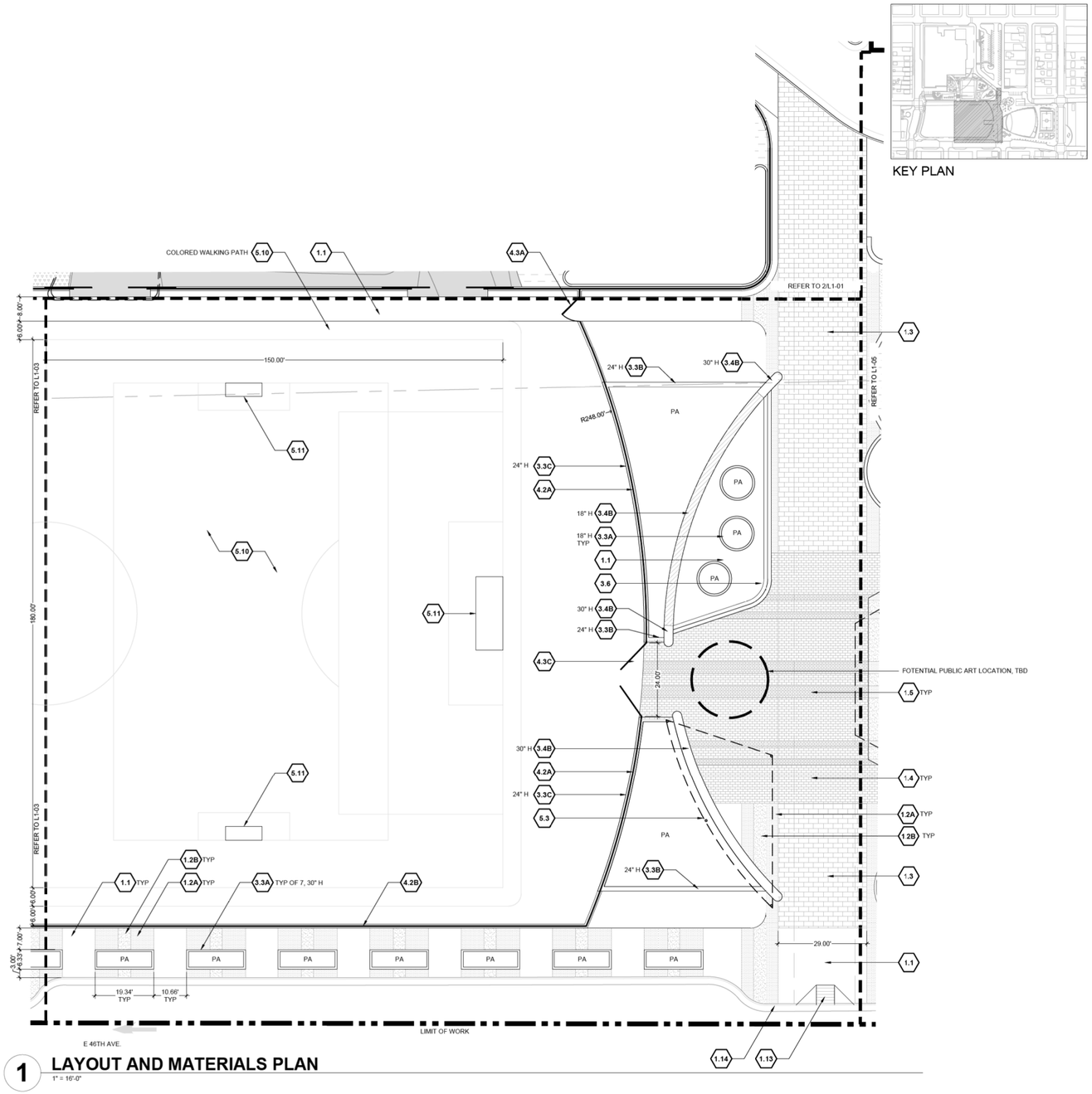
Print Date: 5/5/2017		Sheet Revisions			Colorado Department of Transportation
File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907
Front Range Mobility Group	Horiz. Scale: As Noted				Region 1 KJS
	Vert. Scale: As Noted				
	Unit Information				
	Unit Leader				

PROPOSAL	CENTRAL 70 LANDSCAPE AND AESTHETIC LAYOUT AND MATERIAL PLAN			Project No./Code
No Revisions:				FBR 0704-234
Revised:	Designer:	Structure Numbers		19631
Void:	Detailer:			
	Sheet Subset: LANDSCAPE	Subset Sheets: L1-03 of		Sheet Number 454



1 LAYOUT AND MATERIALS PLAN
1" = 16'-0"

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
1.0	**PAVEMENTS, RAMPS, AND CURBS**		
1.1	CIP Concrete Paving, Sawcut Joints, Standard Grey, Broom Finish	1 / L2-01	
1.2A	CIP Concrete Paving, Sawcut Joints, Light Sandscape Finish, Integral color	1 / L2-01	
1.2B	CIP Concrete Paving, Sawcut Joints, Medium Sandscape Finish, Integral color	1 / L2-01	
1.3	Concrete/Stone Unit Pavers Type 1	2 / L2-01	
1.4	Concrete/Stone Unit Pavers Type 2	2 / L2-01	
1.5	Concrete/Stone Unit Pavers Type 3	2 / L2-01	
1.6	CIP Concrete Band	3 / L2-01	
1.7	Precast Concrete Band	3 / L2-01	
1.8	Playground Asphalt		REF CCD STDS
1.9	Rubberized Play Tiles		REF CCD/DPS STDS
1.10	Protective Play Surface		REF CCD/DPS STDS
1.11	Asphalt Parking Paving / Parking Striping		REF CCD STDS
1.12	Playground Pit ADA Ramp	4 / L2-01	
1.13	ADA Ramp		REF CCD STDS
1.14	CIP Concrete Curb and Gutter		REF CCD STDS
2.0	**NOT USED**		
3.0	**STEPS, CURBS AND WALLS**		
3.1	CIP Concrete Mural Wall	4,5 / L2-02	
3.2	CIP Concrete Curb	5 / L2-01	
3.3A	CIP Concrete Wall, 8" Wide	7 / L2-01	
3.3B	CIP Concrete Wall, 12" Wide	8 / L2-01	
3.3C	CIP Concrete Wall, 18" Wide	9 / L2-01	
3.4A	Precast Concrete Seat Wall, 18" Wide	10 / L2-01	
3.4B	Precast Concrete Seat Wall, 36" Wide	1,2 / L2-02	
3.5	Precast Concrete Retaining Wall	3 / L2-02	
3.6	Precast Concrete Step	1 / L2-03	
3.7	CMU Screen Wall	2 / L2-03	
3.8	Trash Enclosure	3 / L2-03	
4.0	**RAILINGS, BARRIERS AND FENCING**		
4.1	Stainless Steel Handrail	4 / L2-03	
4.2A	Custom Fencing Type 1	1 / L2-04	
4.2B	Custom Fencing Type 2	2 / L2-04	
4.3A	Fencing Gates Type 1	1 / L2-05	
4.3B	Fencing Gates Type 2	4 / L2-05	
4.3C	Fencing Gates Type 3	3 / L2-05	
4.3D	Fencing Gates Type 4	2 / L2-05	
5.0	**SPECIALTY ELEMENTS**		
5.1	Shade Structure, Events Lawn Pavilion	1,2 / L2-06	
5.2	Shade Structure, Type 1	1 / L2-07	
5.3	Shade Structure, Type 2	1 / L2-08	
5.4	Overlook	1 / L2-09	
5.5	Concessions/Restroom Building		REF SCHED 10
5.6	Maintenance Building		REF SCHED 10
5.7	Splash Pad Water Elements		REF SCHED 10
5.8	Tot Lot Play Elements		REF SCHED 10
5.9	Playground Play Elements		REF SCHED 10
5.10	Synthetic Turf		REF SCHED 10
5.11	Removable Soccer Goal		REF CCD STDS
5.12	Basketball Goal		REF DPS STDS
5.13	Primary Play Structure at School Playground		REF DPS STDS
5.14	Intermediate Play Structure at School Playground		REF DPS STDS
5.15	Swings at School Playground		REF DPS STDS
5.16	Painted Courts : Hop Scotch		REF DPS STDS
5.17	Painted Court : Hop Scotch ADA		REF DPS STDS
5.18	Painted Court : Foursquare		REF DPS STDS
5.19	Painted Court : Tether Ball		REF DPS STDS
5.20	Shade Structure at School Playground		REF DPS STDS
5.21	Sandstone Boulder		

MATERIAL LEGEND

1.1	CIP CONCRETE, SAWCUT JOINTS, STANDARD GRAY	1.8	ASPHALT, INTEGRAL COLOR AND STRIPING
1.2A	CIP CONCRETE PAVING, SAWCUT JOINTS , LIGHT SANDSCAPE FINISH AND INTEGRAL COLOR	1.9	RUBBERIZED PLAY TILE
1.2B	CIP CONCRETE PAVING, SAWCUT JOINTS, MEDIUM SANDSCAPE FINISH, INTEGRAL COLOR	1.10	FIBAR PLAY SURFACE
1.3	CONCRETE UNIT PAVER TYPE 1		
1.4	CONCRETE UNIT PAVER TYPE 2		
1.5	CONCRETE UNIT PAVER TYPE 3		

NORTH
0 8' 16' 32'
ORIGINAL SCALE: 1"=16'-00"

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Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

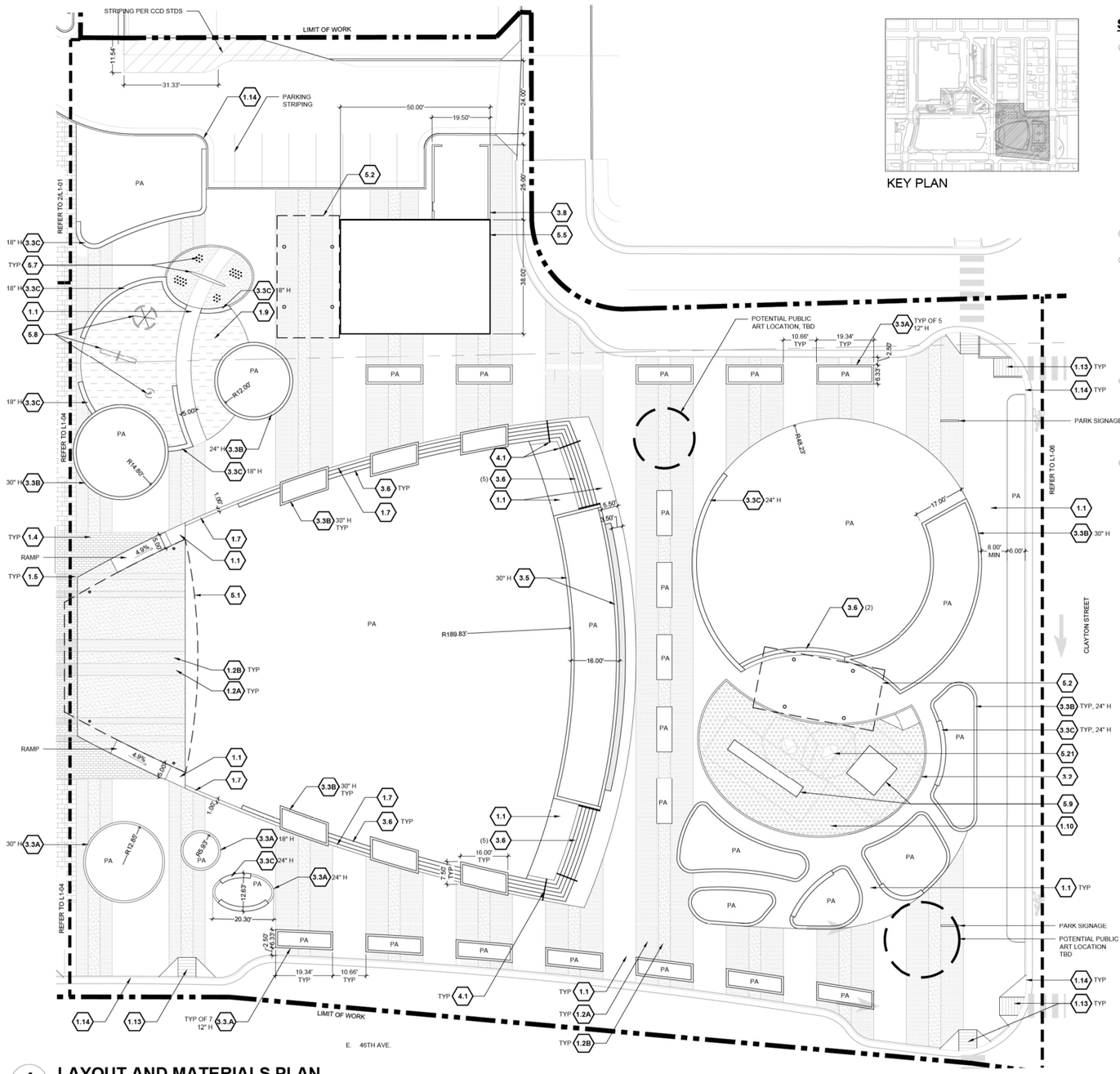
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
LANDSCAPE AND AESTHETIC
LAYOUT AND MATERIAL PLAN

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: L1-04 of

Project No./Code
FBR 0704-234
19631
Sheet Number 455



KEY PLAN

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
1.0	**PAVEMENTS, RAMPS, AND CURBS**		
1.1	CIP Concrete Paving, Sawcut Joints, Standard Grey, Broom Finish	1 / L2-01	
1.2A	CIP Concrete Paving, Sawcut Joints, Light Sandscape Finish, Integral color	1 / L2-01	
1.2B	CIP Concrete Paving, Sawcut Joints, Medium Sandscape Finish, Integral color	1 / L2-01	
1.3	Concrete/Stone Unit Pavers Type 1	2 / L2-01	
1.4	Concrete/Stone Unit Pavers Type 2	2 / L2-01	
1.5	Concrete/Stone Unit Pavers Type 3	2 / L2-01	
1.6	CIP Concrete Band	3 / L2-01	
1.7	Precast Concrete Band	3 / L2-01	
1.8	Playground Asphalt		REF CCD STDS
1.9	Rubberized Play Tiles		REF CCD/DPS STDS
1.10	Protective Play Surface		REF CCD/DPS STDS
1.11	Asphalt Parking Paving / Parking Striping		REF CCD STDS
1.12	Playground Pit ADA Ramp	4 / L2-01	
1.13	ADA Ramp		REF CCD STDS
1.14	CIP Concrete Curb and Gutter		REF CCD STDS
2.0	**NOT USED**		
3.0	**STEPS, CURBS AND WALLS**		
3.1	CIP Concrete Mural Wall	4,5 / L2-02	
3.2	CIP Concrete Curb	5 / L2-01	
3.3A	CIP Concrete Wall, 8" Wide	7 / L2-01	
3.3B	CIP Concrete Wall, 12" Wide	8 / L2-01	
3.3C	CIP Concrete Wall, 18" Wide	9 / L2-01	
3.4A	Precast Concrete Seat Wall, 18" Wide	10 / L2-01	
3.4B	Precast Concrete Seat Wall, 36" Wide	1,2 / L2-02	
3.5	Precast Concrete Retaining Wall	3 / L2-02	
3.6	Precast Concrete Step	1 / L2-03	
3.7	CMU Screen Wall	2 / L2-03	
3.8	Trash Enclosure	3 / L2-03	
4.0	**RAILINGS, BARRIERS AND FENCING**		
4.1	Stainless Steel Handrail	4 / L2-03	
4.2A	Custom Fencing Type 1	1 / L2-04	
4.2B	Custom Fencing Type 2	2 / L2-04	
4.3A	Fencing Gates Type 1	1 / L2-05	
4.3B	Fencing Gates Type 2	4 / L2-05	
4.3C	Fencing Gates Type 3	3 / L2-05	
4.3D	Fencing Gates Type 4	2 / L2-05	
5.0	**SPECIALTY ELEMENTS**		
5.1	Shade Structure, Events Lawn Pavilion	1,2 / L2-06	
5.2	Shade Structure, Type 1	1 / L2-07	
5.3	Shade Structure, Type 2	1 / L2-08	
5.4	Overlook	1 / L2-09	
5.5	Concessions/Restroom Building		REF SCHED 10
5.6	Maintenance Building		REF SCHED 10
5.7	Splash Pad Water Elements		REF SCHED 10
5.8	Tot Lot Play Elements		REF SCHED 10
5.9	Playground Play Elements		REF SCHED 10
5.10	Synthetic Turf		REF SCHED 10
5.11	Removable Soccer Goal		REF CCD STDS
5.12	Basketball Goal		REF DPS STDS
5.13	Primary Play Structure at School Playground		REF DPS STDS
5.14	Intermediate Play Structure at School Playground		REF DPS STDS
5.15	Swings at School Playground		REF DPS STDS
5.16	Painted Courts : Hop Scotch		REF DPS STDS
5.17	Painted Court : Hop Scotch ADA		REF DPS STDS
5.18	Painted Court : Foursquare		REF DPS STDS
5.19	Painted Court : Tether Ball		REF DPS STDS
5.20	Shade Structure at School Playground		REF DPS STDS
5.21	Sandstone Boulder		

MATERIAL LEGEND

1.1	CIP CONCRETE, SAWCUT JOINTS, STANDARD GRAY	1.8	ASPHALT, INTEGRAL COLOR AND STRIPING
1.2A	CIP CONCRETE PAVING, SAWCUT JOINTS , LIGHT SANDSCAPE FINISH AND INTEGRAL COLOR	1.9	RUBBERIZED PLAY TILE
1.2B	CIP CONCRETE PAVING, SAWCUT JOINTS, MEDIUM SANDSCAPE FINISH, INTEGRAL COLOR	1.10	FIBAR PLAY SURFACE
1.3	CONCRETE UNIT PAVER TYPE 1		
1.4	CONCRETE UNIT PAVER TYPE 2		
1.5	CONCRETE UNIT PAVER TYPE 3		

1 LAYOUT AND MATERIALS PLAN

1" = 16'-0"

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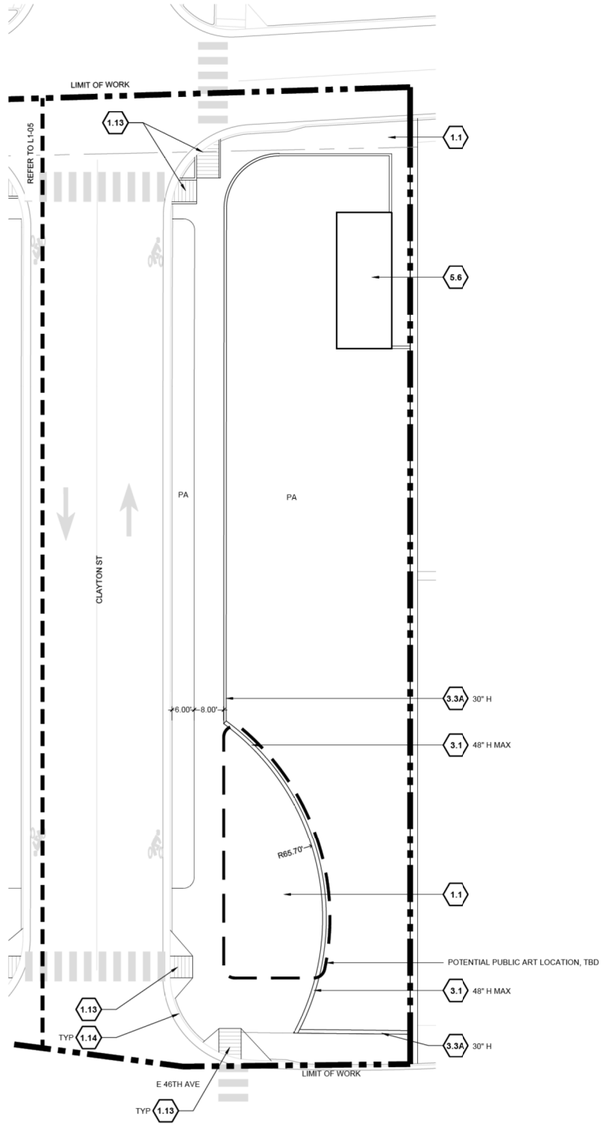
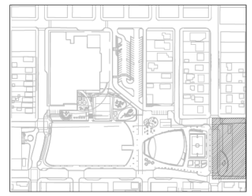
Print Date: 5/5/2017		Sheet Revisions			Colorado Department of Transportation
File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907
Front Range Mobility Group	Horiz. Scale: As Noted				Region 1 KJS
	Vert. Scale: As Noted				
	Unit Information				
	Unit Leader				

PROPOSAL	CENTRAL 70 LANDSCAPE AND AESTHETIC LAYOUT AND MATERIAL PLAN			Project No./Code
No Revisions:				FBR 0704-234
Revised:	Designer:	Structure Numbers		19631
Void:	Detailer:			
	Sheet Subset: LANDSCAPE	Subset Sheets: L1-05 of		Sheet Number 456



1 LAYOUT AND MATERIALS PLAN
1" = 16'-0"



KEY PLAN

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
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1.3	Concrete/Stone Unit Pavers Type 1	2 / L2-01	
1.4	Concrete/Stone Unit Pavers Type 2	2 / L2-01	
1.5	Concrete/Stone Unit Pavers Type 3	2 / L2-01	
1.6	CIP Concrete Band	3 / L2-01	
1.7	Precast Concrete Band	3 / L2-01	
1.8	Playground Asphalt		REF CCD STDS
1.9	Rubberized Play Tiles		REF CCD/DPS STDS
1.10	Protective Play Surface		REF CCD/DPS STDS
1.11	Asphalt Parking Paving / Parking Striping		REF CCD STDS
1.12	Playground Pit ADA Ramp	4 / L2-01	
1.13	ADA Ramp		REF CCD STDS
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3.0	**STEPS, CURBS AND WALLS**		
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3.6	Precast Concrete Step	1 / L2-03	
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4.0	**RAILINGS, BARRIERS AND FENCING**		
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4.2A	Custom Fencing Type 1	1 / L2-04	
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4.3A	Fencing Gates Type 1	1 / L2-05	
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4.3C	Fencing Gates Type 3	3 / L2-05	
4.3D	Fencing Gates Type 4	2 / L2-05	
5.0	**SPECIALTY ELEMENTS**		
5.1	Shade Structure, Events Lawn Pavilion	1,2 / L2-06	
5.2	Shade Structure, Type 1	1 / L2-07	
5.3	Shade Structure, Type 2	1 / L2-08	
5.4	Overlook	1 / L2-09	
5.5	Concessions/Restroom Building		REF SCHED 10
5.6	Maintenance Building		REF SCHED 10
5.7	Splash Pad Water Elements		REF SCHED 10
5.8	Tot Lot Play Elements		REF SCHED 10
5.9	Playground Play Elements		REF SCHED 10
5.10	Synthetic Turf		REF SCHED 10
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5.19	Painted Court : Tether Ball		REF DPS STDS
5.20	Shade Structure at School Playground		REF DPS STDS
5.21	Sandstone Boulder		

MATERIAL LEGEND

- 1.1 — CIP CONCRETE, SAWCUT JOINTS, STANDARD GRAY
- 1.2A — CIP CONCRETE PAVING, SAWCUT JOINTS , LIGHT SANDSCAPE FINISH AND INTEGRAL COLOR
- 1.2B — CIP CONCRETE PAVING, SAWCUT JOINTS, MEDIUM SANDSCAPE FINISH, INTEGRAL COLOR
- 1.3 — CONCRETE UNIT PAVER TYPE 1
- 1.4 — CONCRETE UNIT PAVER TYPE 2
- 1.5 — CONCRETE UNIT PAVER TYPE 3
- 1.8 — ASPHALT, INTEGRAL COLOR AND STRIPING
- 1.9 — RUBBERIZED PLAY TILE
- 1.10 — FIBAR PLAY SURFACE

NORTH

0 8' 16' 32'
ORIGINAL SCALE: 1"=16'-00"

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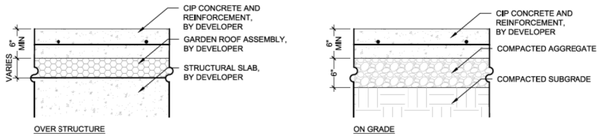
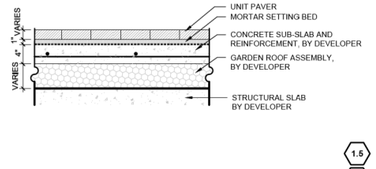
Print Date: 5/5/2017		Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 LANDSCAPE AND AESTHETIC LAYOUT AND MATERIAL PLAN	Project No./Code
File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:		FBR 0704-234
Front Range Mobility Group	Horiz. Scale: As Noted					Revised:	Designer:	19631
	Vert. Scale: As Noted						Detailer:	
	Unit Information				Region 1 KJS	Void:	Sheet Subset: LANDSCAPE	Sheet Number 457
	Unit Leader						Structure Numbers / Subset Sheets: L1-06 of	



1 CIP CONCRETE PAVING

SCALE: 1" = 1'-0"

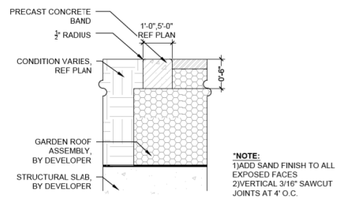
1.2B 1.2A 1.1



2 CONCRETE / STONE UNIT PAVER

SCALE: 1" = 1'-0"

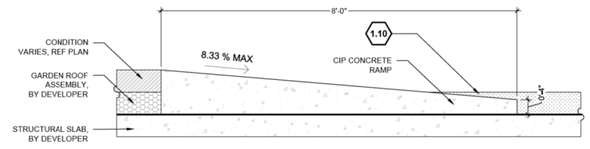
1.5 1.4 1.3



3 PRECAST CONCRETE BAND

SCALE: 1" = 1'-0"

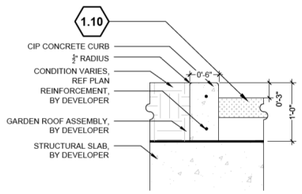
1.7



4 PLAYGROUND PIT ADA RAMP

SCALE: 1" = 1'-0"

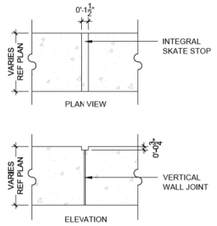
1.12



5 CIP CONCRETE CURB

SCALE: 1" = 1'-0"

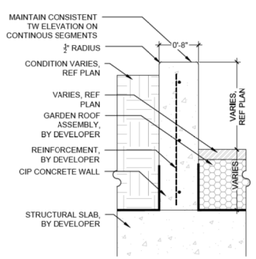
3.2



6 SKATE STOP FOR CIP CONCRETE WALLS

SCALE: 1" = 1'-0"

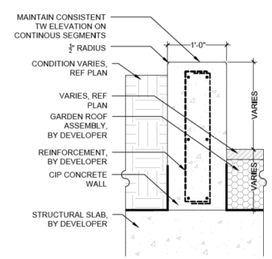
3.3



7 CIP CONCRETE WALL, 8" W

SCALE: 1" = 1'-0"

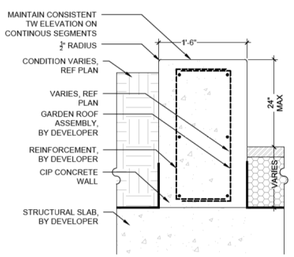
3.3A



8 CIP CONCRETE WALL, 12" W

SCALE: 1" = 1'-0"

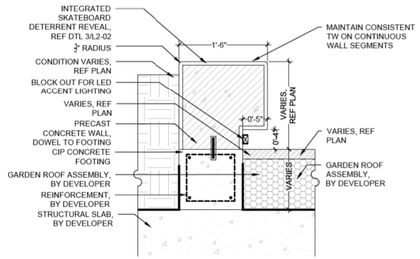
3.3B



9 CIP CONCRETE WALL, 18" W

SCALE: 1" = 1'-0"

3.3C



10 PRECAST CONCRETE WALL, 18" W

SCALE: 1" = 1'-3"

3.4A

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
1.0	**PAVEMENTS, RAMPS, AND CURBS**		
1.1	CIP Concrete Paving, Sawcut Joints, Standard Grey, Broom Finish	1 / L2-01	
1.2A	CIP Concrete Paving, Sawcut Joints, Light Sandscape Finish, Integral color	1 / L2-01	
1.2B	CIP Concrete Paving, Sawcut Joints, Medium Sandscape Finish, Integral color	1 / L2-01	
1.3	Concrete/Stone Unit Pavers Type 1	2 / L2-01	
1.4	Concrete/Stone Unit Pavers Type 2	2 / L2-01	
1.5	Concrete/Stone Unit Pavers Type 3	2 / L2-01	
1.6	CIP Concrete Band	3 / L2-01	
1.7	Precast Concrete Band	3 / L2-01	
1.8	Playground Asphalt		REF CCD STDS
1.9	Rubberized Play Tiles		REF CCD/DPS STDS
1.10	Protective Play Surface		REF CCD/DPS STDS
1.11	Asphalt Parking Paving / Parking Striping		REF CCD STDS
1.12	Playground Pit ADA Ramp	4 / L2-01	
1.13	ADA Ramp		REF CCD STDS
1.14	CIP Concrete Curb and Gutter		REF CCD STDS
2.0	**NOT USED**		
3.0	**STEPS, CURBS AND WALLS**		
3.1	CIP Concrete Mural Wall	4,5 / L2-02	
3.2	CIP Concrete Curb	5 / L2-01	
3.3A	CIP Concrete Wall, 8" Wide	7 / L2-01	
3.3B	CIP Concrete Wall, 12" Wide	8 / L2-01	
3.3C	CIP Concrete Wall, 18" Wide	9 / L2-01	
3.4A	Precast Concrete Seat Wall, 18" Wide	10 / L2-01	
3.4B	Precast Concrete Seat Wall, 36" Wide	1,2 / L2-02	
3.5	Precast Concrete Retaining Wall	3 / L2-02	
3.6	Precast Concrete Step	1 / L2-03	
3.7	CMU Screen Wall	2 / L2-03	
3.8	Trash Enclosure	3 / L2-03	
4.0	**RAILINGS, BARRIERS AND FENCING**		
4.1	Stainless Steel Handrail	4 / L2-03	
4.2A	Custom Fencing Type 1	1 / L2-04	
4.2B	Custom Fencing Type 2	2 / L2-04	
4.3A	Fencing Gates Type 1	1 / L2-05	
4.3B	Fencing Gates Type 2	4 / L2-05	
4.3C	Fencing Gates Type 3	3 / L2-05	
4.3D	Fencing Gates Type 4	2 / L2-05	
5.0	**SPECIALTY ELEMENTS**		
5.1	Shade Structure, Events Lawn Pavilion	1,2 / L2-06	
5.2	Shade Structure, Type 1	1 / L2-07	
5.3	Shade Structure, Type 2	1 / L2-08	
5.4	Overlook	1 / L2-09	
5.5	Concessions/Restroom Building		REF SCHED 10
5.6	Maintenance Building		REF SCHED 10
5.7	Splash Pad Water Elements		REF SCHED 10
5.8	Tot Lot Play Elements		REF SCHED 10
5.9	Playground Play Elements		REF SCHED 10
5.10	Synthetic Turf		REF SCHED 10
5.11	Removable Soccer Goal		REF CCD STDS
5.12	Basketball Goal		REF DPS STDS
5.13	Primary Play Structure at School Playground		REF DPS STDS
5.14	Intermediate Play Structure at School Playground		REF DPS STDS
5.15	Swings at School Playground		REF DPS STDS
5.16	Painted Courts : Hop Scotch		REF DPS STDS
5.17	Painted Court : Hop Scotch ADA		REF DPS STDS
5.18	Painted Court : Foursquare		REF DPS STDS
5.19	Painted Court : Tether Ball		REF DPS STDS
5.20	Shade Structure at School Playground		REF DPS STDS
5.21	Sandstone Boulder		
6.0	**FURNISHINGS**		
6.1A	8' Diameter Precast Concrete Seating Pod	1 / L2-10	
6.1B	10' Diameter Precast Concrete Seating Pod	2 / L2-10	
6.2A	Bike Rack		REF SCHED 10
6.2B	Bike Share		REF SCHED 10
6.3	Tables and Chairs		REF SCHED 10
6.4	Trash/Recycle Receptacle		REF SCHED 10
6.5	Bench		REF SCHED 10
6.6	Custom Aluminum Bench	3 / L2-10	
6.7	Removable Bollard		REF SCHED 10
6.8	Interpretive Sign		REF CDOT STDS
6.9	Drinking Fountain		REF SCHED 10
6.10	Picnic Table		REF SCHED 10
6.11	Tree Grate		REF SCHED 10
7.0	**SITE LIGHTING AND ELECTRICAL**		
7.1	Pedestrian Lighting		REF SCHED 10
7.2	Central Plaza Lighting		REF SCHED 10
7.3	Field Lighting		REF SCHED 10
7.4	Parking Lot Lighting		REF SCHED 10
7.5	Accent Lighting		REF SCHED 10
7.6	Tree Accent Lighting		REF SCHED 10
7.7	Electrical Outlets		REF SCHED 10
8.0	**REFERENCE SECTIONS AND ELEVATIONS**		
8.1	46th Avenue at Multi-Use Field	1 / L2-12	
8.2	Clayton Street Cover Extension, South	2 / L2-12	
8.3	Columbine Street Cover Extension, North	1 / L2-13	
8.4	Clayton Street Cover Extension, North	3 / L2-12	
8.5	Columbine Street Cover Extension, South	2 / L2-13	
8.6	46th Avenue at Event Lawn	1 / L2-14	
8.7	Tot Lot and Splash Pad	2,3 / L2-14	
8.8	Multi-Use Field Fencing	4 / L2-14	
8.9	Columbine Street	1 / L2-15	
8.10	Central Plaza Space and Event Lawn	2,3 / L2-15, 1,2,3 / L2-16	
8.11	East Side Community Space	1,2,3 / L2-17	
9.0	**PLANTING AND LANDSCAPE**		
9.1	Ornamental Tree Planting Over Structure		REF SCHED 10
9.2	Street Tree Planting Over Structure		REF SCHED 10
9.3	Shade Tree Planting Over Structure		REF SCHED 10
9.4	Shade Tree Planting Off Structure		REF SCHED 10
9.5	Enhanced Landscape		REF SCHED 10
9.6	Transitional Landscape		REF SCHED 10
9.7	Naturalized Turf		REF SCHED 10

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Print Date: 5/5/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

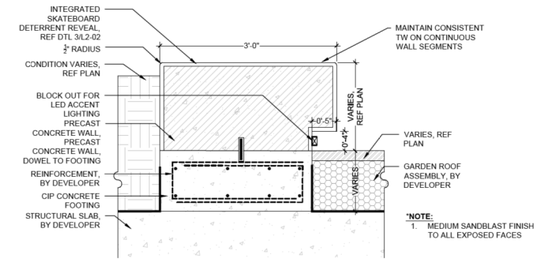
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
LANDSCAPE AND AESTHETIC DETAILS

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers:
Subset Sheets: L2-01 of

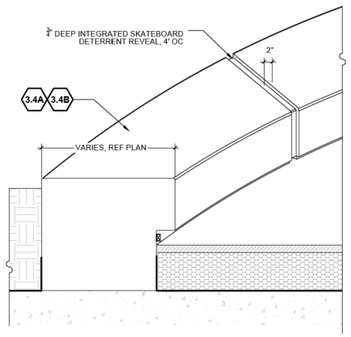
Project No./Code
FBR 0704-234
19631
Sheet Number 458



1 PRECAST CONCRETE SEAT WALL, 36" W

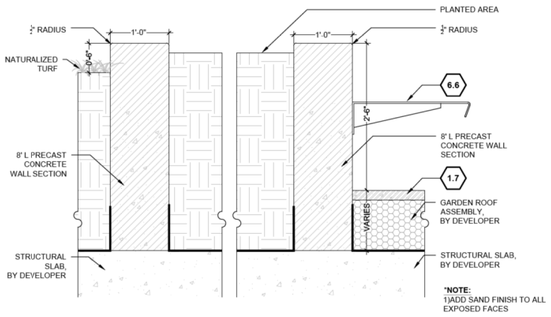
3.4B

SCALE: 1" = 1'-0"



2 SKATE DETERRENT

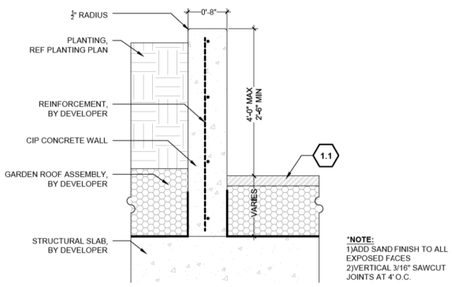
SCALE: 1" = 1'-0"



3 PRECAST CONCRETE RETAINING WALL

3.5

SCALE: 1" = 1'-0"



4 CIP CONCRETE MURAL WALL- SECTION

3.1

SCALE: 1" = 1'-0"

5 CIP CONCRETE MURAL WALL- ELEVATION

3.1

SCALE: 3/16" = 1'-0"

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
1.0	**PAVEMENTS, RAMPS, AND CURBS**		
1.1	CIP Concrete Paving, Sawcut Joints, Standard Grey, Broom Finish	1 / L2-01	
1.2A	CIP Concrete Paving, Sawcut Joints, Light Sandscape Finish, Integral color	1 / L2-01	
1.2B	CIP Concrete Paving, Sawcut Joints, Medium Sandscape Finish, Integral color	1 / L2-01	
1.3	Concrete/Stone Unit Pavers Type 1	2 / L2-01	
1.4	Concrete/Stone Unit Pavers Type 2	2 / L2-01	
1.5	Concrete/Stone Unit Pavers Type 3	2 / L2-01	
1.6	CIP Concrete Band	3 / L2-01	
1.7	Precast Concrete Band	3 / L2-01	
1.8	Playground Asphalt		REF CCD STDS
1.9	Rubberized Play Tiles		REF CCD/DPS STDS
1.10	Protective Play Surface		REF CCD/DPS STDS
1.11	Asphalt Parking Paving / Parking Striping		REF CCD STDS
1.12	Playground Pit ADA Ramp	4 / L2-01	
1.13	ADA Ramp		REF CCD STDS
1.14	CIP Concrete Curb and Gutter		REF CCD STDS
2.0	**NOT USED**		
3.0	**STEPS, CURBS AND WALLS**		
3.1	CIP Concrete Mural Wall	4,5 / L2-02	
3.2	CIP Concrete Curb	5 / L2-01	
3.3A	CIP Concrete Wall, 8" Wide	7 / L2-01	
3.3B	CIP Concrete Wall, 12" Wide	8 / L2-01	
3.3C	CIP Concrete Wall, 18" Wide	9 / L2-01	
3.4A	Precast Concrete Seat Wall, 18" Wide	10 / L2-01	
3.4B	Precast Concrete Seat Wall, 36" Wide	1,2 / L2-02	
3.5	Precast Concrete Retaining Wall	3 / L2-02	
3.6	Precast Concrete Step	1 / L2-03	
3.7	CMU Screen Wall	2 / L2-03	
3.8	Trash Enclosure	3 / L2-03	
4.0	**RAILINGS, BARRIERS AND FENCING**		
4.1	Stainless Steel Handrail	4 / L2-03	
4.2A	Custom Fencing Type 1	1 / L2-04	
4.2B	Custom Fencing Type 2	2 / L2-04	
4.3A	Fencing Gates Type 1	1 / L2-05	
4.3B	Fencing Gates Type 2	4 / L2-05	
4.3C	Fencing Gates Type 3	3 / L2-05	
4.3D	Fencing Gates Type 4	2 / L2-05	
5.0	**SPECIALTY ELEMENTS**		
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5.3	Shade Structure, Type 2	1 / L2-08	
5.4	Overlook	1 / L2-09	
5.5	Concessions/Restroom Building		REF SCHED 10
5.6	Maintenance Building		REF SCHED 10
5.7	Splash Pad Water Elements		REF SCHED 10
5.8	Tot Lot Play Elements		REF SCHED 10
5.9	Playground Play Elements		REF SCHED 10
5.10	Synthetic Turf		REF SCHED 10
5.11	Removable Soccer Goal		REF CCD STDS
5.12	Basketball Goal		REF DPS STDS
5.13	Primary Play Structure at School Playground		REF DPS STDS
5.14	Intermediate Play Structure at School Playground		REF DPS STDS
5.15	Swings at School Playground		REF DPS STDS
5.16	Painted Courts : Hop Scotch		REF DPS STDS
5.17	Painted Court : Hop Scotch ADA		REF DPS STDS
5.18	Painted Court : Foursquare		REF DPS STDS
5.19	Painted Court : Tether Ball		REF DPS STDS
5.20	Shade Structure at School Playground		REF DPS STDS
5.21	Sandstone Boulder		
6.0	**FURNISHINGS**		
6.1A	8' Diameter Precast Concrete Seating Pod	1 / L2-10	
6.1B	10' Diameter Precast Concrete Seating Pod	2 / L2-10	
6.2A	Bike Rack		REF SCHED 10
6.2B	Bike Share		REF SCHED 10
6.3	Tables and Chairs		REF SCHED 10
6.4	Trash/Recycle Receptacle		REF SCHED 10
6.5	Bench		REF SCHED 10
6.6	Custom Aluminum Bench	3 / L2-10	
6.7	Removable Bollard		REF SCHED 10
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6.9	Drinking Fountain		REF SCHED 10
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7.0	**SITE LIGHTING AND ELECTRICAL**		
7.1	Pedestrian Lighting		REF SCHED 10
7.2	Central Plaza Lighting		REF SCHED 10
7.3	Field Lighting		REF SCHED 10
7.4	Parking Lot Lighting		REF SCHED 10
7.5	Accent Lighting		REF SCHED 10
7.6	Tree Accent Lighting		REF SCHED 10
7.7	Electrical Outlets		REF SCHED 10
8.0	**REFERENCE SECTIONS AND ELEVATIONS**		
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8.2	Clayton Street Cover Extension, South	2 / L2-12	
8.3	Columbine Street Cover Extension, North	1 / L2-13	
8.4	Clayton Street Cover Extension, North	3 / L2-12	
8.5	Columbine Street Cover Extension, South	2 / L2-13	
8.6	46th Avenue at Event Lawn	1 / L2-14	
8.7	Tot Lot and Splash Pad	2,3 / L2-14	
8.8	Multi-Use Field Fencing	4 / L2-14	
8.9	Columbine Street	1 / L2-15	
8.10	Central Plaza Space and Event Lawn	2,3 / L2-15, 1,2,3 / L2-16	
8.11	East Side Community Space	1,2,3 / L2-17	
9.0	**PLANTING AND LANDSCAPE**		
9.1	Ornamental Tree Planting Over Structure		REF SCHED 10
9.2	Street Tree Planting Over Structure		REF SCHED 10
9.3	Shade Tree Planting Over Structure		REF SCHED 10
9.4	Shade Tree Planting Off Structure		REF SCHED 10
9.5	Enhanced Landscape		REF SCHED 10
9.6	Transitional Landscape		REF SCHED 10
9.7	Naturalized Turf		REF SCHED 10

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PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
LANDSCAPE AND AESTHETIC DETAILS

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: L2-02 of

Project No./Code
FBR 0704-234
19631
Sheet Number 459

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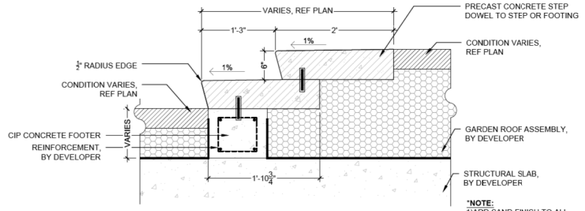
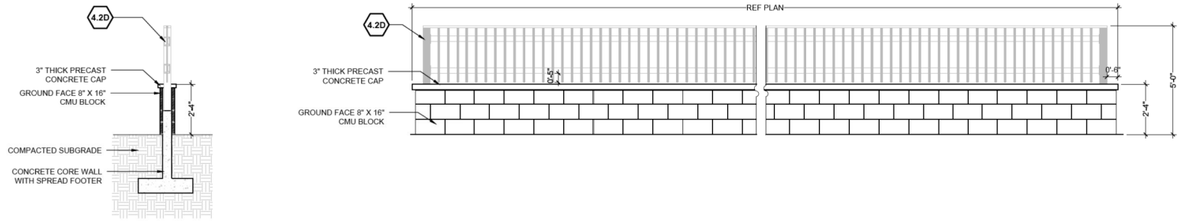


1 PRECAST CONCRETE STEP

SCALE: 1" = 1'-0"

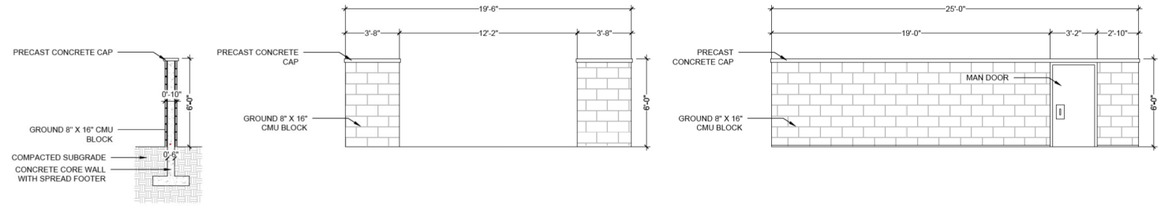
3.6



2 CMU SCREEN WALL

SCALE: 3/8" = 1'-0"

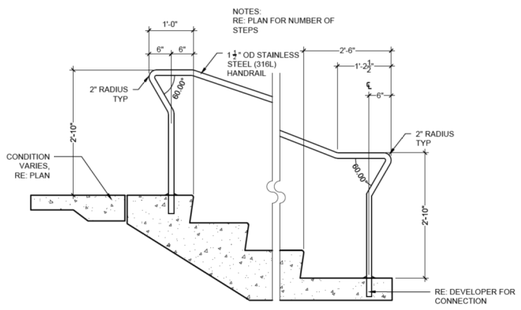
3.7



3 TRASH ENCLOSURE

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

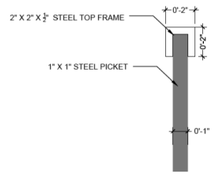
3.8



4 STAINLESS STEEL HANDRAIL

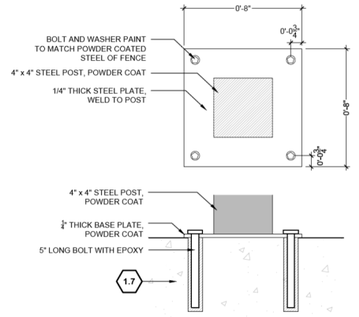
SCALE: 1" = 1'-0"

4.1



5 PICKET AND TOP FRAME SECTION

SCALE: 3" = 1'-0"



6 CONNECTION PLATE

SCALE: 3" = 1'-0"

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
1.0	**PAVEMENTS, RAMPS, AND CURBS**		
1.1	CIP Concrete Paving, Sawcut Joints, Standard Grey, Broom Finish	1 / L2-01	
1.2A	CIP Concrete Paving, Sawcut Joints, Light Sandscape Finish, Integral color	1 / L2-01	
1.2B	CIP Concrete Paving, Sawcut Joints, Medium Sandscape Finish, Integral color	1 / L2-01	
1.3	Concrete/Stone Unit Pavers Type 1	2 / L2-01	
1.4	Concrete/Stone Unit Pavers Type 2	2 / L2-01	
1.5	Concrete/Stone Unit Pavers Type 3	2 / L2-01	
1.6	CIP Concrete Band	3 / L2-01	
1.7	Precast Concrete Band	3 / L2-01	
1.8	Playground Asphalt		REF CCD STDS
1.9	Rubberized Play Tiles		REF CCD/DPS STDS
1.10	Protective Play Surface		REF CCD/DPS STDS
1.11	Asphalt Parking Paving / Parking Striping		REF CCD STDS
1.12	Playground Pit ADA Ramp	4 / L2-01	
1.13	ADA Ramp		REF CCD STDS
1.14	CIP Concrete Curb and Gutter		REF CCD STDS
2.0	**NOT USED**		
3.0	**STEPS, CURBS AND WALLS**		
3.1	CIP Concrete Mural Wall	4,5 / L2-02	
3.2	CIP Concrete Curb	5 / L2-01	
3.3A	CIP Concrete Wall, 8" Wide	7 / L2-01	
3.3B	CIP Concrete Wall, 12" Wide	8 / L2-01	
3.3C	CIP Concrete Wall, 18" Wide	9 / L2-01	
3.4A	Precast Concrete Seat Wall, 18" Wide	10 / L2-01	
3.4B	Precast Concrete Seat Wall, 36" Wide	1,2 / L2-02	
3.5	Precast Concrete Retaining Wall	3 / L2-02	
3.6	Precast Concrete Step	1 / L2-03	
3.7	CMU Screen Wall	2 / L2-03	
3.8	Trash Enclosure	3 / L2-03	
4.0	**RAILINGS, BARRIERS AND FENCING**		
4.1	Stainless Steel Handrail	4 / L2-03	
4.2A	Custom Fencing Type 1	1 / L2-04	
4.2B	Custom Fencing Type 2	2 / L2-04	
4.3A	Fencing Gates Type 1	1 / L2-05	
4.3B	Fencing Gates Type 2	4 / L2-05	
4.3C	Fencing Gates Type 3	3 / L2-05	
4.3D	Fencing Gates Type 4	2 / L2-05	
5.0	**SPECIALTY ELEMENTS**		
5.1	Shade Structure, Events Lawn Pavilion	1,2 / L2-06	
5.2	Shade Structure, Type 1	1 / L2-07	
5.3	Shade Structure, Type 2	1 / L2-08	
5.4	Overlook	1 / L2-09	
5.5	Concessions/Restroom Building		REF SCHED 10
5.6	Maintenance Building		REF SCHED 10
5.7	Splash Pad Water Elements		REF SCHED 10
5.8	Tot Lot Play Elements		REF SCHED 10
5.9	Playground Play Elements		REF SCHED 10
5.10	Synthetic Turf		REF SCHED 10
5.11	Removable Soccer Goal		REF CCD STDS
5.12	Basketball Goal		REF DPS STDS
5.13	Primary Play Structure at School Playground		REF DPS STDS
5.14	Intermediate Play Structure at School Playground		REF DPS STDS
5.15	Swings at School Playground		REF DPS STDS
5.16	Painted Courts : Hop Scotch		REF DPS STDS
5.17	Painted Court : Hop Scotch ADA		REF DPS STDS
5.18	Painted Court : Foursquare		REF DPS STDS
5.19	Painted Court : Tether Ball		REF DPS STDS
5.20	Shade Structure at School Playground		REF DPS STDS
5.21	Sandstone Boulder		
6.0	**FURNISHINGS**		
6.1A	8' Diameter Precast Concrete Seating Pod	1 / L2-10	
6.1B	10' Diameter Precast Concrete Seating Pod	2 / L2-10	
6.2A	Bike Rack		REF SCHED 10
6.2B	Bike Share		REF SCHED 10
6.3	Tables and Chairs		REF SCHED 10
6.4	Trash/Recycle Receptacle		REF SCHED 10
6.5	Bench		REF SCHED 10
6.6	Custom Aluminum Bench	3 / L2-10	
6.7	Removable Bollard		REF SCHED 10
6.8	Interpretive Sign		REF CDOT STDS
6.9	Drinking Fountain		REF SCHED 10
6.10	Picnic Table		REF SCHED 10
6.11	Tree Grate		REF SCHED 10
7.0	**SITE LIGHTING AND ELECTRICAL**		
7.1	Pedestrian Lighting		REF SCHED 10
7.2	Central Plaza Lighting		REF SCHED 10
7.3	Field Lighting		REF SCHED 10
7.4	Parking Lot Lighting		REF SCHED 10
7.5	Accent Lighting		REF SCHED 10
7.6	Tree Accent Lighting		REF SCHED 10
7.7	Electrical Outlets		REF SCHED 10
8.0	**REFERENCE SECTIONS AND ELEVATIONS**		
8.1	46th Avenue at Multi-Use Field	1 / L2-12	
8.2	Clayton Street Cover Extension, South	2 / L2-12	
8.3	Columbine Street Cover Extension, North	1 / L2-13	
8.4	Clayton Street Cover Extension, North	3 / L2-12	
8.5	Columbine Street Cover Extension, South	2 / L2-13	
8.6	46th Avenue at Event Lawn	1 / L2-14	
8.7	Tot Lot and Splash Pad	2,3 / L2-14	
8.8	Multi-Use Field Fencing	4 / L2-14	
8.9	Columbine Street	1 / L2-15	
8.10	Central Plaza Space and Event Lawn	2,3 / L2-15, 1,2,3 / L2-16	
8.11	East Side Community Space	1,2,3 / L2-17	
9.0	**PLANTING AND LANDSCAPE**		
9.1	Ornamental Tree Planting Over Structure		REF SCHED 10
9.2	Street Tree Planting Over Structure		REF SCHED 10
9.3	Shade Tree Planting Over Structure		REF SCHED 10
9.4	Shade Tree Planting Off Structure		REF SCHED 10
9.5	Enhanced Landscape		REF SCHED 10
9.6	Transitional Landscape		REF SCHED 10
9.7	Naturalized Turf		REF SCHED 10

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Print Date: 5/5/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions

Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
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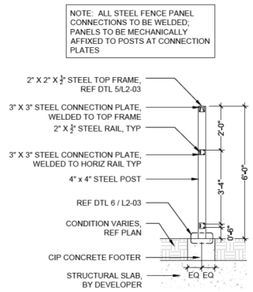
Region 1 KJS

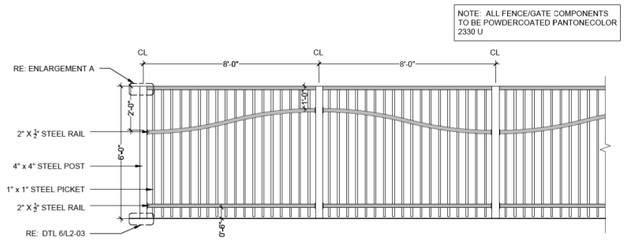
PROPOSAL
No Revisions:
Revised:
Void:

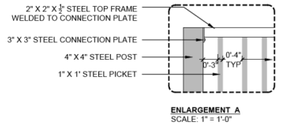
CENTRAL 70
LANDSCAPE AND AESTHETIC DETAILS

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: L2-03 of

Project No./Code
FBR 0704-234
19631
Sheet Number 460





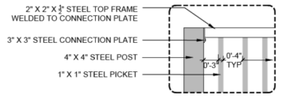


ENLARGEMENT A
SCALE: 1" = 1'-0"

1 CUSTOM FENCING TYPE 1

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

4.2A



ENLARGEMENT A
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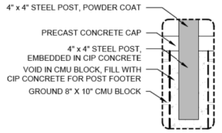

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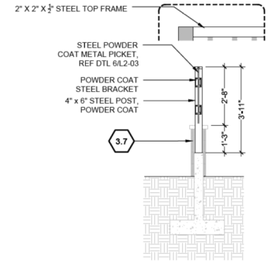

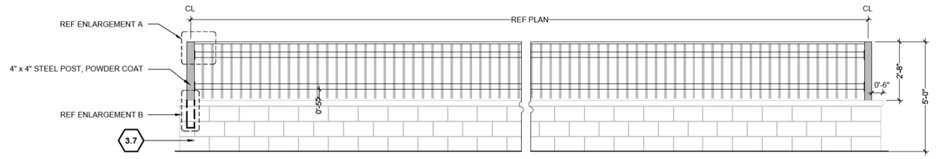

2 CUSTOM FENCING TYPE 2

SCALE: 3/8" = 1'-0"

4.2B

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
1.0	**PAVEMENTS, RAMPS, AND CURBS**		
1.1	CIP Concrete Paving, Sawcut Joints, Standard Grey, Broom Finish	1 / L2-01	
1.2A	CIP Concrete Paving, Sawcut Joints, Light Sandscape Finish, Integral color	1 / L2-01	
1.2B	CIP Concrete Paving, Sawcut Joints, Medium Sandscape Finish, Integral color	1 / L2-01	
1.3	Concrete/Stone Unit Pavers Type 1	2 / L2-01	
1.4	Concrete/Stone Unit Pavers Type 2	2 / L2-01	
1.5	Concrete/Stone Unit Pavers Type 3	2 / L2-01	
1.6	CIP Concrete Band	3 / L2-01	
1.7	Precast Concrete Band	3 / L2-01	
1.8	Playground Asphalt		REF CCD STDS
1.9	Rubberized Play Tiles		REF CCD/DPS STDS
1.10	Protective Play Surface		REF CCD/DPS STDS
1.11	Asphalt Parking Paving / Parking Striping		REF CCD STDS
1.12	Playground Pit ADA Ramp	4 / L2-01	
1.13	ADA Ramp		REF CCD STDS
1.14	CIP Concrete Curb and Gutter		REF CCD STDS
2.0	**NOT USED**		
3.0	**STEPS, CURBS AND WALLS**		
3.1	CIP Concrete Mural Wall	4,5 / L2-02	
3.2	CIP Concrete Curb	5 / L2-01	
3.3A	CIP Concrete Wall, 8" Wide	7 / L2-01	
3.3B	CIP Concrete Wall, 12" Wide	8 / L2-01	
3.3C	CIP Concrete Wall, 18" Wide	9 / L2-01	
3.4A	Precast Concrete Seat Wall, 18" Wide	10 / L2-01	
3.4B	Precast Concrete Seat Wall, 36" Wide	1,2 / L2-02	
3.5	Precast Concrete Retaining Wall	3 / L2-02	
3.6	Precast Concrete Step	1 / L2-03	
3.7	CMU Screen Wall	2 / L2-03	
3.8	Trash Enclosure	3 / L2-03	
4.0	**RAILINGS, BARRIERS AND FENCING**		
4.1	Stainless Steel Handrail	4 / L2-03	
4.2A	Custom Fencing Type 1	1 / L2-04	
4.2B	Custom Fencing Type 2	2 / L2-04	
4.3A	Fencing Gates Type 1	1 / L2-05	
4.3B	Fencing Gates Type 2	4 / L2-05	
4.3C	Fencing Gates Type 3	3 / L2-05	
4.3D	Fencing Gates Type 4	2 / L2-05	
5.0	**SPECIALTY ELEMENTS**		
5.1	Shade Structure, Events Lawn Pavilion	1,2 / L2-06	
5.2	Shade Structure, Type 1	1 / L2-07	
5.3	Shade Structure, Type 2	1 / L2-08	
5.4	Overlook	1 / L2-09	
5.5	Concessions/Restroom Building		REF SCHED 10
5.6	Maintenance Building		REF SCHED 10
5.7	Splash Pad Water Elements		REF SCHED 10
5.8	Tot Lot Play Elements		REF SCHED 10
5.9	Playground Play Elements		REF SCHED 10
5.10	Synthetic Turf		REF SCHED 10
5.11	Removable Soccer Goal		REF CCD STDS
5.12	Basketball Goal		REF DPS STDS
5.13	Primary Play Structure at School Playground		REF DPS STDS
5.14	Intermediate Play Structure at School Playground		REF DPS STDS
5.15	Swings at School Playground		REF DPS STDS
5.16	Painted Courts : Hop Scotch		REF DPS STDS
5.17	Painted Court : Hop Scotch ADA		REF DPS STDS
5.18	Painted Court : Foursquare		REF DPS STDS
5.19	Painted Court : Tether Ball		REF DPS STDS
5.20	Shade Structure at School Playground		REF DPS STDS
5.21	Sandstone Boulder		
6.0	**FURNISHINGS**		
6.1A	8' Diameter Precast Concrete Seating Pod	1 / L2-10	
6.1B	10' Diameter Precast Concrete Seating Pod	2 / L2-10	
6.2A	Bike Rack		REF SCHED 10
6.2B	Bike Share		REF SCHED 10
6.3	Tables and Chairs		REF SCHED 10
6.4	Trash/Recycle Receptacle		REF SCHED 10
6.5	Bench		REF SCHED 10
6.6	Custom Aluminum Bench	3 / L2-10	
6.7	Removable Bollard		REF SCHED 10
6.8	Interpretive Sign		REF CDOT STDS
6.9	Drinking Fountain		REF SCHED 10
6.10	Picnic Table		REF SCHED 10
6.11	Tree Grate		REF SCHED 10
7.0	**SITE LIGHTING AND ELECTRICAL**		
7.1	Pedestrian Lighting		REF SCHED 10
7.2	Central Plaza Lighting		REF SCHED 10
7.3	Field Lighting		REF SCHED 10
7.4	Parking Lot Lighting		REF SCHED 10
7.5	Accent Lighting		REF SCHED 10
7.6	Tree Accent Lighting		REF SCHED 10
7.7	Electrical Outlets		REF SCHED 10
8.0	**REFERENCE SECTIONS AND ELEVATIONS**		
8.1	46th Avenue at Multi-Use Field	1 / L2-12	
8.2	Clayton Street Cover Extension, South	2 / L2-12	
8.3	Columbine Street Cover Extension, North	1 / L2-13	
8.4	Clayton Street Cover Extension, North	3 / L2-12	
8.5	Columbine Street Cover Extension, South	2 / L2-13	
8.6	46th Avenue at Event Lawn	1 / L2-14	
8.7	Tot Lot and Splash Pad	2,3 / L2-14	
8.8	Multi-Use Field Fencing	4 / L2-14	
8.9	Columbine Street	1 / L2-15	
8.10	Central Plaza Space and Event Lawn	2,3 / L2-15, 1,2,3 / L2-16	
8.11	East Side Community Space	1,2,3 / L2-17	
9.0	**PLANTING AND LANDSCAPE**		
9.1	Ornamental Tree Planting Over Structure		REF SCHED 10
9.2	Street Tree Planting Over Structure		REF SCHED 10
9.3	Shade Tree Planting Over Structure		REF SCHED 10
9.4	Shade Tree Planting Off Structure		REF SCHED 10
9.5	Enhanced Landscape		REF SCHED 10
9.6	Transitional Landscape		REF SCHED 10
9.7	Naturalized Turf		REF SCHED 10

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Print Date: 5/5/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
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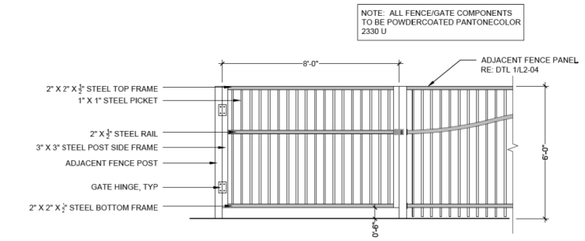
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
LANDSCAPE AND AESTHETIC DETAILS

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: L2-04 of

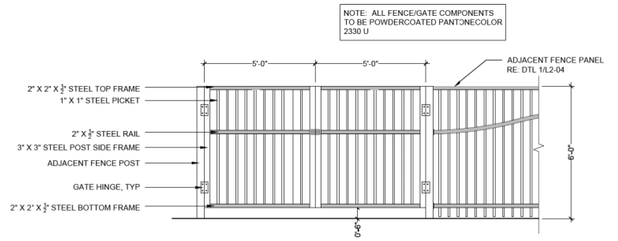
Project No./Code
FBR 0704-234
19631
Sheet Number 461



1 FENCING GATES TYPE 1 (SWING GATE)

SCALE: 3/8" = 1'-0"

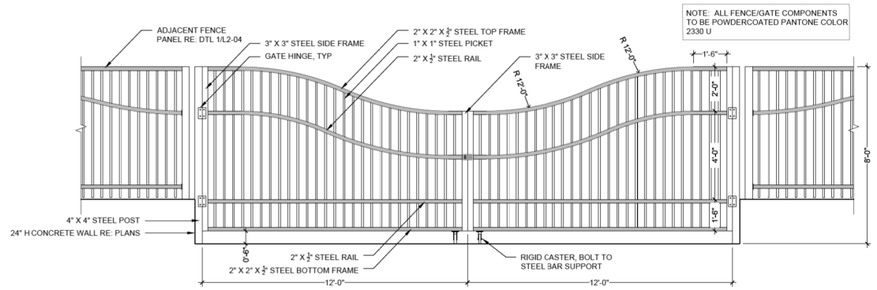
4.3A



2 FENCING GATES TYPE 4 (DOUBLE SWING GATE)

SCALE: 3/8" = 1'-0"

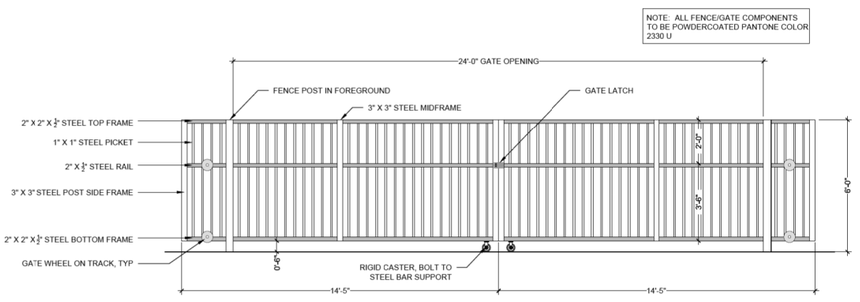
4.3A



3 FENCING GATES TYPE 3 (SWING GATE)

SCALE: 3/8" = 1'-0"

4.3C



4 FENCING GATES TYPE 2 (ROLLING GATE)

SCALE: 3/8" = 1'-0"

4.3B

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
1.0	**PAVEMENTS, RAMPS, AND CURBS**		
1.1	CIP Concrete Paving, Sawcut Joints, Standard Grey, Broom Finish	1 / L2-01	
1.2A	CIP Concrete Paving, Sawcut Joints, Light Sandscape Finish, Integral color	1 / L2-01	
1.2B	CIP Concrete Paving, Sawcut Joints, Medium Sandscape Finish, Integral color	1 / L2-01	
1.3	Concrete/Stone Unit Pavers Type 1	2 / L2-01	
1.4	Concrete/Stone Unit Pavers Type 2	2 / L2-01	
1.5	Concrete/Stone Unit Pavers Type 3	2 / L2-01	
1.6	CIP Concrete Band	3 / L2-01	
1.7	Precast Concrete Band	3 / L2-01	
1.8	Playground Asphalt		REF CCD STDS
1.9	Rubberized Play Tiles		REF CCD/DPS STDS
1.10	Protective Play Surface		REF CCD/DPS STDS
1.11	Asphalt Parking Paving / Parking Striping		REF CCD STDS
1.12	Playground Pit ADA Ramp	4 / L2-01	
1.13	ADA Ramp		REF CCD STDS
1.14	CIP Concrete Curb and Gutter		REF CCD STDS
2.0	**NOT USED**		
3.0	**STEPS, CURBS AND WALLS**		
3.1	CIP Concrete Mural Wall	4,5 / L2-02	
3.2	CIP Concrete Curb	5 / L2-01	
3.3A	CIP Concrete Wall, 8" Wide	7 / L2-01	
3.3B	CIP Concrete Wall, 12" Wide	8 / L2-01	
3.3C	CIP Concrete Wall, 18" Wide	9 / L2-01	
3.4A	Precast Concrete Seat Wall, 18" Wide	10 / L2-01	
3.4B	Precast Concrete Seat Wall, 36" Wide	1,2 / L2-02	
3.5	Precast Concrete Retaining Wall	3 / L2-02	
3.6	Precast Concrete Step	1 / L2-03	
3.7	CMU Screen Wall	2 / L2-03	
3.8	Trash Enclosure	3 / L2-03	
4.0	**RAILINGS, BARRIERS AND FENCING**		
4.1	Stainless Steel Handrail	4 / L2-03	
4.2A	Custom Fencing Type 1	1 / L2-04	
4.2B	Custom Fencing Type 2	2 / L2-04	
4.3A	Fencing Gates Type 1	1 / L2-05	
4.3B	Fencing Gates Type 2	4 / L2-05	
4.3C	Fencing Gates Type 3	3 / L2-05	
4.3D	Fencing Gates Type 4	2 / L2-05	
5.0	**SPECIALTY ELEMENTS**		
5.1	Shade Structure, Events Lawn Pavilion	1,2 / L2-06	
5.2	Shade Structure, Type 1	1 / L2-07	
5.3	Shade Structure, Type 2	1 / L2-08	
5.4	Overlook	1 / L2-09	
5.5	Concessions/Restroom Building		REF SCHED 10
5.6	Maintenance Building		REF SCHED 10
5.7	Splash Pad Water Elements		REF SCHED 10
5.8	Tot Lot Play Elements		REF SCHED 10
5.9	Playground Play Elements		REF SCHED 10
5.10	Synthetic Turf		REF SCHED 10
5.11	Removable Soccer Goal		REF CCD STDS
5.12	Basketball Goal		REF DPS STDS
5.13	Primary Play Structure at School Playground		REF DPS STDS
5.14	Intermediate Play Structure at School Playground		REF DPS STDS
5.15	Swings at School Playground		REF DPS STDS
5.16	Painted Courts : Hop Scotch		REF DPS STDS
5.17	Painted Court : Hop Scotch ADA		REF DPS STDS
5.18	Painted Court : Foursquare		REF DPS STDS
5.19	Painted Court : Tether Ball		REF DPS STDS
5.20	Shade Structure at School Playground		REF DPS STDS
5.21	Sandstone Boulder		
6.0	**FURNISHINGS**		
6.1A	6' Diameter Precast Concrete Seating Pod	1 / L2-10	
6.1B	10' Diameter Precast Concrete Seating Pod	2 / L2-10	
6.2A	Bike Rack		REF SCHED 10
6.2B	Bike Share		REF SCHED 10
6.3	Tables and Chairs		REF SCHED 10
6.4	Trash/Recycle Receptacle		REF SCHED 10
6.5	Bench		REF SCHED 10
6.6	Custom Aluminum Bench	3 / L2-10	
6.7	Removable Bollard		REF SCHED 10
6.8	Interpretive Sign		REF CDOT STDS
6.9	Drinking Fountain		REF SCHED 10
6.10	Picnic Table		REF SCHED 10
6.11	Tree Grate		REF SCHED 10
7.0	**SITE LIGHTING AND ELECTRICAL**		
7.1	Pedestrian Lighting		REF SCHED 10
7.2	Central Plaza Lighting		REF SCHED 10
7.3	Field Lighting		REF SCHED 10
7.4	Parking Lot Lighting		REF SCHED 10
7.5	Accent Lighting		REF SCHED 10
7.6	Tree Accent Lighting		REF SCHED 10
7.7	Electrical Outlets		REF SCHED 10
8.0	**REFERENCE SECTIONS AND ELEVATIONS**		
8.1	46th Avenue at Multi-Use Field	1 / L2-12	
8.2	Clayton Street Cover Extension, South	2 / L2-12	
8.3	Columbine Street Cover Extension, North	1 / L2-13	
8.4	Clayton Street Cover Extension, North	3 / L2-12	
8.5	Columbine Street Cover Extension, South	2 / L2-13	
8.6	46th Avenue at Event Lawn	1 / L2-14	
8.7	Tot Lot and Splash Pad	2,3 / L2-14	
8.8	Multi-Use Field Fencing	4 / L2-14	
8.9	Columbine Street	1 / L2-15	
8.10	Central Plaza Space and Event Lawn	2,3 / L2-15, 1,2,3 / L2-16	
8.11	East Side Community Space	1,2,3 / L2-17	
9.0	**PLANTING AND LANDSCAPE**		
9.1	Ornamental Tree Planting Over Structure		REF SCHED 10
9.2	Street Tree Planting Over Structure		REF SCHED 10
9.3	Shade Tree Planting Over Structure		REF SCHED 10
9.4	Shade Tree Planting Off Structure		REF SCHED 10
9.5	Enhanced Landscape		REF SCHED 10
9.6	Transitional Landscape		REF SCHED 10
9.7	Naturalized Turf		REF SCHED 10

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Print Date: 5/5/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

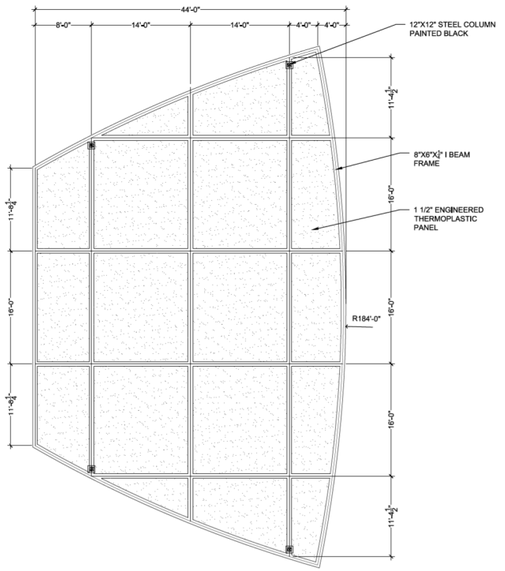
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
LANDSCAPE AND AESTHETIC DETAILS

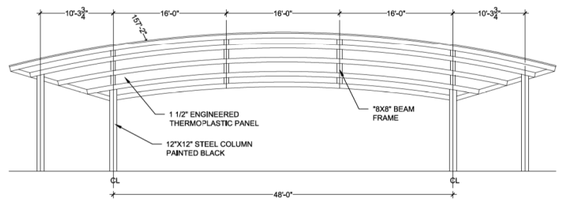
Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: L2-05 of

Project No./Code
FBR 0704-234
19631
Sheet Number 462



PLAN VIEW

*NOTE:
1. DRAWINGS ARE FOR DESIGN INTENT ONLY.
2. DEVELOPER TO ADDRESS DRAINAGE FROM SHADE STRUCTURE ROOF TO MITIGATE SHEET DRAINAGE TO SURROUNDING SURFACES.

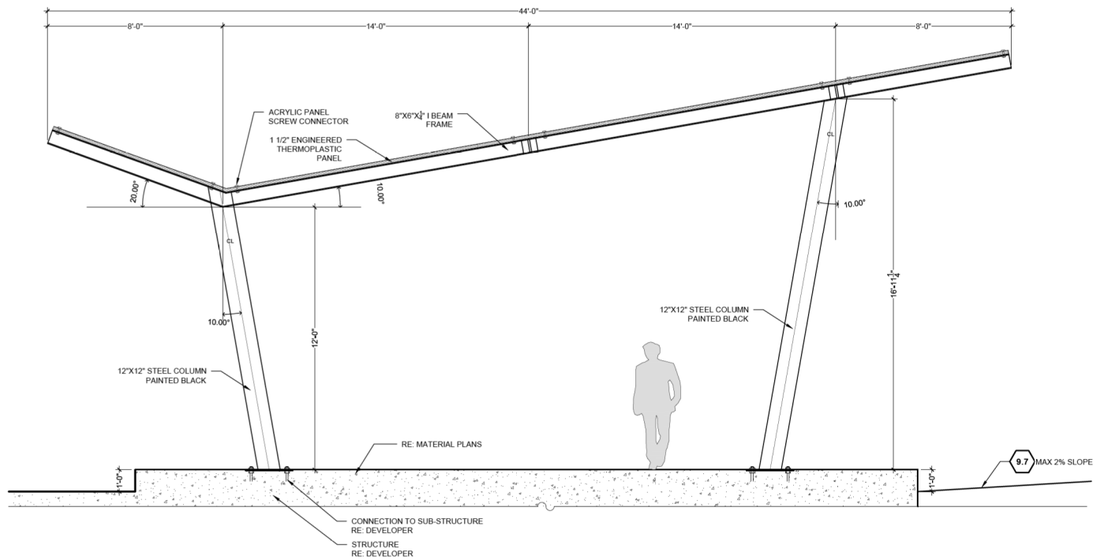


EAST ELEVATION

1 SHADE STRUCTURE, EVENTS LAWN PAVILION

5.2

SCALE: 1/8" = 1'-0"



2 SHADE STRUCTURE, EVENTS LAWN PAVILION

5.2

SCALE: 3/8" = 1'-0"

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
1.0	**PAVEMENTS, RAMPS, AND CURBS**		
1.1	CIP Concrete Paving, Sawcut Joints, Standard Grey, Broom Finish	1 / L2-01	
1.2A	CIP Concrete Paving, Sawcut Joints, Light Sandscape Finish, Integral color	1 / L2-01	
1.2B	CIP Concrete Paving, Sawcut Joints, Medium Sandscape Finish, Integral color	1 / L2-01	
1.3	Concrete/Stone Unit Pavers Type 1	2 / L2-01	
1.4	Concrete/Stone Unit Pavers Type 2	2 / L2-01	
1.5	Concrete/Stone Unit Pavers Type 3	2 / L2-01	
1.6	CIP Concrete Band	3 / L2-01	
1.7	Precast Concrete Band	3 / L2-01	
1.8	Playground Asphalt		REF CCD STDS
1.9	Rubberized Play Tiles		REF CCD/DPS STDS
1.10	Protective Play Surface		REF CCD/DPS STDS
1.11	Asphalt Parking Paving / Parking Striping		REF CCD STDS
1.12	Playground Pit ADA Ramp	4 / L2-01	
1.13	ADA Ramp		REF CCD STDS
1.14	CIP Concrete Curb and Gutter		REF CCD STDS
2.0	**NOT USED**		
3.0	**STEPS, CURBS AND WALLS**		
3.1	CIP Concrete Mural Wall	4,5 / L2-02	
3.2	CIP Concrete Curb	5 / L2-01	
3.3A	CIP Concrete Wall, 8" Wide	7 / L2-01	
3.3B	CIP Concrete Wall, 12" Wide	8 / L2-01	
3.3C	CIP Concrete Wall, 18" Wide	9 / L2-01	
3.4A	Precast Concrete Seat Wall, 18" Wide	10 / L2-01	
3.4B	Precast Concrete Seat Wall, 36" Wide	1,2 / L2-02	
3.5	Precast Concrete Retaining Wall	3 / L2-02	
3.6	Precast Concrete Step	1 / L2-03	
3.7	CMU Screen Wall	2 / L2-03	
3.8	Trash Enclosure	3 / L2-03	
4.0	**RAILINGS, BARRIERS AND FENCING**		
4.1	Stainless Steel Handrail	4 / L2-03	
4.2A	Custom Fencing Type 1	1 / L2-04	
4.2B	Custom Fencing Type 2	2 / L2-04	
4.3A	Fencing Gates Type 1	1 / L2-05	
4.3B	Fencing Gates Type 2	4 / L2-05	
4.3C	Fencing Gates Type 3	3 / L2-05	
4.3D	Fencing Gates Type 4	2 / L2-05	
5.0	**SPECIALTY ELEMENTS**		
5.1	Shade Structure, Events Lawn Pavilion	1,2 / L2-06	
5.2	Shade Structure, Type 1	1 / L2-07	
5.3	Shade Structure, Type 2	1 / L2-08	
5.4	Overlook	1 / L2-09	
5.5	Concessions/Restroom Building		REF SCHED 10
5.6	Maintenance Building		REF SCHED 10
5.7	Splash Pad Water Elements		REF SCHED 10
5.8	Tot Lot Play Elements		REF SCHED 10
5.9	Playground Play Elements		REF SCHED 10
5.10	Synthetic Turf		REF SCHED 10
5.11	Removable Soccer Goal		REF CCD STDS
5.12	Basketball Goal		REF DPS STDS
5.13	Primary Play Structure at School Playground		REF DPS STDS
5.14	Intermediate Play Structure at School Playground		REF DPS STDS
5.15	Swings at School Playground		REF DPS STDS
5.16	Painted Courts : Hop Scotch		REF DPS STDS
5.17	Painted Court : Hop Scotch ADA		REF DPS STDS
5.18	Painted Court : Foursquare		REF DPS STDS
5.19	Painted Court : Tether Ball		REF DPS STDS
5.20	Shade Structure at School Playground		REF DPS STDS
5.21	Sandstone Boulder		
6.0	**FURNISHINGS**		
6.1A	8' Diameter Precast Concrete Seating Pod	1 / L2-10	
6.1B	10' Diameter Precast Concrete Seating Pod	2 / L2-10	
6.2A	Bike Rack		REF SCHED 10
6.2B	Bike Share		REF SCHED 10
6.3	Tables and Chairs		REF SCHED 10
6.4	Trash/Recycle Receptacle		REF SCHED 10
6.5	Bench		REF SCHED 10
6.6	Custom Aluminum Bench	3 / L2-10	
6.7	Removable Bollard		REF SCHED 10
6.8	Interpretive Sign		REF CDOT STDS
6.9	Drinking Fountain		REF SCHED 10
6.10	Picnic Table		REF SCHED 10
6.11	Tree Grate		REF SCHED 10
7.0	**SITE LIGHTING AND ELECTRICAL**		
7.1	Pedestrian Lighting		REF SCHED 10
7.2	Central Plaza Lighting		REF SCHED 10
7.3	Field Lighting		REF SCHED 10
7.4	Parking Lot Lighting		REF SCHED 10
7.5	Accent Lighting		REF SCHED 10
7.6	Tree Accent Lighting		REF SCHED 10
7.7	Electrical Outlets		REF SCHED 10
8.0	**REFERENCE SECTIONS AND ELEVATIONS**		
8.1	46th Avenue at Multi-Use Field	1 / L2-12	
8.2	Clayton Street Cover Extension, South	2 / L2-12	
8.3	Columbine Street Cover Extension, North	1 / L2-13	
8.4	Clayton Street Cover Extension, North	3 / L2-12	
8.5	Columbine Street Cover Extension, South	2 / L2-13	
8.6	46th Avenue at Event Lawn	1 / L2-14	
8.7	Tot Lot and Splash Pad	2,3 / L2-14	
8.8	Multi-Use Field Fencing	4 / L2-14	
8.9	Columbine Street	1 / L2-15	
8.10	Central Plaza Space and Event Lawn	2,3 / L2-15, 1,2,3 / L2-16	
8.11	East Side Community Space	1,2,3 / L2-17	
9.0	**PLANTING AND LANDSCAPE**		
9.1	Ornamental Tree Planting Over Structure		REF SCHED 10
9.2	Street Tree Planting Over Structure		REF SCHED 10
9.3	Shade Tree Planting Over Structure		REF SCHED 10
9.4	Shade Tree Planting Off Structure		REF SCHED 10
9.5	Enhanced Landscape		REF SCHED 10
9.6	Transitional Landscape		REF SCHED 10
9.7	Naturalized Turf		REF SCHED 10

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Print Date: 5/5/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
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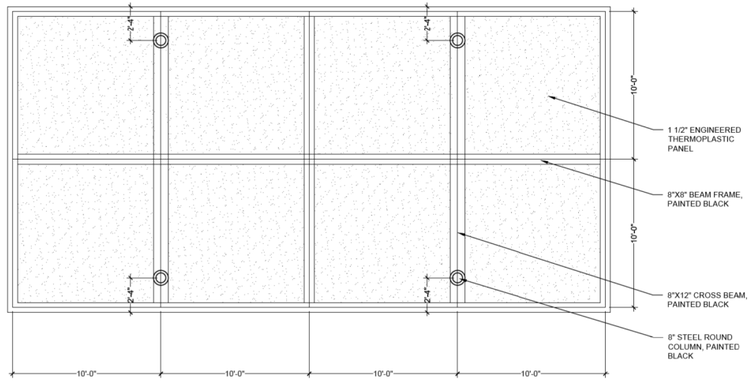
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

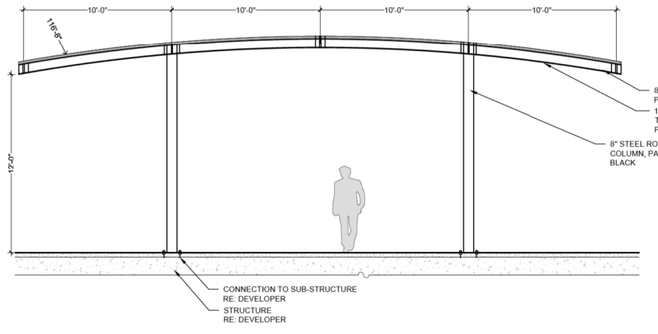
CENTRAL 70
LANDSCAPE AND AESTHETIC DETAILS

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: L2-06 of

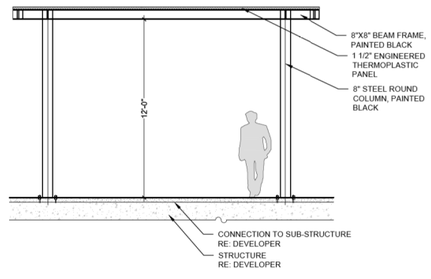
Project No./Code
FBR 0704-234
19631
Sheet Number 463



PLAN VIEW



ELEVATION



SECTION

*NOTE:
1. DRAWINGS ARE FOR DESIGN INTENT ONLY.
2. DEVELOPER TO ADDRESS DRAINAGE FROM SHADE STRUCTURE ROOF TO MITIGATE SHEET DRAINAGE TO SURROUNDING SURFACES.

1 SHADE STRUCTURE, TYPE 1

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

5.3A

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
1.0	**PAVEMENTS, RAMPS, AND CURBS**		
1.1	CIP Concrete Paving, Sawcut Joints, Standard Grey, Broom Finish	1 / L2-01	
1.2A	CIP Concrete Paving, Sawcut Joints, Light Sandscape Finish, Integral color	1 / L2-01	
1.2B	CIP Concrete Paving, Sawcut Joints, Medium Sandscape Finish, Integral color	1 / L2-01	
1.3	Concrete/Stone Unit Pavers Type 1	2 / L2-01	
1.4	Concrete/Stone Unit Pavers Type 2	2 / L2-01	
1.5	Concrete/Stone Unit Pavers Type 3	2 / L2-01	
1.6	CIP Concrete Band	3 / L2-01	
1.7	Precast Concrete Band	3 / L2-01	
1.8	Playground Asphalt		REF CCD STDS
1.9	Rubberized Play Tiles		REF CCD/DPS STDS
1.10	Protective Play Surface		REF CCD/DPS STDS
1.11	Asphalt Parking Paving / Parking Striping		REF CCD STDS
1.12	Playground Pit ADA Ramp	4 / L2-01	
1.13	ADA Ramp		REF CCD STDS
1.14	CIP Concrete Curb and Gutter		REF CCD STDS
2.0	**NOT USED**		
3.0	**STEPS, CURBS AND WALLS**		
3.1	CIP Concrete Mural Wall	4,5 / L2-02	
3.2	CIP Concrete Curb	5 / L2-01	
3.3A	CIP Concrete Wall, 8" Wide	7 / L2-01	
3.3B	CIP Concrete Wall, 12" Wide	8 / L2-01	
3.3C	CIP Concrete Wall, 18" Wide	9 / L2-01	
3.4A	Precast Concrete Seat Wall, 18" Wide	10 / L2-01	
3.4B	Precast Concrete Seat Wall, 36" Wide	1,2 / L2-02	
3.5	Precast Concrete Retaining Wall	3 / L2-02	
3.6	Precast Concrete Step	1 / L2-03	
3.7	CMU Screen Wall	2 / L2-03	
3.8	Trash Enclosure	3 / L2-03	
4.0	**RAILINGS, BARRIERS AND FENCING**		
4.1	Stainless Steel Handrail	4 / L2-03	
4.2A	Custom Fencing Type 1	1 / L2-04	
4.2B	Custom Fencing Type 2	2 / L2-04	
4.3A	Fencing Gates Type 1	1 / L2-05	
4.3B	Fencing Gates Type 2	4 / L2-05	
4.3C	Fencing Gates Type 3	3 / L2-05	
4.3D	Fencing Gates Type 4	2 / L2-05	
5.0	**SPECIALTY ELEMENTS**		
5.1	Shade Structure, Events Lawn Pavilion	1,2 / L2-06	
5.2	Shade Structure, Type 1	1 / L2-07	
5.3	Shade Structure, Type 2	1 / L2-08	
5.4	Overlook	1 / L2-09	
5.5	Concessions/Restroom Building		REF SCHED 10
5.6	Maintenance Building		REF SCHED 10
5.7	Splash Pad Water Elements		REF SCHED 10
5.8	Tot Lot Play Elements		REF SCHED 10
5.9	Playground Play Elements		REF SCHED 10
5.10	Synthetic Turf		REF SCHED 10
5.11	Removable Soccer Goal		REF CCD STDS
5.12	Basketball Goal		REF DPS STDS
5.13	Primary Play Structure at School Playground		REF DPS STDS
5.14	Intermediate Play Structure at School Playground		REF DPS STDS
5.15	Swings at School Playground		REF DPS STDS
5.16	Painted Courts : Hop Scotch		REF DPS STDS
5.17	Painted Court : Hop Scotch ADA		REF DPS STDS
5.18	Painted Court : Foursquare		REF DPS STDS
5.19	Painted Court : Tether Ball		REF DPS STDS
5.20	Shade Structure at School Playground		REF DPS STDS
5.21	Sandstone Boulder		
6.0	**FURNISHINGS**		
6.1A	8' Diameter Precast Concrete Seating Pod	1 / L2-10	
6.1B	10' Diameter Precast Concrete Seating Pod	2 / L2-10	
6.2A	Bike Rack		REF SCHED 10
6.2B	Bike Share		REF SCHED 10
6.3	Tables and Chairs		REF SCHED 10
6.4	Trash/Recycle Receptacle		REF SCHED 10
6.5	Bench		REF SCHED 10
6.6	Custom Aluminum Bench	3 / L2-10	
6.7	Removable Bollard		REF SCHED 10
6.8	Interpretive Sign		REF CDOT STDS
6.9	Drinking Fountain		REF SCHED 10
6.10	Picnic Table		REF SCHED 10
6.11	Tree Grate		REF SCHED 10
7.0	**SITE LIGHTING AND ELECTRICAL**		
7.1	Pedestrian Lighting		REF SCHED 10
7.2	Central Plaza Lighting		REF SCHED 10
7.3	Field Lighting		REF SCHED 10
7.4	Parking Lot Lighting		REF SCHED 10
7.5	Accent Lighting		REF SCHED 10
7.6	Tree Accent Lighting		REF SCHED 10
7.7	Electrical Outlets		REF SCHED 10
8.0	**REFERENCE SECTIONS AND ELEVATIONS**		
8.1	46th Avenue at Multi-Use Field	1 / L2-12	
8.2	Clayton Street Cover Extension, South	2 / L2-12	
8.3	Columbine Street Cover Extension, North	1 / L2-13	
8.4	Clayton Street Cover Extension, North	3 / L2-12	
8.5	Columbine Street Cover Extension, South	2 / L2-13	
8.6	46th Avenue at Event Lawn	1 / L2-14	
8.7	Tot Lot and Splash Pad	2,3 / L2-14	
8.8	Multi-Use Field Fencing	4 / L2-14	
8.9	Columbine Street	1 / L2-15	
8.10	Central Plaza Space and Event Lawn	2,3 / L2-15, 1,2,3 / L2-16	
8.11	East Side Community Space	1,2,3 / L2-17	
9.0	**PLANTING AND LANDSCAPE**		
9.1	Ornamental Tree Planting Over Structure		REF SCHED 10
9.2	Street Tree Planting Over Structure		REF SCHED 10
9.3	Shade Tree Planting Over Structure		REF SCHED 10
9.4	Shade Tree Planting Off Structure		REF SCHED 10
9.5	Enhanced Landscape		REF SCHED 10
9.6	Transitional Landscape		REF SCHED 10
9.7	Naturalized Turf		REF SCHED 10

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Unit Information
Unit Leader

Front Range Mobility Group

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No Revisions:
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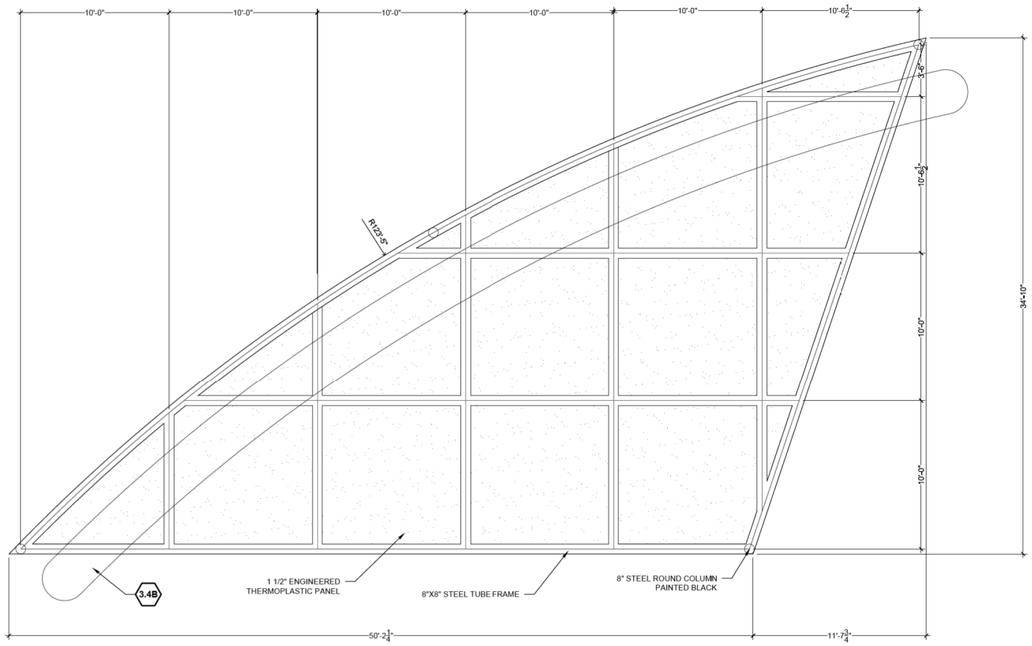
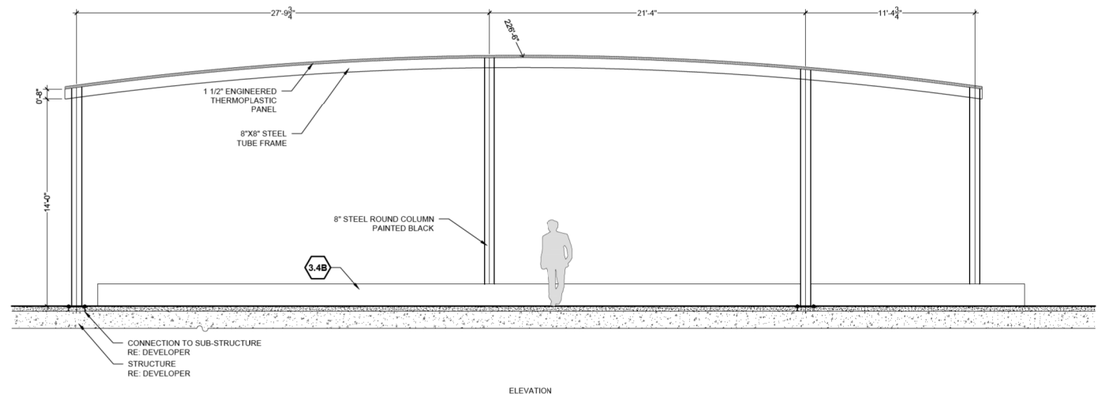
CENTRAL 70
LANDSCAPE AND AESTHETIC DETAILS

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: L2-07 of

Project No./Code
FBR 0704-234
19631
Sheet Number 464



PLAN VIEW



ELEVATION

1 SHADE STRUCTURE, TYPE 2

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

5.3

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
1.0	**PAVEMENTS, RAMPS, AND CURBS**		
1.1	CIP Concrete Paving, Sawcut Joints, Standard Grey, Broom Finish	1 / L2-01	
1.2A	CIP Concrete Paving, Sawcut Joints, Light Sandscape Finish, Integral color	1 / L2-01	
1.2B	CIP Concrete Paving, Sawcut Joints, Medium Sandscape Finish, Integral color	1 / L2-01	
1.3	Concrete/Stone Unit Pavers Type 1	2 / L2-01	
1.4	Concrete/Stone Unit Pavers Type 2	2 / L2-01	
1.5	Concrete/Stone Unit Pavers Type 3	2 / L2-01	
1.6	CIP Concrete Band	3 / L2-01	
1.7	Precast Concrete Band	3 / L2-01	
1.8	Playground Asphalt		REF CCD STDS
1.9	Rubberized Play Tiles		REF CCD/DPS STDS
1.10	Protective Play Surface		REF CCD/DPS STDS
1.11	Asphalt Parking Paving / Parking Striping		REF CCD STDS
1.12	Playground Pit ADA Ramp	4 / L2-01	
1.13	ADA Ramp		REF CCD STDS
1.14	CIP Concrete Curb and Gutter		REF CCD STDS
2.0	**NOT USED**		
3.0	**STEPS, CURBS AND WALLS**		
3.1	CIP Concrete Mural Wall	4,5 / L2-02	
3.2	CIP Concrete Curb	5 / L2-01	
3.3A	CIP Concrete Wall, 8" Wide	7 / L2-01	
3.3B	CIP Concrete Wall, 12" Wide	8 / L2-01	
3.3C	CIP Concrete Wall, 18" Wide	9 / L2-01	
3.4A	Precast Concrete Seat Wall, 18" Wide	10 / L2-01	
3.4B	Precast Concrete Seat Wall, 36" Wide	1,2 / L2-02	
3.5	Precast Concrete Retaining Wall	3 / L2-02	
3.6	Precast Concrete Step	1 / L2-03	
3.7	CMU Screen Wall	2 / L2-03	
3.8	Trash Enclosure	3 / L2-03	
4.0	**RAILINGS, BARRIERS AND FENCING**		
4.1	Stainless Steel Handrail	4 / L2-03	
4.2A	Custom Fencing Type 1	1 / L2-04	
4.2B	Custom Fencing Type 2	2 / L2-04	
4.3A	Fencing Gates Type 1	1 / L2-05	
4.3B	Fencing Gates Type 2	4 / L2-05	
4.3C	Fencing Gates Type 3	3 / L2-05	
4.3D	Fencing Gates Type 4	2 / L2-05	
5.0	**SPECIALTY ELEMENTS**		
5.1	Shade Structure, Events Lawn Pavilion	1,2 / L2-06	
5.2	Shade Structure, Type 1	1 / L2-07	
5.3	Shade Structure, Type 2	1 / L2-08	
5.4	Overlook	1 / L2-09	
5.5	Concessions/Restroom Building		REF SCHED 10
5.6	Maintenance Building		REF SCHED 10
5.7	Splash Pad Water Elements		REF SCHED 10
5.8	Tot Lot Play Elements		REF SCHED 10
5.9	Playground Play Elements		REF SCHED 10
5.10	Synthetic Turf		REF SCHED 10
5.11	Removable Soccer Goal		REF CCD STDS
5.12	Basketball Goal		REF DPS STDS
5.13	Primary Play Structure at School Playground		REF DPS STDS
5.14	Intermediate Play Structure at School Playground		REF DPS STDS
5.15	Swings at School Playground		REF DPS STDS
5.16	Painted Courts : Hop Scotch		REF DPS STDS
5.17	Painted Court : Hop Scotch ADA		REF DPS STDS
5.18	Painted Court : Foursquare		REF DPS STDS
5.19	Painted Court : Tether Ball		REF DPS STDS
5.20	Shade Structure at School Playground		REF DPS STDS
5.21	Sandstone Boulder		
6.0	**FURNISHINGS**		
6.1A	8' Diameter Precast Concrete Seating Pod	1 / L2-10	
6.1B	10' Diameter Precast Concrete Seating Pod	2 / L2-10	
6.2A	Bike Rack		REF SCHED 10
6.2B	Bike Share		REF SCHED 10
6.3	Tables and Chairs		REF SCHED 10
6.4	Trash/Recycle Receptacle		REF SCHED 10
6.5	Bench		REF SCHED 10
6.6	Custom Aluminum Bench	3 / L2-10	
6.7	Removable Bollard		REF SCHED 10
6.8	Interpretive Sign		REF CDOT STDS
6.9	Drinking Fountain		REF SCHED 10
6.10	Picnic Table		REF SCHED 10
6.11	Tree Grate		REF SCHED 10
7.0	**SITE LIGHTING AND ELECTRICAL**		
7.1	Pedestrian Lighting		REF SCHED 10
7.2	Central Plaza Lighting		REF SCHED 10
7.3	Field Lighting		REF SCHED 10
7.4	Parking Lot Lighting		REF SCHED 10
7.5	Accent Lighting		REF SCHED 10
7.6	Tree Accent Lighting		REF SCHED 10
7.7	Electrical Outlets		REF SCHED 10
8.0	**REFERENCE SECTIONS AND ELEVATIONS**		
8.1	46th Avenue at Multi-Use Field	1 / L2-12	
8.2	Clayton Street Cover Extension, South	2 / L2-12	
8.3	Columbine Street Cover Extension, North	1 / L2-13	
8.4	Clayton Street Cover Extension, North	3 / L2-12	
8.5	Columbine Street Cover Extension, South	2 / L2-13	
8.6	46th Avenue at Event Lawn	1 / L2-14	
8.7	Tot Lot and Splash Pad	2,3 / L2-14	
8.8	Multi-Use Field Fencing	4 / L2-14	
8.9	Columbine Street	1 / L2-15	
8.10	Central Plaza Space and Event Lawn	2,3 / L2-15, 1,2,3 / L2-16	
8.11	East Side Community Space	1,2,3 / L2-17	
9.0	**PLANTING AND LANDSCAPE**		
9.1	Ornamental Tree Planting Over Structure		REF SCHED 10
9.2	Street Tree Planting Over Structure		REF SCHED 10
9.3	Shade Tree Planting Over Structure		REF SCHED 10
9.4	Shade Tree Planting Off Structure		REF SCHED 10
9.5	Enhanced Landscape		REF SCHED 10
9.6	Transitional Landscape		REF SCHED 10
9.7	Naturalized Turf		REF SCHED 10

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Print Date: 5/5/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

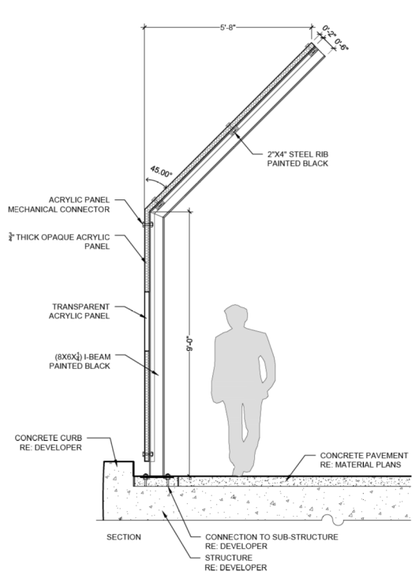
PROPOSAL
No Revisions:
Revised:
Void:

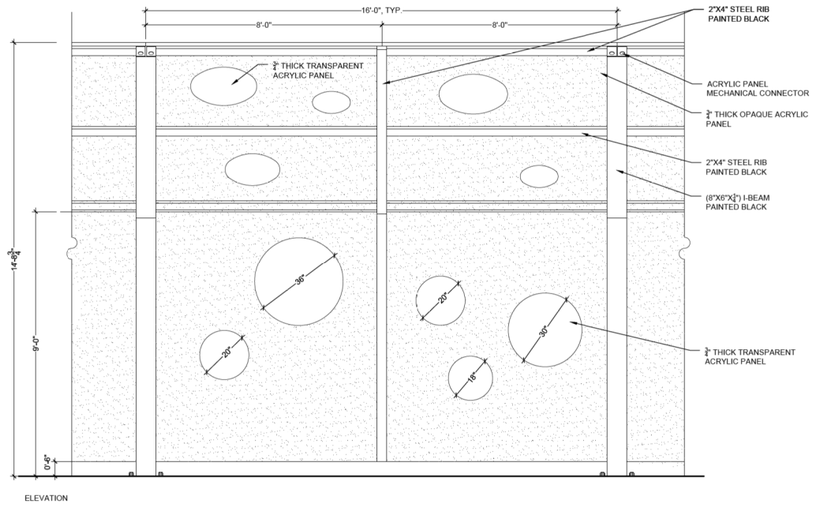
CENTRAL 70
LANDSCAPE AND AESTHETIC DETAILS

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: L2-08 of

Project No./Code
FBR 0704-234
19631
Sheet Number 465

*NOTE:
1. DRAWINGS ARE FOR DESIGN INTENT ONLY.
2. DEVELOPER TO ADDRESS DRAINAGE FROM SHADE STRUCTURE ROOF TO MITIGATE SHEET DRAINAGE TO SURROUNDING SURFACES.





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

5.4

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
1.0	**PAVEMENTS, RAMPS, AND CURBS**		
1.1	CIP Concrete Paving, Sawcut Joints, Standard Grey, Broom Finish	1 / L2-01	
1.2A	CIP Concrete Paving, Sawcut Joints, Light Sandscape Finish, Integral color	1 / L2-01	
1.2B	CIP Concrete Paving, Sawcut Joints, Medium Sandscape Finish, Integral color	1 / L2-01	
1.3	Concrete/Stone Unit Pavers Type 1	2 / L2-01	
1.4	Concrete/Stone Unit Pavers Type 2	2 / L2-01	
1.5	Concrete/Stone Unit Pavers Type 3	2 / L2-01	
1.6	CIP Concrete Band	3 / L2-01	
1.7	Precast Concrete Band	3 / L2-01	
1.8	Playground Asphalt		REF CCD STDS
1.9	Rubberized Play Tiles		REF CCD/DPS STDS
1.10	Protective Play Surface		REF CCD/DPS STDS
1.11	Asphalt Parking Paving / Parking Striping		REF CCD STDS
1.12	Playground Pit ADA Ramp	4 / L2-01	
1.13	ADA Ramp		REF CCD STDS
1.14	CIP Concrete Curb and Gutter		REF CCD STDS
2.0	**NOT USED**		
3.0	**STEPS, CURBS AND WALLS**		
3.1	CIP Concrete Mural Wall	4,5 / L2-02	
3.2	CIP Concrete Curb	5 / L2-01	
3.3A	CIP Concrete Wall, 8" Wide	7 / L2-01	
3.3B	CIP Concrete Wall, 12" Wide	8 / L2-01	
3.3C	CIP Concrete Wall, 18" Wide	9 / L2-01	
3.4A	Precast Concrete Seat Wall, 18" Wide	10 / L2-01	
3.4B	Precast Concrete Seat Wall, 36" Wide	1,2 / L2-02	
3.5	Precast Concrete Retaining Wall	3 / L2-02	
3.6	Precast Concrete Step	1 / L2-03	
3.7	CMU Screen Wall	2 / L2-03	
3.8	Trash Enclosure	3 / L2-03	
4.0	**RAILINGS, BARRIERS AND FENCING**		
4.1	Stainless Steel Handrail	4 / L2-03	
4.2A	Custom Fencing Type 1	1 / L2-04	
4.2B	Custom Fencing Type 2	2 / L2-04	
4.3A	Fencing Gates Type 1	1 / L2-05	
4.3B	Fencing Gates Type 2	4 / L2-05	
4.3C	Fencing Gates Type 3	3 / L2-05	
4.3D	Fencing Gates Type 4	2 / L2-05	
5.0	**SPECIALTY ELEMENTS**		
5.1	Shade Structure, Events Lawn Pavilion	1,2 / L2-06	
5.2	Shade Structure, Type 1	1 / L2-07	
5.3	Shade Structure, Type 2	1 / L2-08	
5.4	Overlook	1 / L2-09	
5.5	Concessions/Restroom Building		REF SCHED 10
5.6	Maintenance Building		REF SCHED 10
5.7	Splash Pad Water Elements		REF SCHED 10
5.8	Tot Lot Play Elements		REF SCHED 10
5.9	Playground Play Elements		REF SCHED 10
5.10	Synthetic Turf		REF SCHED 10
5.11	Removable Soccer Goal		REF CCD STDS
5.12	Basketball Goal		REF DPS STDS
5.13	Primary Play Structure at School Playground		REF DPS STDS
5.14	Intermediate Play Structure at School Playground		REF DPS STDS
5.15	Swings at School Playground		REF DPS STDS
5.16	Painted Courts : Hop Scotch		REF DPS STDS
5.17	Painted Court : Hop Scotch ADA		REF DPS STDS
5.18	Painted Court : Foursquare		REF DPS STDS
5.19	Painted Court : Tether Ball		REF DPS STDS
5.20	Shade Structure at School Playground		REF DPS STDS
5.21	Sandstone Boulder		
6.0	**FURNISHINGS**		
6.1A	8' Diameter Precast Concrete Seating Pod	1 / L2-10	
6.1B	10' Diameter Precast Concrete Seating Pod	2 / L2-10	
6.2A	Bike Rack		REF SCHED 10
6.2B	Bike Share		REF SCHED 10
6.3	Tables and Chairs		REF SCHED 10
6.4	Trash/Recycle Receptacle		REF SCHED 10
6.5	Bench		REF SCHED 10
6.6	Custom Aluminum Bench	3 / L2-10	
6.7	Removable Bollard		REF SCHED 10
6.8	Interpretive Sign		REF CDOT STDS
6.9	Drinking Fountain		REF SCHED 10
6.10	Picnic Table		REF SCHED 10
6.11	Tree Grate		REF SCHED 10
7.0	**SITE LIGHTING AND ELECTRICAL**		
7.1	Pedestrian Lighting		REF SCHED 10
7.2	Central Plaza Lighting		REF SCHED 10
7.3	Field Lighting		REF SCHED 10
7.4	Parking Lot Lighting		REF SCHED 10
7.5	Accent Lighting		REF SCHED 10
7.6	Tree Accent Lighting		REF SCHED 10
7.7	Electrical Outlets		REF SCHED 10
8.0	**REFERENCE SECTIONS AND ELEVATIONS**		
8.1	46th Avenue at Multi-Use Field	1 / L2-12	
8.2	Clayton Street Cover Extension, South	2 / L2-12	
8.3	Columbine Street Cover Extension, North	1 / L2-13	
8.4	Clayton Street Cover Extension, North	3 / L2-12	
8.5	Columbine Street Cover Extension, South	2 / L2-13	
8.6	46th Avenue at Event Lawn	1 / L2-14	
8.7	Tot Lot and Splash Pad	2,3 / L2-14	
8.8	Multi-Use Field Fencing	4 / L2-14	
8.9	Columbine Street	1 / L2-15	
8.10	Central Plaza Space and Event Lawn	2,3 / L2-15, 1,2,3 / L2-16	
8.11	East Side Community Space	1,2,3 / L2-17	
9.0	**PLANTING AND LANDSCAPE**		
9.1	Ornamental Tree Planting Over Structure		REF SCHED 10
9.2	Street Tree Planting Over Structure		REF SCHED 10
9.3	Shade Tree Planting Over Structure		REF SCHED 10
9.4	Shade Tree Planting Off Structure		REF SCHED 10
9.5	Enhanced Landscape		REF SCHED 10
9.6	Transitional Landscape		REF SCHED 10
9.7	Naturalized Turf		REF SCHED 10

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Print Date: 5/5/2017
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Unit Leader

Front Range Mobility Group

Sheet Revisions		
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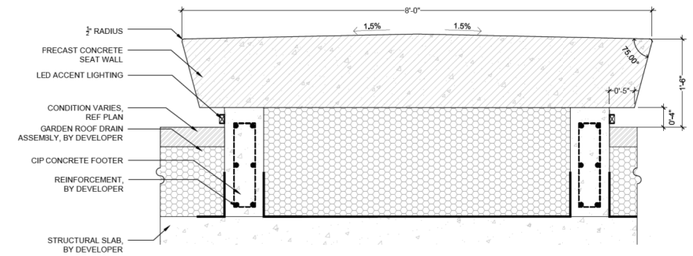
CENTRAL 70
LANDSCAPE AND AESTHETIC DETAILS

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: L2-09 of

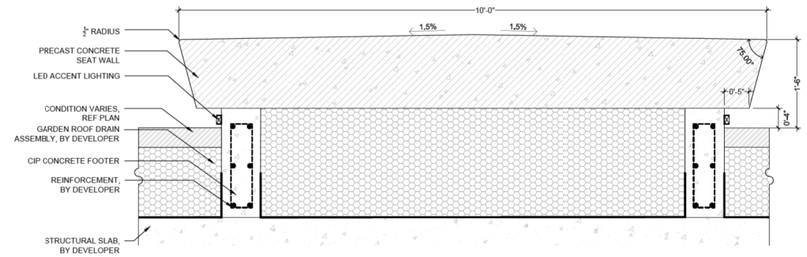
Project No./Code
FBR 0704-234
19631
Sheet Number 466



*NOTE:
1)ADD SAND FINISH TO ALL EXPOSED FACES
2)ADD INTEGRATED SKATEBOARD DETERRENT REVEAL

1 8' DIAMETER PRECAST CONCRETE SEATING POD (6.1A)

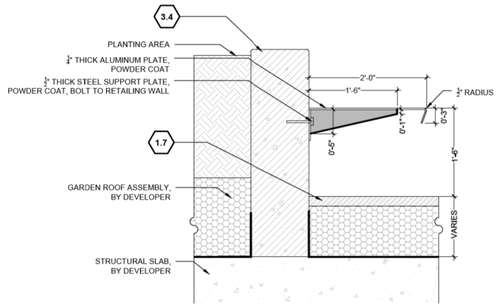
SCALE: 1" = 1'-0"



*NOTE:
1)ADD SAND FINISH TO ALL EXPOSED FACES
2)ADD INTEGRATED SKATEBOARD DETERRENT REVEAL

2 10' DIAMETER PRECAST CONCRETE SEATING POD (6.1B)

SCALE: 1" = 1'-0"



3 CUSTOM ALUMINUM BENCH (6.6)

SCALE: 1" = 1'-0"

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
1.0	**PAVEMENTS, RAMPS, AND CURBS**		
1.1	CIP Concrete Paving, Sawcut Joints, Standard Grey, Broom Finish	1 / L2-01	
1.2A	CIP Concrete Paving, Sawcut Joints, Light Sandscape Finish, Integral color	1 / L2-01	
1.2B	CIP Concrete Paving, Sawcut Joints, Medium Sandscape Finish, Integral color	1 / L2-01	
1.3	Concrete/Stone Unit Pavers Type 1	2 / L2-01	
1.4	Concrete/Stone Unit Pavers Type 2	2 / L2-01	
1.5	Concrete/Stone Unit Pavers Type 3	2 / L2-01	
1.6	CIP Concrete Band	3 / L2-01	
1.7	Precast Concrete Band	3 / L2-01	
1.8	Playground Asphalt		REF CCD STDS
1.9	Rubberized Play Tiles		REF CCD/DPS STDS
1.10	Protective Play Surface		REF CCD/DPS STDS
1.11	Asphalt Parking Paving / Parking Striping		REF CCD STDS
1.12	Playground Pit ADA Ramp	4 / L2-01	
1.13	ADA Ramp		REF CCD STDS
1.14	CIP Concrete Curb and Gutter		REF CCD STDS
2.0	**NOT USED**		
3.0	**STEPS, CURBS AND WALLS**		
3.1	CIP Concrete Mural Wall	4,5 / L2-02	
3.2	CIP Concrete Curb	5 / L2-01	
3.3A	CIP Concrete Wall, 8" Wide	7 / L2-01	
3.3B	CIP Concrete Wall, 12" Wide	8 / L2-01	
3.3C	CIP Concrete Wall, 18" Wide	9 / L2-01	
3.4A	Precast Concrete Seat Wall, 18" Wide	10 /L2-01	
3.4B	Precast Concrete Seat Wall, 36" Wide	1,2 / L2-02	
3.5	Precast Concrete Retaining Wall	3 / L2-02	
3.6	Precast Concrete Step	1 / L2-03	
3.7	CMU Screen Wall	2 / L2-03	
3.8	Trash Enclosure	3 / L2-03	
4.0	**RAILINGS, BARRIERS AND FENCING**		
4.1	Stainless Steel Handrail	4 / L2-03	
4.2A	Custom Fencing Type 1	1 / L2-04	
4.2B	Custom Fencing Type 2	2 / L2-04	
4.3A	Fencing Gates Type 1	1 / L2-05	
4.3B	Fencing Gates Type 2	4 / L2-05	
4.3C	Fencing Gates Type 3	3 / L2-05	
4.3D	Fencing Gates Type 4	2 / L2-05	
5.0	**SPECIALTY ELEMENTS**		
5.1	Shade Structure, Events Lawn Pavilion	1,2 / L2-06	
5.2	Shade Structure, Type 1	1 / L2-07	
5.3	Shade Structure, Type 2	1 / L2-08	
5.4	Overlook	1 / L2-09	
5.5	Concessions/Restroom Building		REF SCHED 10
5.6	Maintenance Building		REF SCHED 10
5.7	Splash Pad Water Elements		REF SCHED 10
5.8	Tot Lot Play Elements		REF SCHED 10
5.9	Playground Play Elements		REF SCHED 10
5.10	Synthetic Turf		REF SCHED 10
5.11	Removable Soccer Goal		REF CCD STDS
5.12	Basketball Goal		REF DPS STDS
5.13	Primary Play Structure at School Playground		REF DPS STDS
5.14	Intermediate Play Structure at School Playground		REF DPS STDS
5.15	Swings at School Playground		REF DPS STDS
5.16	Painted Courts : Hop Scotch		REF DPS STDS
5.17	Painted Court : Hop Scotch ADA		REF DPS STDS
5.18	Painted Court : Foursquare		REF DPS STDS
5.19	Painted Court : Tether Ball		REF DPS STDS
5.20	Shade Structure at School Playground		REF DPS STDS
5.21	Sandstone Boulder		
6.0	**FURNISHINGS**		
6.1A	8' Diameter Precast Concrete Seating Pod	1 / L2-10	
6.1B	10' Diameter Precast Concrete Seating Pod	2 / L2-10	
6.2A	Bike Rack		REF SCHED 10
6.2B	Bike Share		REF SCHED 10
6.3	Tables and Chairs		REF SCHED 10
6.4	Trash/Recycle Receptacle		REF SCHED 10
6.5	Bench		REF SCHED 10
6.6	Custom Aluminum Bench	3 / L2-10	
6.7	Removable Bollard		REF SCHED 10
6.8	Interpretive Sign		REF CDOT STDS
6.9	Drinking Fountain		REF SCHED 10
6.10	Picnic Table		REF SCHED 10
6.11	Tree Grate		REF SCHED 10
7.0	**SITE LIGHTING AND ELECTRICAL**		
7.1	Pedestrian Lighting		REF SCHED 10
7.2	Central Plaza Lighting		REF SCHED 10
7.3	Field Lighting		REF SCHED 10
7.4	Parking Lot Lighting		REF SCHED 10
7.5	Accent Lighting		REF SCHED 10
7.6	Tree Accent Lighting		REF SCHED 10
7.7	Electrical Outlets		REF SCHED 10
8.0	**REFERENCE SECTIONS AND ELEVATIONS**		
8.1	46th Avenue at Multi-Use Field	1 / L2-12	
8.2	Clayton Street Cover Extension, South	2 / L2-12	
8.3	Columbine Street Cover Extension, North	1 / L2-13	
8.4	Clayton Street Cover Extension, North	3 / L2-12	
8.5	Columbine Street Cover Extension, South	2 / L2-13	
8.6	46th Avenue at Event Lawn	1 / L2-14	
8.7	Tot Lot and Splash Pad	2,3 / L2-14	
8.8	Multi-Use Field Fencing	4 / L2-14	
8.9	Columbine Street	1 / L2-15	
8.10	Central Plaza Space and Event Lawn	2,3 / L2-15, 1,2,3 / L2-16	
8.11	East Side Community Space	1,2,3 / L2-17	
9.0	**PLANTING AND LANDSCAPE**		
9.1	Ornamental Tree Planting Over Structure		REF SCHED 10
9.2	Street Tree Planting Over Structure		REF SCHED 10
9.3	Shade Tree Planting Over Structure		REF SCHED 10
9.4	Shade Tree Planting Off Structure		REF SCHED 10
9.5	Enhanced Landscape		REF SCHED 10
9.6	Transitional Landscape		REF SCHED 10
9.7	Naturalized Turf		REF SCHED 10

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Print Date: 5/5/2017
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Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
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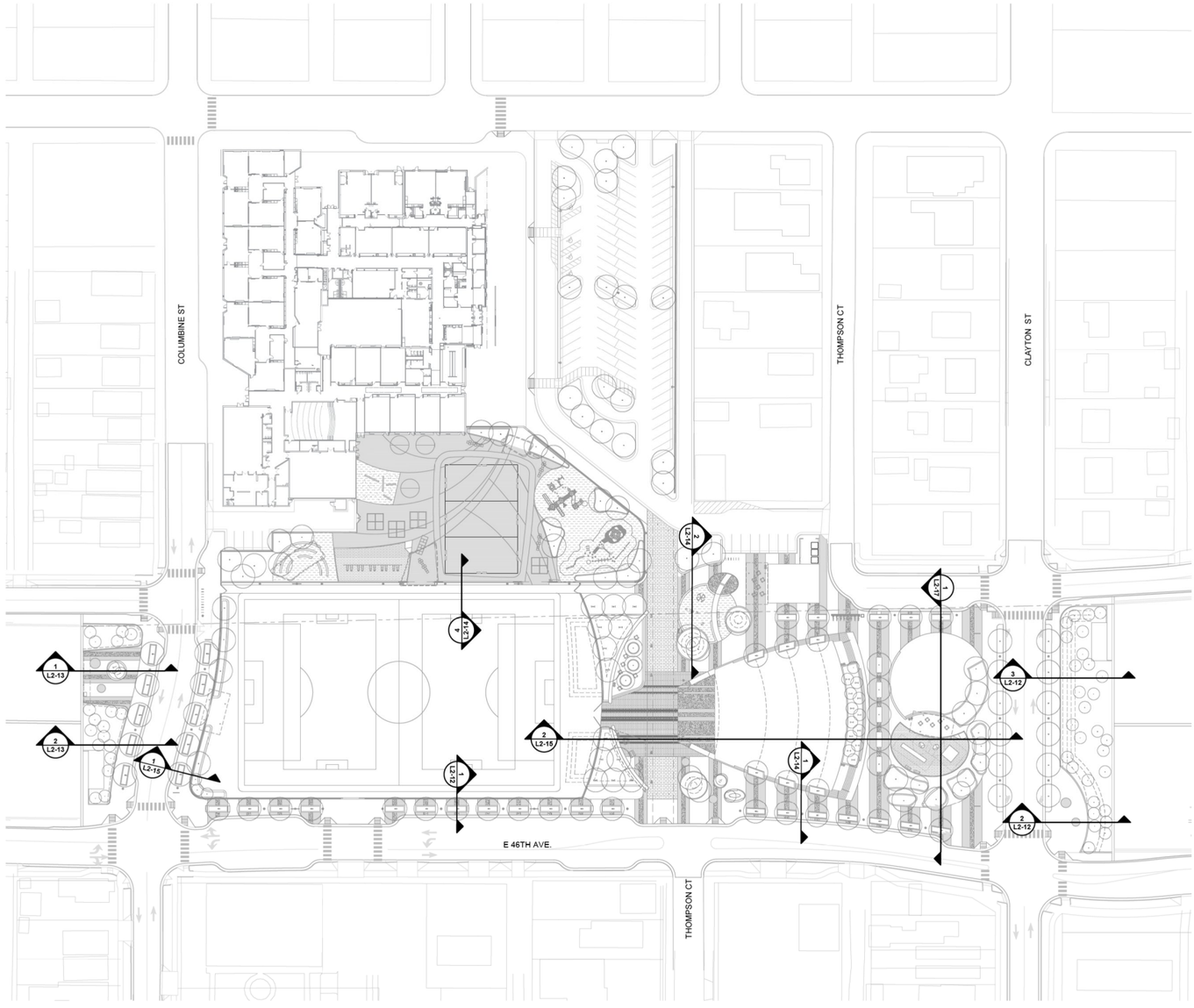
Void:

CENTRAL 70
LANDSCAPE AND AESTHETIC DETAILS

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: L2-10 of

Project No./Code
FBR 0704-234
19631
Sheet Number 467



1 SECTION REFERENCE PLAN

1" = 60'

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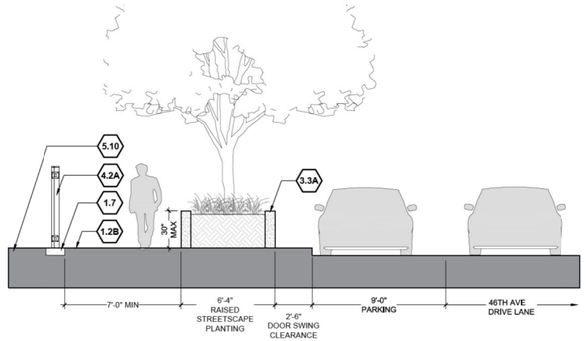
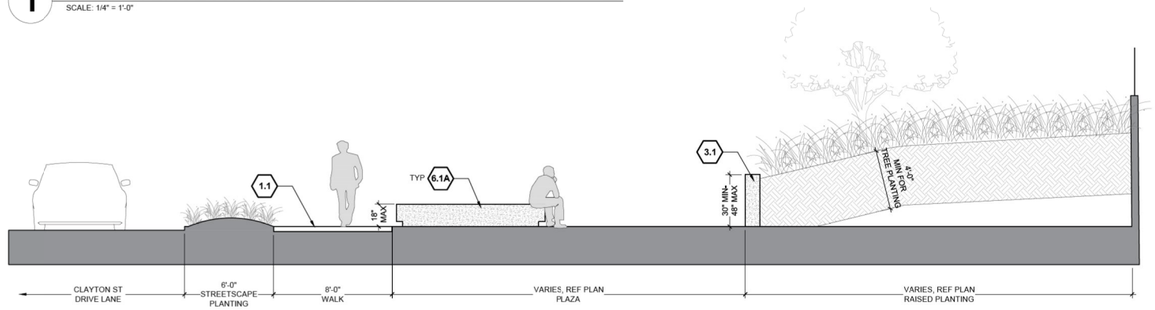
Print Date: 5/5/2017			Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 LANDSCAPE AND AESTHETIC REFERENCE SECTIONS AND ELEVATIONS REFERENCE PLAN		Project No./Code
File Name: See sheet edge for information			Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:	Designer:	Structure Numbers:	FBR 0704-234
Front Range Mobility Group	Horiz. Scale: As Noted						Revised:	Detailer:		19631
	Vert. Scale: As Noted						Void:	Sheet Subset: LANDSCAPE	Subset Sheets: L2-11 of	Sheet Number 468
	Unit Information					Region 1 KJS				
	Unit Leader									



1 46TH AVENUE AT MULTI-USE FIELD

8.1

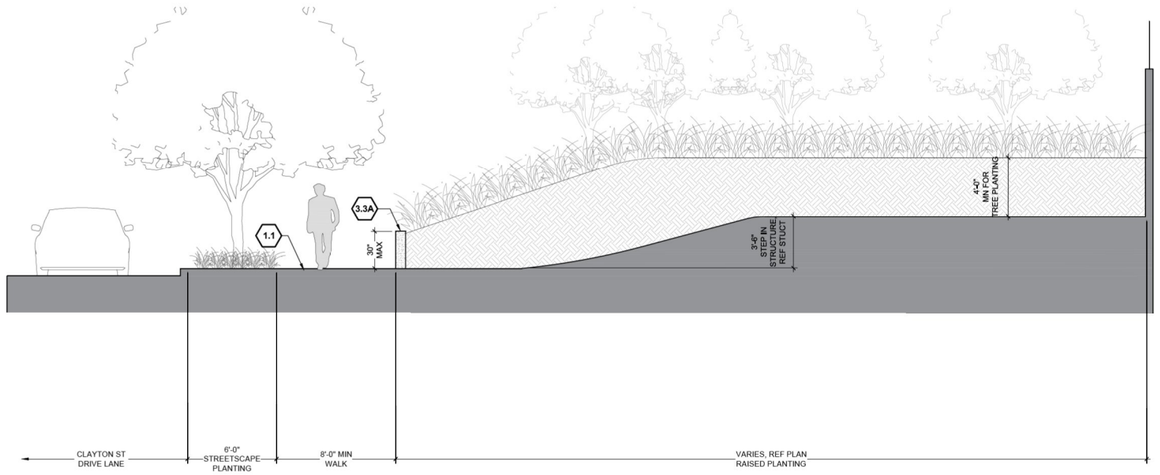
SCALE: 1/4" = 1'-0"



2 CLAYTON STREET COVER EXTENSION, SOUTH

8.2

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



3 CLAYTON STREET COVER EXTENSION, NORTH

8.4

SCALE: 1/8" = 1'-0"

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
1.0	**PAVEMENTS, RAMPS, AND CURBS**		
1.1	CIP Concrete Paving, Sawcut Joints, Standard Grey, Broom Finish	1 / L2-01	
1.2A	CIP Concrete Paving, Sawcut Joints, Light Sandscape Finish, Integral color	1 / L2-01	
1.2B	CIP Concrete Paving, Sawcut Joints, Medium Sandscape Finish, Integral color	1 / L2-01	
1.3	Concrete/Stone Unit Pavers Type 1	2 / L2-01	
1.4	Concrete/Stone Unit Pavers Type 2	2 / L2-01	
1.5	Concrete/Stone Unit Pavers Type 3	2 / L2-01	
1.6	CIP Concrete Band	3 / L2-01	
1.7	Precast Concrete Band	3 / L2-01	
1.8	Playground Asphalt		REF CCD STDS
1.9	Rubberized Play Tiles		REF CCD/DPS STDS
1.10	Protective Play Surface		REF CCD/DPS STDS
1.11	Asphalt Parking Paving / Parking Striping		REF CCD STDS
1.12	Playground Pit ADA Ramp	4 / L2-01	
1.13	ADA Ramp		REF CCD STDS
1.14	CIP Concrete Curb and Gutter		REF CCD STDS
2.0	**NOT USED**		
3.0	**STEPS, CURBS AND WALLS**		
3.1	CIP Concrete Mural Wall	4,5 / L2-02	
3.2	CIP Concrete Curb	5 / L2-01	
3.3A	CIP Concrete Wall, 8" Wide	7 / L2-01	
3.3B	CIP Concrete Wall, 12" Wide	8 / L2-01	
3.3C	CIP Concrete Wall, 18" Wide	9 / L2-01	
3.4A	Precast Concrete Seat Wall, 18" Wide	10 / L2-01	
3.4B	Precast Concrete Seat Wall, 36" Wide	1,2 / L2-02	
3.5	Precast Concrete Retaining Wall	3 / L2-02	
3.6	Precast Concrete Step	1 / L2-03	
3.7	CMU Screen Wall	2 / L2-03	
3.8	Trash Enclosure	3 / L2-03	
4.0	**RAILINGS, BARRIERS AND FENCING**		
4.1	Stainless Steel Handrail	4 / L2-03	
4.2A	Custom Fencing Type 1	1 / L2-04	
4.2B	Custom Fencing Type 2	2 / L2-04	
4.3A	Fencing Gates Type 1	1 / L2-05	
4.3B	Fencing Gates Type 2	4 / L2-05	
4.3C	Fencing Gates Type 3	3 / L2-05	
4.3D	Fencing Gates Type 4	2 / L2-05	
5.0	**SPECIALTY ELEMENTS**		
5.1	Shade Structure, Events Lawn Pavilion	1,2 / L2-06	
5.2	Shade Structure, Type 1	1 / L2-07	
5.3	Shade Structure, Type 2	1 / L2-08	
5.4	Overlook	1 / L2-09	
5.5	Concessions/Restroom Building		REF SCHED 10
5.6	Maintenance Building		REF SCHED 10
5.7	Splash Pad Water Elements		REF SCHED 10
5.8	Tot Lot Play Elements		REF SCHED 10
5.9	Playground Play Elements		REF SCHED 10
5.10	Synthetic Turf		REF SCHED 10
5.11	Removable Soccer Goal		REF CCD STDS
5.12	Basketball Goal		REF DPS STDS
5.13	Primary Play Structure at School Playground		REF DPS STDS
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5.16	Painted Courts : Hop Scotch		REF DPS STDS
5.17	Painted Court : Hop Scotch ADA		REF DPS STDS
5.18	Painted Court : Foursquare		REF DPS STDS
5.19	Painted Court : Tether Ball		REF DPS STDS
5.20	Shade Structure at School Playground		REF DPS STDS
5.21	Sandstone Boulder		
6.0	**FURNISHINGS**		
6.1A	8' Diameter Precast Concrete Seating Pod	1 / L2-10	
6.1B	10' Diameter Precast Concrete Seating Pod	2 / L2-10	
6.2A	Bike Rack		REF SCHED 10
6.2B	Bike Share		REF SCHED 10
6.3	Tables and Chairs		REF SCHED 10
6.4	Trash/Recycle Receptacle		REF SCHED 10
6.5	Bench		REF SCHED 10
6.6	Custom Aluminum Bench	3 / L2-10	
6.7	Removable Bollard		REF SCHED 10
6.8	Interpretive Sign		REF CDOT STDS
6.9	Drinking Fountain		REF SCHED 10
6.10	Picnic Table		REF SCHED 10
6.11	Tree Grate		REF SCHED 10
7.0	**SITE LIGHTING AND ELECTRICAL**		
7.1	Pedestrian Lighting		REF SCHED 10
7.2	Central Plaza Lighting		REF SCHED 10
7.3	Field Lighting		REF SCHED 10
7.4	Parking Lot Lighting		REF SCHED 10
7.5	Accent Lighting		REF SCHED 10
7.6	Tree Accent Lighting		REF SCHED 10
7.7	Electrical Outlets		REF SCHED 10
8.0	**REFERENCE SECTIONS AND ELEVATIONS**		
8.1	46th Avenue at Multi-Use Field	1 / L2-12	
8.2	Clayton Street Cover Extension, South	2 / L2-12	
8.3	Columbine Street Cover Extension, North	1 / L2-13	
8.4	Clayton Street Cover Extension, North	3 / L2-12	
8.5	Columbine Street Cover Extension, South	2 / L2-13	
8.6	46th Avenue at Event Lawn	1 / L2-14	
8.7	Tot Lot and Splash Pad	2,3 / L2-14	
8.8	Multi-Use Field Fencing	4 / L2-14	
8.9	Columbine Street	1 / L2-15	
8.10	Central Plaza Space and Event Lawn	2,3 / L2-15, 1,2,3 / L2-16	
8.11	East Side Community Space	1,2,3 / L2-17	
9.0	**PLANTING AND LANDSCAPE**		
9.1	Ornamental Tree Planting Over Structure		REF SCHED 10
9.2	Street Tree Planting Over Structure		REF SCHED 10
9.3	Shade Tree Planting Over Structure		REF SCHED 10
9.4	Shade Tree Planting Off Structure		REF SCHED 10
9.5	Enhanced Landscape		REF SCHED 10
9.6	Transitional Landscape		REF SCHED 10
9.7	Naturalized Turf		REF SCHED 10

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Print Date: 5/21/2017

File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted

Vert. Scale: As Noted

Unit Information

Unit Leader

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907

Region 1 KJS

PROPOSAL

No Revisions:

Revised:

Void:

CENTRAL 70
LANDSCAPE AND AESTHETIC
REFERENCE SECTIONS
AND ELEVATIONS

Designer:

Detailer:

Sheet Subset: LANDSCAPE

Structure Numbers

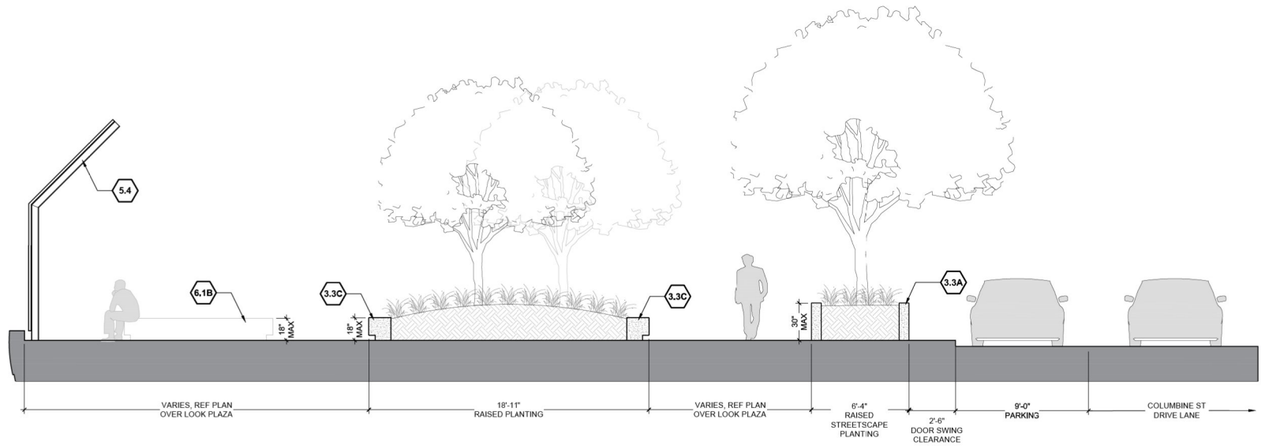
Subset Sheets: L2-12 of

Project No./Code

FBR 0704-234

19631

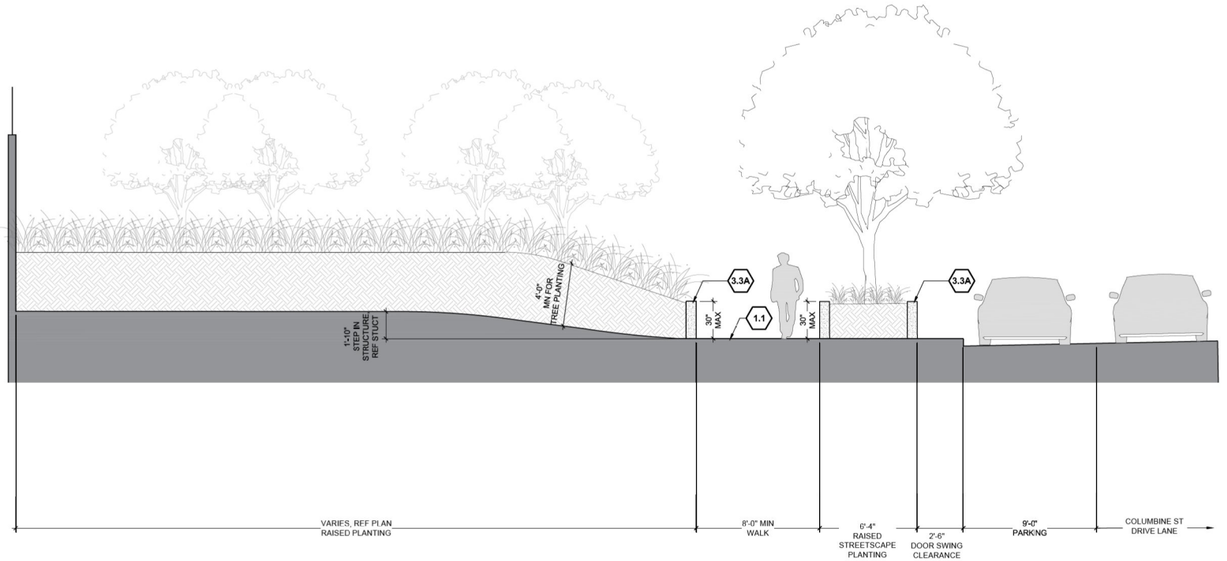
Sheet Number 469



1 COLUMBINE STREET COVER EXTENSION, NORTH

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

8.3



2 COLUMBINE STREET COVER EXTENSION, SOUTH

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

8.5

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
1.0	**PAVEMENTS, RAMPS, AND CURBS**		
1.1	CIP Concrete Paving, Sawcut Joints, Standard Grey, Broom Finish	1 / L2-01	
1.2A	CIP Concrete Paving, Sawcut Joints, Light Sandscape Finish, Integral color	1 / L2-01	
1.2B	CIP Concrete Paving, Sawcut Joints, Medium Sandscape Finish, Integral color	1 / L2-01	
1.3	Concrete/Stone Unit Pavers Type 1	2 / L2-01	
1.4	Concrete/Stone Unit Pavers Type 2	2 / L2-01	
1.5	Concrete/Stone Unit Pavers Type 3	2 / L2-01	
1.6	CIP Concrete Band	3 / L2-01	
1.7	Precast Concrete Band	3 / L2-01	
1.8	Playground Asphalt		REF CCD STDS
1.9	Rubberized Play Tiles		REF CCD/DPS STDS
1.10	Protective Play Surface		REF CCD/DPS STDS
1.11	Asphalt Parking Paving / Parking Striping		REF CCD STDS
1.12	Playground Pit ADA Ramp	4 / L2-01	
1.13	ADA Ramp		REF CCD STDS
1.14	CIP Concrete Curb and Gutter		REF CCD STDS
2.0	**NOT USED**		
3.0	**STEPS, CURBS AND WALLS**		
3.1	CIP Concrete Mural Wall	4,5 / L2-02	
3.2	CIP Concrete Curb	5 / L2-01	
3.3A	CIP Concrete Wall, 8" Wide	7 / L2-01	
3.3B	CIP Concrete Wall, 12" Wide	8 / L2-01	
3.3C	CIP Concrete Wall, 18" Wide	9 / L2-01	
3.4A	Precast Concrete Seat Wall, 18" Wide	10 / L2-01	
3.4B	Precast Concrete Seat Wall, 36" Wide	1,2 / L2-02	
3.5	Precast Concrete Retaining Wall	3 / L2-02	
3.6	Precast Concrete Step	1 / L2-03	
3.7	CMU Screen Wall	2 / L2-03	
3.8	Trash Enclosure	3 / L2-03	
4.0	**RAILINGS, BARRIERS AND FENCING**		
4.1	Stainless Steel Handrail	4 / L2-03	
4.2A	Custom Fencing Type 1	1 / L2-04	
4.2B	Custom Fencing Type 2	2 / L2-04	
4.3A	Fencing Gates Type 1	1 / L2-05	
4.3B	Fencing Gates Type 2	4 / L2-05	
4.3C	Fencing Gates Type 3	3 / L2-05	
4.3D	Fencing Gates Type 4	2 / L2-05	
5.0	**SPECIALTY ELEMENTS**		
5.1	Shade Structure, Events Lawn Pavilion	1,2 / L2-06	
5.2	Shade Structure, Type 1	1 / L2-07	
5.3	Shade Structure, Type 2	1 / L2-08	
5.4	Overlook	1 / L2-09	
5.5	Concessions/Restroom Building		REF SCHED 10
5.6	Maintenance Building		REF SCHED 10
5.7	Splash Pad Water Elements		REF SCHED 10
5.8	Tot Lot Play Elements		REF SCHED 10
5.9	Playground Play Elements		REF SCHED 10
5.10	Synthetic Turf		REF SCHED 10
5.11	Removable Soccer Goal		REF CCD STDS
5.12	Basketball Goal		REF DPS STDS
5.13	Primary Play Structure at School Playground		REF DPS STDS
5.14	Intermediate Play Structure at School Playground		REF DPS STDS
5.15	Swings at School Playground		REF DPS STDS
5.16	Painted Courts : Hop Scotch		REF DPS STDS
5.17	Painted Court : Hop Scotch ADA		REF DPS STDS
5.18	Painted Court : Foursquare		REF DPS STDS
5.19	Painted Court : Tether Ball		REF DPS STDS
5.20	Shade Structure at School Playground		REF DPS STDS
5.21	Sandstone Boulder		
6.0	**FURNISHINGS**		
6.1A	8' Diameter Precast Concrete Seating Pod	1 / L2-10	
6.1B	10' Diameter Precast Concrete Seating Pod	2 / L2-10	
6.2A	Bike Rack		REF SCHED 10
6.2B	Bike Share		REF SCHED 10
6.3	Tables and Chairs		REF SCHED 10
6.4	Trash/Recycle Receptacle		REF SCHED 10
6.5	Bench		REF SCHED 10
6.6	Custom Aluminum Bench	3 / L2-10	
6.7	Removable Bollard		REF SCHED 10
6.8	Interpretive Sign		REF CDOT STDS
6.9	Drinking Fountain		REF SCHED 10
6.10	Picnic Table		REF SCHED 10
6.11	Tree Grate		REF SCHED 10
7.0	**SITE LIGHTING AND ELECTRICAL**		
7.1	Pedestrian Lighting		REF SCHED 10
7.2	Central Plaza Lighting		REF SCHED 10
7.3	Field Lighting		REF SCHED 10
7.4	Parking Lot Lighting		REF SCHED 10
7.5	Accent Lighting		REF SCHED 10
7.6	Tree Accent Lighting		REF SCHED 10
7.7	Electrical Outlets		REF SCHED 10
8.0	**REFERENCE SECTIONS AND ELEVATIONS**		
8.1	46th Avenue at Multi-Use Field	1 / L2-12	
8.2	Clayton Street Cover Extension, South	2 / L2-12	
8.3	Columbine Street Cover Extension, North	1 / L2-13	
8.4	Clayton Street Cover Extension, North	3 / L2-12	
8.5	Columbine Street Cover Extension, South	2 / L2-13	
8.6	46th Avenue at Event Lawn	1 / L2-14	
8.7	Tot Lot and Splash Pad	2,3 / L2-14	
8.8	Multi-Use Field Fencing	4 / L2-14	
8.9	Columbine Street	1 / L2-15	
8.10	Central Plaza Space and Event Lawn	2,3 / L2-15, 1,2,3 / L2-16	
8.11	East Side Community Space	1,2,3 / L2-17	
9.0	**PLANTING AND LANDSCAPE**		
9.1	Ornamental Tree Planting Over Structure		REF SCHED 10
9.2	Street Tree Planting Over Structure		REF SCHED 10
9.3	Shade Tree Planting Over Structure		REF SCHED 10
9.4	Shade Tree Planting Off Structure		REF SCHED 10
9.5	Enhanced Landscape		REF SCHED 10
9.6	Transitional Landscape		REF SCHED 10
9.7	Naturalized Turf		REF SCHED 10

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Print Date: 5/21/2017
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Horiz. Scale: As Noted
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Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
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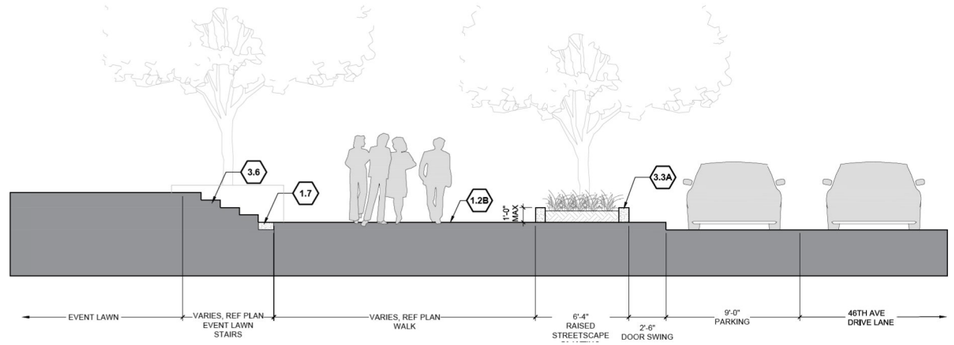
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
LANDSCAPE AND AESTHETIC REFERENCE SECTIONS AND ELEVATIONS

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers:
Subset Sheets: L2-13 of

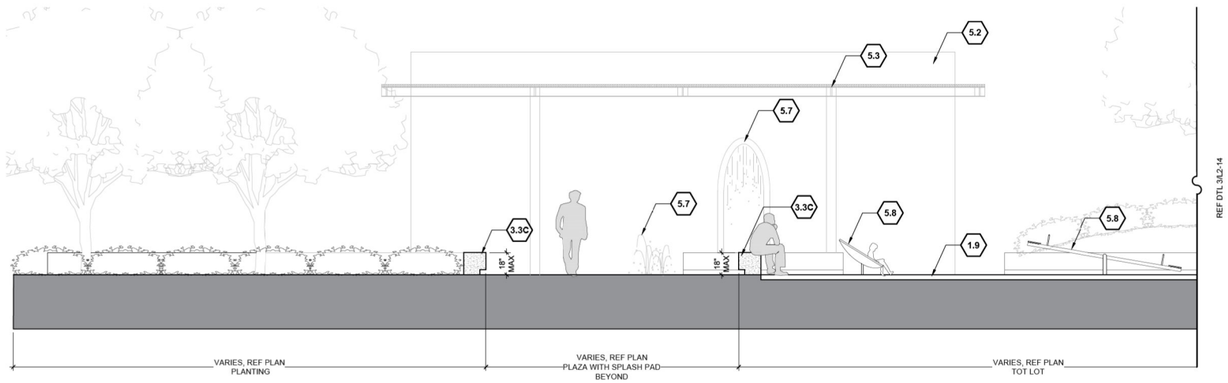
Project No./Code
FBR 0704-234
19631
Sheet Number 470



1 46TH AVENUE AT EVENT LAWN

8.6

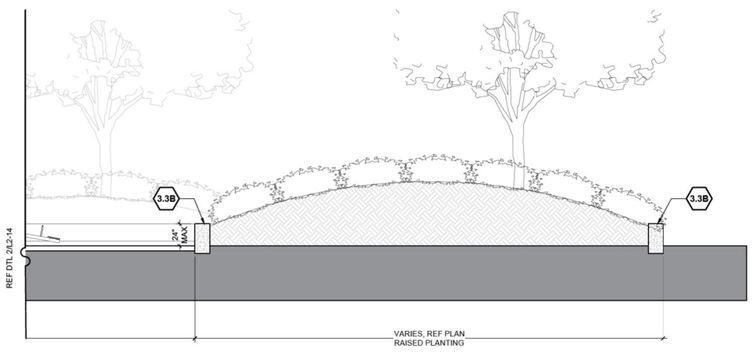
SCALE: 1/4" = 1'-0"



2 TOT LOT AND SPLASH PAD

8.7

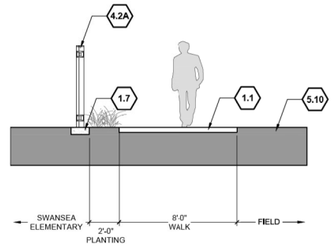
SCALE: 1/4" = 1'-0"



3 TOT LOT AND SPLASH PAD CONTINUED

8.7

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



4 MULTI-USE FIELD FENCING

8.8

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

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
1.0	**PAVEMENTS, RAMPS, AND CURBS**		
1.1	CIP Concrete Paving, Sawcut Joints, Standard Grey, Broom Finish	1 / L2-01	
1.2A	CIP Concrete Paving, Sawcut Joints, Light Sandscape Finish, Integral color	1 / L2-01	
1.2B	CIP Concrete Paving, Sawcut Joints, Medium Sandscape Finish, Integral color	1 / L2-01	
1.3	Concrete/Stone Unit Pavers Type 1	2 / L2-01	
1.4	Concrete/Stone Unit Pavers Type 2	2 / L2-01	
1.5	Concrete/Stone Unit Pavers Type 3	2 / L2-01	
1.6	CIP Concrete Band	3 / L2-01	
1.7	Precast Concrete Band	3 / L2-01	
1.8	Playground Asphalt		REF CCD STDS
1.9	Rubberized Play Tiles		REF CCD/DPS STDS
1.10	Protective Play Surface		REF CCD/DPS STDS
1.11	Asphalt Parking Paving / Parking Striping		REF CCD STDS
1.12	Playground Pit ADA Ramp	4 / L2-01	
1.13	ADA Ramp		REF CCD STDS
1.14	CIP Concrete Curb and Gutter		REF CCD STDS
2.0	**NOT USED**		
3.0	**STEPS, CURBS AND WALLS**		
3.1	CIP Concrete Mural Wall	4,5 / L2-02	
3.2	CIP Concrete Curb	5 / L2-01	
3.3A	CIP Concrete Wall, 8" Wide	7 / L2-01	
3.3B	CIP Concrete Wall, 12" Wide	8 / L2-01	
3.3C	CIP Concrete Wall, 18" Wide	9 / L2-01	
3.4A	Precast Concrete Seat Wall, 18" Wide	10 / L2-01	
3.4B	Precast Concrete Seat Wall, 36" Wide	1,2 / L2-02	
3.5	Precast Concrete Retaining Wall	3 / L2-02	
3.6	Precast Concrete Step	1 / L2-03	
3.7	CMU Screen Wall	2 / L2-03	
3.8	Trash Enclosure	3 / L2-03	
4.0	**RAILINGS, BARRIERS AND FENCING**		
4.1	Stainless Steel Handrail	4 / L2-03	
4.2A	Custom Fencing Type 1	1 / L2-04	
4.2B	Custom Fencing Type 2	2 / L2-04	
4.3A	Fencing Gates Type 1	1 / L2-05	
4.3B	Fencing Gates Type 2	4 / L2-05	
4.3C	Fencing Gates Type 3	3 / L2-05	
4.3D	Fencing Gates Type 4	2 / L2-05	
5.0	**SPECIALTY ELEMENTS**		
5.1	Shade Structure, Events Lawn Pavilion	1,2 / L2-06	
5.2	Shade Structure, Type 1	1 / L2-07	
5.3	Shade Structure, Type 2	1 / L2-08	
5.4	Overlook	1 / L2-09	
5.5	Concessions/Restroom Building		REF SCHED 10
5.6	Maintenance Building		REF SCHED 10
5.7	Splash Pad Water Elements		REF SCHED 10
5.8	Tot Lot Play Elements		REF SCHED 10
5.9	Playground Play Elements		REF SCHED 10
5.10	Synthetic Turf		REF SCHED 10
5.11	Removable Soccer Goal		REF CCD STDS
5.12	Basketball Goal		REF DPS STDS
5.13	Primary Play Structure at School Playground		REF DPS STDS
5.14	Intermediate Play Structure at School Playground		REF DPS STDS
5.15	Swings at School Playground		REF DPS STDS
5.16	Painted Courts : Hop Scotch		REF DPS STDS
5.17	Painted Court : Hop Scotch ADA		REF DPS STDS
5.18	Painted Court : Foursquare		REF DPS STDS
5.19	Painted Court : Tether Ball		REF DPS STDS
5.20	Shade Structure at School Playground		REF DPS STDS
5.21	Sandstone Boulder		
6.0	**FURNISHINGS**		
6.1A	8' Diameter Precast Concrete Seating Pod	1 / L2-10	
6.1B	10' Diameter Precast Concrete Seating Pod	2 / L2-10	
6.2A	Bike Rack		REF SCHED 10
6.2B	Bike Share		REF SCHED 10
6.3	Tables and Chairs		REF SCHED 10
6.4	Trash/Recycle Receptacle		REF SCHED 10
6.5	Bench		REF SCHED 10
6.6	Custom Aluminum Bench	3 / L2-10	
6.7	Removable Bollard		REF SCHED 10
6.8	Interpretive Sign		REF CDOT STDS
6.9	Drinking Fountain		REF SCHED 10
6.10	Picnic Table		REF SCHED 10
6.11	Tree Grate		REF SCHED 10
7.0	**SITE LIGHTING AND ELECTRICAL**		
7.1	Pedestrian Lighting		REF SCHED 10
7.2	Central Plaza Lighting		REF SCHED 10
7.3	Field Lighting		REF SCHED 10
7.4	Parking Lot Lighting		REF SCHED 10
7.5	Accent Lighting		REF SCHED 10
7.6	Tree Accent Lighting		REF SCHED 10
7.7	Electrical Outlets		REF SCHED 10
8.0	**REFERENCE SECTIONS AND ELEVATIONS**		
8.1	46th Avenue at Multi-Use Field	1 / L2-12	
8.2	Clayton Street Cover Extension, South	2 / L2-12	
8.3	Columbine Street Cover Extension, North	1 / L2-13	
8.4	Clayton Street Cover Extension, North	3 / L2-12	
8.5	Columbine Street Cover Extension, South	2 / L2-13	
8.6	46th Avenue at Event Lawn	1 / L2-14	
8.7	Tot Lot and Splash Pad	2,3 / L2-14	
8.8	Multi-Use Field Fencing	4 / L2-14	
8.9	Columbine Street	1 / L2-15	
8.10	Central Plaza Space and Event Lawn	2,3 / L2-15, 1,2,3 / L2-16	
8.11	East Side Community Space	1,2,3 / L2-17	
9.0	**PLANTING AND LANDSCAPE**		
9.1	Ornamental Tree Planting Over Structure		REF SCHED 10
9.2	Street Tree Planting Over Structure		REF SCHED 10
9.3	Shade Tree Planting Over Structure		REF SCHED 10
9.4	Shade Tree Planting Off Structure		REF SCHED 10
9.5	Enhanced Landscape		REF SCHED 10
9.6	Transitional Landscape		REF SCHED 10
9.7	Naturalized Turf		REF SCHED 10

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Print Date: 5/5/2017
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Unit Information
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Front Range Mobility Group

Sheet Revisions		
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Colorado Department of Transportation
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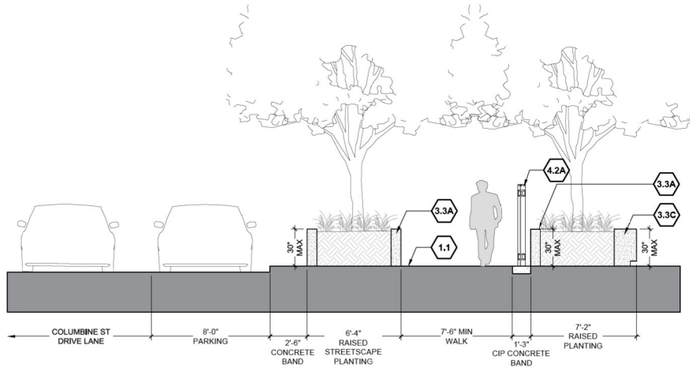
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
LANDSCAPE AND AESTHETIC REFERENCE SECTIONS AND ELEVATIONS

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: L2-14 of

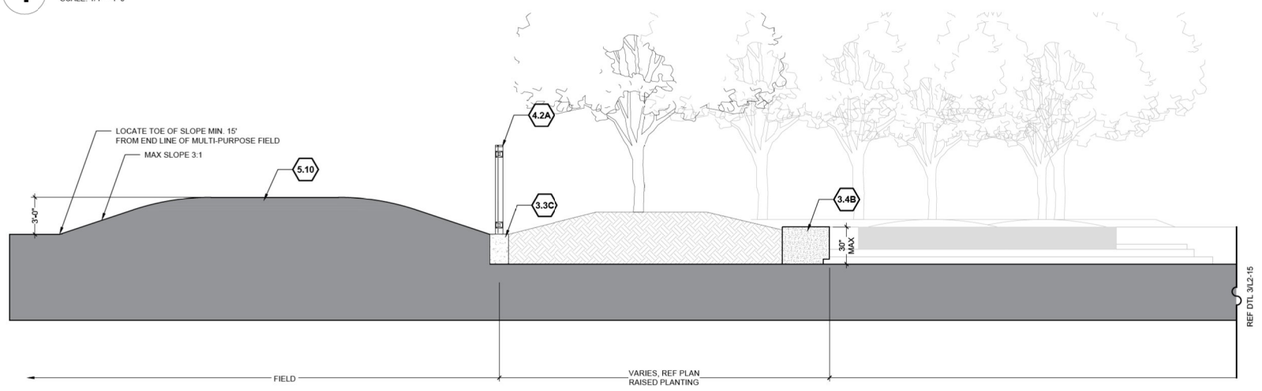
Project No./Code
FBR 0704-234
19631
Sheet Number 471



1 COLUMBINE STREET

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

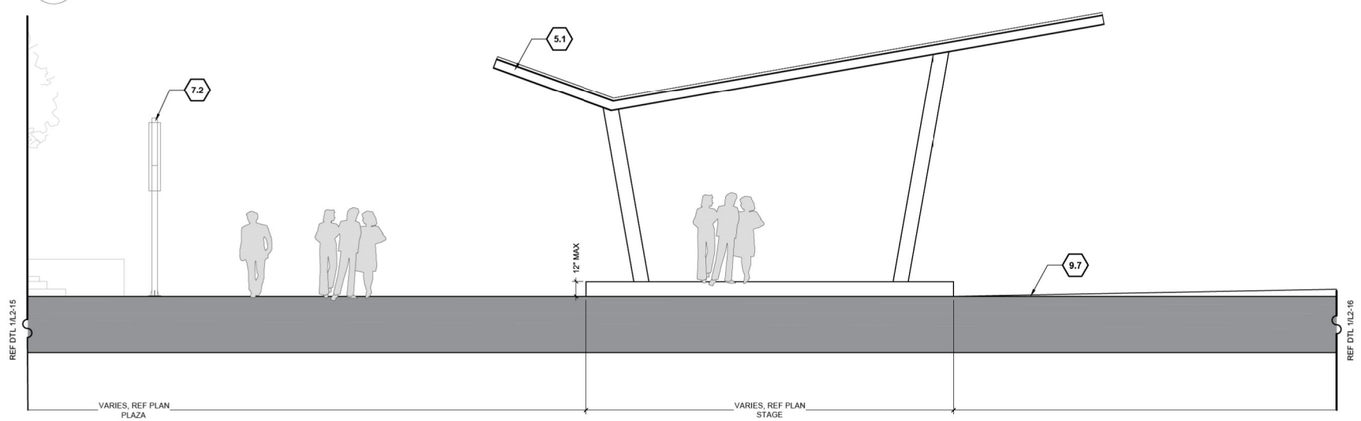
8.9



2 CENTRAL PLAZA SPACE AND EVENT LAWN

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

8.10



3 CENTRAL PLAZA SPACE AND EVENT LAWN CONTINUED

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

8.10

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
1.0	**PAVEMENTS, RAMPS, AND CURBS**		
1.1	CIP Concrete Paving, Sawcut Joints, Standard Grey, Broom Finish	1 / L2-01	
1.2A	CIP Concrete Paving, Sawcut Joints, Light Sandscape Finish, Integral color	1 / L2-01	
1.2B	CIP Concrete Paving, Sawcut Joints, Medium Sandscape Finish, Integral color	1 / L2-01	
1.3	Concrete/Stone Unit Pavers Type 1	2 / L2-01	
1.4	Concrete/Stone Unit Pavers Type 2	2 / L2-01	
1.5	Concrete/Stone Unit Pavers Type 3	2 / L2-01	
1.6	CIP Concrete Band	3 / L2-01	
1.7	Precast Concrete Band	3 / L2-01	
1.8	Playground Asphalt		REF CCD STDS
1.9	Rubberized Play Tiles		REF CCD/DPS STDS
1.10	Protective Play Surface		REF CCD/DPS STDS
1.11	Asphalt Parking Paving / Parking Striping		REF CCD STDS
1.12	Playground Pit ADA Ramp	4 / L2-01	
1.13	ADA Ramp		REF CCD STDS
1.14	CIP Concrete Curb and Gutter		REF CCD STDS
2.0	**NOT USED**		
3.0	**STEPS, CURBS AND WALLS**		
3.1	CIP Concrete Mural Wall	4,5 / L2-02	
3.2	CIP Concrete Curb	5 / L2-01	
3.3A	CIP Concrete Wall, 8" Wide	7 / L2-01	
3.3B	CIP Concrete Wall, 12" Wide	8 / L2-01	
3.3C	CIP Concrete Wall, 18" Wide	9 / L2-01	
3.4A	Precast Concrete Seat Wall, 18" Wide	10 / L2-01	
3.4B	Precast Concrete Seat Wall, 36" Wide	1,2 / L2-02	
3.5	Precast Concrete Retaining Wall	3 / L2-02	
3.6	Precast Concrete Step	1 / L2-03	
3.7	CMU Screen Wall	2 / L2-03	
3.8	Trash Enclosure	3 / L2-03	
4.0	**RAILINGS, BARRIERS AND FENCING**		
4.1	Stainless Steel Handrail	4 / L2-03	
4.2A	Custom Fencing Type 1	1 / L2-04	
4.2B	Custom Fencing Type 2	2 / L2-04	
4.3A	Fencing Gates Type 1	1 / L2-05	
4.3B	Fencing Gates Type 2	4 / L2-05	
4.3C	Fencing Gates Type 3	3 / L2-05	
4.3D	Fencing Gates Type 4	2 / L2-05	
5.0	**SPECIALTY ELEMENTS**		
5.1	Shade Structure, Events Lawn Pavilion	1,2 / L2-06	
5.2	Shade Structure, Type 1	1 / L2-07	
5.3	Shade Structure, Type 2	1 / L2-08	
5.4	Overlook	1 / L2-09	
5.5	Concessions/Restroom Building		REF SCHED 10
5.6	Maintenance Building		REF SCHED 10
5.7	Splash Pad Water Elements		REF SCHED 10
5.8	Tot Lot Play Elements		REF SCHED 10
5.9	Playground Play Elements		REF SCHED 10
5.10	Synthetic Turf		REF SCHED 10
5.11	Removable Soccer Goal		REF CCD STDS
5.12	Basketball Goal		REF DPS STDS
5.13	Primary Play Structure at School Playground		REF DPS STDS
5.14	Intermediate Play Structure at School Playground		REF DPS STDS
5.15	Swings at School Playground		REF DPS STDS
5.16	Painted Courts : Hop Scotch		REF DPS STDS
5.17	Painted Court : Hop Scotch ADA		REF DPS STDS
5.18	Painted Court : Foursquare		REF DPS STDS
5.19	Painted Court : Tether Ball		REF DPS STDS
5.20	Shade Structure at School Playground		REF DPS STDS
5.21	Sandstone Boulder		
6.0	**FURNISHINGS**		
6.1A	8' Diameter Precast Concrete Seating Pod	1 / L2-10	
6.1B	10' Diameter Precast Concrete Seating Pod	2 / L2-10	
6.2A	Bike Rack		REF SCHED 10
6.2B	Bike Share		REF SCHED 10
6.3	Tables and Chairs		REF SCHED 10
6.4	Trash/Recycle Receptacle		REF SCHED 10
6.5	Bench		REF SCHED 10
6.6	Custom Aluminum Bench	3 / L2-10	
6.7	Removable Bollard		REF SCHED 10
6.8	Interpretive Sign		REF CDOT STDS
6.9	Drinking Fountain		REF SCHED 10
6.10	Picnic Table		REF SCHED 10
6.11	Tree Grate		REF SCHED 10
7.0	**SITE LIGHTING AND ELECTRICAL**		
7.1	Pedestrian Lighting		REF SCHED 10
7.2	Central Plaza Lighting		REF SCHED 10
7.3	Field Lighting		REF SCHED 10
7.4	Parking Lot Lighting		REF SCHED 10
7.5	Accent Lighting		REF SCHED 10
7.6	Tree Accent Lighting		REF SCHED 10
7.7	Electrical Outlets		REF SCHED 10
8.0	**REFERENCE SECTIONS AND ELEVATIONS**		
8.1	40th Avenue at Multi-Use Field	1 / L2-12	
8.2	Clayton Street Cover Extension, South	2 / L2-12	
8.3	Columbine Street Cover Extension, North	1 / L2-13	
8.4	Clayton Street Cover Extension, North	3 / L2-12	
8.5	Columbine Street Cover Extension, South	2 / L2-13	
8.6	40th Avenue at Event Lawn	1 / L2-14	
8.7	Tot Lot and Splash Pad	2,3 / L2-14	
8.8	Multi-Use Field Fencing	4 / L2-14	
8.9	Columbine Street	1 / L2-15	
8.10	Central Plaza Space and Event Lawn	2,3 / L2-15, 1,2,3 / L2-16	
8.11	East Side Community Space	1,2,3 / L2-17	
9.0	**PLANTING AND LANDSCAPE**		
9.1	Ornamental Tree Planting Over Structure		REF SCHED 10
9.2	Street Tree Planting Over Structure		REF SCHED 10
9.3	Shade Tree Planting Over Structure		REF SCHED 10
9.4	Shade Tree Planting Off Structure		REF SCHED 10
9.5	Enhanced Landscape		REF SCHED 10
9.6	Transitional Landscape		REF SCHED 10
9.7	Naturalized Turf		REF SCHED 10

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Print Date: 5/5/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

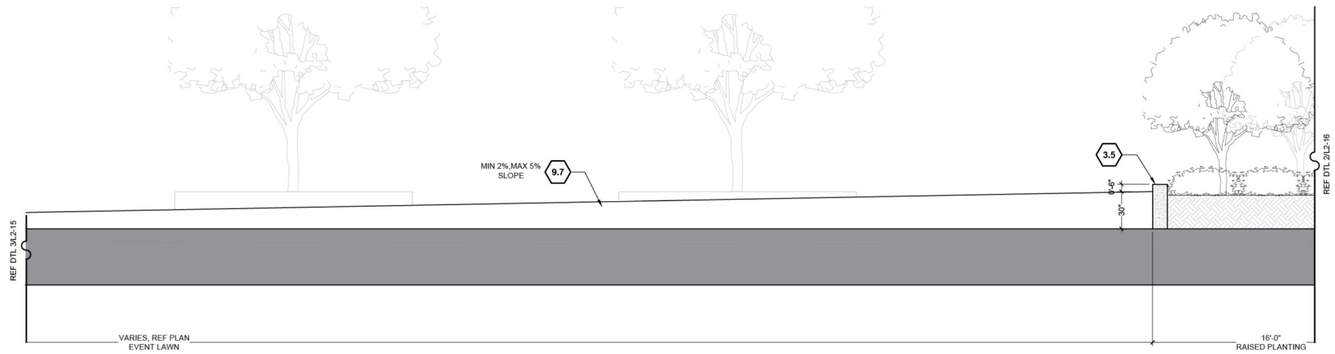
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
LANDSCAPE AND AESTHETIC REFERENCE SECTIONS AND ELEVATIONS

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: L2-15 of

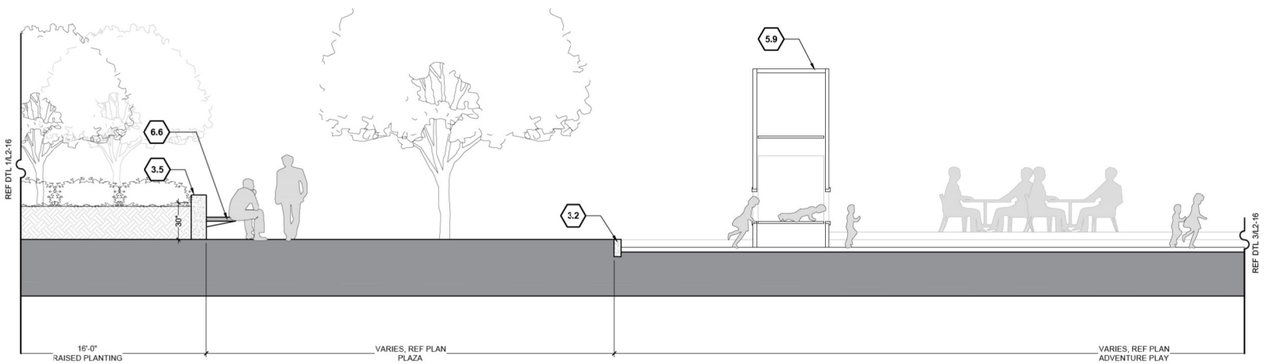
Project No./Code
FBR 0704-234
19631
Sheet Number 472



1 CENTRAL PLAZA SPACE AND EVENT LAWN CONTINUED

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

8.10



2 CENTRAL PLAZA SPACE AND EVENT LAWN CONTINUED

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

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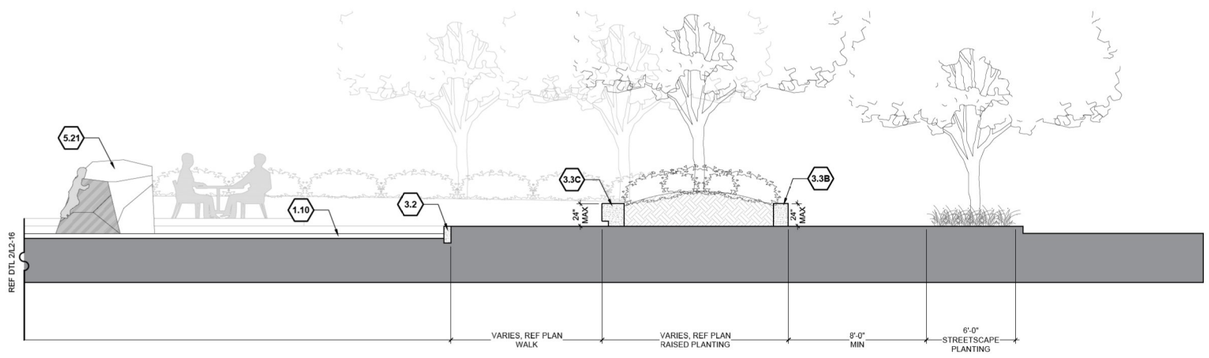

3 CENTRAL PLAZA SPACE AND EVENT LAWN CONTINUED

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

8.10

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
1.0	**PAVEMENTS, RAMPS, AND CURBS**		
1.1	CIP Concrete Paving, Sawcut Joints, Standard Grey, Broom Finish	1 / L2-01	
1.2A	CIP Concrete Paving, Sawcut Joints, Light Sandscape Finish, Integral color	1 / L2-01	
1.2B	CIP Concrete Paving, Sawcut Joints, Medium Sandscape Finish, Integral color	1 / L2-01	
1.3	Concrete/Stone Unit Pavers Type 1	2 / L2-01	
1.4	Concrete/Stone Unit Pavers Type 2	2 / L2-01	
1.5	Concrete/Stone Unit Pavers Type 3	2 / L2-01	
1.6	CIP Concrete Band	3 / L2-01	
1.7	Precast Concrete Band	3 / L2-01	
1.8	Playground Asphalt		REF CCD STDS
1.9	Rubberized Play Tiles		REF CCD/DPS STDS
1.10	Protective Play Surface		REF CCD/DPS STDS
1.11	Asphalt Parking Paving / Parking Striping		REF CCD STDS
1.12	Playground Pit ADA Ramp	4 / L2-01	
1.13	ADA Ramp		REF CCD STDS
1.14	CIP Concrete Curb and Gutter		REF CCD STDS
2.0	**NOT USED**		
3.0	**STEPS, CURBS AND WALLS**		
3.1	CIP Concrete Mural Wall	4,5 / L2-02	
3.2	CIP Concrete Curb	5 / L2-01	
3.3A	CIP Concrete Wall, 8" Wide	7 / L2-01	
3.3B	CIP Concrete Wall, 12" Wide	8 / L2-01	
3.3C	CIP Concrete Wall, 18" Wide	9 / L2-01	
3.4A	Precast Concrete Seat Wall, 18" Wide	10 / L2-01	
3.4B	Precast Concrete Seat Wall, 36" Wide	1,2 / L2-02	
3.5	Precast Concrete Retaining Wall	3 / L2-02	
3.6	Precast Concrete Step	1 / L2-03	
3.7	CMU Screen Wall	2 / L2-03	
3.8	Trash Enclosure	3 / L2-03	
4.0	**RAILINGS, BARRIERS AND FENCING**		
4.1	Stainless Steel Handrail	4 / L2-03	
4.2A	Custom Fencing Type 1	1 / L2-04	
4.2B	Custom Fencing Type 2	2 / L2-04	
4.3A	Fencing Gates Type 1	1 / L2-05	
4.3B	Fencing Gates Type 2	4 / L2-05	
4.3C	Fencing Gates Type 3	3 / L2-05	
4.3D	Fencing Gates Type 4	2 / L2-05	
5.0	**SPECIALTY ELEMENTS**		
5.1	Shade Structure, Events Lawn Pavilion	1,2 / L2-06	
5.2	Shade Structure, Type 1	1 / L2-07	
5.3	Shade Structure, Type 2	1 / L2-08	
5.4	Overlook	1 / L2-09	
5.5	Concessions/Restroom Building		REF SCHED 10
5.6	Maintenance Building		REF SCHED 10
5.7	Splash Pad Water Elements		REF SCHED 10
5.8	Tot Lot Play Elements		REF SCHED 10
5.9	Playground Play Elements		REF SCHED 10
5.10	Synthetic Turf		REF SCHED 10
5.11	Removable Soccer Goal		REF CCD STDS
5.12	Basketball Goal		REF DPS STDS
5.13	Primary Play Structure at School Playground		REF DPS STDS
5.14	Intermediate Play Structure at School Playground		REF DPS STDS
5.15	Swings at School Playground		REF DPS STDS
5.16	Painted Courts : Hop Scotch		REF DPS STDS
5.17	Painted Court : Hop Scotch ADA		REF DPS STDS
5.18	Painted Court : Foursquare		REF DPS STDS
5.19	Painted Court : Tether Ball		REF DPS STDS
5.20	Shade Structure at School Playground		REF DPS STDS
5.21	Sandstone Boulder		
6.0	**FURNISHINGS**		
6.1A	8' Diameter Precast Concrete Seating Pod	1 / L2-10	
6.1B	10' Diameter Precast Concrete Seating Pod	2 / L2-10	
6.2A	Bike Rack		REF SCHED 10
6.2B	Bike Share		REF SCHED 10
6.3	Tables and Chairs		REF SCHED 10
6.4	Trash/Recycle Receptacle		REF SCHED 10
6.5	Bench		REF SCHED 10
6.6	Custom Aluminum Bench	3 / L2-10	
6.7	Removable Bollard		REF SCHED 10
6.8	Interpretive Sign		REF CDOT STDS
6.9	Drinking Fountain		REF SCHED 10
6.10	Picnic Table		REF SCHED 10
6.11	Tree Grate		REF SCHED 10
7.0	**SITE LIGHTING AND ELECTRICAL**		
7.1	Pedestrian Lighting		REF SCHED 10
7.2	Central Plaza Lighting		REF SCHED 10
7.3	Field Lighting		REF SCHED 10
7.4	Parking Lot Lighting		REF SCHED 10
7.5	Accent Lighting		REF SCHED 10
7.6	Tree Accent Lighting		REF SCHED 10
7.7	Electrical Outlets		REF SCHED 10
8.0	**REFERENCE SECTIONS AND ELEVATIONS**		
8.1	46th Avenue at Multi-Use Field	1 / L2-12	
8.2	Clayton Street Cover Extension, South	2 / L2-12	
8.3	Columbine Street Cover Extension, North	1 / L2-13	
8.4	Clayton Street Cover Extension, North	3 / L2-12	
8.5	Columbine Street Cover Extension, South	2 / L2-13	
8.6	46th Avenue at Event Lawn	1 / L2-14	
8.7	Tot Lot and Splash Pad	2,3 / L2-14	
8.8	Multi-Use Field Fencing	4 / L2-14	
8.9	Columbine Street	1 / L2-15	
8.10	Central Plaza Space and Event Lawn	2,3 / L2-15, 1,2,3 / L2-16	
8.11	East Side Community Space	1,2,3 / L2-17	
9.0	**PLANTING AND LANDSCAPE**		
9.1	Ornamental Tree Planting Over Structure		REF SCHED 10
9.2	Street Tree Planting Over Structure		REF SCHED 10
9.3	Shade Tree Planting Over Structure		REF SCHED 10
9.4	Shade Tree Planting Off Structure		REF SCHED 10
9.5	Enhanced Landscape		REF SCHED 10
9.6	Transitional Landscape		REF SCHED 10
9.7	Naturalized Turf		REF SCHED 10

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Print Date: 5/5/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

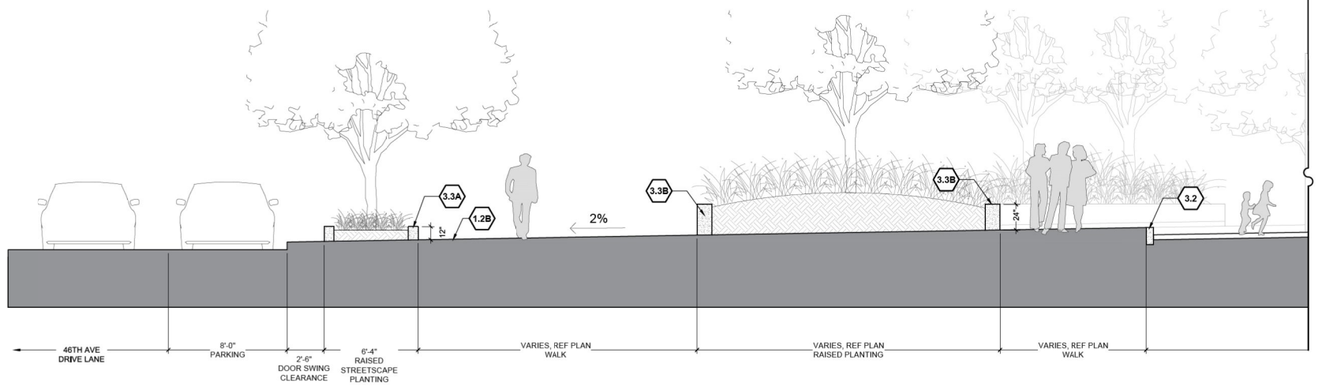
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
LANDSCAPE AND AESTHETIC
REFERENCE SECTIONS AND ELEVATIONS

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers:
Subset Sheets: L2-16 of

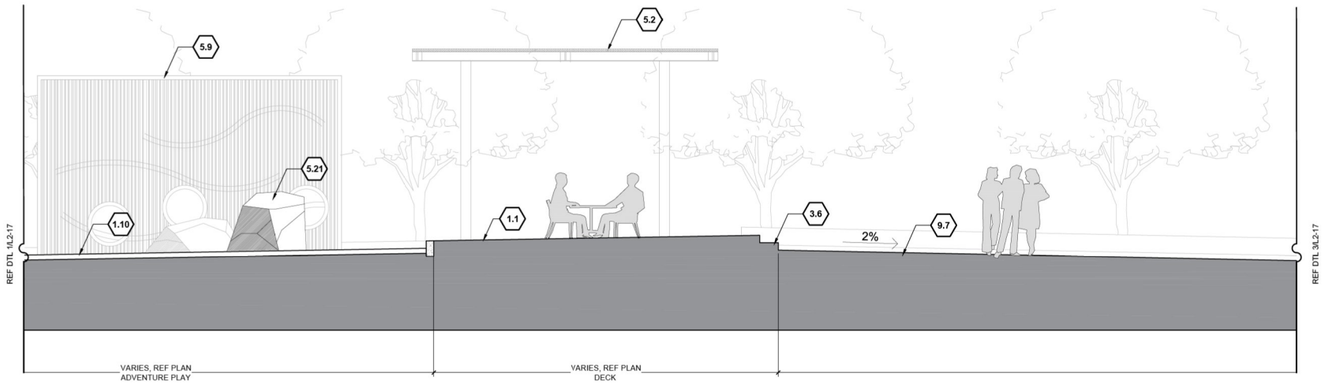
Project No./Code
FBR 0704-234
19631
Sheet Number 473



1 EAST SIDE COMMUNITY SPACE

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

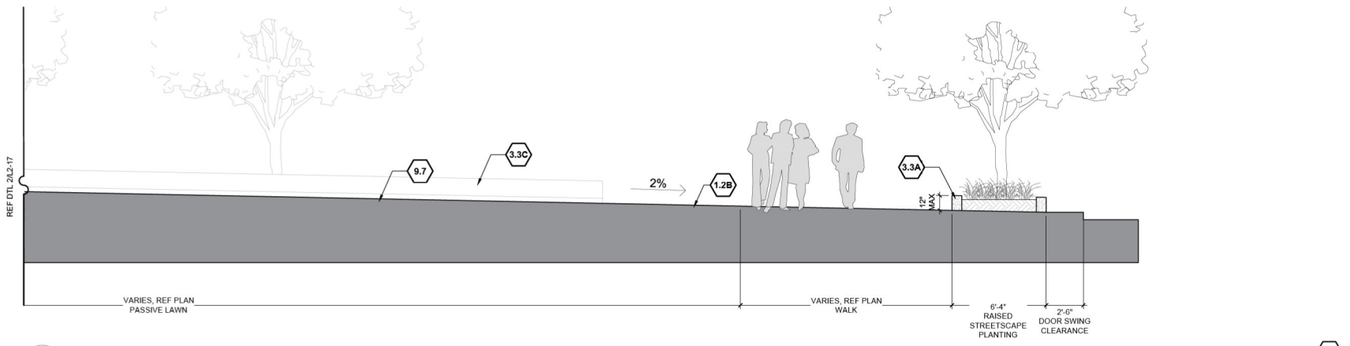
8.11



2 EAST SIDE COMMUNITY SPACE CONTINUED

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

8.11



3 EAST SIDE COMMUNITY SPACE CONTINUED

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

8.11

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
1.0	**PAVEMENTS, RAMPS, AND CURBS**		
1.1	CIP Concrete Paving, Sawcut Joints, Standard Grey, Broom Finish	1 / L2-01	
1.2A	CIP Concrete Paving, Sawcut Joints, Light Sandscape Finish, Integral color	1 / L2-01	
1.2B	CIP Concrete Paving, Sawcut Joints, Medium Sandscape Finish, Integral color	1 / L2-01	
1.3	Concrete/Stone Unit Pavers Type 1	2 / L2-01	
1.4	Concrete/Stone Unit Pavers Type 2	2 / L2-01	
1.5	Concrete/Stone Unit Pavers Type 3	2 / L2-01	
1.6	CIP Concrete Band	3 / L2-01	
1.7	Precast Concrete Band	3 / L2-01	
1.8	Playground Asphalt		REF CCD STDS
1.9	Rubberized Play Tiles		REF CCD/DPS STDS
1.10	Protective Play Surface		REF CCD/DPS STDS
1.11	Asphalt Parking Paving / Parking Striping		REF CCD STDS
1.12	Playground Pit ADA Ramp	4 / L2-01	
1.13	ADA Ramp		REF CCD STDS
1.14	CIP Concrete Curb and Gutter		REF CCD STDS
2.0	**NOT USED**		
3.0	**STEPS, CURBS AND WALLS**		
3.1	CIP Concrete Mural Wall	4,5 / L2-02	
3.2	CIP Concrete Curb	5 / L2-01	
3.3A	CIP Concrete Wall, 8" Wide	7 / L2-01	
3.3B	CIP Concrete Wall, 12" Wide	8 / L2-01	
3.3C	CIP Concrete Wall, 18" Wide	9 / L2-01	
3.4A	Precast Concrete Seat Wall, 18" Wide	10 / L2-01	
3.4B	Precast Concrete Seat Wall, 36" Wide	1,2 / L2-02	
3.5	Precast Concrete Retaining Wall	3 / L2-02	
3.6	Precast Concrete Step	1 / L2-03	
3.7	CMU Screen Wall	2 / L2-03	
3.8	Trash Enclosure	3 / L2-03	
4.0	**RAILINGS, BARRIERS AND FENCING**		
4.1	Stainless Steel Handrail	4 / L2-03	
4.2A	Custom Fencing Type 1	1 / L2-04	
4.2B	Custom Fencing Type 2	2 / L2-04	
4.3A	Fencing Gates Type 1	1 / L2-05	
4.3B	Fencing Gates Type 2	4 / L2-05	
4.3C	Fencing Gates Type 3	3 / L2-05	
4.3D	Fencing Gates Type 4	2 / L2-05	
5.0	**SPECIALTY ELEMENTS**		
5.1	Shade Structure, Events Lawn Pavilion	1,2 / L2-06	
5.2	Shade Structure, Type 1	1 / L2-07	
5.3	Shade Structure, Type 2	1 / L2-08	
5.4	Overlook	1 / L2-09	
5.5	Concessions/Restroom Building		REF SCHED 10
5.6	Maintenance Building		REF SCHED 10
5.7	Splash Pad Water Elements		REF SCHED 10
5.8	Tot Lot Play Elements		REF SCHED 10
5.9	Playground Play Elements		REF SCHED 10
5.10	Synthetic Turf		REF SCHED 10
5.11	Removable Soccer Goal		REF CCD STDS
5.12	Basketball Goal		REF DPS STDS
5.13	Primary Play Structure at School Playground		REF DPS STDS
5.14	Intermediate Play Structure at School Playground		REF DPS STDS
5.15	Swings at School Playground		REF DPS STDS
5.16	Painted Courts : Hop Scotch		REF DPS STDS
5.17	Painted Court : Hop Scotch ADA		REF DPS STDS
5.18	Painted Court : Foursquare		REF DPS STDS
5.19	Painted Court : Tether Ball		REF DPS STDS
5.20	Shade Structure at School Playground		REF DPS STDS
5.21	Sandstone Boulder		
6.0	**FURNISHINGS**		
6.1A	8' Diameter Precast Concrete Seating Pod	1 / L2-10	
6.1B	10' Diameter Precast Concrete Seating Pod	2 / L2-10	
6.2A	Bike Rack		REF SCHED 10
6.2B	Bike Share		REF SCHED 10
6.3	Tables and Chairs		REF SCHED 10
6.4	Trash/Recycle Receptacle		REF SCHED 10
6.5	Bench		REF SCHED 10
6.6	Custom Aluminum Bench	3 / L2-10	
6.7	Removable Bollard		REF SCHED 10
6.8	Interpretive Sign		REF CDOT STDS
6.9	Drinking Fountain		REF SCHED 10
6.10	Picnic Table		REF SCHED 10
6.11	Tree Grate		REF SCHED 10
7.0	**SITE LIGHTING AND ELECTRICAL**		
7.1	Pedestrian Lighting		REF SCHED 10
7.2	Central Plaza Lighting		REF SCHED 10
7.3	Field Lighting		REF SCHED 10
7.4	Parking Lot Lighting		REF SCHED 10
7.5	Accent Lighting		REF SCHED 10
7.6	Tree Accent Lighting		REF SCHED 10
7.7	Electrical Outlets		REF SCHED 10
8.0	**REFERENCE SECTIONS AND ELEVATIONS**		
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8.2	Clayton Street Cover Extension, South	2 / L2-12	
8.3	Columbine Street Cover Extension, North	1 / L2-13	
8.4	Clayton Street Cover Extension, North	3 / L2-12	
8.5	Columbine Street Cover Extension, South	2 / L2-13	
8.6	46th Avenue at Event Lawn	1 / L2-14	
8.7	Tot Lot and Splash Pad	2,3 / L2-14	
8.8	Multi-Use Field Fencing	4 / L2-14	
8.9	Columbine Street	1 / L2-15	
8.10	Central Plaza Space and Event Lawn	2,3 / L2-15, 1,2,3 / L2-16	
8.11	East Side Community Space	1,2,3 / L2-17	
9.0	**PLANTING AND LANDSCAPE**		
9.1	Ornamental Tree Planting Over Structure		REF SCHED 10
9.2	Street Tree Planting Over Structure		REF SCHED 10
9.3	Shade Tree Planting Over Structure		REF SCHED 10
9.4	Shade Tree Planting Off Structure		REF SCHED 10
9.5	Enhanced Landscape		REF SCHED 10
9.6	Transitional Landscape		REF SCHED 10
9.7	Naturalized Turf		REF SCHED 10

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Print Date: 5/5/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
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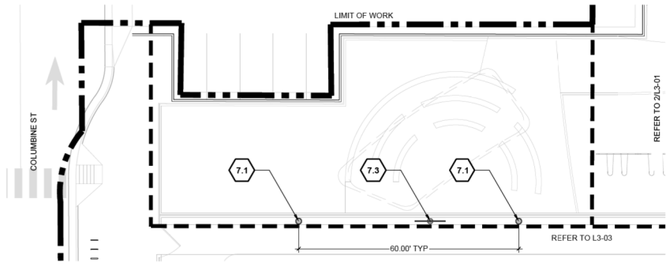
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
LANDSCAPE AND AESTHETIC
REFERENCE SECTIONS
AND ELEVATIONS

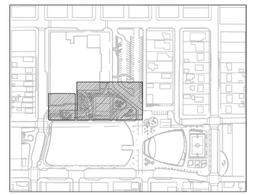
Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: L2-17 of

Project No./Code
FBR 0704-234
19631
Sheet Number 474



1 LIGHTING AND FURNISHINGS PLAN

1" = 16'-0"



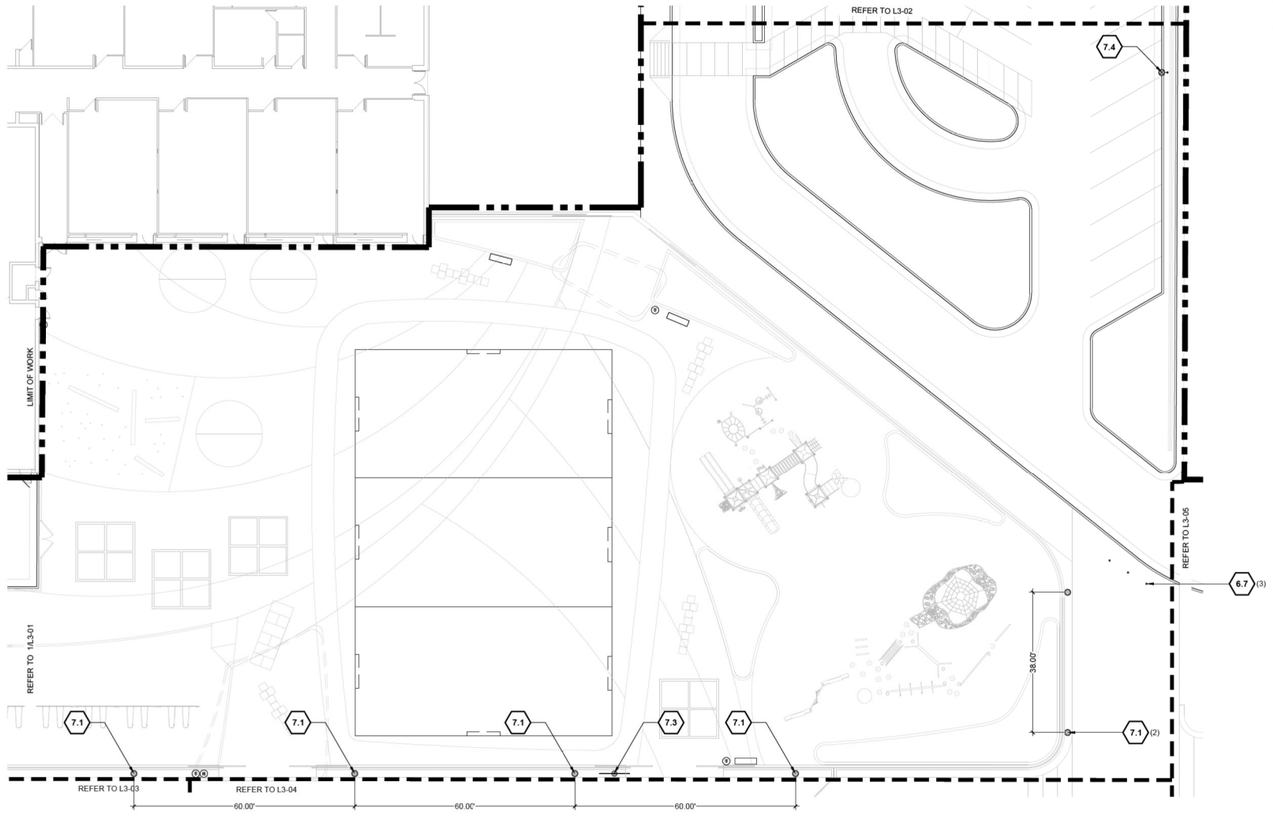
KEY PLAN

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
6.0	**FURNISHINGS**		
6.1A	8' Diameter Precast Concrete Seating Pod	1 / L2-10	
6.1B	10' Diameter Precast Concrete Seating Pod	2 / L2-10	
6.2A	Bike Rack		REF SCHED 10
6.2B	Bike Share		REF SCHED 10
6.3	Tables and Chairs		REF SCHED 10
6.4	Trash/Recycle Receptacle		REF SCHED 10
6.5	Bench		REF SCHED 10
6.6	Custom Aluminum Bench	3 / L2-10	
6.7	Removable Bollard		REF SCHED 10
6.8	Interpretive Sign		REF CDOT STD
6.9	Drinking Fountain		REF SCHED 10
6.10	Picnic Table		REF SCHED 10
6.11	Tree Grate		REF SCHED 10
7.0	**SITE LIGHTING AND ELECTRICAL**		
7.1	Pedestrian Lighting		REF SCHED 10
7.2	Central Plaza Lighting		REF SCHED 10
7.3	Field Lighting		REF SCHED 10
7.4	Parking Lot Lighting		REF SCHED 10
7.5	Accent Lighting		REF SCHED 10
7.6	Tree Accent Lighting		REF SCHED 10
7.7	**Electrical Outlets**		**REF SCHED 10**

LIGHTING AND FURNISHING LEGEND

- 7.1 PEDESTRIAN LIGHTING
- 7.2 CENTRAL PLAZA LIGHTING
- 7.3 FIELD LIGHTING
- 7.4 PARKING LOT LIGHTING
- 7.5 ACCENT LIGHTING
- 7.6 TREE ACCENT LIGHTING
- 7.7 ELECTRICAL OUTLET
- 6.1 PRECAST CONCRETE SEATING POD
- 6.2 BIKE RACK
- 6.3 TABLES AND CHAIRS
- 6.4 TRASH/RECYCLING RECEPTACLE
- 6.5 BENCH
- 6.7 REMOVABLE BOLLARD
- 6.9 DRINKING FOUNTAIN
- 6.10 PICNIC TABLE



2 LIGHTING AND FURNISHINGS PLAN

1" = 16'-0"

NORTH

0 8' 16' 32'

ORIGINAL SCALE: 1"=16'-00"

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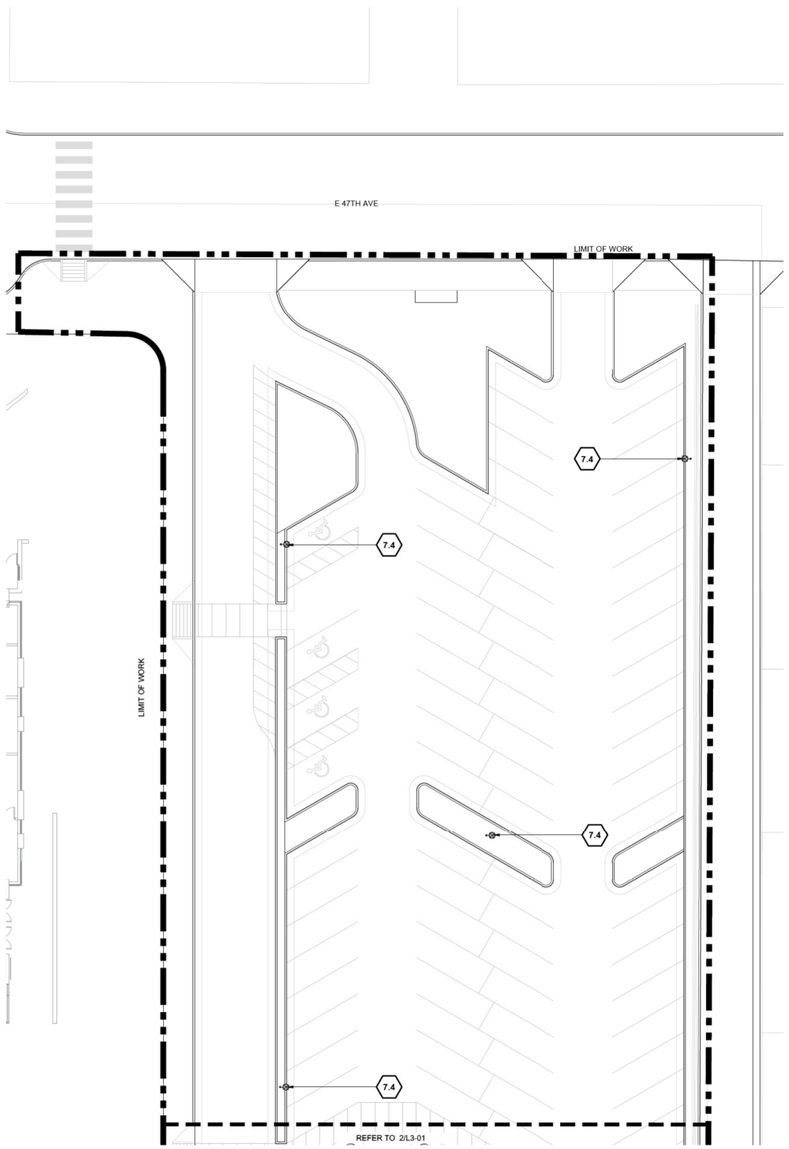
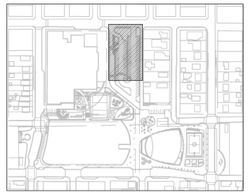
Print Date: 5/5/2017		Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 LANDSCAPE AND AESTHETIC LIGHTING AND FURNISHING PLAN	Project No./Code
File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:		FBR 0704-234
Front Range Mobility Group	Horiz. Scale: As Noted					Revised:	Designer:	19631
	Vert. Scale: As Noted						Detailer:	
	Unit Information				Region 1 KJS	Void:	Sheet Subset: LANDSCAPE	Sheet Number 475
	Unit Leader						Structure Numbers / Subset Sheets: L3-01 of	



1 **LIGHTING AND FURNISHINGS PLAN**
1" = 16'-0"



KEY PLAN

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
6.0	**FURNISHINGS**		
6.1A	8' Diameter Precast Concrete Seating Pod	1 / L2-10	
6.1B	10' Diameter Precast Concrete Seating Pod	2 / L2-10	
6.2A	Bike Rack		REF SCHED 10
6.2B	Bike Share		REF SCHED 10
6.3	Tables and Chairs		REF SCHED 10
6.4	Trash/Recycle Receptacle		REF SCHED 10
6.5	Bench		REF SCHED 10
6.6	Custom Aluminum Bench	3 / L2-10	
6.7	Removable Bollard		REF SCHED 10
6.8	Interpretive Sign		REF CDOT STD
6.9	Drinking Fountain		REF SCHED 10
6.10	Picnic Table		REF SCHED 10
6.11	Tree Grate		REF SCHED 10
7.0	**SITE LIGHTING AND ELECTRICAL**		
7.1	Pedestrian Lighting		REF SCHED 10
7.2	Central Plaza Lighting		REF SCHED 10
7.3	Field Lighting		REF SCHED 10
7.4	Parking Lot Lighting		REF SCHED 10
7.5	Accent Lighting		REF SCHED 10
7.6	Tree Accent Lighting		REF SCHED 10
7.7	**Electrical Outlets**		**REF SCHED 10**

LIGHTING AND FURNISHING LEGEND

7.1	PEDESTRIAN LIGHTING	6.1	PRECAST CONCRETE SEATING POD
7.2	CENTRAL PLAZA LIGHTING	6.2	BIKE RACK
7.3	FIELD LIGHTING	6.3	TABLES AND CHAIRS
7.4	PARKING LOT LIGHTING	6.4	TRASH/RECYCLING RECEPTACLE
7.5	ACCENT LIGHTING	6.5	BENCH
7.6	TREE ACCENT LIGHTING	6.7	REMOVABLE BOLLARD
7.7	ELECTRICAL OUTLET	6.9	DRINKING FOUNTAIN
		6.10	PICNIC TABLE

NORTH 0 8' 16' 32'
ORIGINAL SCALE: 1"=16'-00"

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Print Date: 5/5/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

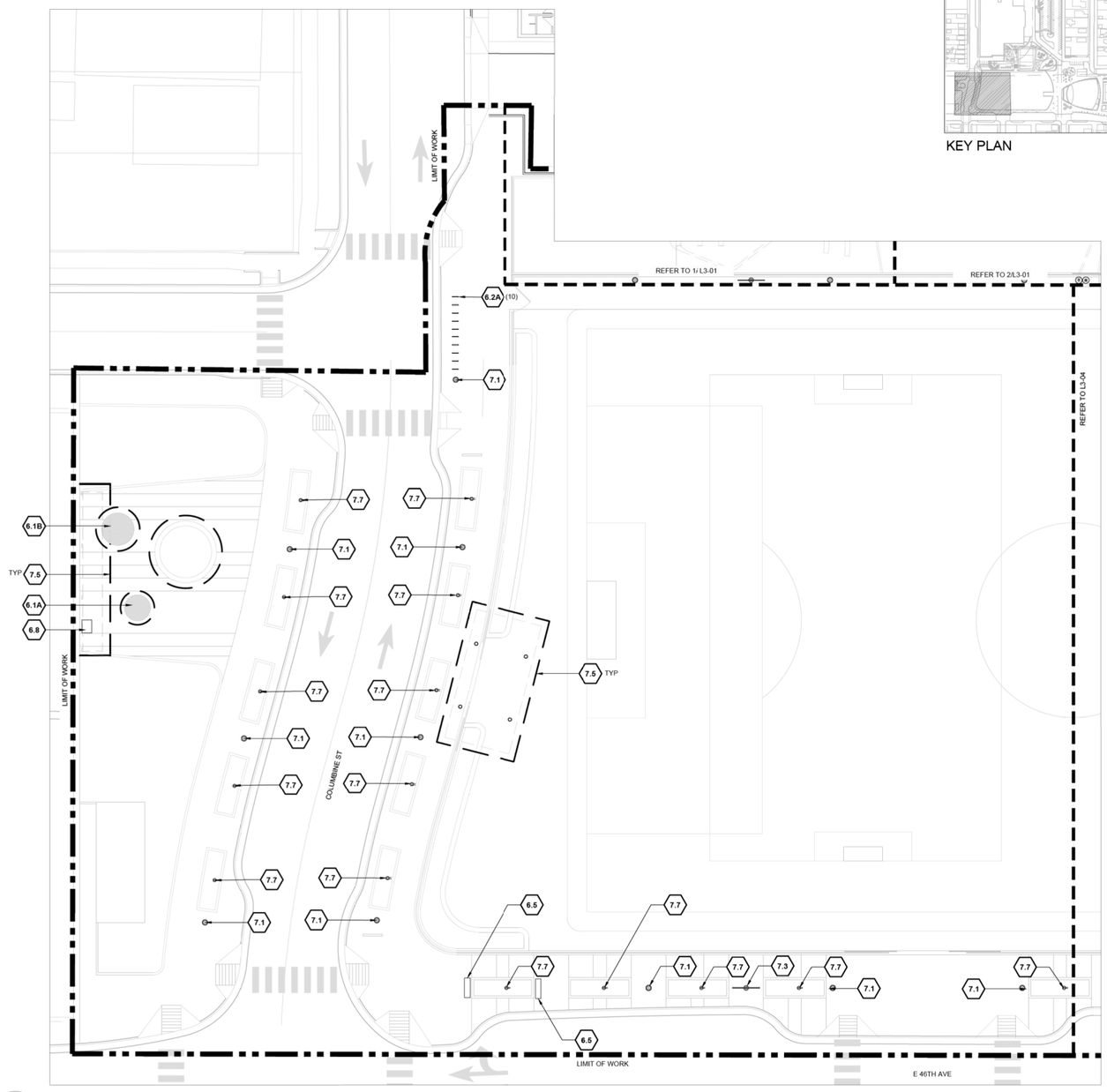
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

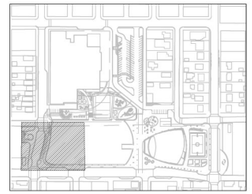
CENTRAL 70
LANDSCAPE AND AESTHETIC LIGHTING AND FURNISHING PLAN

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers:
Subset Sheets: L3-02 of

Project No./Code
FBR 0704-234
19631
Sheet Number 476



1 **LIGHTING AND FURNISHINGS PLAN**
1" = 16'-0"



KEY PLAN

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
6.0	**FURNISHINGS**		
6.1A	8' Diameter Precast Concrete Seating Pod	1 / L2-10	
6.1B	10' Diameter Precast Concrete Seating Pod	2 / L2-10	
6.2A	Bike Rack		REF SCHED 10
6.2B	Bike Share		REF SCHED 10
6.3	Tables and Chairs		REF SCHED 10
6.4	Trash/Recycle Receptacle		REF SCHED 10
6.5	Bench		REF SCHED 10
6.6	Custom Aluminum Bench	3 / L2-10	
6.7	Removable Bollard		REF SCHED 10
6.8	Interpretive Sign		REF CDOT STD
6.9	Drinking Fountain		REF SCHED 10
6.10	Picnic Table		REF SCHED 10
6.11	Tree Grate		REF SCHED 10
7.0	**SITE LIGHTING AND ELECTRICAL**		
7.1	Pedestrian Lighting		REF SCHED 10
7.2	Central Plaza Lighting		REF SCHED 10
7.3	Field Lighting		REF SCHED 10
7.4	Parking Lot Lighting		REF SCHED 10
7.5	Accent Lighting		REF SCHED 10
7.6	Tree Accent Lighting		REF SCHED 10
7.7	**Electrical Outlets**		**REF SCHED 10**

LIGHTING AND FURNISHING LEGEND

7.1	PEDESTRIAN LIGHTING	6.1	PRECAST CONCRETE SEATING POD
7.2	CENTRAL PLAZA LIGHTING	6.2	BIKE RACK
7.3	FIELD LIGHTING	6.3	TABLES AND CHAIRS
7.4	PARKING LOT LIGHTING	6.4	TRASH/RECYCLING RECEPTACLE
7.5	ACCENT LIGHTING	6.5	BENCH
7.6	TREE ACCENT LIGHTING	6.7	REMOVABLE BOLLARD
7.7	ELECTRICAL OUTLET	6.9	DRINKING FOUNTAIN
		6.10	PICNIC TABLE

NORTH
0 8' 16' 32'
ORIGINAL SCALE: 1"=16'-00"

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Print Date: 5/5/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

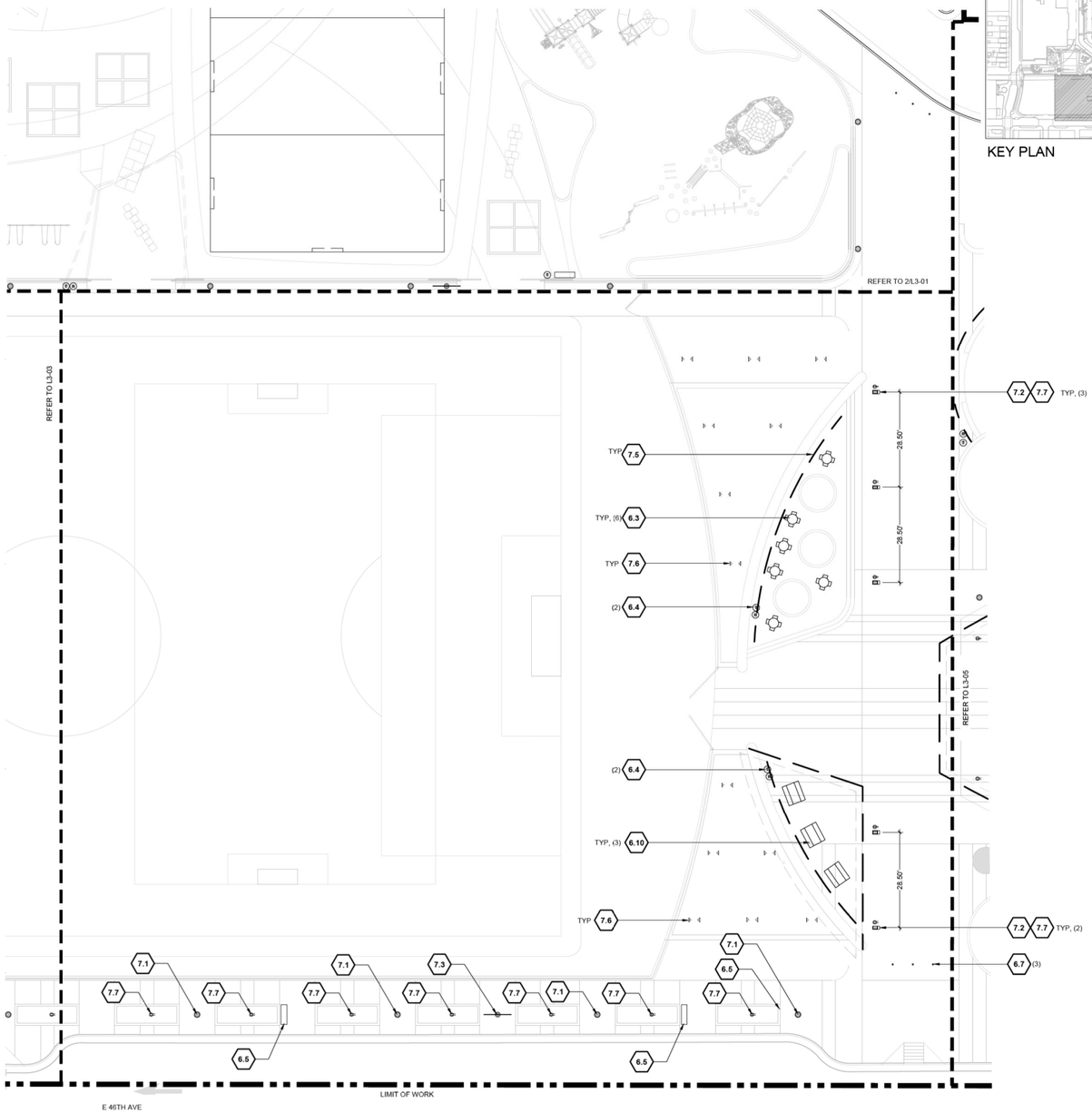
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
LANDSCAPE AND AESTHETIC LIGHTING AND FURNISHING PLAN

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: L3-03 of

Project No./Code
FBR 0704-234
19631
Sheet Number 477



1 **LIGHTING AND FURNISHINGS PLAN**
1" = 16'-0"

KEY PLAN

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
6.0	**FURNISHINGS**		
6.1A	8' Diameter Precast Concrete Seating Pod	1 / L2-10	
6.1B	10' Diameter Precast Concrete Seating Pod	2 / L2-10	
6.2A	Bike Rack		REF SCHED 10
6.2B	Bike Share		REF SCHED 10
6.3	Tables and Chairs		REF SCHED 10
6.4	Trash/Recycle Receptacle		REF SCHED 10
6.5	Bench		REF SCHED 10
6.6	Custom Aluminum Bench	3 / L2-10	
6.7	Removable Bollard		REF SCHED 10
6.8	Interpretive Sign		REF CDOT STD
6.9	Drinking Fountain		REF SCHED 10
6.10	Picnic Table		REF SCHED 10
6.11	Tree Grate		REF SCHED 10
7.0	**SITE LIGHTING AND ELECTRICAL**		
7.1	Pedestrian Lighting		REF SCHED 10
7.2	Central Plaza Lighting		REF SCHED 10
7.3	Field Lighting		REF SCHED 10
7.4	Parking Lot Lighting		REF SCHED 10
7.5	Accent Lighting		REF SCHED 10
7.6	Tree Accent Lighting		REF SCHED 10
7.7	**Electrical Outlets**		**REF SCHED 10**

LIGHTING AND FURNISHING LEGEND

- 7.1 PEDESTRIAN LIGHTING
- 7.2 CENTRAL PLAZA LIGHTING
- 7.3 FIELD LIGHTING
- 7.4 PARKING LOT LIGHTING
- 7.5 ACCENT LIGHTING
- 7.6 TREE ACCENT LIGHTING
- 7.7 ELECTRICAL OUTLET
- 6.1 PRECAST CONCRETE SEATING POD
- 6.2 BIKE RACK
- 6.3 TABLES AND CHAIRS
- 6.4 TRASH/RECYCLING RECEPTACLE
- 6.5 BENCH
- 6.7 REMOVABLE BOLLARD
- 6.9 DRINKING FOUNTAIN
- 6.10 PICNIC TABLE

NORTH
0 8' 16' 32'
ORIGINAL SCALE: 1"=16'-00"

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Print Date: 5/5/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

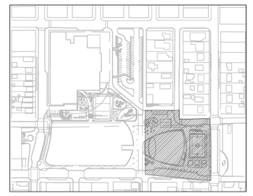
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
LANDSCAPE AND AESTHETIC LIGHTING AND FURNISHING PLAN

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: L3-04 of

Project No./Code
FBR 0704-234
19631
Sheet Number 478



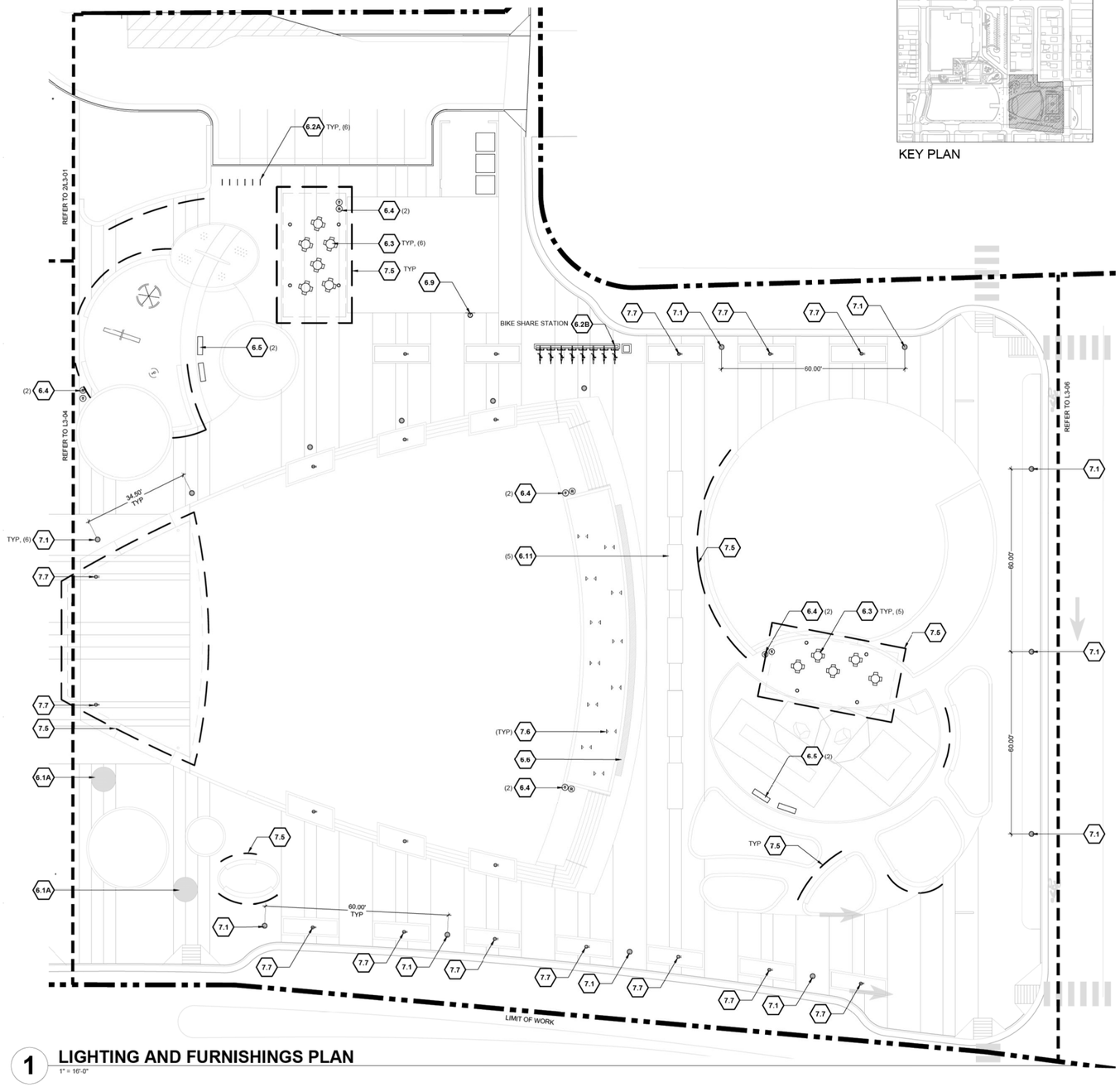
KEY PLAN

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
6.0	**FURNISHINGS**		
6.1A	8' Diameter Precast Concrete Seating Pod	1 / L2-10	
6.1B	10' Diameter Precast Concrete Seating Pod	2 / L2-10	
6.2A	Bike Rack		REF SCHED 10
6.2B	Bike Share		REF SCHED 10
6.3	Tables and Chairs		REF SCHED 10
6.4	Trash/Recycle Receptacle		REF SCHED 10
6.5	Bench		REF SCHED 10
6.6	Custom Aluminum Bench	3 / L2-10	
6.7	Removable Bollard		REF SCHED 10
6.8	Interpretive Sign		REF CDOT STD
6.9	Drinking Fountain		REF SCHED 10
6.10	Picnic Table		REF SCHED 10
6.11	Tree Grate		REF SCHED 10
7.0	**SITE LIGHTING AND ELECTRICAL**		
7.1	Pedestrian Lighting		REF SCHED 10
7.2	Central Plaza Lighting		REF SCHED 10
7.3	Field Lighting		REF SCHED 10
7.4	Parking Lot Lighting		REF SCHED 10
7.5	Accent Lighting		REF SCHED 10
7.6	Tree Accent Lighting		REF SCHED 10
7.7	**Electrical Outlets**		**REF SCHED 10**

LIGHTING AND FURNISHING LEGEND

- 7.1 PEDESTRIAN LIGHTING
- 7.2 CENTRAL PLAZA LIGHTING
- 7.3 FIELD LIGHTING
- 7.4 PARKING LOT LIGHTING
- 7.5 ACCENT LIGHTING
- 7.6 TREE ACCENT LIGHTING
- 7.7 ELECTRICAL OUTLET
- 6.1 PRECAST CONCRETE SEATING POD
- 6.2 BIKE RACK
- 6.3 TABLES AND CHAIRS
- 6.4 TRASH/RECYCLING RECEPTACLE
- 6.5 BENCH
- 6.7 REMOVABLE BOLLARD
- 6.9 DRINKING FOUNTAIN
- 6.10 PICNIC TABLE



1 **LIGHTING AND FURNISHINGS PLAN**
1" = 16'-0"

NORTH 0 8' 16' 32'
ORIGINAL SCALE: 1"=16'-00"

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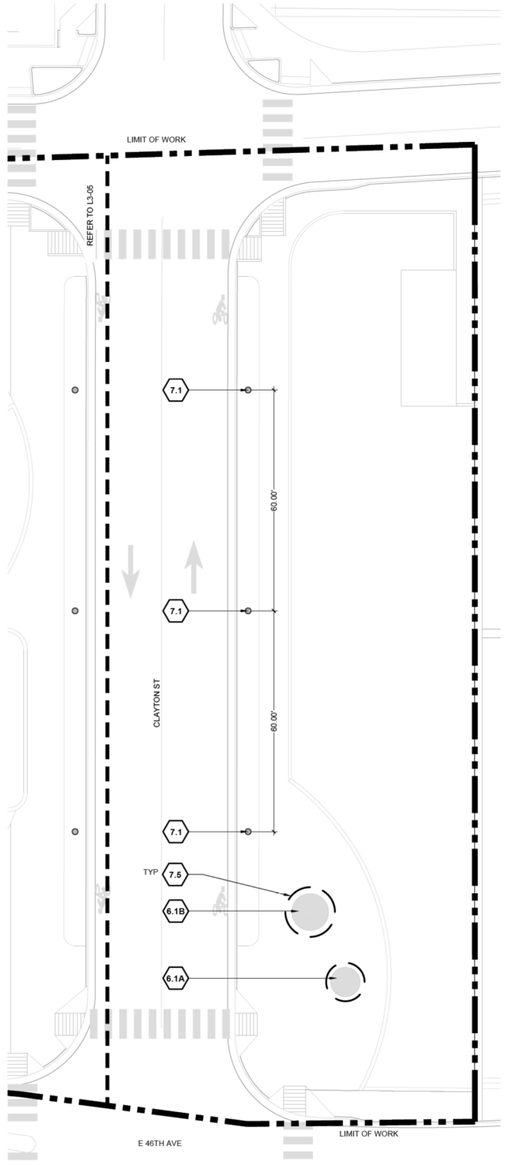
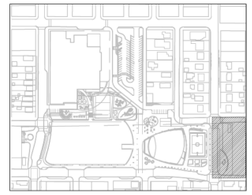
Print Date: 5/5/2017		Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 LANDSCAPE AND AESTHETIC LIGHTING AND FURNISHING PLAN	Project No./Code
File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:		FBR 0704-234
Front Range Mobility Group	Horiz. Scale: As Noted					Revised:	Designer:	Structure Numbers: 19631
	Vert. Scale: As Noted						Detailer:	
	Unit Information				Region 1 KJS	Void:	Sheet Subset: LANDSCAPE	Subset Sheets: L3-05 of
	Unit Leader							Sheet Number 479



1 LIGHTING AND FURNISHINGS PLAN
1" = 16'-0"



KEY PLAN

SITE KEYNOTES:

		DETAIL / SHEET	REFERENCE
6.0	**FURNISHINGS**		
6.1A	8' Diameter Precast Concrete Seating Pod	1 / L2-10	
6.1B	10' Diameter Precast Concrete Seating Pod	2 / L2-10	
6.2A	Bike Rack		REF SCHED 10
6.2B	Bike Share		REF SCHED 10
6.3	Tables and Chairs		REF SCHED 10
6.4	Trash/Recycle Receptacle		REF SCHED 10
6.5	Bench		REF SCHED 10
6.6	Custom Aluminum Bench	3 / L2-10	
6.7	Removable Bollard		REF SCHED 10
6.8	Interpretive Sign		REF CDOT STD
6.9	Drinking Fountain		REF SCHED 10
6.10	Picnic Table		REF SCHED 10
6.11	Tree Grate		REF SCHED 10
7.0	**SITE LIGHTING AND ELECTRICAL**		
7.1	Pedestrian Lighting		REF SCHED 10
7.2	Central Plaza Lighting		REF SCHED 10
7.3	Field Lighting		REF SCHED 10
7.4	Parking Lot Lighting		REF SCHED 10
7.5	Accent Lighting		REF SCHED 10
7.6	Tree Accent Lighting		REF SCHED 10
7.7	**Electrical Outlets**		**REF SCHED 10**

LIGHTING AND FURNISHING LEGEND

- 7.1 PEDESTRIAN LIGHTING
- 7.2 CENTRAL PLAZA LIGHTING
- 7.3 FIELD LIGHTING
- 7.4 PARKING LOT LIGHTING
- 7.5 ACCENT LIGHTING
- 7.6 TREE ACCENT LIGHTING
- 7.7 ELECTRICAL OUTLET
- 6.1 PRECAST CONCRETE SEATING POD
- 6.2 BIKE RACK
- 6.3 TABLES AND CHAIRS
- 6.4 TRASH/RECYCLING RECEPTACLE
- 6.5 BENCH
- 6.7 REMOVABLE BOLLARD
- 6.9 DRINKING FOUNTAIN
- 6.10 PICNIC TABLE

NORTH
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ORIGINAL SCALE: 1"=16'-00"

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Print Date: 5/5/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
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Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

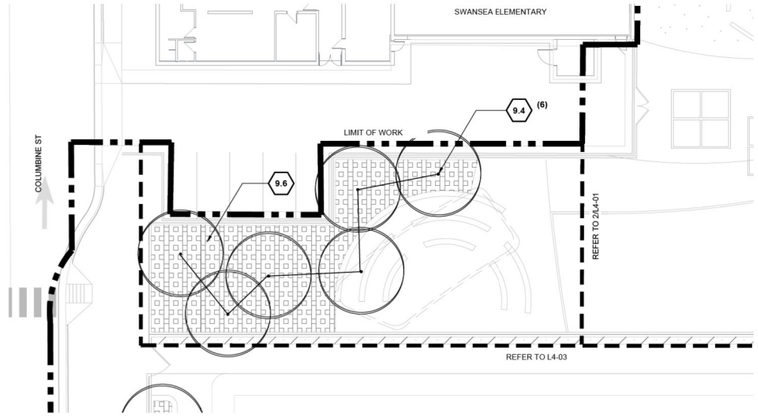
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

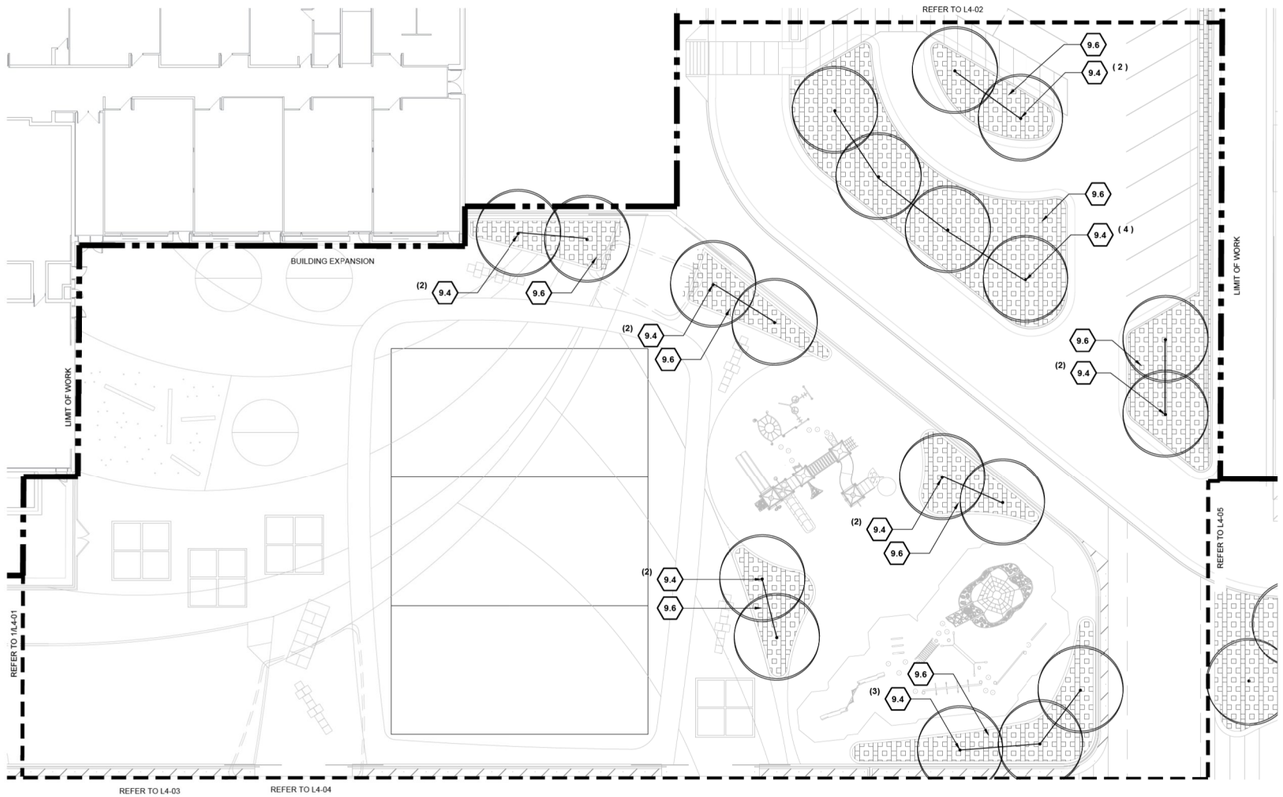
CENTRAL 70
LANDSCAPE AND AESTHETIC LIGHTING AND FURNISHING PLAN

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers:
Subset Sheets: L3-06 of

Project No./Code
FBR 0704-234
19631
Sheet Number 480



1 PLANTING PLAN
1" = 16'-0"



2 PLANTING PLAN
1" = 16'-0"

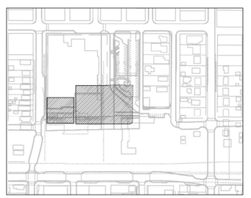
PLANTING KEYNOTES:

		DETAIL / SHEET REFERENCE
9.0	**PLANTING AND LANDSCAPE**	
9.1	Ornamental Tree Planting Over Structure	REF SCHED 10
9.2	Street Tree Planting Over Structure	REF SCHED 10
9.3	Shade Tree Planting Over Structure	REF SCHED 10
9.4	Shade Tree Planting Off Structure	REF SCHED 10
9.5	Enhanced Landscape	REF SCHED 10
9.6	Transitional Landscape	REF SCHED 10
9.7	Naturalized Turf	REF SCHED 10

PLANTING LEGEND

9.5 ENHANCED LANDSCAPE
9.6 TRANSITIONAL LANDSCAPE
9.7 NATURALIZED TURF

	PLANTING TYPE, PLANTING CONDITION	MIN.CAL MIN.H	MIN.SOIL DEPTH	MIN.SOIL VOLUME
	OVER STRUCTURE			
9.1A	ORNAMENTAL TREE, RAISED PLANTER, MIN 18"/MAX 24" H	2.5" CAL 8' H	36"	300 CF
9.1B	ORNAMENTAL TREE, RAISED PLANTER, MAX 30" H	2.5" CAL 8' H	36"	300 CF
9.1C	ORNAMENTAL TREE, RAISED BOOKEND PLANTER	2.5" CAL 8' H	48"	300 CF
9.2A	STREET TREE, RAISED PLANTER, MAX 30" H	2.5" CAL	36"	270 CF
9.2B	STREET TREE, RAISED PLANTER, MAX 12" H	2.5" CAL	48"	235 CF
9.2C	STREET TREE, FLUSH PLANTER	2.5" CAL	48"	300 CF
9.3A	SHADE TREE, RAISED PLANTER, MAX 30" H	2.5" CAL	48"	500 CF
9.3B	SHADE TREE, RAISED PLANTER, MIN 18"/MAX 24" H	2.5" CAL	36"	300 CF
9.3C	SHADE TREE, FLUSH PLANTER	2.5" CAL	48"	300 CF
9.3D	SHADE TREE, RAISED PLANTER, MAX 24" H	2.5" CAL	42"	500 CF
9.3E	SHADE TREE, RAISED PLANTER, MAX 30" H	2.5" CAL	48"	300 CF
9.7A	TURF, TYPE 1	N/A	12"	N/A
9.7B	TURF, TYPE 2	N/A	18"	N/A
	OFF STRUCTURE			
9.4	SHADE TREE	2.5" CAL	N/A	N/A



KEY PLAN

NORTH
0 8' 16' 32'
ORIGINAL SCALE: 1"=16'-00"

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Print Date: 5/5/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

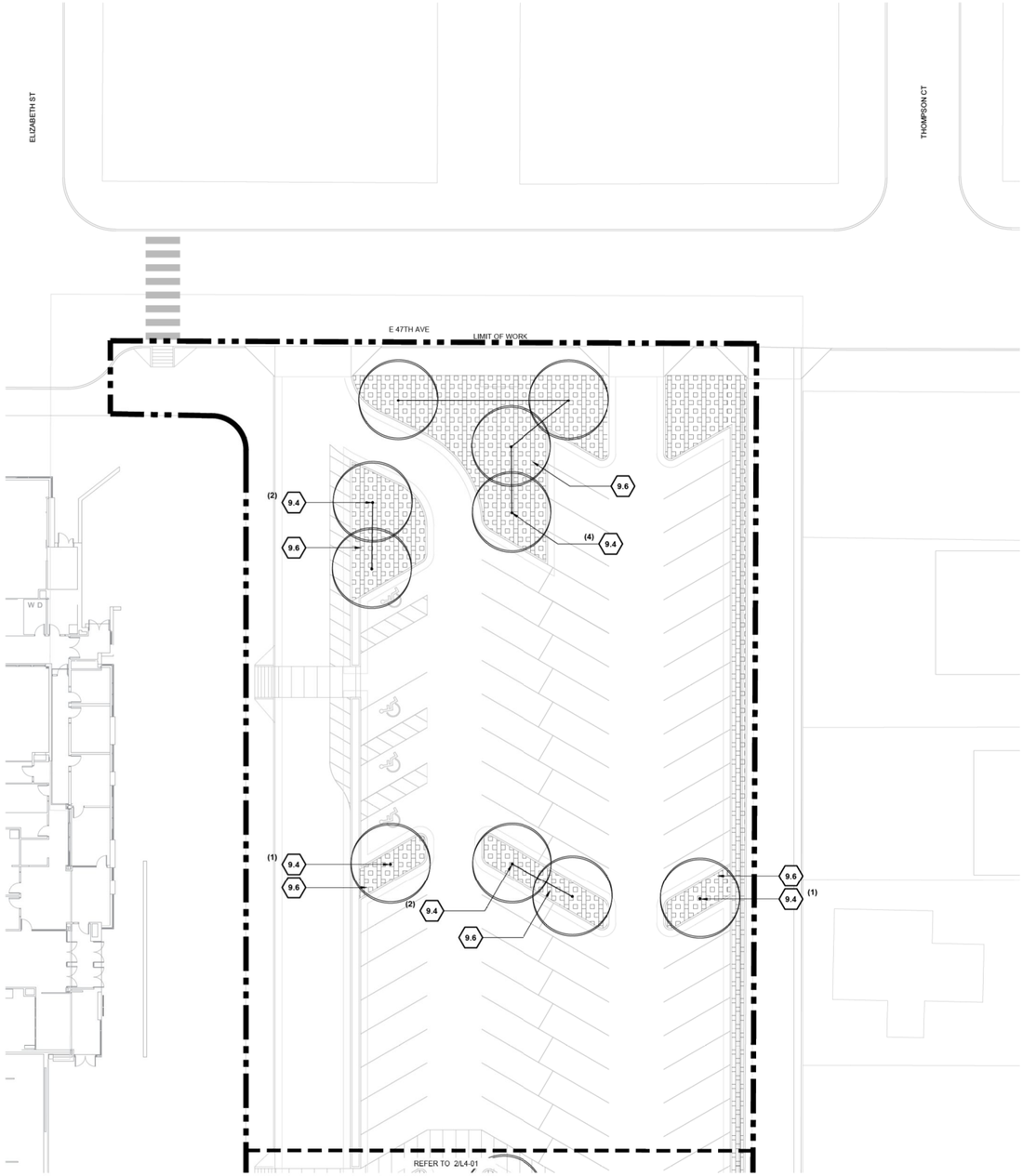
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
LANDSCAPE AND AESTHETIC PLANTING PLAN

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: L4-01 of

Project No./Code
FBR 0704-234
19631
Sheet Number 481



1 PLANTING PLAN
1" = 16'-0"

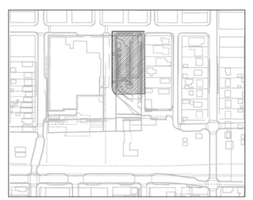
PLANTING KEYNOTES:

		DETAIL / SHEET REFERENCE
9.0	**PLANTING AND LANDSCAPE**	
9.1	Ornamental Tree Planting Over Structure	REF SCHED 10
9.2	Street Tree Planting Over Structure	REF SCHED 10
9.3	Shade Tree Planting Over Structure	REF SCHED 10
9.4	Shade Tree Planting Off Structure	REF SCHED 10
9.5	Enhanced Landscape	REF SCHED 10
9.6	Transitional Landscape	REF SCHED 10
9.7	Naturalized Turf	REF SCHED 10

PLANTING LEGEND

- 9.5 ENHANCED LANDSCAPE
- 9.6 TRANSITIONAL LANDSCAPE
- 9.7 NATURALIZED TURF

	PLANTING TYPE, PLANTING CONDITION	MIN.CAL MIN.H	MIN.SOIL DEPTH	MIN.SOIL VOLUME
	OVER STRUCTURE			
9.1A	ORNAMENTAL TREE, RAISED PLANTER, MIN 18"/MAX 24" H	2.5" CAL 8' H	36"	300 CF
9.1B	ORNAMENTAL TREE, RAISED PLANTER, MAX 30" H	2.5" CAL 8' H	36"	300 CF
9.1C	ORNAMENTAL TREE, RAISED BOOKEND PLANTER	2.5" CAL 8' H	48"	300 CF
9.2A	STREET TREE, RAISED PLANTER, MAX 30" H	2.5" CAL	36"	270 CF
9.2B	STREET TREE, RAISED PLANTER, MAX 12" H	2.5" CAL	48"	235 CF
9.2C	STREET TREE, FLUSH PLANTER	2.5" CAL	48"	300 CF
9.3A	SHADE TREE, RAISED PLANTER, MAX 30" H	2.5" CAL	48"	500 CF
9.3B	SHADE TREE, RAISED PLANTER, MIN 18"/MAX 24" H	2.5" CAL	36"	300 CF
9.3C	SHADE TREE, FLUSH PLANTER	2.5" CAL	48"	300 CF
9.3D	SHADE TREE, RAISED PLANTER, MAX 24" H	2.5" CAL	42"	500 CF
9.3E	SHADE TREE, RAISED PLANTER, MAX 30" H	2.5" CAL	48"	300 CF
9.7A	TURF, TYPE 1	N/A	12"	N/A
9.7B	TURF, TYPE 2	N/A	18"	N/A
	OFF STRUCTURE			
9.4	SHADE TREE	2.5" CAL	N/A	N/A



KEY PLAN

NORTH 0 8' 16' 32'
ORIGINAL SCALE: 1"=16'-00"

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Print Date: 5/5/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

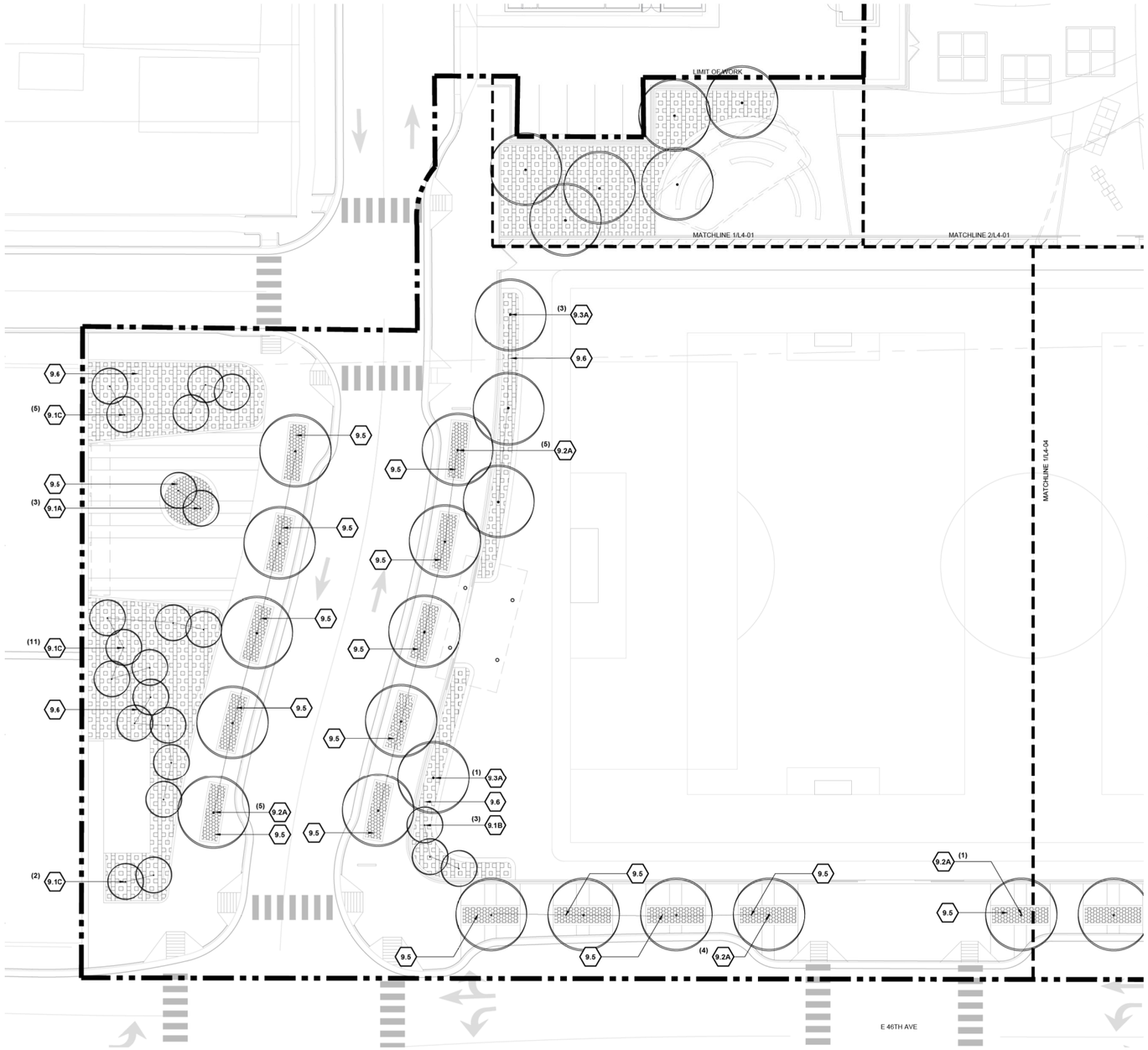
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
LANDSCAPE AND AESTHETIC PLANTING PLAN

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: L4-02 of

Project No./Code
FBR 0704-234
19631
Sheet Number 482



1 I-70 COVER
1" = 16'-0"

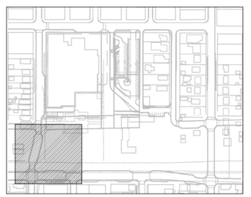
PLANTING KEYNOTES:

		DETAIL / SHEET REFERENCE
9.0	**PLANTING AND LANDSCAPE**	
9.1	Ornamental Tree Planting Over Structure	REF SCHED 10
9.2	Street Tree Planting Over Structure	REF SCHED 10
9.3	Shade Tree Planting Over Structure	REF SCHED 10
9.4	Shade Tree Planting Off Structure	REF SCHED 10
9.5	Enhanced Landscape	REF SCHED 10
9.6	Transitional Landscape	REF SCHED 10
9.7	Naturalized Turf	REF SCHED 10

PLANTING LEGEND

- 9.5 ENHANCED LANDSCAPE
- 9.6 TRANSITIONAL LANDSCAPE
- 9.7 NATURALIZED TURF

	PLANTING TYPE, PLANTING CONDITION	MIN.CAL MIN.H	MIN.SOIL DEPTH	MIN.SOIL VOLUME
	OVER STRUCTURE			
9.1A	ORNAMENTAL TREE, RAISED PLANTER, MIN 18"/MAX 24" H	2.5" CAL 8' H	36"	300 CF
9.1B	ORNAMENTAL TREE, RAISED PLANTER, MAX 30" H	2.5" CAL 8' H	36"	300 CF
9.1C	ORNAMENTAL TREE, RAISED BOOKEND PLANTER	2.5" CAL 8' H	48"	300 CF
9.2A	STREET TREE, RAISED PLANTER, MAX 30" H	2.5" CAL	36"	270 CF
9.2B	STREET TREE, RAISED PLANTER, MAX 12" H	2.5" CAL	48"	235 CF
9.2C	STREET TREE, FLUSH PLANTER	2.5" CAL	48"	300 CF
9.3A	SHADE TREE, RAISED PLANTER, MAX 30" H	2.5" CAL	48"	500 CF
9.3B	SHADE TREE, RAISED PLANTER, MIN 18"/MAX 24" H	2.5" CAL	36"	300 CF
9.3C	SHADE TREE, FLUSH PLANTER	2.5" CAL	48"	300 CF
9.3D	SHADE TREE, RAISED PLANTER, MAX 24" H	2.5" CAL	42"	500 CF
9.3E	SHADE TREE, RAISED PLANTER, MAX 30" H	2.5" CAL	48"	300 CF
9.7A	TURF, TYPE A	N/A	12"	N/A
9.7B	TURF, TYPE B	N/A	13"	N/A
	OFF STRUCTURE			
9.4	SHADE TREE	2.5" CAL	N/A	N/A



KEY PLAN

NORTH
0 8' 16' 32'
ORIGINAL SCALE: 1"=16'-00"

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Print Date: 5/5/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

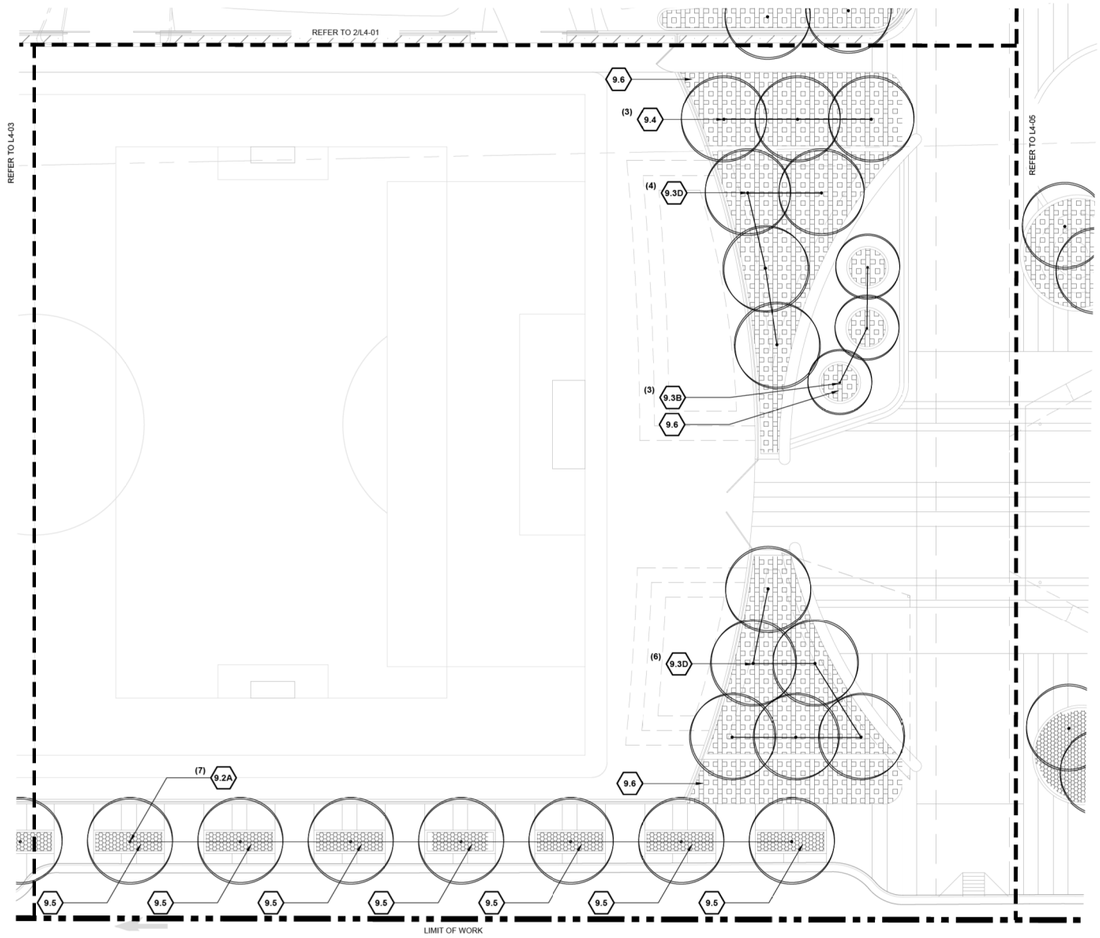
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
LANDSCAPE AND AESTHETIC PLANTING PLAN

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: L4-03 of

Project No./Code
FBR 0704-234
19631
Sheet Number 483



1 **PLANTING PLAN**
1" = 16'-0"

PLANTING KEYNOTES:

		DETAIL / SHEET REFERENCE
9.0	**PLANTING AND LANDSCAPE**	
9.1	Ornamental Tree Planting Over Structure	REF SCHED 10
9.2	Street Tree Planting Over Structure	REF SCHED 10
9.3	Shade Tree Planting Over Structure	REF SCHED 10
9.4	Shade Tree Planting Off Structure	REF SCHED 10
9.5	Enhanced Landscape	REF SCHED 10
9.6	Transitional Landscape	REF SCHED 10
9.7	Naturalized Turf	REF SCHED 10

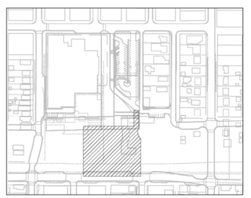
PLANTING LEGEND

9.5 ENHANCED LANDSCAPE

9.6 TRANSITIONAL LANDSCAPE

9.7 NATURALIZED TURF

	PLANTING TYPE, PLANTING CONDITION	MIN.CAL MIN.H	MIN.SOIL DEPTH	MIN.SOIL VOLUME
	OVER STRUCTURE			
9.1A	ORNAMENTAL TREE, RAISED PLANTER, MIN 18"/MAX 24" H	2.5" CAL 8' H	36"	300 CF
9.1B	ORNAMENTAL TREE, RAISED PLANTER, MAX 30" H	2.5" CAL 8' H	36"	300 CF
9.1C	ORNAMENTAL TREE, RAISED BOOKEND PLANTER	2.5" CAL 8' H	48"	300 CF
9.2A	STREET TREE, RAISED PLANTER, MAX 30" H	2.5" CAL	36"	270 CF
9.2B	STREET TREE, RAISED PLANTER, MAX 12" H	2.5" CAL	48"	235 CF
9.2C	STREET TREE, FLUSH PLANTER	2.5" CAL	48"	300 CF
9.3A	SHADE TREE, RAISED PLANTER, MAX 30" H	2.5" CAL	48"	500 CF
9.3B	SHADE TREE, RAISED PLANTER, MIN 18"/MAX 24" H	2.5" CAL	36"	300 CF
9.3C	SHADE TREE, FLUSH PLANTER	2.5" CAL	48"	300 CF
9.3D	SHADE TREE, RAISED PLANTER, MAX 24" H	2.5" CAL	42"	500 CF
9.3E	SHADE TREE, RAISED PLANTER, MAX 30" H	2.5" CAL	48"	300 CF
9.7A	TURF, TYPE 1	N/A	12"	N/A
9.7B	TURF, TYPE 2	N/A	18"	N/A
	OFF STRUCTURE			
9.4	SHADE TREE	2.5" CAL	N/A	N/A



KEY PLAN

NORTH 0 8' 16' 32'
ORIGINAL SCALE: 1"=16'-00"

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Print Date: 5/5/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

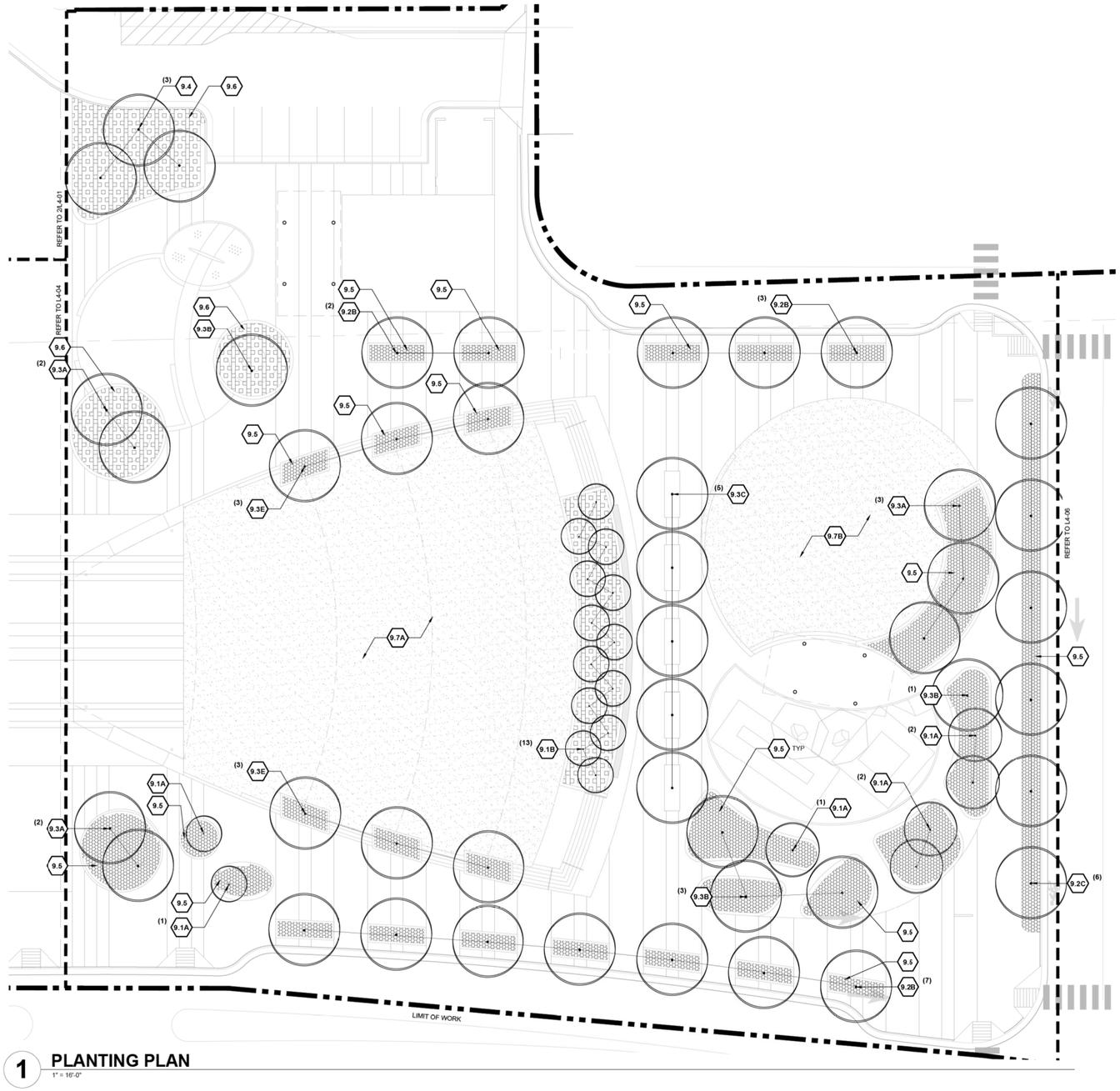
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
LANDSCAPE AND AESTHETIC PLANTING PLAN

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: L4-04 of

Project No./Code
FBR 0704-234
19631
Sheet Number 484



1 **PLANTING PLAN**
1" = 16'-0"

PLANTING KEYNOTES:

		DETAIL / SHEET REFERENCE
9.0	**PLANTING AND LANDSCAPE**	
9.1	Ornamental Tree Planting Over Structure	REF SCHED 10
9.2	Street Tree Planting Over Structure	REF SCHED 10
9.3	Shade Tree Planting Over Structure	REF SCHED 10
9.4	Shade Tree Planting Off Structure	REF SCHED 10
9.5	Enhanced Landscape	REF SCHED 10
9.6	Transitional Landscape	REF SCHED 10
9.7	Naturalized Turf	REF SCHED 10

PLANTING LEGEND

- 9.5 ENHANCED LANDSCAPE
- 9.6 TRANSITIONAL LANDSCAPE
- 9.7 NATURALIZED TURF

	PLANTING TYPE, PLANTING CONDITION	MIN.CAL MIN.H	MIN.SOIL DEPTH	MIN.SOIL VOLUME
	OVER STRUCTURE			
9.1A	ORNAMENTAL TREE, RAISED PLANTER, MIN 18"/MAX 24" H	2.5" CAL 8' H	36"	300 CF
9.1B	ORNAMENTAL TREE, RAISED PLANTER, MAX 30" H	2.5" CAL 8' H	36"	300 CF
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9.2A	STREET TREE, RAISED PLANTER, MAX 30" H	2.5" CAL	36"	270 CF
9.2B	STREET TREE, RAISED PLANTER, MAX 12" H	2.5" CAL	48"	235 CF
9.2C	STREET TREE, FLUSH PLANTER	2.5" CAL	48"	300 CF
9.3A	SHADE TREE, RAISED PLANTER, MAX 30" H	2.5" CAL	48"	500 CF
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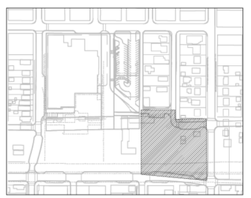
9.3D	SHADE TREE, RAISED PLANTER, MAX 24" H	2.5" CAL	42"	500 CF
9.3E	SHADE TREE, RAISED PLANTER, MAX 30" H	2.5" CAL	48"	300 CF
9.7A	TURF, TYPE 1	N/A	12"	N/A
9.7B	TURF, TYPE 2	N/A	18"	N/A
	OFF STRUCTURE			
9.4	SHADE TREE	2.5" CAL	N/A	N/A



KEY PLAN

NORTH 0 8' 16' 32'
ORIGINAL SCALE: 1"=16'-00"

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Print Date: 5/5/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

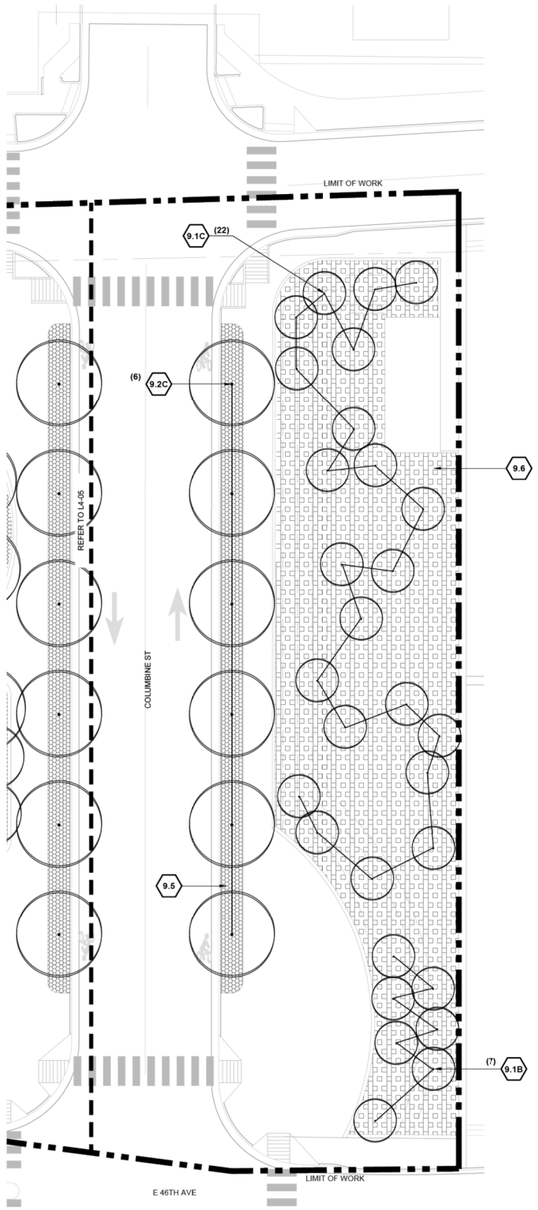
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
LANDSCAPE AND AESTHETIC PLANTING PLAN

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: L4-05 of

Project No./Code
FBR 0704-234
19631
Sheet Number 485



1 **I-70 COVER**
1" = 16'-0"

PLANTING KEYNOTES:

		DETAIL / SHEET REFERENCE
9.0	**PLANTING AND LANDSCAPE**	
9.1	Ornamental Tree Planting Over Structure	REF SCHED 10
9.2	Street Tree Planting Over Structure	REF SCHED 10
9.3	Shade Tree Planting Over Structure	REF SCHED 10
9.4	Shade Tree Planting Off Structure	REF SCHED 10
9.5	Enhanced Landscape	REF SCHED 10
9.6	Transitional Landscape	REF SCHED 10
9.7	Naturalized Turf	REF SCHED 10

PLANTING LEGEND

- 9.5 ENHANCED LANDSCAPE
- 9.6 TRANSITIONAL LANDSCAPE
- 9.7 NATURALIZED TURF

	PLANTING TYPE, PLANTING CONDITION	MIN.CAL MIN.H	MIN.SOIL DEPTH	MIN.SOIL VOLUME
	OVER STRUCTURE			
9.1A	ORNAMENTAL TREE, RAISED PLANTER, MIN 18"/MAX 24" H	2.5" CAL 8' H	36"	300 CF
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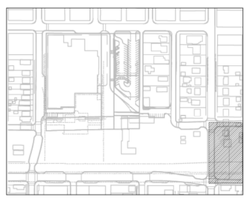
9.3E	SHADE TREE, RAISED PLANTER, MAX 30" H	2.5" CAL	48"	300 CF
9.7A	TURF, TYPE 1	N/A	12"	N/A
9.7B	TURF, TYPE 2	N/A	18"	N/A
	OFF STRUCTURE			
9.4	SHADE TREE	2.5" CAL	N/A	N/A



KEY PLAN

NORTH 0 8' 16' 32'
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Print Date: 5/5/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

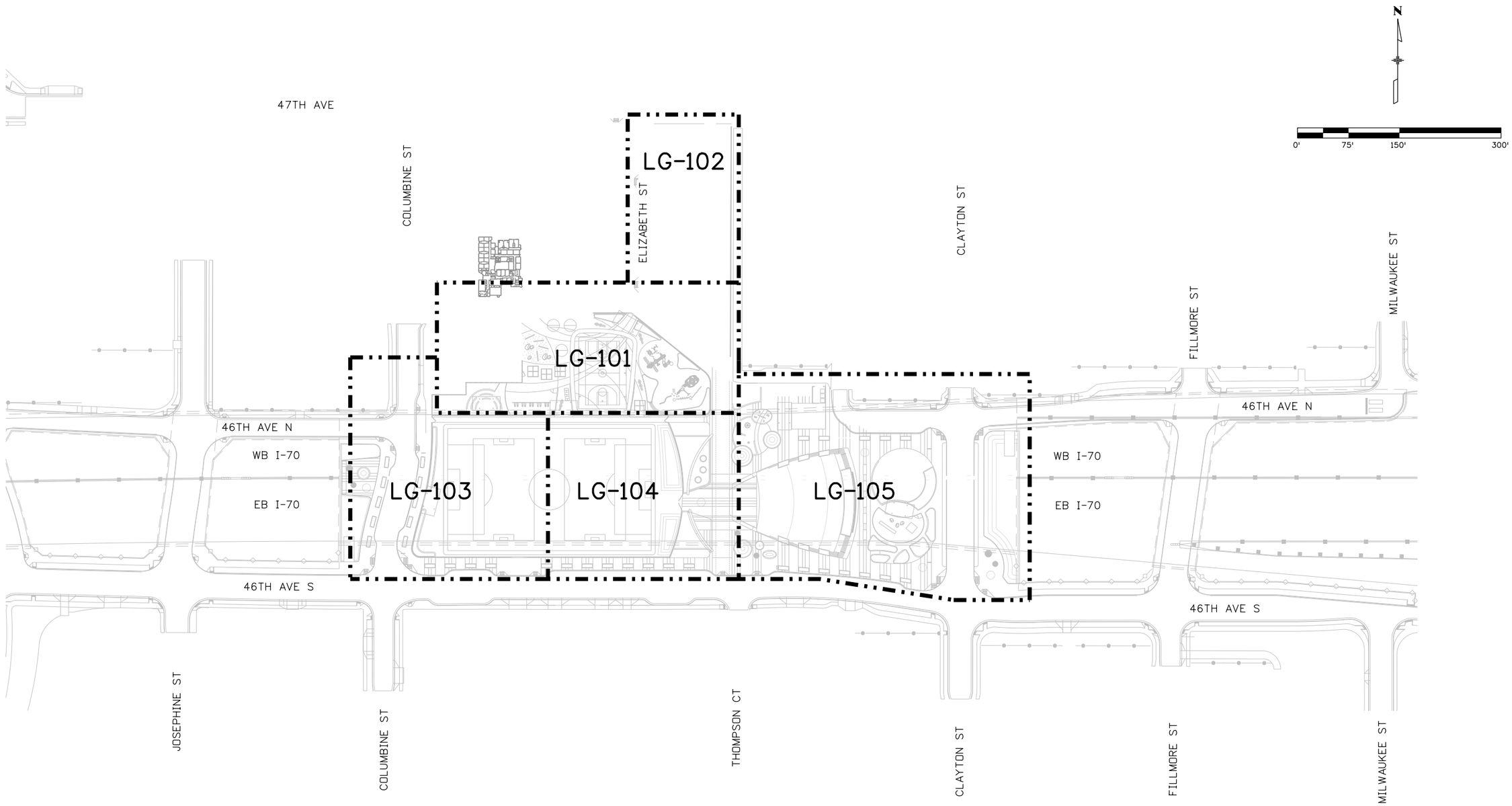
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
LANDSCAPE AND AESTHETIC PLANTING PLAN

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: L4-06 of

Project No./Code
FBR 0704-234
19631
Sheet Number 486



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Print Date: 5/10/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

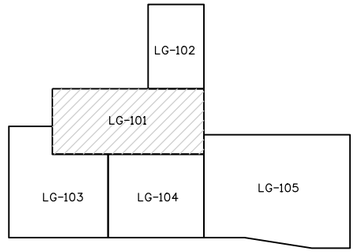
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
LANDSCAPE AND AESTHETIC
GRADING & DRAINAGE
REFERENCE PLAN

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: LG-100 of

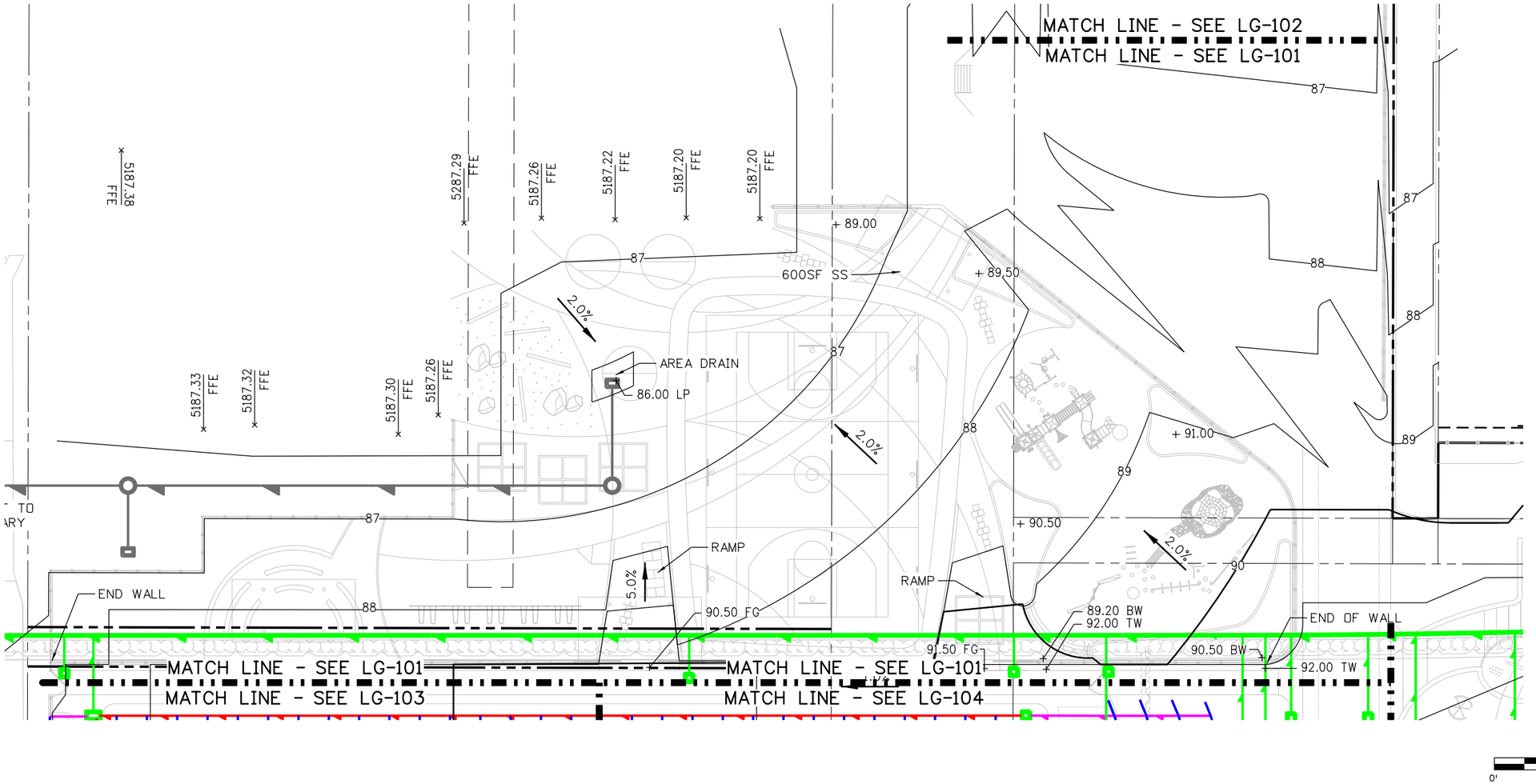
Project No./Code
FBR 0704-234
19631
Sheet Number 487



KEY PLAN

LEGEND

- RCP: 24 INCH
- SOLID PLASTIC PIPE: 12 INCH
- ACO TRENCH DRAIN
- SOLID PLASTIC PIPE: 10 INCH
- PERFORATED PLASTIC PIPE: 8 INCH
- SOLID PLASTIC PIPE BELOW TOP SLAB: 18 INCH
- SPECIAL INLET TO PENETRATE TOP SLAB
- SECONDARY SYSTEM



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Print Date: 5/10/2017			
File Name: See sheet edge for information			
Front Range Mobility Group	Horiz. Scale: As Noted		
	Vert. Scale: As Noted		
	Unit Information		
	Unit Leader		

Sheet Revisions

Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
LANDSCAPE AND AESTHETIC GRADING & DRAINAGE PLAN

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers:
Subset Sheets: LG-101 of

Project No./Code
FBR 0704-234
19631
Sheet Number 488

LEGEND

- RCP: 24 INCH
- SOLID PLASTIC PIPE: 12 INCH
- ACO TRENCH DRAIN
- SOLID PLASTIC PIPE: 10 INCH
- PERFORATED PLASTIC PIPE: 8 INCH
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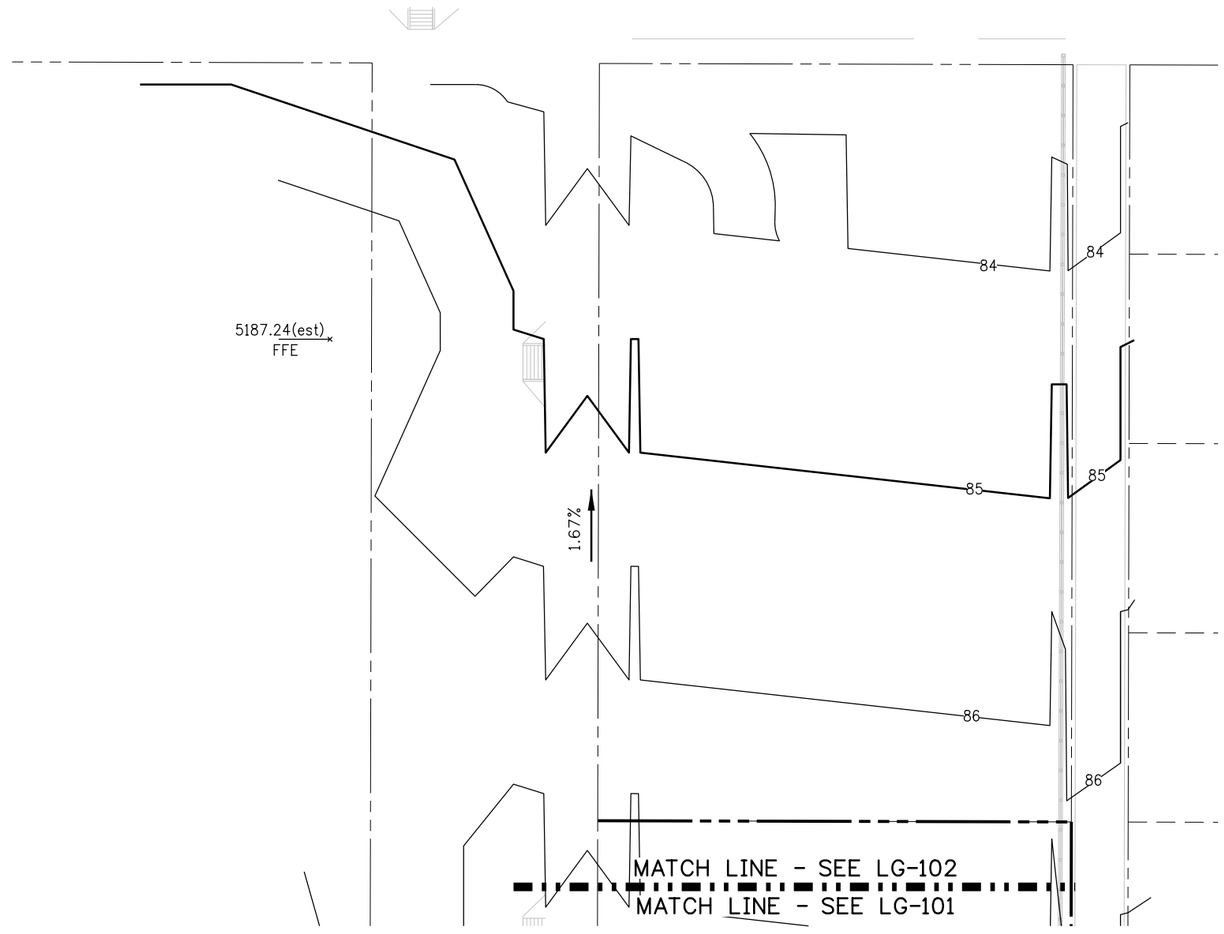

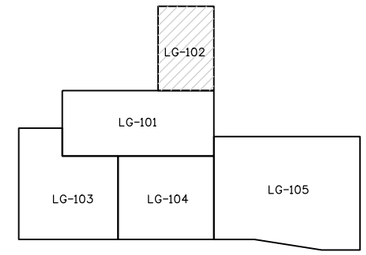

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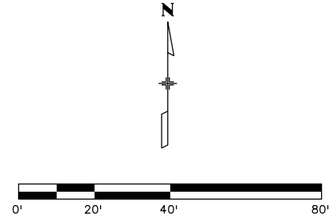

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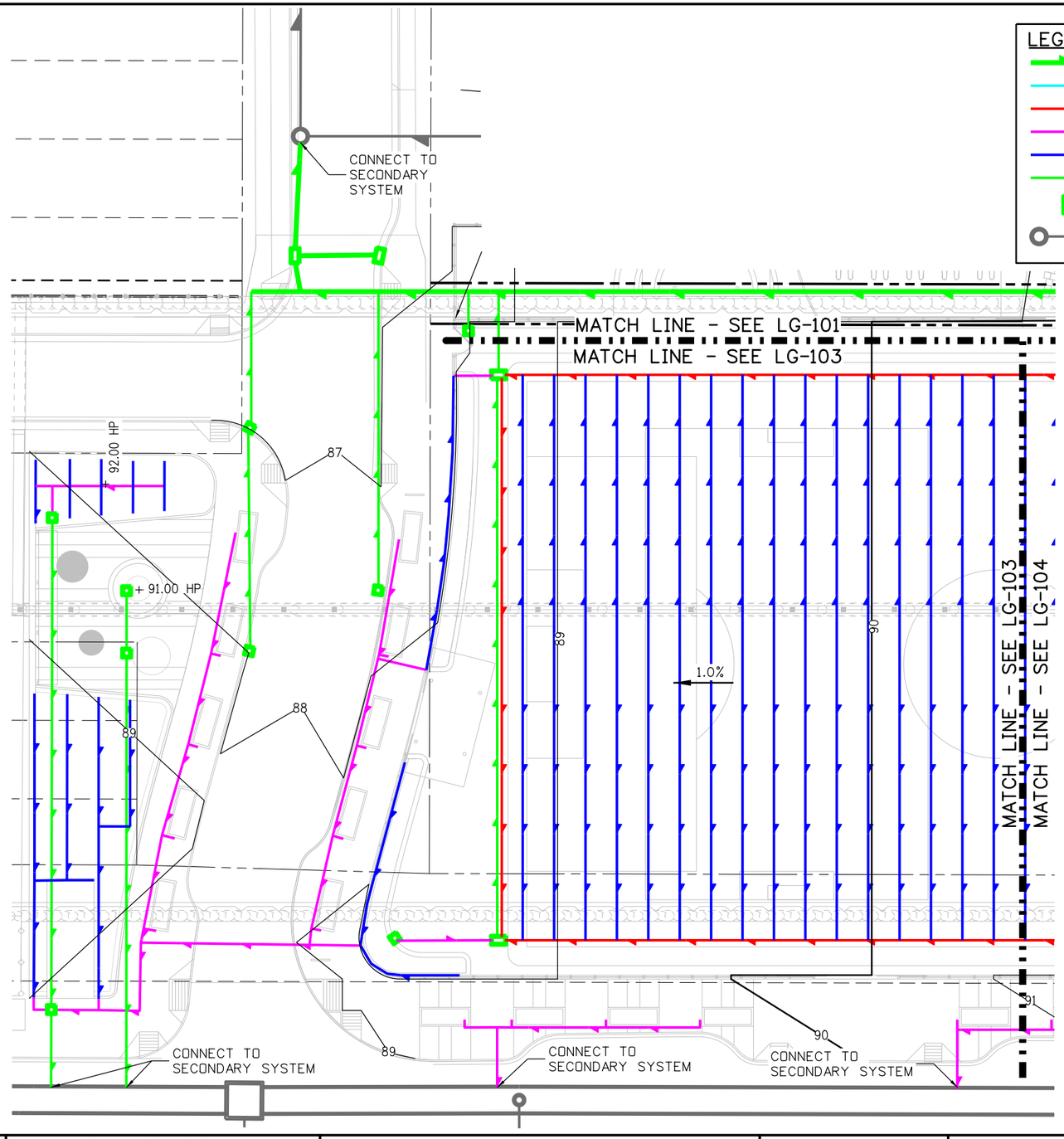
Print Date: 5/10/2017		Sheet Revisions			Colorado Department of Transportation
File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907
Front Range Mobility Group	Horiz. Scale: As Noted				
	Vert. Scale: As Noted				
	Unit Information				
	Unit Leader				Region 1 KJS

PROPOSAL	CENTRAL 70 LANDSCAPE AND AESTHETIC GRADING & DRAINAGE PLAN		Project No./Code
No Revisions:			FBR 0704-234
Revised:	Designer:	Structure Numbers	19631
Void:	Detailer:		Sheet Number 489
	Sheet Subset: LANDSCAPE	Subset Sheets: LG-102 of	



LEGEND

- RCP: 24 INCH
- SOLID PLASTIC PIPE: 12 INCH
- ACO TRENCH DRAIN
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- SPECIAL INLET TO PENETRATE TOP SLAB
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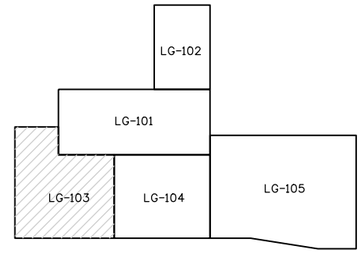
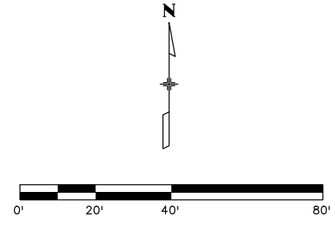


KEY PLAN



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Print Date: 5/10/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
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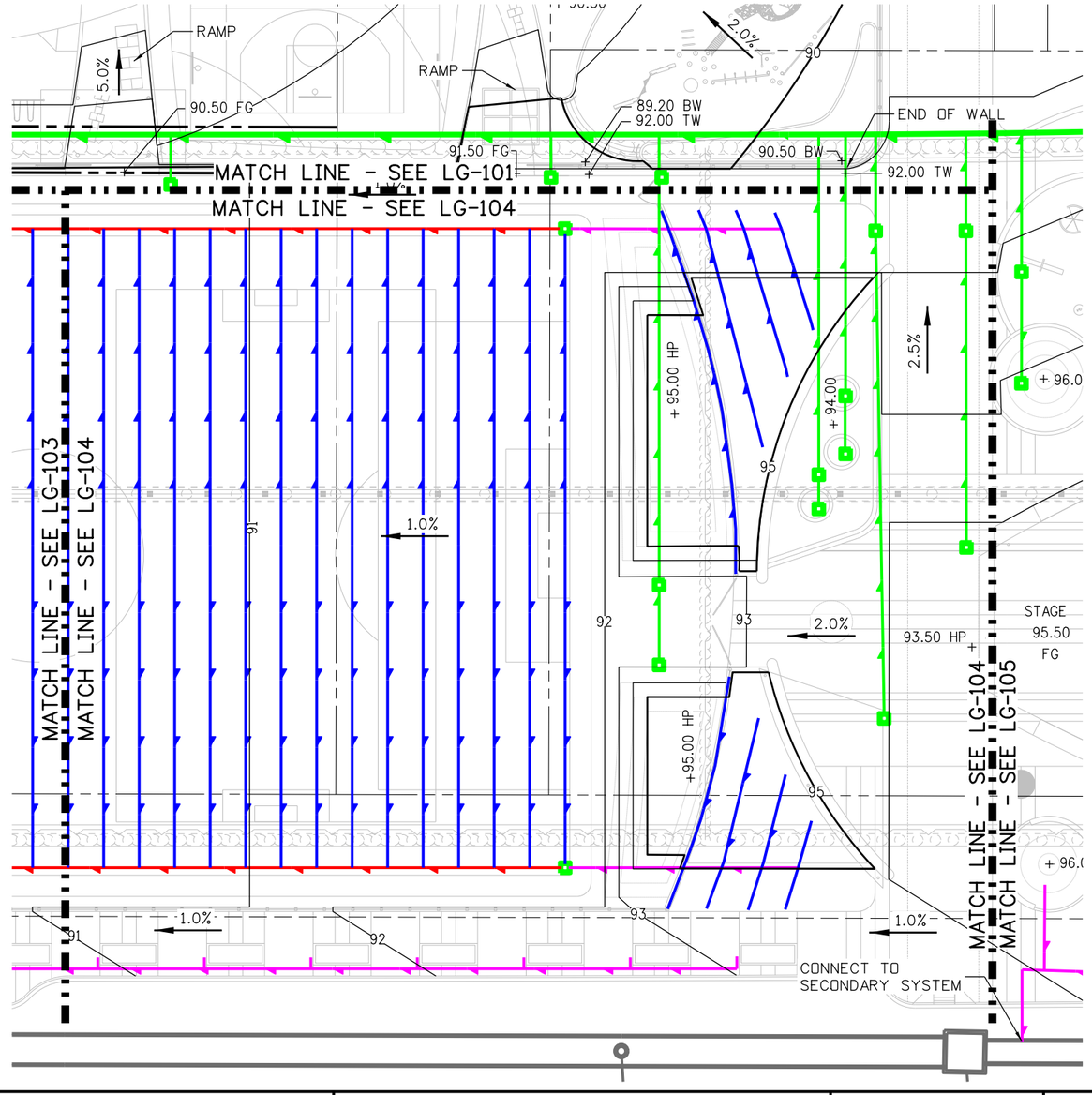
CENTRAL 70
LANDSCAPE AND AESTHETIC GRADING & DRAINAGE PLAN

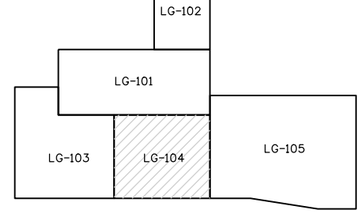
Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: LG-103 of

Project No./Code
FBR 0704-234
19631
Sheet Number 490



LEGEND

- RCP: 24 INCH
- SOLID PLASTIC PIPE: 12 INCH
- ACO TRENCH DRAIN
- SOLID PLASTIC PIPE: 10 INCH
- PERFORATED PLASTIC PIPE: 8 INCH
- SOLID PLASTIC PIPE BELOW TOP SLAB: 18 INCH
- SPECIAL INLET TO PENETRATE TOP SLAB
- SECONDARY SYSTEM



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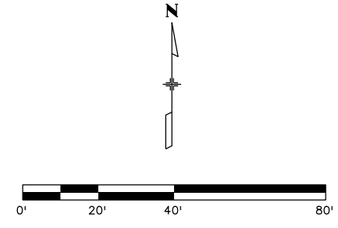

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Print Date: 5/10/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale:	As Noted
Vert. Scale:	As Noted
Unit Information	
Unit Leader	

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Sheet Revisions

Date:	Comments	Init.

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PROPOSAL

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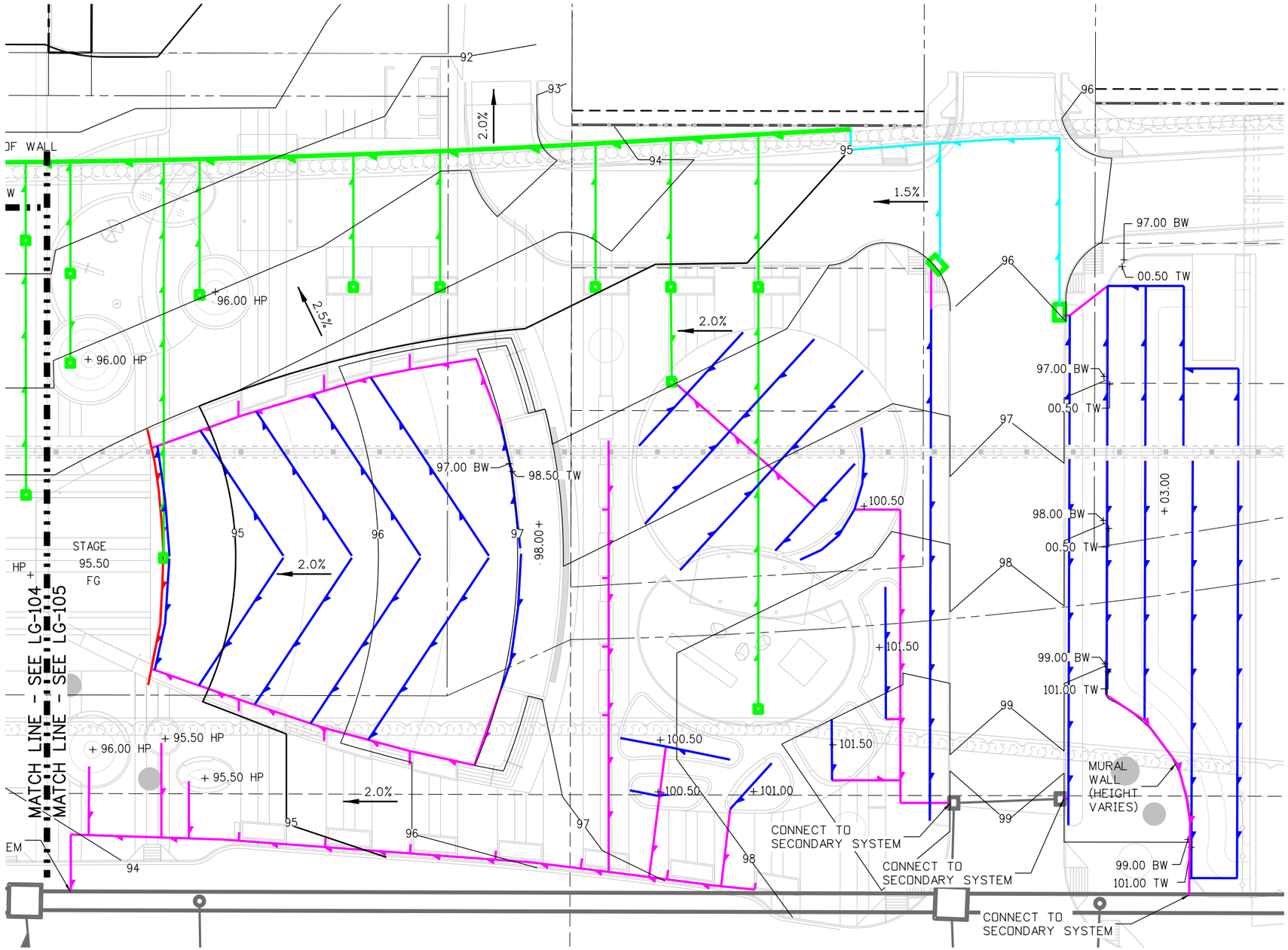
CENTRAL 70
LANDSCAPE AND AESTHETIC GRADING & DRAINAGE PLAN

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	LANDSCAPE	Subset Sheets:	LG-104 of

Project No./Code	
FBR 0704-234	
19631	
Sheet Number	491



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- RCP: 24 INCH
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- ACO TRENCH DRAIN
- SOLID PLASTIC PIPE: 10 INCH
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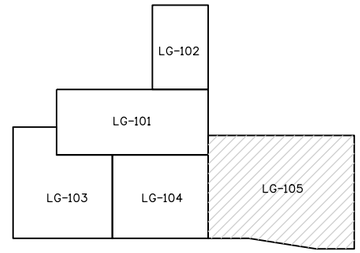

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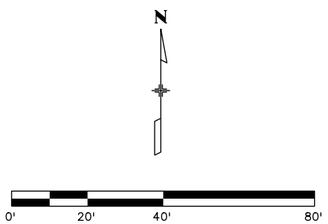

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Unit Information
Unit Leader

Front Range Mobility Group

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CENTRAL 70
LANDSCAPE AND AESTHETIC
GRADING & DRAINAGE
PLAN

Designer:
Detailer:
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: LG-105 of

Project No./Code
FBR 0704-234
19631
Sheet Number 492

IRRIGATION NOTES:

1. THE CONTRACTOR IS TO INSTALL AN AUTOMATIC IRRIGATION SYSTEM THAT WILL PROVIDE 100% COVERAGE FOR ALL LANDSCAPED AREAS.
2. REFER TO SPECIFICATIONS AND DETAILS FOR INSTALLATION INSTRUCTIONS.
3. MEET ALL APPLICABLE LOCAL AND MUNICIPAL CODES FOR WORK NECESSARY IN IRRIGATION SYSTEM INSTALLATION.
4. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL LICENSES, PERMITS, AND USE/SALES TAXES APPLICABLE TO THIS PROJECT.
6. VERIFY ALL SITE INFORMATION PRIOR TO CONSTRUCTION. NOTIFY OWNER/LANDSCAPE ARCHITECT OF ANY DISCREPANCIES FROM PREPARED IRRIGATION PLANS.
7. LOCATE ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING OF WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO UNDERGROUND UTILITIES CAUSED BY INSTALLATION OF IRRIGATION SYSTEM.
8. CONTRACTOR IS TO REFER TO AND COORDINATE IRRIGATION SYSTEM INSTALLATION WITH LANDSCAPE PLANS. AVOID CONFLICTING LOCATIONS BETWEEN PIPING AND LANDSCAPE MATERIAL, EDGING, ETC.
9. TAP LOCATION ON PLAN IS SCHEMATIC, CONTRACTOR IS TO VERIFY LOCATION AND COORDINATE WITH OWNER AND ALL OTHER DISCIPLINES.
10. CONTRACTOR IS TO PROVIDE ALL NECESSARY PIPE, VALVES, ETC. DOWNSTREAM FROM POINT OF CONNECTION NOT INSTALLED BY OTHER DISCIPLINES.
11. CONTRACTOR IS TO VERIFY AVAILABLE PRESSURE AND FLOW AT POINT OF CONNECTION PRIOR TO INSTALLATION OF IRRIGATION SYSTEM EQUIPMENT AND NOTIFY LANDSCAPE ARCHITECT WITH VERIFICATION FIGURES. FAILURE TO NOTIFY LANDSCAPE ARCHITECT WILL RESULT IN CONTRACTOR TAKING RESPONSIBILITY FOR ANY ALTERATIONS TO THE PLAN DUE TO VARIATIONS OF PRESSURE OR FLOW AT HIS/HER OWN RISK.
12. INSTALL MANUAL DRAIN VALVES AT ALL LOW POINTS TO ALLOW FOR SYSTEM WINTERIZATION.
13. CONTRACTOR TO COORDINATE INSTALLATION OF SLEEVING WITH BUILDING CONSTRUCTION AND INSTALLATION OF PAVING AND SIDEWALKS. ALL SLEEVING UNDER PAVED SURFACES SHOWN ON PLANS IS BY CONTRACTOR UNLESS OTHERWISE NOTED. ALL MAINLINES, LATERAL LINES, DRIP LINES AND CONTROL WIRES UNDER PAVED SURFACES ARE TO BE INSTALLED IN SLEEVING. INSTALL SLEEVING AS PER DETAIL AND SPECIFICATIONS.
14. ALL PIPING, PVC ELECTRICAL SLEEVES, ETC. UNDER PAVING SHALL BE INSTALLED PRIOR TO PAVING WORK. NO TEES, ELLS OR OTHER TURNS IN PIPING SHALL BE LOCATED UNDER PAVING EXCEPT WHERE SHOWN ON DRAWING. CAP ALL ENDS HAND TIGHT PRIOR TO BACKFILL USE PVC SCHEDULE 40 PIPE FOR ALL NON–PRESSURE LATERAL LINE PIPING INSTALLED UNDER PAVED AREAS.
15. CONTRACTOR IS TO PROVIDE ELECTRICAL POWER TO THE AUTOMATIC CONTROLLER. COORDINATE LOCATION WITH OWNER/LANDSCAPE ARCHITECT.
16. CONTRACTOR SHALL EXTEND SPARE CONTROL WIRES FROM EACH CONTROLLER TO THE END OF THE MAINLINE SERVING THAT CONTROLLER. SEE DETAILS AND SPECIFICATIONS FOR NUMBER OF SPARE WIRES AND INSTALLATION REQ.
17. INSTALL ALL MATERIALS AND EQUIPMENT AS SHOWN IN DETAILS. USE TEFLON TAPE OR TEFLON PIPE DOPE ON ALL MALE PIPE THREADS ON ALL IRRIGATION SWING JOINT AND VALVE ASSEMBLIES.
18. ALL TRENCHES TO BE PUDDLED AND COMPACTED TO THE SAME DENSITY AS THE UNDISTURBED ADJACENT SOIL.
19. CONTRACTOR TO PERFORM IRRIGATION AUDIT FOR IRRIGATION ZONES AS PART OF FINAL IRRIGATION ACCEPTANCE.
20. IT IS THE INTENT OF THIS DESIGN THAT ALL IRRIGATION EQUIPMENT BE INSTALLED IN LANDSCAPED AREAS AND WITHIN THE PROPERTY LIMITS. ANY EQUIPMENT SHOWN OUTSIDE OF THESE LIMITS IS SHOWN IN THAT LOCATION FOR GRAPHICAL CLARITY ONLY. ALL VALVE BOXES SHALL BE INSTALLED A MINIMUM OF 2'–0" FROM EDGE OF ANY PAVED SURFACES AND A MINIMUM OF 3'–0" FROM THE CENTERLINE OF ANY DRAINAGE SWALES.
21. MAINTENANCE AND OPERATION REQUIREMENTS: A SEASONAL MAINTENANCE SCHEDULE BEGINNING ON APRIL 1 THROUGH OCTOBER 1 SHALL ESTABLISH PROCEDURES FOR OPTIMUM IRRIGATION EFFICIENCY AND PREVENTIVE MAINTENANCE PRACTICES THAT WILL CONSERVE WATER RESOURCES. THE MAINTENANCE SCHEDULE SHOULD INCLUDE THE FOLLOWING ITEMS:
    - VERIFY COVERAGE OF HEADS (BI–MONTHLY)*
    - CHECK FOR BROKEN HEADS OR LEAKAGE (BI–MONTHLY)*
    - REPROGRAM CONTROLLERS ACCORDING TO THE SEASONAL NEEDS (MONTHLY)*
    - VERIFY WATER SUPPLY AND PRESSURE (UPON SYSTEM STARTUP, THEN TWO ADDITIONAL TIMES)
    - INSPECT THE BACKFLOW PREVENTER DEVICE (UPON SYSTEM STARTUP)
    - VERIFY SENSOR FUNCTIONALITY (BI–MONTHLY)*

*ALL ITEMS SHALL BE PERFORMED UPON SYSTEM START UP AND THEN AT A MINIMUM OF THE PERIOD STATED, INSPECTIONS SHALL BE PERFORMED MORE FREQUENTLY AS REQUIRED.

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Print Date: 4/25/2017
File Name: Central 70–Pre Award Corridor Irrigation –TechProp.dwg
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

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Region 1 KJS

PROPOSAL
No Revisions:
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CENTRAL 70
IRRIGATION NOTES

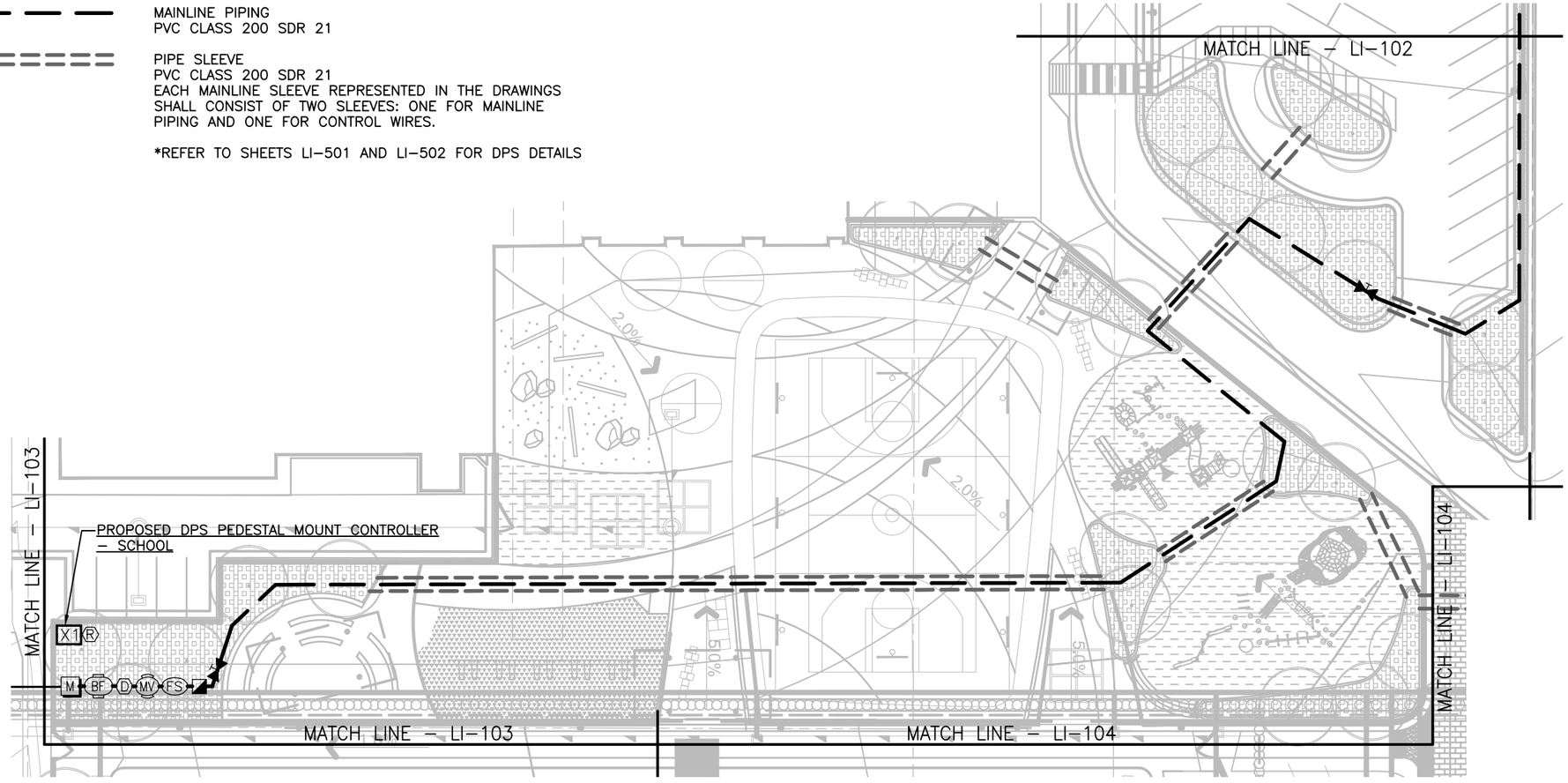
Designer: JJN
Detailer: JJN
Sheet Subset: LANDSCAPE
Structure Numbers:
Subset Sheets: LI–100 of

Project No./Code
FBR 0704–234
19631
Sheet Number 493

IRRIGATION SCHEDULE – DPS

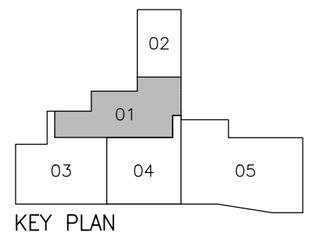
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	
◪	RAIN BIRD 44LRC	QUICK COUPLER VALVE
⧗	SPEARS UTILITY BALL VALVE	GATE VALVE
(MV) (FS)	GREEN TECH FSAV SERIES FLOW SENSOR ASSY. W/ NORMALLY OPEN MASTER VALVE	MASTER VALVE/FLOW SENSOR
(D)	BUCKNER 22000 SERIES	DRAIN VALVE
(BF)	FEBCO 825YA W/ GUARDSHACK GS–1 ENCLOSURE	BACKFLOW PREVENTION ASSEMBLY W/ ENCLOSURE
X1	RAINMASTER EAGLE–i SERIES CONTROLLER	CONTROLLER
(R)	HUNTER WRF–CLIK	WIRELESS RAIN/FREEZE SENSOR.
— — —	MAINLINE PIPING PVC CLASS 200 SDR 21	
= = = = =	PIPE SLEEVE PVC CLASS 200 SDR 21 EACH MAINLINE SLEEVE REPRESENTED IN THE DRAWINGS SHALL CONSIST OF TWO SLEEVES: ONE FOR MAINLINE PIPING AND ONE FOR CONTROL WIRES.	

*REFER TO SHEETS LI–501 AND LI–502 FOR DPS DETAILS



1 LAYOUT & MATERIALS PLAN – SCHOOL
1" = 40'-0"

NORTH 0 20' 40' 80'



KEY PLAN

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Print Date: 4/25/2017			
File Name: Central 70–Pre Award Corridor Irrigation –TechProp.dwg			
Front Range Mobility Group	Horiz. Scale: As Noted		
	Vert. Scale: As Noted		
	Unit Information		
	Unit Leader		

Sheet Revisions		
Date:	Comments	Init.

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Region 1 KJS

PROPOSAL
No Revisions:
Revised:
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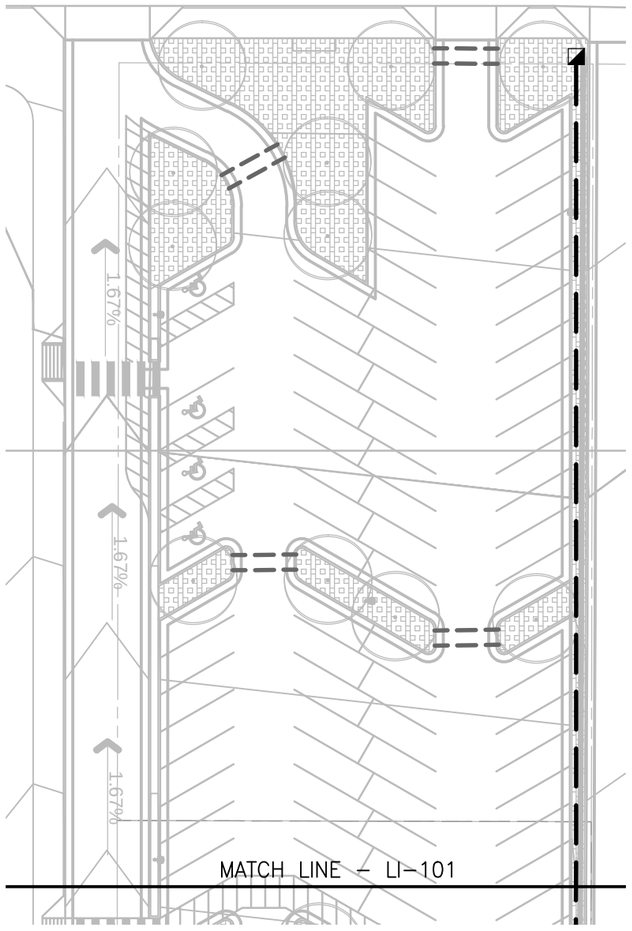
CENTRAL 70
IRRIGATION PLAN – SCHOOL

Designer:	JJN	Structure Numbers	
Detailer:	JJN		
Sheet Subset:	LANDSCAPE	Subset Sheets: LI–101 of	

Project No./Code
FBR 0704–234
19631
Sheet Number 494

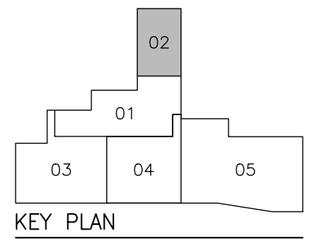


1 LAYOUT & MATERIALS PLAN – SCHOOL
1" = 40'–0"

IRRIGATION SCHEDULE – DPS

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	
	RAIN BIRD 44LRC	QUICK COUPLER VALVE
	SPEARS UTILITY BALL VALVE	GATE VALVE
MV FS	GREEN TECH FSAV SERIES FLOW SENSOR ASSY. W/ NORMALLY OPEN MASTER VALVE	MASTER VALVE/FLOW SENSOR
D	BUCKNER 22000 SERIES	DRAIN VALVE
BF	FEBCO 825YA W/ GUARDSHACK GS–1 ENCLOSURE	BACKFLOW PREVENTION ASSEMBLY W/ ENCLOSURE
X1	RAINMASTER EAGLE–i SERIES CONTROLLER	CONTROLLER
R	HUNTER WRF–CLIK	WIRELESS RAIN/FREEZE SENSOR.
	MAINLINE PIPING PVC CLASS 200 SDR 21	
	PIPE SLEEVE PVC CLASS 200 SDR 21 EACH MAINLINE SLEEVE REPRESENTED IN THE DRAWINGS SHALL CONSIST OF TWO SLEEVES: ONE FOR MAINLINE PIPING AND ONE FOR CONTROL WIRES.	

*REFER TO SHEETS LI–501 AND LI–502 FOR DPS DETAILS



KEY PLAN

NORTH
0 20' 40' 80'

4/25/2017 9:17:26 AM M:\5-PROPOSALS\2016\16-054_CH2M_Central 70\2-WORKING\Final Submittal _Landscape Plan\Central 70–Pre Award Corridor Irrigation –TechProp.dwg

Print Date: 4/25/2017
File Name: Central 70–Pre Award Corridor Irrigation –TechProp.dwg
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

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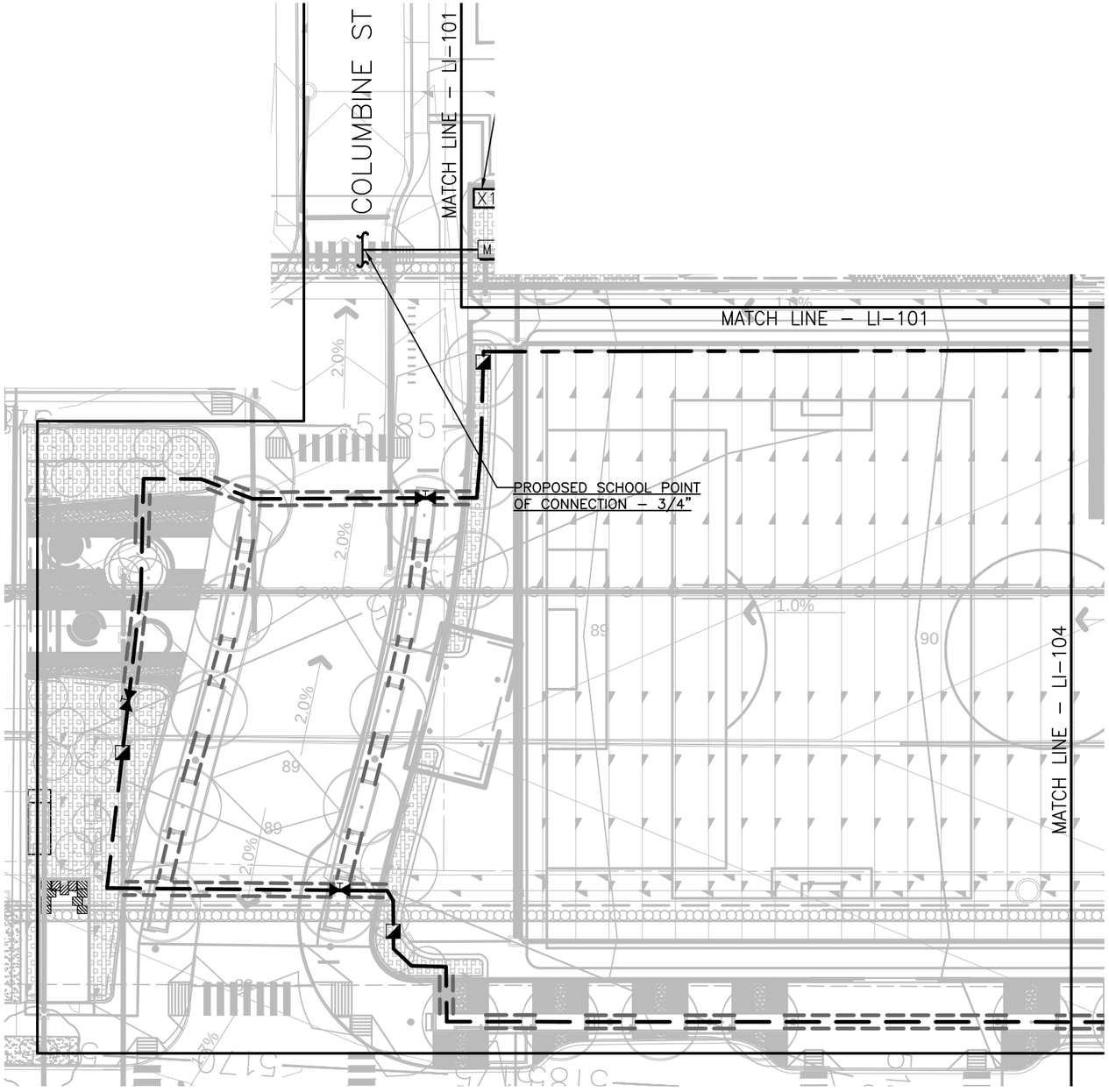
CENTRAL 70
IRRIGATION
PLAN – SCHOOL

Designer: JJN
Detailer: JJN
Sheet Subset: LANDSCAPE
Structure Numbers:
Subset Sheets: LI–102 of

Project No./Code
FBR 0704–234
19631
Sheet Number 495



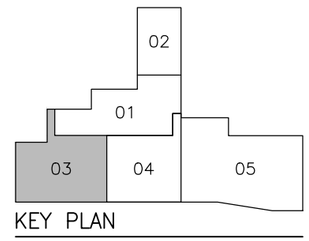
1 LAYOUT & MATERIALS PLAN – COVER
1" = 40'-0"

IRRIGATION SCHEDULE – DP&R

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	
	BUCKNER QB44LCAR10	QUICK COUPLER VALVE
	MATCO–NORCA 10RS	GATE VALVE
MV	SUPERIOR 3100 SERIES NORMALLY OPEN	MASTER VALVE
FS	DATA INDUSTRIAL 228BR	FLOW SENSOR
D	MUELLER 300 SERIES	DRAIN VALVE
BF	FEBCO 825YA W/ GUARDSHACK GS–1 ENCLOSURE	BACKFLOW PREVENTION ASSEMBLY W/ ENCLOSURE
X2	TORO EICON SPECIAL BUILD CONTROLLER	CONTROLLER
R	HUNTER WRF–CLIK	WIRELESS RAIN/FREEZE SENSOR.
	MAINLINE PIPING PVC CLASS 200 SDR 21	
	MAINLINE PIPING HDPE PE3408 DR11	
	PIPE SLEEVE PVC CLASS 200 SDR 21 EACH MAINLINE SLEEVE REPRESENTED IN THE DRAWINGS SHALL CONSIST OF TWO SLEEVES: ONE FOR MAINLINE PIPING AND ONE FOR CONTROL WIRES.	

*REFER TO SHEETS LI–503 – LI–505 FOR DP&R DETAILS

NORTH 0 20' 40' 80'



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Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

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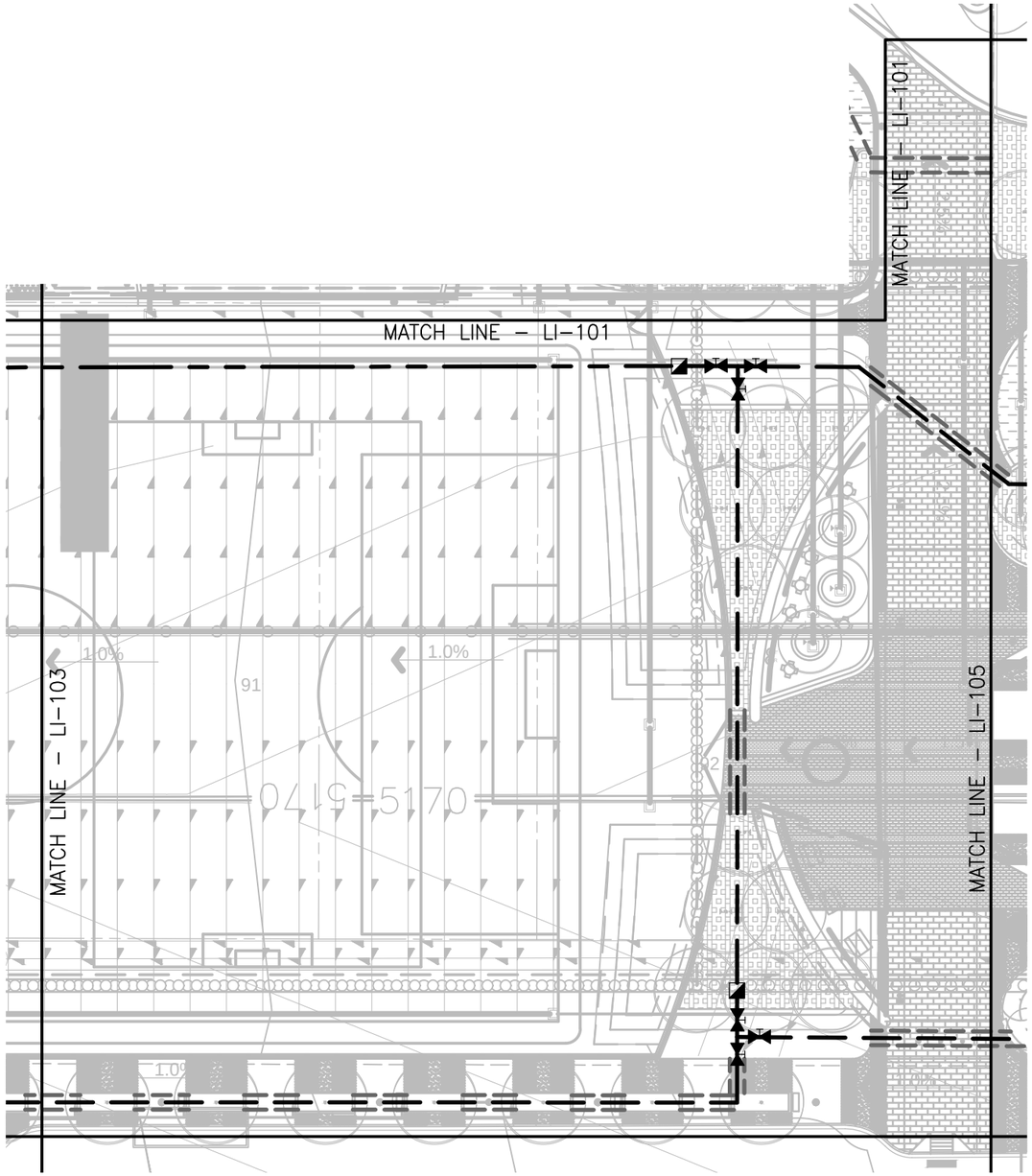
CENTRAL 70
IRRIGATION PLAN – COVER

Designer: JJN
Detailer: JJN
Sheet Subset: LANDSCAPE
Structure Numbers
Subset Sheets: LI–103 of

Project No./Code
FBR 0704–234
19631
Sheet Number 496



1 LAYOUT & MATERIALS PLAN – COVER
1" = 40'–0"

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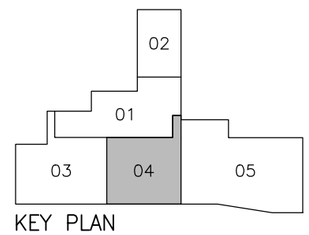
*REFER TO SHEETS LI–503 – LI–505 FOR DP&R DETAILS

NORTH

0 20' 40' 80'



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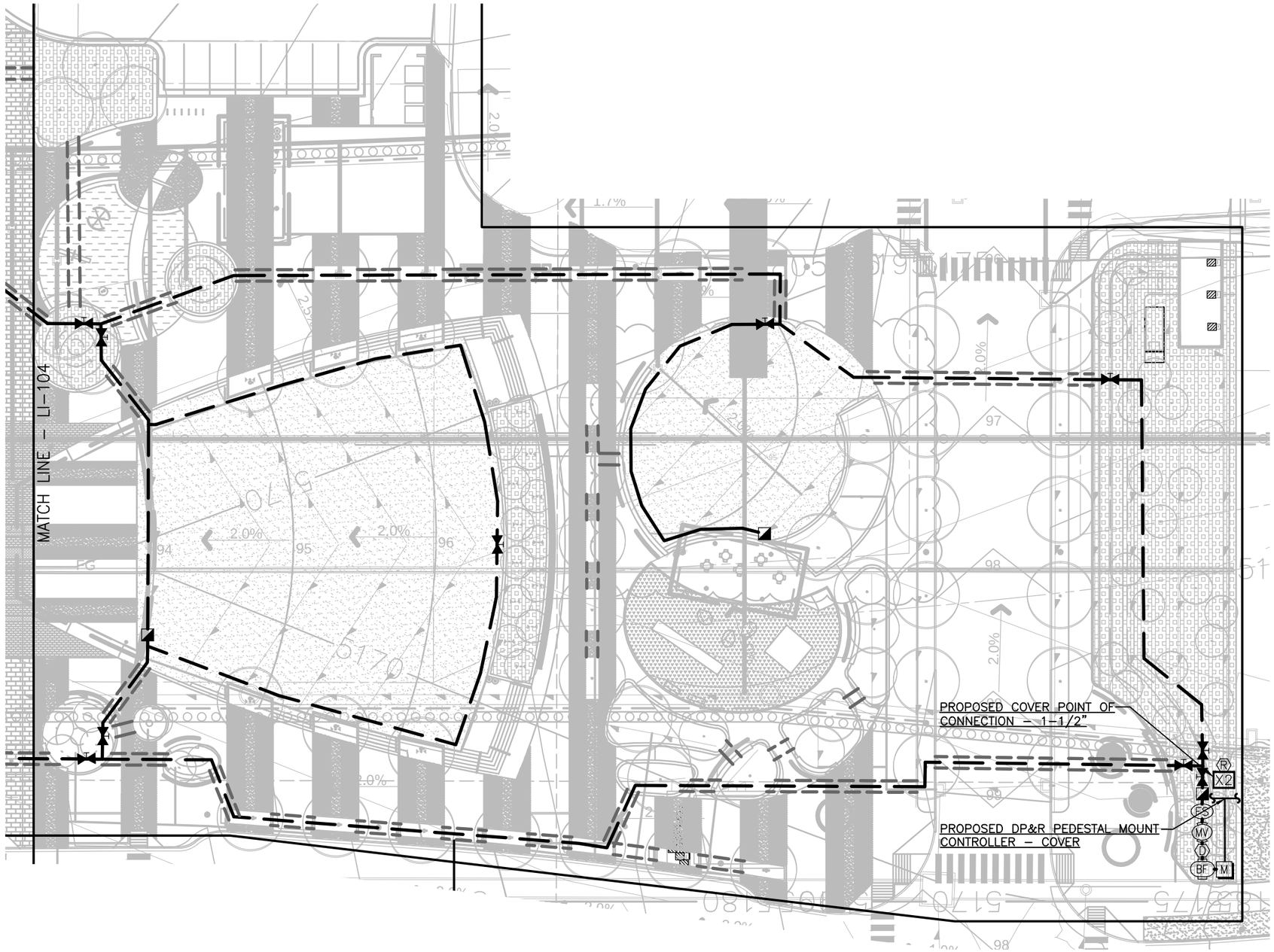
CENTRAL 70
IRRIGATION
PLAN – COVER

Designer: JJN
Detailer: JJN
Sheet Subset: LANDSCAPE
Structure Numbers:
Subset Sheets: LI–104 of

Project No./Code
FBR 0704–234
19631
Sheet Number 497



1 LAYOUT & MATERIALS PLAN – COVER
1" = 40'–0"

NORTH 0 20' 40' 80'

IRRIGATION SCHEDULE – DP&R

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	
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⧗	MATCO–NORCA 10RS	GATE VALVE
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R	HUNTER WRF–CLIK	RAIN SENSOR
— — —	MAINLINE PIPING PVC CLASS 200 SDR 21	
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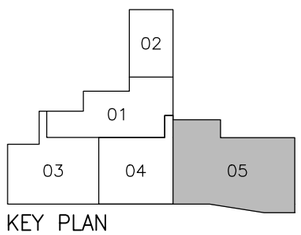
= = =	PIPE SLEEVE PVC CLASS 200 SDR 21 EACH MAINLINE SLEEVE REPRESENTED IN THE DRAWINGS SHALL CONSIST OF TWO SLEEVES: ONE FOR MAINLINE PIPING AND ONE FOR CONTROL WIRES.	

*REFER TO SHEETS LI–503 – LI–505 FOR DP&R DETAILS



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Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
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Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

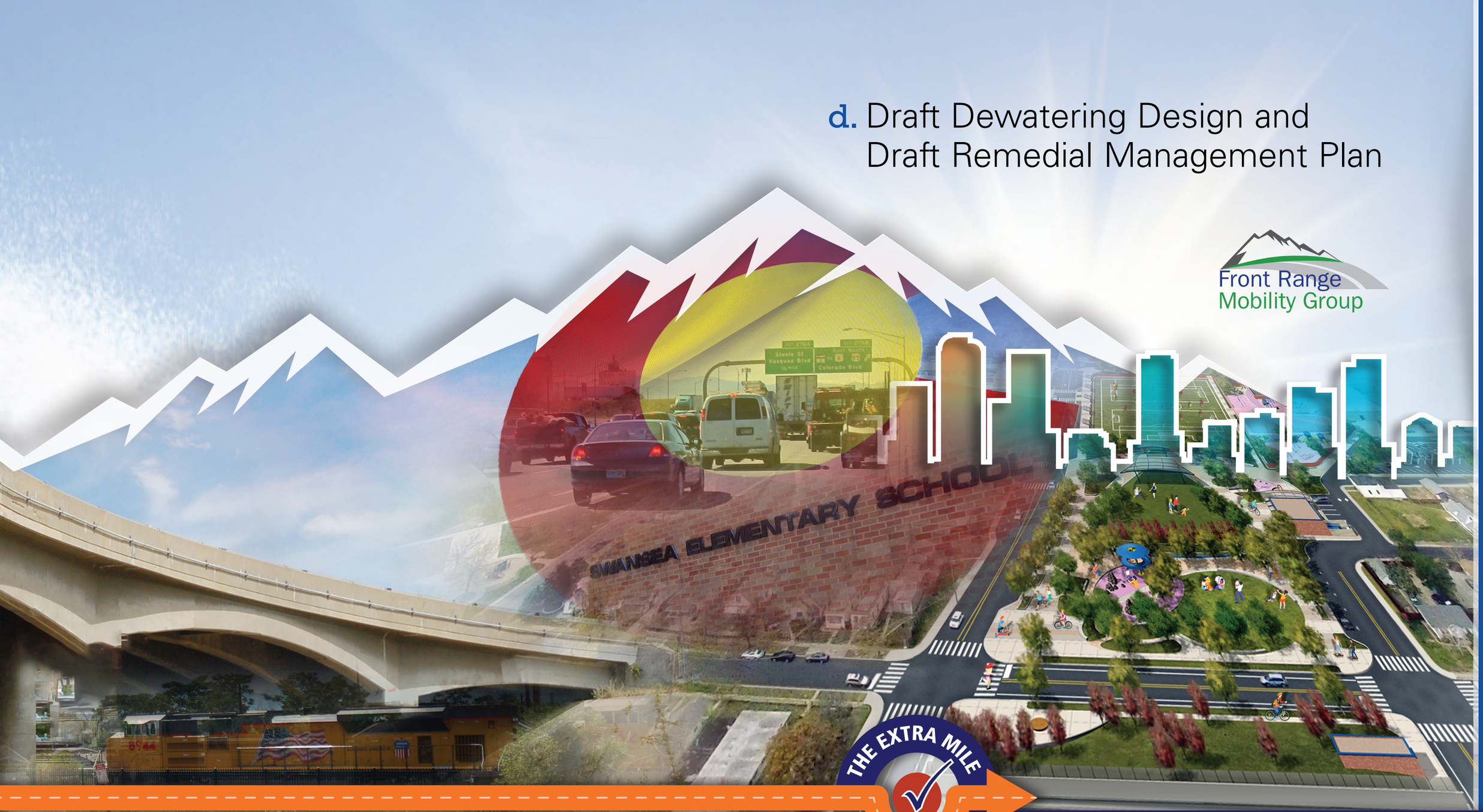
CENTRAL 70
IRRIGATION PLAN – COVER

Designer: JJN
Detailer: JJN
Sheet Subset: LANDSCAPE
Structure Numbers:
Subset Sheets: LI–105 of

Project No./Code
FBR 0704–234
19631
Sheet Number 498

d. Draft Dewatering Design and Draft Remedial Management Plan

Front Range Mobility Group



THE EXTRA MILE

CONNECTING COMMUNITIES

d. Draft Dewatering Design and Draft Remedial Management Plan

Draft Remediation Activities Management Plan for Construction Period and Operating Period

Prepared By:

Front Range Mobility Group

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1. INTRODUCTION

This document is Front Range Mobility Group's (FRMG's) Draft Remediation Activities Management Plan (RAMP) for the construction and operating periods for the Colorado Department of Transportation's Central 70 Project as required by Section C.4. of the Colorado Department of Public Health and the Environment's Remediation Activities Discharging to Surface Water Authorization to Discharge Under the Colorado Discharge Permit System (CDPS General Permit COG315000).

1.1. Project Location and Description

The Central 70 Project consists of the preferred alternative namely, the Partial Cover Lowered Alternative, in the Interstate 70 (I-70) East Environmental Impact Statement (EIS), as approved by the Record of Decision (ROD) dated January 19, 2017.

The project limits extend from I-25 on the west to Chambers Road on the east. The selected and approved alternative removes the elevated I-70 Viaduct and reconstructs I-70 as a Lowered Section from approximately the Union Pacific Railroad (UPRR) to Colorado Boulevard. The Lowered section is partially covered from Columbine Street to just east of Clayton Street, a distance of nearly 1000 feet, and is known as the Cover.

A portion of I-70 within the Lowered Section from approximately UPRR to Thompson Court will be located below the water table. Proposed cutoff walls will be constructed to limit groundwater from entering the Lowered Section. A groundwater collection system, as shown in **Figure 3**, will be installed inside the cutoff walls to intercept seepage through the cutoff walls and groundwater infiltration from below. The collected groundwater will be piped to and be removed by pumps for treatment at an on-site groundwater treatment system. The proposed treatment facility is located on the north side of I-70 just west of York Street. Treated groundwater will be discharged to an adjacent water quality pond and ultimately discharged to the storm sewer in York Street.

1.2 Dewatering

1.2.1 Construction Period

FRMG will employ construction dewatering in two phases. The first phase includes the construction of the caissons for the groundwater isolation walls and caissons for the bridge foundations. The second phase will include the construction of the UPRR Bridge foundations. A cofferdam may be required at the UPRR Bridge to minimize the dewatering necessary to construct the bridge.

Water from the construction of the drilled caissons will be pumped into holding tanks. Once the drilling solids have settled out, the water will be treated in a portable treatment system and

discharged into the City and County of Denver's (CCD) storm sewer system in York Street, which eventually flows to the South Platte River.

Once the groundwater isolation wall is completed, dewatering and treatment is anticipated to be accomplished using a combination of the portable treatment system and the pump station/ permanent water treatment facility to be located on the north side of the Lowered Section between UPRR and York Street. Once treated, the water will be discharged into the existing CCD storm sewer system at York Street as permitted by CDPS General Permit COG315000.

Locations of the portable treatment systems will be determined based on construction activities.

1.2.2 Operating Period

Dewatering during the operating period will involve passive capture of cutoff wall seepage and groundwater infiltration from below. The sustaining flow during the operating period is assumed to be a combination of the secant pile wall seepage (70 gpm) and the underdrain seepage (30 gpm) for a total flow of approximately 100 gpm. This water will be collected, pumped to and treated at the permanent water treatment facility described above and to the CCD Storm sewer system in York Street.

The permanent water treatment facility will be permitted under a CDPHE Industrial Individual Wastewater Discharge Permit (Individual Permit). However, if needed, the permanent water treatment facility may be permitted under a second CDPS General Permit COG315000 for an interim period of up to 2 years until the Individual Permit is issued by CDPHE.

1.3 Purpose of This Plan

The purpose of this RAMP is to document / communicate the following information required under CDPS General Permit COG315000 for remediation activities that discharge to surface water:

- Plan Administrator
- Facility Certified Operator
- Site Map
- Description of Pollution Control Practices
- Description of Materials Handling and Spill Prevention

This information is provided in Section 2.0.

2.0 CDPS General Permit COG315000 Information

2.1 Plan Administrator

FRMG's Plan Administrators responsible for developing, implementing, maintaining, and revising this RAMP are:

- Construction Period – Mr. Don Harding, Construction Manager
- Operations Period – Mr. Mike Smith, Operations and Maintenance Manager

2.2 Facility Certified Operator

As documented in Regulation 100, all water and wastewater facilities in Colorado shall be under the supervision of an operator certified at or above the classification of the facility. Both the construction and operating period facility will be Class A Industrial Wastewater Treatment Facilities, because both are anticipated to operate for over one year and will include a polishing treatment step utilizing ion exchange to remove remaining dissolved metals. Therefore, the minimum operator certification level will be Level A.

The Facility Certified Operator will be named at the time of permit application.

2.3 Site Map

Site Maps are included as **Figure 1** (2 sheets) attached to this document. The Site Maps show:

i) **The source of the discharge or dewatering excavations** – The excavation that will need to be dewatered is the area where the lowered portion of the highway will be below the water table (i.e., groundwater) between approximately UPRR and Thompson Court crossings. The main excavation that will require dewatering is shown on Figure 1 as the area within the blue boundary. East of the main area shown in Figure 4 deep bridge foundations that may contain contaminated groundwater include the bridges at Fillmore Street, Steele Street, the Future Cover, Cook Street, BNSF Railroad, and Colorado Boulevard. Bridges with deep foundations where groundwater is not expected to be contaminated are located at Quebec Street, I-270 and Peoria Street.

ii) **Containment Location(s), if present** – *To Be Determined*

iii) **Location of structural treatment practices, including but not limited to tanks, filter systems, etc.** – Both the temporary construction and permanent operating period treatment facilities will be located on the north side of I-70 just west of York Street in the area identified on Figure 1.

iv) **Sampling Locations** – The influent sampling location will be located at the inlet to the equalization tank, the first step in the treatment process. The sampling location for

treated effluent will be at the discharge point from the treatment system to the Treated Water Pond shown on Figure 1.

v) **Discharge Point(s)/Outfall(s)** – There will be one discharge point. As shown on Figure 1 treated water from the Treated Water Pond will be discharged to the existing 72-inch storm sewer flowing to the north along York Street to Race Street and ultimately discharging at the existing outfall located east of the Franklin Street crossing as shown on **Figure 2**.

vi) **Identification of the conveyance into which the discharge point(s)/outfall(s) are directed (e.g., surface water, storm sewer, ditch, etc.)** – The conveyance that the outfall discharges to is the South Platte River, Segment 14 as shown on Figure 2.

2.4 Description of Pollution Control Practices

As stated in Section 1.1, a portion of I-70 within the Lowered Section will be located below the water table between approximately the UPRR and Thompson Court crossings. A stormwater detention basin and continuously operating dewatering system will be constructed to address this issue. The groundwater seepage will be removed and treated by an on-site facility. The proposed treatment facility is located on the north side of I-70 just west of York Street as shown on Figure 1.

2.4.1 Pollutants

The primary anticipated pollutants are metals that exist either at background levels or higher levels linked to Superfund site conditions. The following pollutants requiring treatment (based on anticipated discharge of treated effluent to the South Platte River) were identified:

- Aluminum,
- Arsenic,
- Cadmium,
- Trivalent chromium,
- Copper,
- Iron,
- Lead,
- Magnesium,
- Nickel,
- Selenium, and
- Uranium.

Groundwater data used for the basis of design for both the temporary construction and permanent operating period treatment system are presented in Table 1 in Attachment A, Central 70 – Groundwater Treatment. Attachment A includes the basis of design for both the construction period and permanent operating period treatment systems.

2.4.2 Water Treatment System Designs

The water treatment systems are designed to handle anticipated construction period groundwater discharge flow rates within the Lowered Section, and operating period groundwater seepage into the Lowered Section. The construction period dewatering flow is assumed to be approximately 200 gallons per minute (gpm). The sustaining flow after construction and during the operations phase is assumed to be a combination of the secant pile wall seepage (70 gpm) and the underdrain seepage (30 gpm) for a total flow of about 100 gpm.

Both the temporary construction and permanent operating period water treatment facility will utilize similar treatment technologies to remove contaminants, which include the following steps:

- Equalization: A tank provides equalization of groundwater to homogenize quality and stabilize flows.
- Chemical Addition: Sodium hydroxide is added to increase the pH to approximately 10 standard units (s.u.), which precipitates most metals as insoluble hydroxides. Sulfide is added to precipitate additional metals.
- Filtration: Solids are removed by an ultra-filtration (UF) membrane. Reject from the membrane is sent back for treatment through the concentration tank. A clean-in-place (CIP) system will be required for periodic membrane maintenance to maintain flux rates.
- Polishing: remaining dissolved metals are removed through ion exchange. Columns operate in lead/lag configuration. The resin column is changed when breakthrough on the first stage vessel is observed.
- Sludge Handling: A small portion of the membrane influent flow is sent to the sludge tank. Polymer is added to improve solids consolidation. A filter press dewaters the sludge. Filtrate is recycled back to the equalization tank, and solids are trucked off for disposal.

A Process Flow Diagrams regarding the proposed construction and permanent operating period water treatment systems are provided on Figure A1 in Attachment A.

Sludge handling will be addressed on-site in compliance with best management practices. Treated water that meets established water quality parameters will be discharged to the South Platte River, Segment 14. The treatment systems are designed to meet the discharge requirements provided in Colorado Water Quality Control Commission regulation 5 CCR 1002-38 “Classifications and Numerical Standards for South Platte River Basin”.

2.4.3 Monitoring Practices

Monitoring parameters and frequencies for both the construction and operating period systems are anticipated to be the same and will be completed in accordance with the general permit (COG-315000) requirements. Treated effluent monitoring parameters and frequencies are presented below in Table 1 (from General Permit COG-315000):

Table 1 Numeric Effluent Limitations and Monitoring Requirements for Continuous Discharges or Flow- Through Treatment

Parameter	ICIS Code	Discharge Limitations			Monitoring Conditions	
		30-Day Average	7-Day Average	Daily Maximum	Monitoring Frequency	Sample Type
Flow, mgd[1]	50050	Limit	----	Limit	Continuous	Recorder
Total Suspended Solids, mg/l	00530	30	45	-----	Weekly	Grab
Oil and Grease[2]	84066	----	-----	-----	Weekly	Visual
Oil and Grease[2], mg/l	03582	----	---	10	Weekly	Grab
pH, s.u.	00400	----	-----	6.5-9.0	Weekly	In-situ
Total Dissolved Solids[3], mg/l	70295	Report	------	Report	Monthly	Grab
Total Phosphorus[4], mg/l, as P	00665	Limit in Certification	----	----	Monthly	Grab
Total Phosphorus[4], mg/l, as P	00665	Report	------	Report	Monthly	Grab
WET[5], acute	TAN6C LC50 Statre 96Hr Acute *Pimpephales*	-----	-----	LC50 ≥ 100% (daily min)	Quarterly	Grab
	TAM3B LC50 Statre 48Hr Acute *Ceriodaphnia*	-----	-------	LC50 ≥ 100% (daily min)	Quarterly	Grab
WET[5], chronic	TCP6C Static Renewal 7 Day Chronic *Pimephales*	----	----	NOEC or IC25 >100% (daily min)	Quarterly	3 Grabs /test
	TCP3B Static Renewal 7 Day Chronic *Ceriodaphnia*	----	----	NOEC or IC25 >100% (daily min)	Quarterly	3 Grabs/test

Parameter ICIS Code	Discharge Limitations			Monitoring Conditions	
	30-Day Average	7-Day Average	Daily Maximum	Monitoring Frequency	Sample Type
Site Specific[6] Metals, Organics, Inorganics, Temperature, RADs	Report	-----	Report	Weekly	Grab
Site Specific[6] Metals, Organics, Inorganics, RADS	Limit in Certification	-----	Limit in Certification	Weekly	Grab

Notes:

[1] Flow Limit—The chronic flow limit will be based on the design capacity of the treatment as provided in the permit application and will be stated on the certification.

[2] Oil and Grease—A visual observation of the discharge for each permitted outfall must be made once a week. In the event an oil sheen or floating oil is observed, a composite sample shall be collected weekly, analyzed, and reported on the DMR. In addition, corrective action shall be taken immediately to mitigate the discharge of oil and grease. A description of the corrective action taken must be included with the DMR.

[3] Total Dissolved Solids (TDS)—Analysis for salinity, measured as TDS, will be required in all permits that discharge in the Colorado River Basin. Following the submittal of the initial six sets of monthly data, the Division shall determine whether the permittee is required to submit a report addressing salt removal in accordance with the Colorado River Salinity Standards, Regulation No. (5CCR 1002-39). If the salinity report is required, the Division shall so advise the permittee by letter or through the inclusion of a compliance schedule and the report shall be submitted within 180 days.

[4] Total Phosphorus—Analysis for Total Phosphorus, as P, will be required for discharges to waters with a control regulation for P. In accordance with the Dillon Reservoir Control Regulation (Regulation 71), monitoring for Total Phosphorus is required. In accordance with the Cherry Creek Reservoir Control Regulation (Regulation 72), monitoring and compliance with the Total Phosphorus chronic numeric effluent limit of 0.05mg/l is required. In accordance with the Chatfield Reservoir Control Regulation (Regulation 73), monitoring and compliance with the Total Phosphorus chronic numeric effluent limit of 1.0 mg/l is required. In accordance with the Bear Creek Watershed Control Regulation (Regulation 74), monitoring for Total Phosphorus is required.

[5] Whole Effluent Toxicity (WET) Testing—A site specific determination will be made as to whether WET testing will be required and will be stated in the permit certification. See Part I.C.7 for WET testing requirements and Part VI.A.4 of the Fact Sheet for the discussion on determining when WET testing is required.

[6] Site Specific Parameters—Upon review of the analytical data supplied with the permit application, site specific parameters will be added to the permit certification based on the type and concentrations of contaminants present. This may include monitoring requirements for Temperature, if there is potential for the permittee to containerize the effluent for extended periods of time. Additional site specific parameters may be added to the permit certification in accordance with Part I.B.3.

Influent monitoring parameters and frequencies are presented below in Table 2 (from General Permit COG-315000):

Table 2 Monitoring Frequency and Sample Type Influent Parameters for Continuous and Intermittent Discharges including Batch Treatment

Parameter / ICIS Code	Discharge Limitations			Monitoring Conditions	
	30-Day Average	7-Day Average	Daily Maximum	Monitoring Frequency	Sample Type
Semi Volatile Organic Compounds Screen[1]	Report	-----	Report	Quarterly	Grab
Volatile Organic Compounds Screen[2]	Report	-----	Report	Quarterly	Grab
Metals Screen[3]	Report	-----	Report	Quarterly	Grab

Notes:

[1] Semi-Volatile Organic Compound Screen—The permittee shall sample the influent once per quarter in accordance with Part I.B.3and have it analyzed for Semi-Volatile Organic Compounds listed in the Influent Screening Requirements found in Part III of the permit. Pesticides, herbicides, and PCBs do not need to be included in this analysis.

[2] Volatile Organic Compound Screen—The permittee shall sample the influent once per quarter in accordance with Part. I.B.3 and have it analyzed for Volatile Organic Compounds listed in the Influent Screening Requirements found in Part III of the permit.

[3] Metals Screen—The permittee shall sample the influent once per quarter in accordance with Part I.B.3 and have it analyzed for all metals listed in the Influent Screening Requirements found in Part III of the permit. The Metals analyses shall be performed for the extraction (Total Recoverable, Potentially Dissolved, and/or Dissolved form) identified in Part III of the permit.

Terms used in Tables 1 and 2 are defined below:

- **"Composite"** sample is a minimum of four (4) grab samples collected at equally spaced two (2) hour intervals and proportioned according to flow. For intermittent discharges or discharges lasting less than 8 hours, a composite sample is defined as sampling three (3) equal aliquots during the beginning, middle and end of the discharge period.
- **"Continuous"** measurement is a measurement obtained from an automatic recording device which continually measures provides measurements.
- **"Daily Maximum"** limitation for all parameters except temperature, means the limitation for this parameter shall be applied as an instantaneous maximum (or, for pH or DO, instantaneous minimum) value. The instantaneous value is defined as the analytical result of any individual sample. DMRs shall include the maximum (and/or minimum) of all instantaneous values within the calendar month. Any instantaneous value beyond

the noted daily maximum limitation for the indicated parameter shall be considered a violation of General Permit COG-315000.

- **"Grab"** sample, is a single "dip and take" sample so as to be representative of the parameter being monitored.
- **"In-situ"** measurement is defined as a single reading, observation or measurement taken in the field at the point of discharge.
- **"Metals Screen"** means an analysis using an EPA approved method found in 40 CFR Part 136, and with an analyte list which includes all metals found in the Influent Screening Requirements found in Part III of General Permit COG-315000. The metals analyses must be performed for the extraction (Total Recoverable, Potentially Dissolved, Dissolved form) identified in Part III of General Permit COG-315000.
- **"Quarterly measurement frequency"** means samples may be collected at any time during the calendar quarter if a continual discharge occurs. If the discharge is intermittent, then samples shall be collected anytime during the quarter that the discharge occurs. Calendar quarters are defined as January-March, April-June, July-September, and October-December.
- **"Recorder"** requires the continuous operation of a chart and/or totalizer (or drinking water rotor meters or pump hour meters where previously approved).
- **"Semi-Volatile Organic Screen"** means an analysis using an EPA approved method found in 40 CFR part 136, and with an analyte list which includes the base, neutral, acid, dioxane organic compounds listed in the Influent Screening Requirements found in Part III of General Permit COG-315000. Pesticides, herbicides, and PCBs do not need to be included in this analysis.
- **"Seven (7) day average"** means, with the exception of fecal coliform or *E. coli* bacteria (see geometric mean), the arithmetic mean of all samples collected in a seven (7) consecutive day period. Such seven (7) day averages shall be calculated for all calendar weeks, which are defined as beginning on Sunday and ending on Saturday. If the calendar week overlaps two months (i.e. the Sunday is in one month and the Saturday in the following month), the seven (7) day average calculated for that calendar week shall be associated with the month that contains the Saturday. Samples may not be used for more than one (1) reporting period.
- **"Thirty (30) day average"** means, except for fecal coliform or *E. coli* bacteria (see geometric mean), the arithmetic mean of all samples collected during a thirty (30) consecutive-day period. The permittee shall report the appropriate mean of all self-monitoring sample data collected during the calendar month on the Discharge Monitoring Reports. Samples shall not be used for more than one (1) reporting period.
- **"Visual"** observation is observing the discharge to check for the presence of a visible sheen or floating oil.

- **"Volatile Organic Compound Screen"** means an analysis using an EPA approved method found in 40 CFR Part 136, and with an analyte list which includes the volatile organic compounds listed in the Influent Screening Requirements found in Part III of General Permit COG-315000.
- **"Weekly measurement frequency"** means samples may be collected at any time during the week as defined as beginning on Sunday and ending on Saturday. If the discharge is intermittent, a sample must be collected for each week (as defined above) that the discharge occurs. A minimum of one sample must be collected for discharges lasting less than one week.

Monitoring records will be established and maintained. These records will include the following:

a. The date, type, exact location, and time of sampling or measurements;
b. The individual(s) who performed the sampling or measurements;
c. The date(s) the analyses were performed;
d. The individual(s) who performed the analyses;
e. The analytical techniques or methods used;
f. The results of such analyses; and
g. Any other observations which may result in an impact on the quality or quantity of the discharge as indicated in 40 CFR 122.44 (i)(1)(iii).

2.4.4 Reporting of Data

Reporting of data gathered in compliance with Part I.B.2 of the general permit (COG-315000) shall be on a monthly basis. Reporting of all data gathered shall comply with the requirements of Part I.E. (General Requirements). Monitoring results shall be summarized for each calendar month and reported on Division approved discharge monitoring report (DMR) forms (EPA form 3320-1).

DMRs will be submitted either by mail, or by using the Division's Net-DMR services, and will be submitted for receipt by the Division no later than the 28th day of the month following the monitoring period. If no discharge occurs during the reporting period, "No Discharge" will be reported on the DMR.

If being mailed, the original signed copy of each discharge monitoring report (DMR) will be submitted to the Division at the following address:

Colorado Department of Public Health and Environment
Water Quality Control Division
WQCD-P-B2
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530

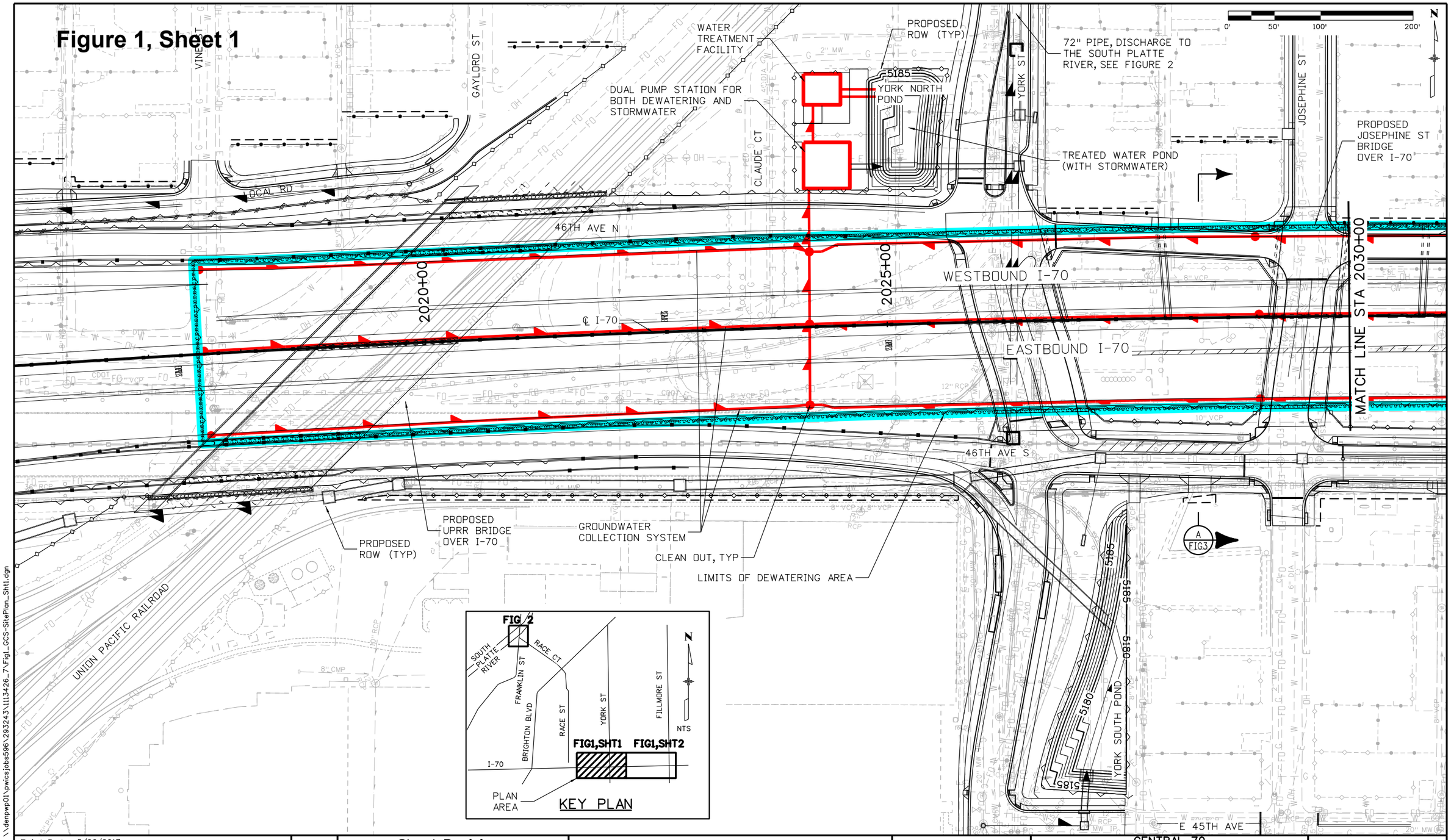
2.4.5 Inspection and Maintenance Practices

To be Determined

2.5 Description of Materials Handling and Spill Prevention

Materials handling and spill prevention procedures will be included in the Spill Prevention, Control and Countermeasures (SPCC) Plan at the time of the final RAMP submittal.

Figure 1, Sheet 1



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Region 1 KJS

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CENTRAL 70
GROUNDWATER COLLECTION SYSTEM
SITE PLAN
FIGURE 1, SHEET 1 OF 2

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Project No./Code
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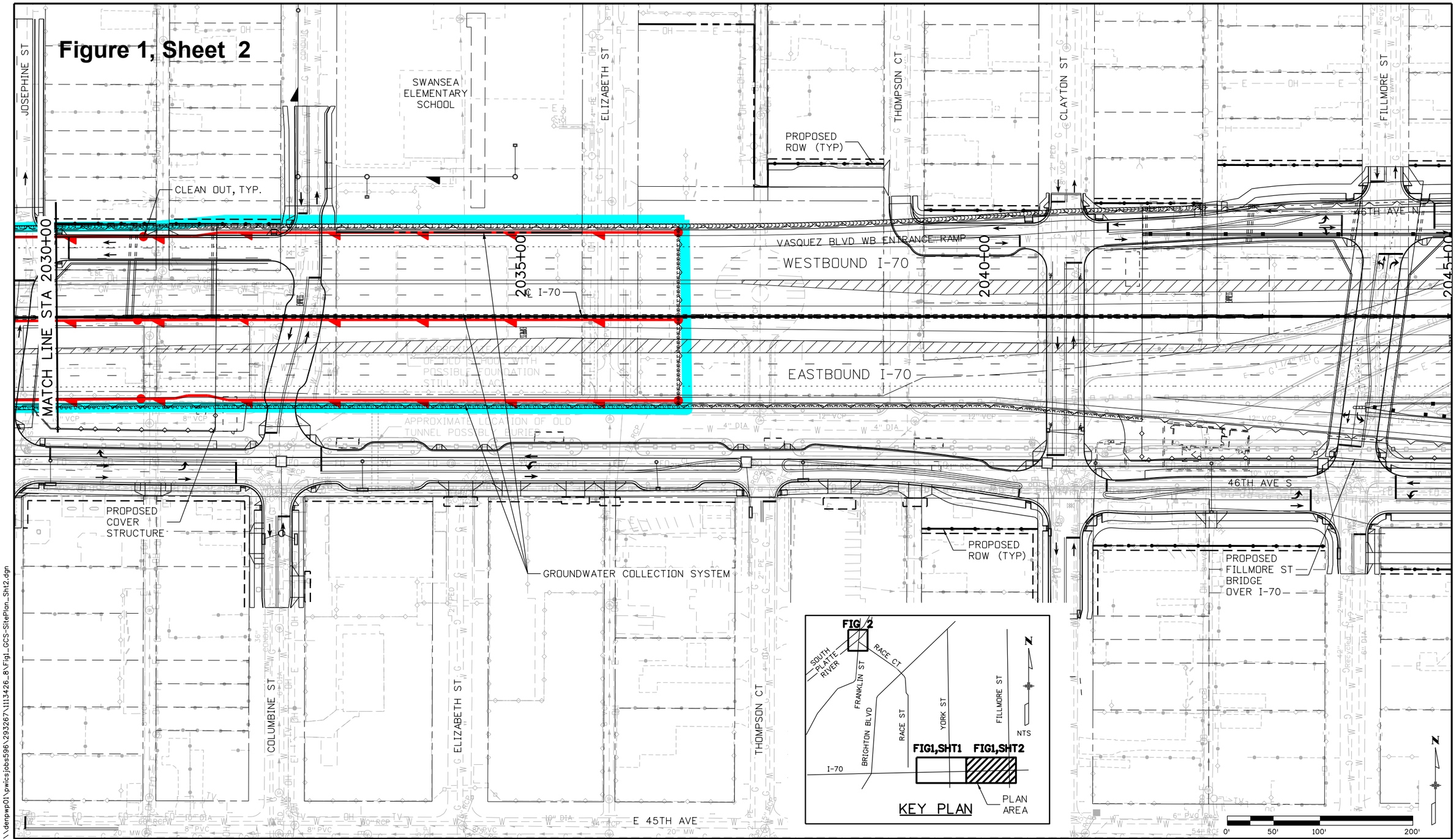
Figure 1, Sheet 2



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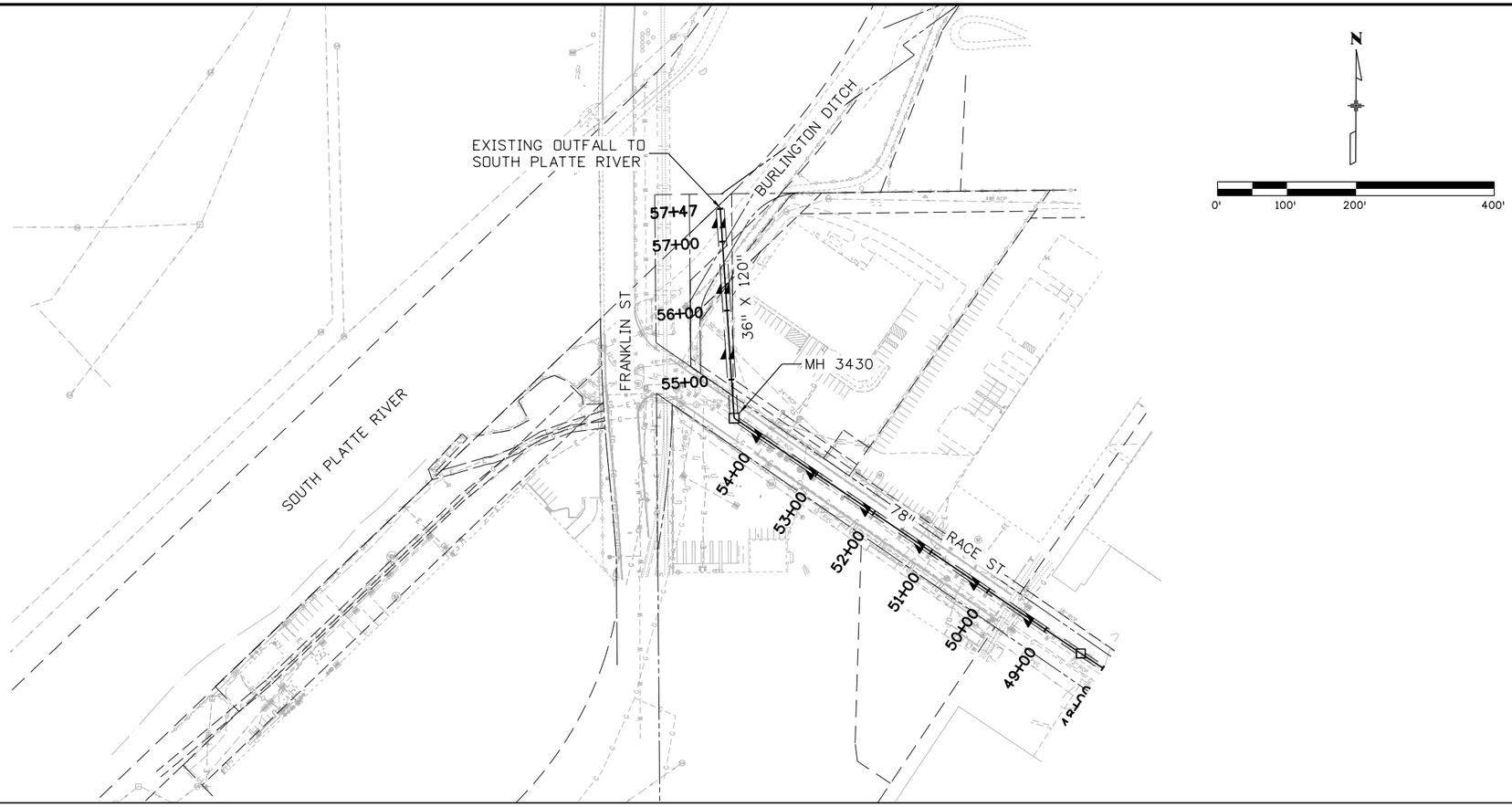
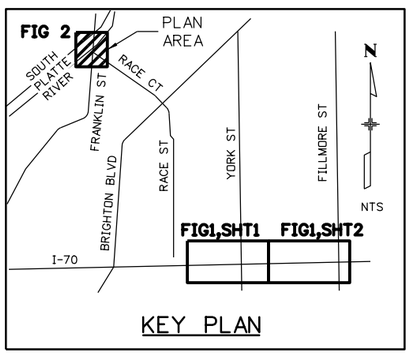
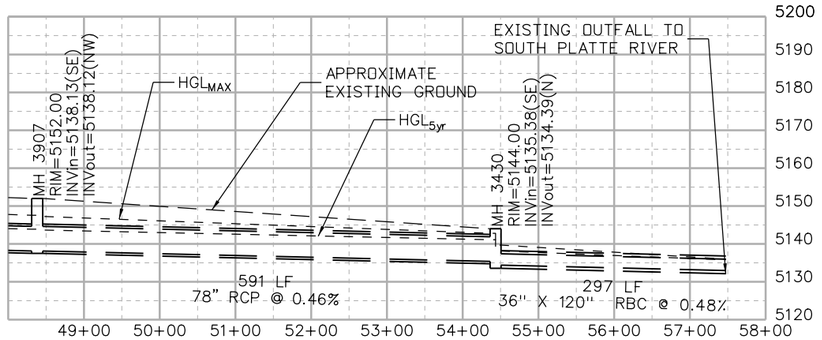
	Unit Leader						Subset Sheets: of	

Figure 2







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	Vert. Scale: As Noted				
	Unit Information				
	Unit Leader				

PROPOSAL	CENTRAL 70 EXISTING OUTFALL SITE MAP FIGURE 2		Project No./Code
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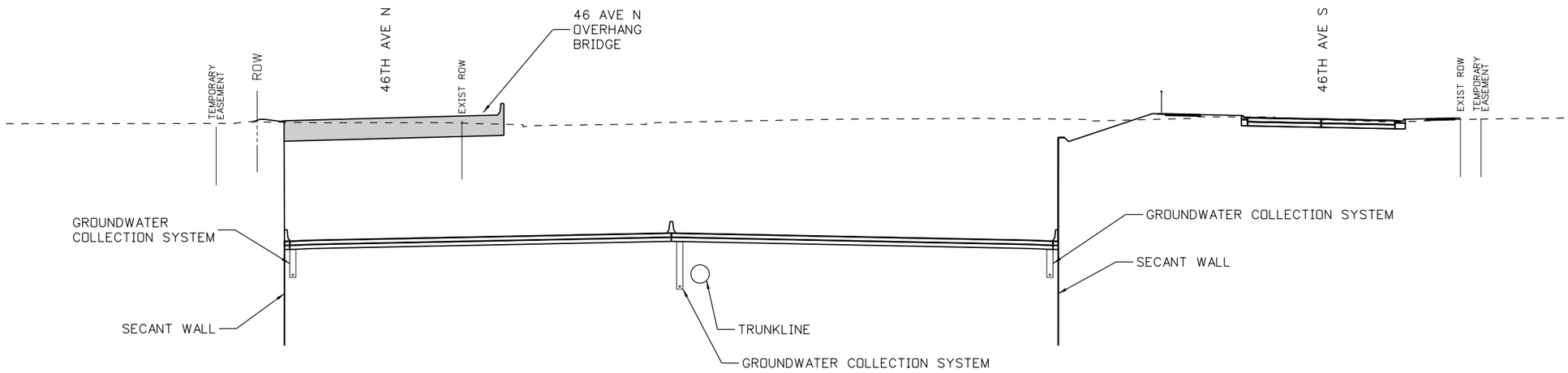
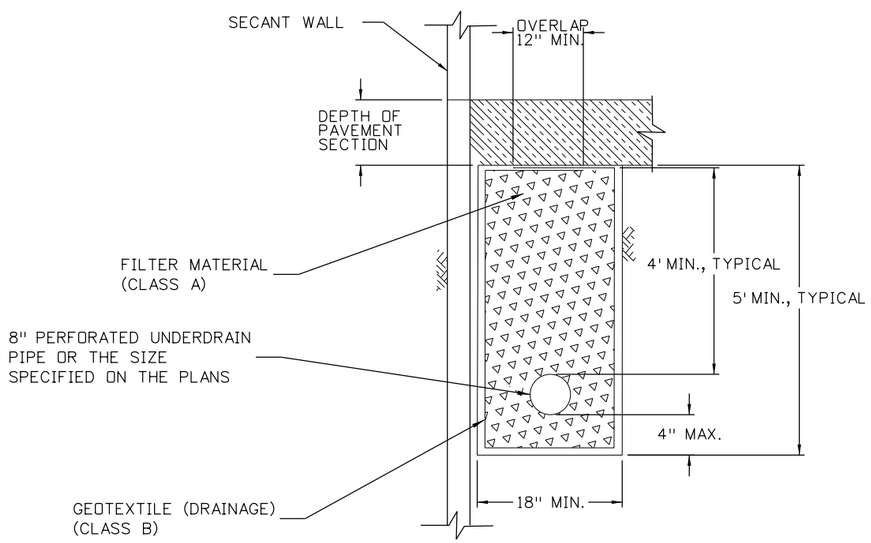
Figure 3





SECTION A FIG1,SHT1

GROUND WATER COLLECTION SYSTEM PIPE UNDERDRAIN

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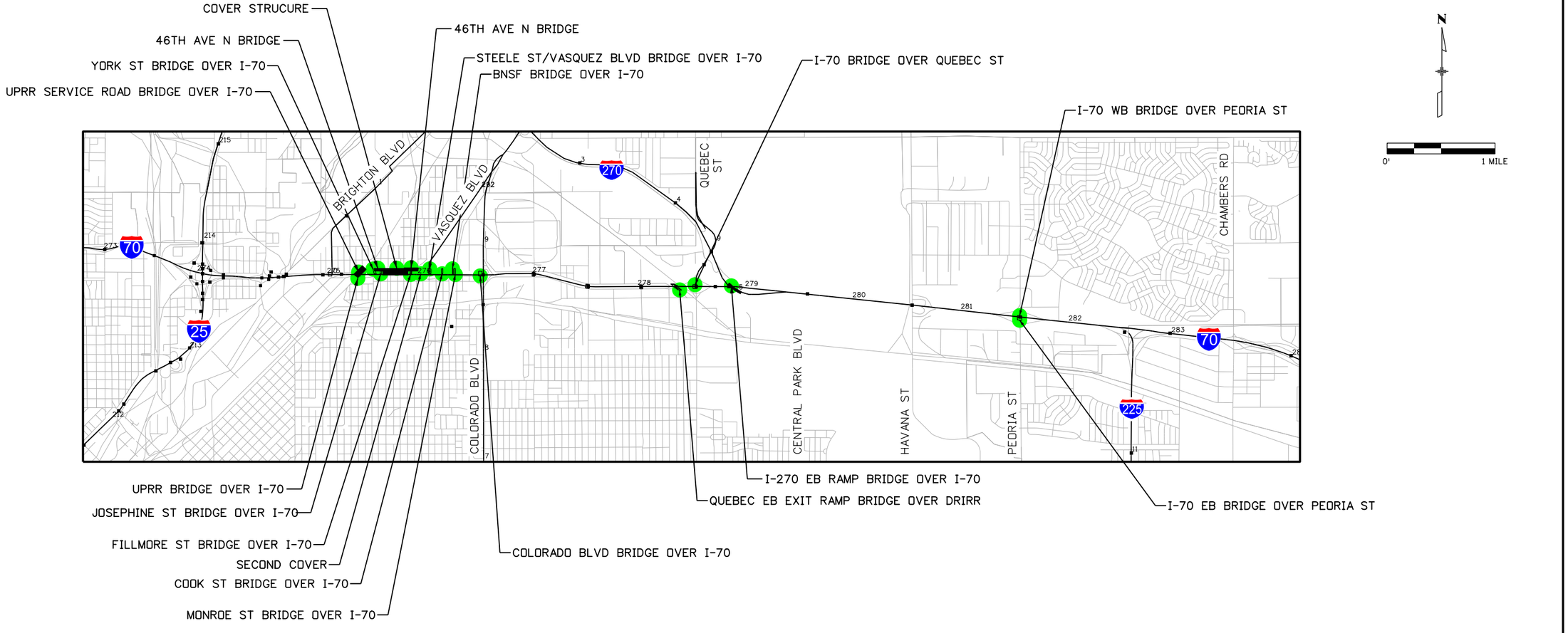
Print Date: 5/26/2017	Sheet Revisions			Colorado Department of Transportation	PROPOSAL
File Name: See sheet edge for information	Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:
Horiz. Scale: As Noted					Revised:
Vert. Scale: As Noted					
Unit Information				Region 1 KJS	Void:
Unit Leader					

Front Range Mobility Group

CENTRAL 70 GROUNDWATER COLLECTION SYSTEM CROSS SECTION FIGURE 3			Project No./Code
Designer:	Structure Numbers		FBR 0704-234
Detailer:			19631
Sheet Subset:	Subset Sheets:	of	Sheet Number

Figure 4



PLAN

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Print Date: 5/26/2017		Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 BRIDGE LOCATIONS WITH DEWATERING FIGURE 4	Project No./Code
File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:		FBR 0704-234
Front Range Mobility Group	Horiz. Scale: As Noted					Revised:	Designer: / Detailer: / Structure Numbers	19631
	Vert. Scale: As Noted							
	Unit Information					Void:	Sheet Subset: / Subset Sheets: of	Sheet Number
	Unit Leader				Region 1 KJS			

Basis of Design

As part of the Central 70 construction project, a section of Interstate 70 (I70) will be lowered below grade. As a result, the final designed roadway between approximately the Union Pacific Railroad (UPRR) and Thompson Court crossings will be below the expected groundwater table, elevation at approximately 5160 feet above mean sea level. As a result, dewatering will be required during both the construction and operations periods, and a groundwater treatment system will be needed to meet discharge limits for recovered groundwater. Groundwater samples were collected in 2015 and 2016 in different wells located near the construction area. Samples taken at the following wells were considered representative of the groundwater to be recovered during dewatering efforts:

- **YA-BB-2:** Brighton Boulevard & I 70 (west of section below the water table);
- **YA-BCL-1:** Clayton Street & I 70 (in section below water table);
- **YA-DOF-6:** York Street & I 70 (south side of I 70);
- **YA-RW-2:** Vine Street & I 70;
- **YA-UP-5:** BNSF/UP RR crossing (north side of I 70);
- **YA-MW2:** BNSF/UP RR crossing (south side of I 70);
- **YA-MW3:** York Street (north of I 70); and
- **YA-MW5:** Clayton Street (~400 ft north of I 70).

Groundwater analytical results for samples collected at these wells are presented in Table 1 below. For the basis of design, it is assumed that groundwater recovered during both the construction period and operations period dewatering will be discharged to Segment 14 of the South Platte River and will be required to meet discharge limits for Segment 14. Note that Segment 14 is the closest segment of the South Platte River to the work area and tends to have lower discharge limits in comparison to the next downstream segment, Segment 15. As a result, discharge limits for Segment 14 presented in Table 1 are conservative and represent the most likely case.

The groundwater sampling results at the wells identified above and presented in Table 1 show a need for treatment. The following constituents of concern requiring treatment were identified: aluminum, arsenic, cadmium, trivalent chromium, copper, iron, lead, magnesium, nickel, selenium, and uranium.

The construction period dewatering flow is assumed to be approximately 200 gallons per minute (gpm). The sustaining flow after construction and during the operations period is assumed to be a combination of the secant pile wall seepage (70 gpm) and the underdrain seepage (30 gpm) for a total flow of about 100 gpm. Note that these flow rates are preliminary estimates and will likely be updated based on the designs of the construction dewatering system and the underdrain seepage system. The design flow for the secant pile wall seepage is based on information provided by the geotechnical team.

Front Range Mobility Group

Table 1 – Groundwater Quality and Potential River Discharge Limits

		YA-BB-2	YA-BCL-1	YA-DOF-6	YA-RW-2	YA-UP-5	YA-MW2	YA-MW3	YA-MW5			Discharge Limits	
	units	3/9/15	3/9/15	3/11/15	3/9/15	3/9/15	9/14/16	9/12/16	9/12/16	Average	Max	30-day Avg	Daily Max
As, Filtered	µg/L	8.39	5.17	26.8	15.2	36	3.93	4.42	2.17	**13**	**36**	**10**	**340**
Cd, Filtered	µg/L	0.913	0.136	1.65	0.135	3.56	0.464	0.318	0.394	**1**	**3.56**	**0.72**	**5**
Cr Trivalent, Filtered	µg/L	10	19	6.82	19	14	14	14	14	**14**	**19**	**131**	**1,005**
Cu, Filtered	µg/L	1.36	1.11	53.1	1.08	34.5	26.8	21.2	19.6	**20**	**53.1**	**20.8**	**31.5**
Fe, Filtered	µg/L	125	140	33	428	69.5	218	33	33	**135**	**428**	**300**	**-**
Pb, Filtered	µg/L	10.2	1.8	8.92	0.855	8.49	26.3	4.37	19.2	**10**	**26.3**	**5.3**	**136**
Mn, Filtered	µg/L	-	-	-	-	-	1,970	779	1,180	**1,310**	**1,970**	**190**	**3,761**
Ni, Filtered	µg/L	38.1	40.3	30.1	31.8	133	15.4	4.07	10.3	**38**	**133**	**93.5**	**842**
Se, Filtered	µg/L	3.78	2.95	10	1.5	4.52	5.92	4.9	2	**4**	**10**	**4.6**	**18.4**
U, Filtered	µg/L	9.04	1.55	53.3	2.91	32	40.2	26.6	11	**22**	**53.3**	**30**	**30**
Al, Total	µg/L	214,000	216,000	495,000	580,000	618,000	54,900	31,600	11,900	**277,675**	**618,000**	**1,262**	**8,838**
As, Total	µg/L	43.8	38.6	121	219	88.7	11.5	15	2.96	**68**	**219**	**3**	**-**
Cd, Total	µg/L	4.18	3.8	3.62	13	7.5	0.909	0.452	0.327	**4**	**13**	**-**	**5**
Cr Trivalent, Total	µg/L	23	58	298	53	22	54	51	14	**72**	**298**	**-**	**50**
Cu, Total	µg/L	302	312	507	715	763	77	54.5	23.4	**344**	**763**	**-**	**-**
Fe, Total	µg/L	290,000	358,000	586,000	896,000	549,000	63,000	38,300	18,000	**349,788**	**896,000**	**1,000**	**-**
Pb, Total	µg/L	318	232	346	712	633	62.8	31.6	22.4	**295**	**712**	**-**	**50**
Mn, Total	µg/L	14,500	13,400	12,800	52,200	35100	-	-	-	**25,600**	**52,200**	**-**	**-**
Ni, Total	µg/L	197	223	240	538	372	44.1	20.7	14.2	**206**	**538**	**100**	**-**
Se, Total	µg/L	25.2	31.3	70.2	47.7	86.9	7.3	6.35	2.83	**35**	**86.9**	**-**	**-**
U, Total	µg/L	45.9	47.1	78.3	70.9	143	43.7	31.9	10.9	**59**	**143**	**-**	**-**

Treatment Proposed

A preliminary process flow diagram for the proposed groundwater treatment is shown in Figure 1. The treatment to remove the constituents of concern includes the following steps:

- **Equalization:** A tank provides equalization of groundwater to homogenize quality and stabilize flows.
- **Chemical Addition:** Sodium hydroxide is added to increase the pH to approximately 10 standard units (s.u.), which precipitates most metals as insoluble hydroxides. Sulfide is added to precipitate additional metals.
- **Filtration:** Solids are removed by an ultra-filtration (UF) membrane. Reject from the membrane is sent back for treatment through the concentration tank. A clean-in-place (CIP) system will be required for periodic membrane maintenance to maintain flux rates.
- **Polishing:** remaining dissolved metals are removed through ion exchange. Columns operate in lead/lag configuration. The resin column is changed when breakthrough on the first stage vessel is observed.
- **Sludge Handling:** A small portion of the membrane influent flow is sent to the sludge tank. Polymer is added to improve solids consolidation. A filter press dewaters the sludge. Filtrate is recycled back to the equalization tank, and solids are trucked off for disposal.

Design criteria for the main equipment of the proposed wastewater treatment are shown in Table 2 for the maximum flow (200 gpm).

Table 2 –Wastewater Treatment System's Main Equipment Design Criteria

Equipment Characteristics	Equipment Criteria
Equalization Tank: - Tank Type - Tank Hydraulic Retention Time (HRT) - Tank Capacity, each - Tank Dimensions, each - Mixer Type - Mixer Horsepower (hp)	Fiberglass reinforced plastic (FRP), above ground, flat bottom, with mixer 2 hours 28,000 gallons 14feet (ft) diameter (Ø), 25ft height (H) Vertical, 316 stainless steel (SS) 7 hp
Feed Pumps: - Pump Number - Pump Type - Pump materials of construction (MOC) - Pump Capacity, each	3 Centrifugal with variable frequency drive (VFD) 316 SS 200 gpm
pH Adjustment Tank: - Tank Type - Tank HRT - Tank Capacity, each - Tank Dimensions, each - Mixer Type - Mixer Horsepower	FRP, above ground, flat bottom, with mixer 10 minutes 2,000 gallons 7ft Ø, 7ft H Vertical, 316 SS 1.5 hp

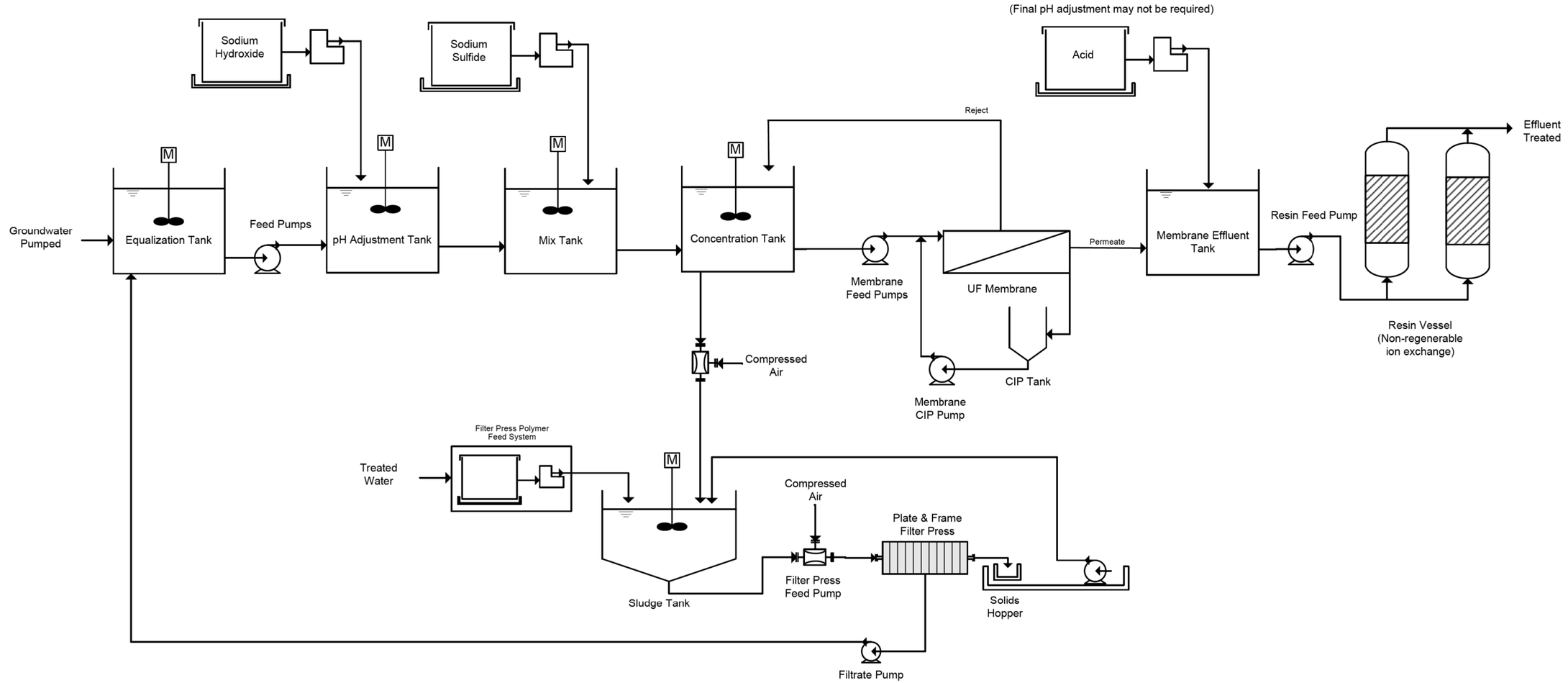
Equipment Characteristics	Equipment Criteria
Mix Tank:	
- Tank Type	FRP, above ground, flat bottom, with mixer
- Tank HRT	10 minutes
- Tank Capacity, each	2,000 gallons
- Tank Dimensions, each	7ft Ø, 7ft H
- Mixer Type	Vertical, 316 SS
- Mixer Horsepower	1.5 horsepower (hp)
Concentration Tank:	
- Tank Type	FRP, above ground, flat bottom, with mixer
- Tank HRT	1 hour
- Tank Capacity, each	12,000 gallons
- Tank Dimensions, each	12ft Ø, 15ft H
- Mixer Type	Vertical, 316 SS
- Mixer Horsepower	4 hp
Membrane Feed Pumps:	
- Pump Number	3
- Pump Type	Centrifugal with VFD
- Pump MOC	316 SS
- Pump Capacity, each	250 gpm (including recycling: 50 gpm)
UF Membrane:	
- Influent Flow	250 gpm
- Membrane Type	To be determined
Membrane Effluent Tank:	
- Tank Type	FRP, above ground, flat bottom
- Tank HRT	10 minutes
- Tank Capacity, each	2,000 gallons
- Tank Dimensions, each	7ft Ø, 7ft H
Resin Feed Pumps:	
- Pump Number	3
- Pump Type	Centrifugal with VFD
- Pump MOC	316 SS
- Pump Capacity, each	200 gpm
Resin Columns:	
- Influent Flow	200 gpm
- Column Number	2
- Column Type	Non-generable ion exchange
Sludge Tank:	
- Tank Type	FRP, above ground, cone bottom, with mixer
- Tank HRT	1 day
- Tank Capacity, each	15,000 gallons
- Tank Dimensions, each	12ft Ø, 18ft H
- Mixer Type	Vertical, 316 SS
- Mixer Horsepower	4 hp
Filter Press:	
- Influent Flow	50 gpm
Filtrate Pump:	
- Pump Number	1
- Pump Type	Centrifugal
- Pump MOC	316 SS
- Pump Capacity, each	50 gpm
Additional Equipment:	
- Chemical pumps (3)	Chemical metering pump and feed system
- Polymer Feed	Polymer Feed system
- Solids transfer pumps (2)	Diaphragm pumps, 10 gpm and 50 gpm

Risks

The design has been developed on preliminary information. The following items should be considered in the following phases of design:

- Groundwater quality should be confirmed by additional sampling and thorough sampling collection methodology examination.
- Flows for both construction and operations periods should be confirmed.
- Additional water characteristics data should be collected (pH, alkalinity, total suspended solids [TSS], oxidation-reduction potential [ORP], ions, etc.) to confirm treatment processes.
- Discharge limits are low for selenium. Groundwater selenium speciation should be analyzed, as efficient selenium removal only occurs for selenite. Additional treatment steps may be required if the selenium present in the groundwater is mainly in the form of selenate.
- Due to the high concentrations of heavy metals in groundwater and low discharge limits, Bench-scale treatability tests are recommended to demonstrate that the limits can be achieved. A Bench-scale test would also allow confirmation of chemical type and usage to assure adequate precipitation and filtration.

Figure A1



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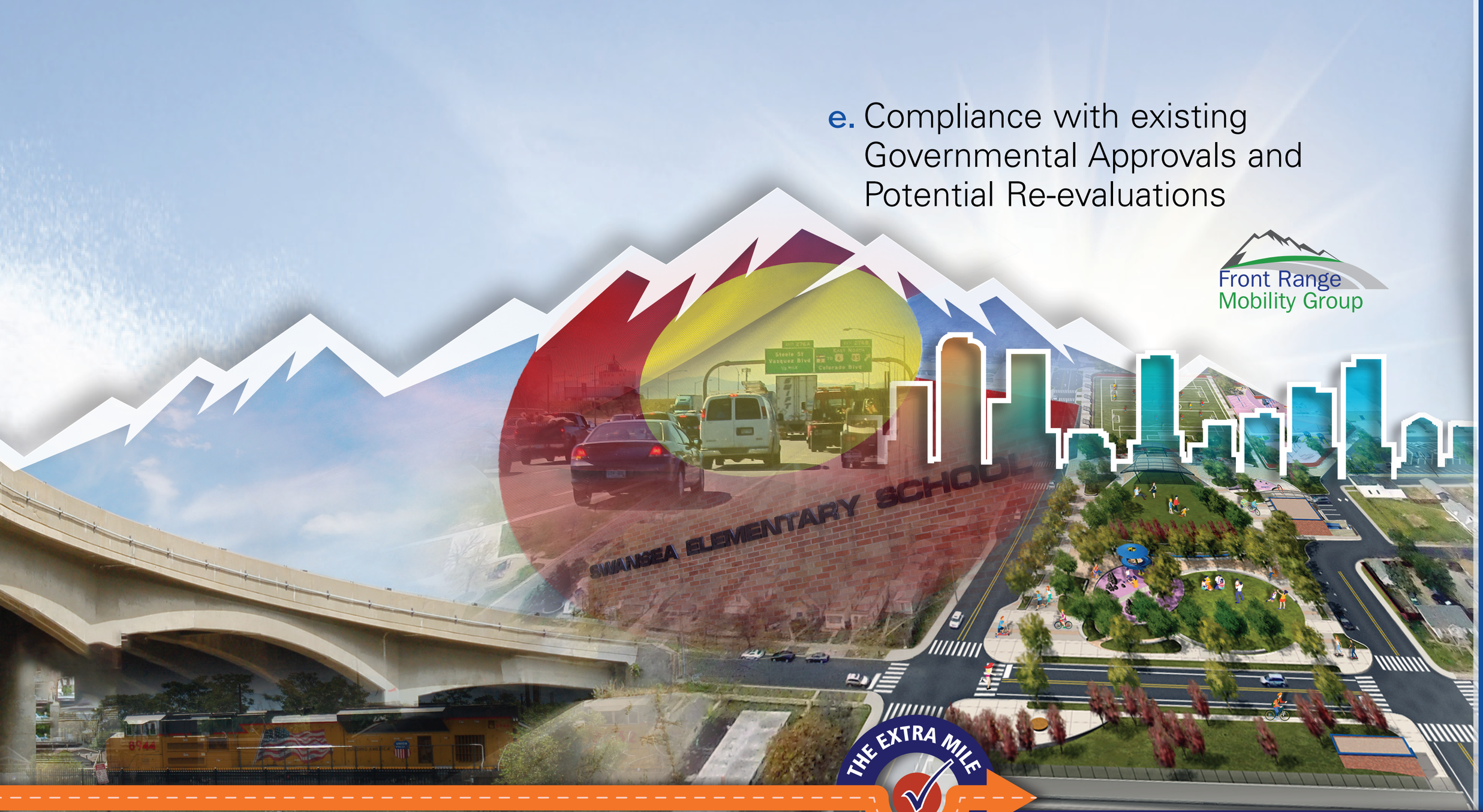
Vert. Scale: As Noted				Region 1 KJS	Void:
Front Range Mobility Group					
Unit Information					
Unit Leader					

CENTRAL 70 I-70 DEWATERING WATER TREATMENT FACILITY PROCESS FLOW DIAGRAM FIGURE A1			Project No./Code
			FBR 0704-234
Designer:	Structure Numbers		19631
Detailer:			
Sheet Subset:	Subset Sheets: of		Sheet Number

e. Compliance with existing Governmental Approvals and Potential Re-evaluations

Front Range Mobility Group



THE EXTRA MILE

CONNECTING COMMUNITIES

Governmental Approvals and possibly re-evaluations and delays associated with such re-evaluations.

FRMG's design is in accordance with Schedule 10 of the Project Agreement and other Approvals governing the Central 70 Project. We have included several Alternative Technical Concepts (ATCs) that may require evaluation for compliance with existing Governmental Approvals, additional Governmental Approvals, or re-evaluations as described for each ATC below. These items correspond with the items in the conditional approvals FRMG received on each of our ATCs. No delays are currently anticipated associated with such re-evaluations.

ATC 65 – Shifting I-70 lanes to the north approximately 40 feet between Brighton Boulevard and Colorado Boulevard

- CDOT and FRMG shall agree upon a protocol for renegotiating the Memorandum of Agreement (MOA) between CDOT and Denver Public Schools (DPS) to address implementation of the DPS Phase 3 School Layout
- FRMG shall be responsible for any approval of the following (although not anticipated)
  - UPRR Trackwork and Signal plans
  - BNSF Trackwork and Signal plan
  - Revisions to the ROW parcels for the UPRR
  - Revisions to the ROW parcels for the BNSF
  - Consequential amendments to the UPRR RRA
  - Consequential amendments to the BNSF RRA

- FRMG shall be responsible for any additional Utility Work required to implement this ATC.
- FRMG shall be responsible to obtain any other Permit or approval required from any Governmental Authority, Utility Owner, or third party (including Denver Wastewater and Denver Water).
- FRMG shall be responsible for obtaining any additional Environmental Approvals and NEPA Re-evaluations required for the implementation of this ATC. At this time, a Level II Re-evaluation is anticipated. Re-evaluation timeframe has been included in our Draft Baseline Proposal Schedule.
- FRMG shall be responsible for conducting necessary public outreach for the implementation of this concept.
- FRMG shall be responsible to obtain any Additional Right-of-Way required to implement the ATC. An additional small transfer of property (12 feet x 265 feet) from DPS to CDOT is anticipated.
- FRMG shall be responsible for all cost and risk associated with gaining approval from FHWA for the design exceptions listed in the ATC.

ATC 21—Removal of Storm Sewer Bridge over I-70 and North Outfall

- FRMG shall be responsible for any additional approvals by Denver Wastewater required to implement this ATC.
- This ATC will eliminate the 404 permit that would have been required for the outfall to the South Platte River

ATC 26 – Semi-transverse ventilation configuration

- The ventilation design shall be coordinated with the I-70 Cover design and Swansea Elementary School outdoor areas. Access points for maintenance and operations shall be located outside of all active use areas for the Cover area and subject to Approval by the Department.
- FRMG shall define new design criteria for the semi-transverse ventilation concept. The new criteria shall be subject to Approval by the Department. The final design of the semi-transverse ventilation concept shall be based on the agreed upon design criteria.
- FRMG shall be responsible for coordination with and approval by all Utilities for Utility design requirements to implement the semi-transverse ventilation concept.
- FRMG shall obtain approval from the Authority Having Jurisdiction (AHJ) for the semi-transverse ventilation concept design.
- FRMG shall be responsible to provide, install, test, and commission the entirety of the Cover MEP System utilizing the semi-transverse ventilation concept.
- FRMG shall be responsible for obtaining any additional approvals or permits (e.g., Environmental Approvals) required for this ATC. This includes any necessary public outreach, as directed by the Department.

ATC 67—LED Light Fixtures

- FRMG shall be responsible for obtaining approval from Xcel to maintain the proposed LED light fixtures.

ATC 74 – Removal of Sanitary Sewer Bridge

- FRMG shall be responsible for any additional Environmental Approvals required for the ATC
- FRMG shall be responsible to obtain any Additional ROW required for the ATC
- FRMG shall be responsible to obtain any required Railroad Permits required for the ATC
- FRMG shall be responsible to obtain any other Permit or approval required from any Governmental Authority, Utility Owner, or other third party (including Denver Wastewater and Metro Wastewater)

f. Draft Structure Drawings

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CENTRAL 70 STRUCTURES

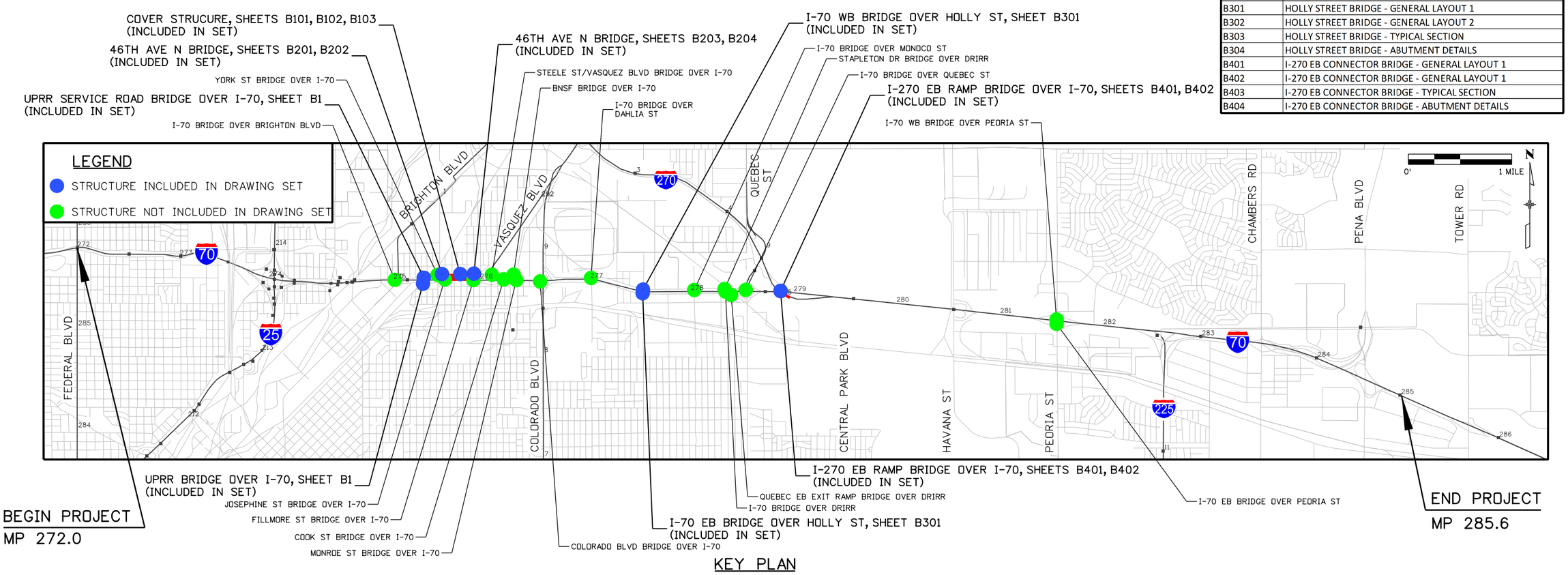
ALTHOUGH NOT REQUIRED BY THE ITP, INCORPORATED WITHIN THIS STRUCTURAL SET IS A REPRESENTATIVE EXAMPLE OF THE REOCCURRING BRIDGES REQUIRED FOR THIS PROJECT, INCLUDING:

- UPRR SERVICE ROAD BRIDGE OVER I-70
  (DESCRIPTION: RAILROAD GRADE SEPARATION)
- COVER STRUCTURE
- 46TH AVE N BRIDGE
  (DESCRIPTION: CANTILEVER OVERHANG WITH STRADDLE BENTS)
- I-70 WB BRIDGE OVER HOLLY ST
  (DESCRIPTION: I-70 MAINLINE BRIDGE)
- I-270 EB RAMP BRIDGE OVER I-70
  (DESCRIPTION: ROADWAY OVERPASS (FLYOVER))

ADDITIONAL GENERAL LAYOUTS FOR ALL THE OTHER MAJOR STRUCTURES HAVE BEEN GENERATED BY THE PROJECT DESIGN TEAM, AND ARE AVAILABLE UPON REQUEST.

INDEX TO STRUCTURE DRAWINGS

SHEET NO.	DESCRIPTION
B1	UPRR BRIDGE - GENERAL LAYOUT 1
B2	UPRR BRIDGE - GENERAL LAYOUT 2
B3	UPRR BRIDGE - TYPICAL SECTION
B4	UPRR BRIDGE - ABUTMENT DETAILS
B5	UPRR BRIDGE - PIER DETAILS
B101	COVER STRUCTURE - PLAN (1 OF 3)
B102	COVER STRUCTURE - PLAN (2 OF 3)
B103	COVER STRUCTURE - PLAN (3 OF 3)
B104	COVER STRUCTURE - TYPICAL SECTION AT COLUMBINE ST
B105	COVER STRUCTURE - WEST END PROFILE
B106	COVER STRUCTURE - EAST END PROFILE
B107	COVER STRUCTURE - STAGED CONST AT SOUTH WALL/ CONFLICTS WITH EXIST VIADUCT COLUMNS
B108	COVER STRUCTURE - CENTER PILE DETAILS
B109	COVER STRUCTURE - PLANTER DETAILS
B201	46TH STREET OVERHANG STRUCTURE - GENERAL LAYOUT 1
B202	46TH STREET OVERHANG STRUCTURE - GENERAL LAYOUT 2
B203	46TH STREET OVERHANG STRUCTURE - GENERAL LAYOUT 3
B204	46TH STREET OVERHANG STRUCTURE - GENERAL LAYOUT 4
B205	46TH STREET OVERHANG STRUCTURE - TYPICAL SECTION 1
B206	46TH STREET OVERHANG STRUCTURE - TYPICAL SECTION 2
B301	HOLLY STREET BRIDGE - GENERAL LAYOUT 1
B302	HOLLY STREET BRIDGE - GENERAL LAYOUT 2
B303	HOLLY STREET BRIDGE - TYPICAL SECTION
B304	HOLLY STREET BRIDGE - ABUTMENT DETAILS
B401	I-270 EB CONNECTOR BRIDGE - GENERAL LAYOUT 1
B402	I-270 EB CONNECTOR BRIDGE - GENERAL LAYOUT 1
B403	I-270 EB CONNECTOR BRIDGE - TYPICAL SECTION
B404	I-270 EB CONNECTOR BRIDGE - ABUTMENT DETAILS



KEY PLAN

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Checked By	X	7/15

Detail	INITIAL	DATE
Detailed By	X	7/15
Checked By	X	7/15

Quantities	INITIAL	DATE
Quantities By	X	7/15
Checked By	X	7/15

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Unit Leader: DV

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Region 1 KJS

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CENTRAL 70
STRUCTURE KEY PLAN AND NARRATIVE

Designer:
Detailer:
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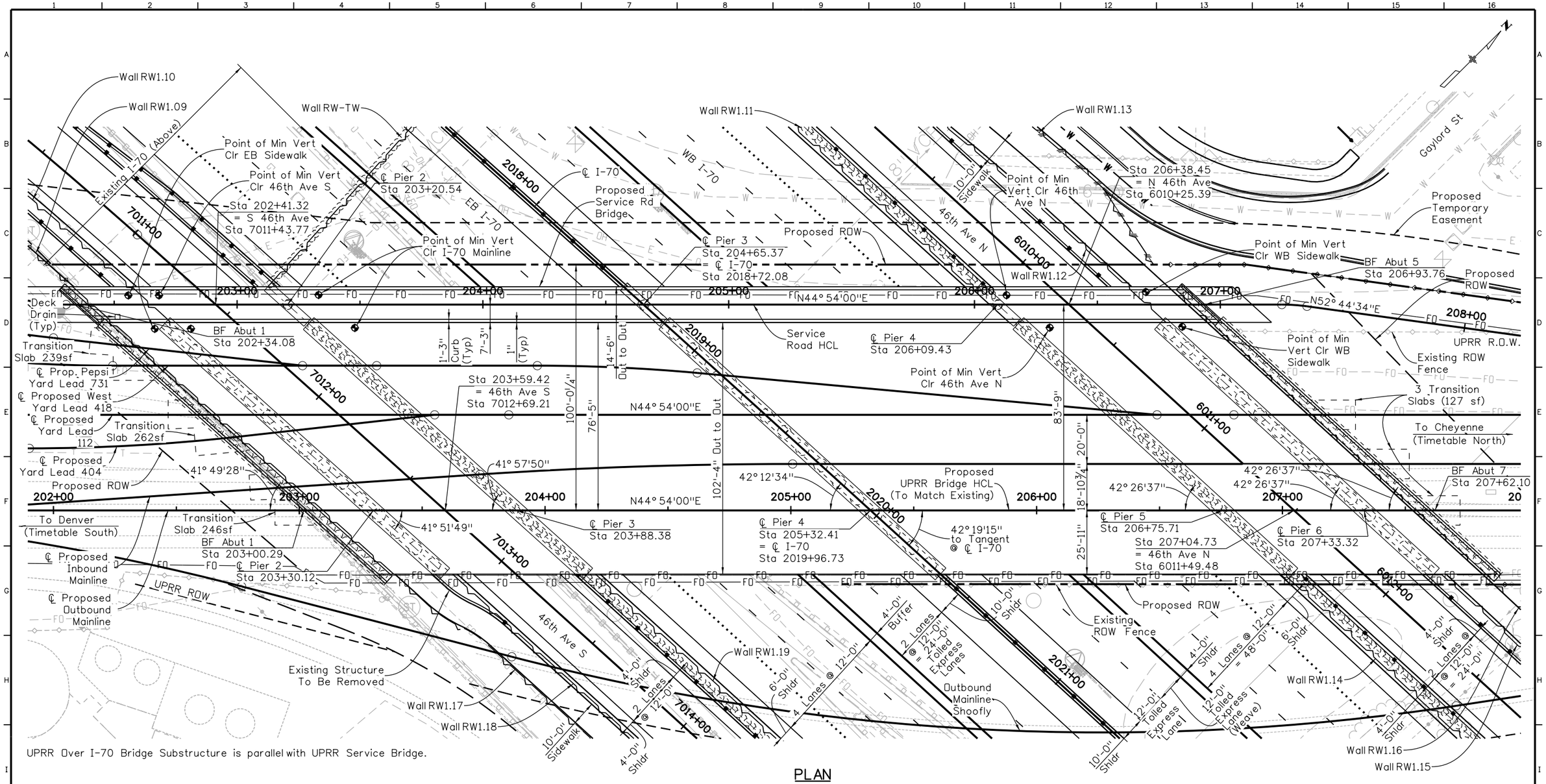

UPRR Over I-70 Bridge Substructure is parallel with UPRR Service Bridge.

PLAN

◆ Indicates point of Minimum Vertical Clearance

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Checked By	X	7/15

Detail	INITIAL	DATE
Detailed By	X	7/15
Checked By	X	7/15

Quantities	INITIAL	DATE
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Region 1 KJS

PROPOSAL
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Revised:
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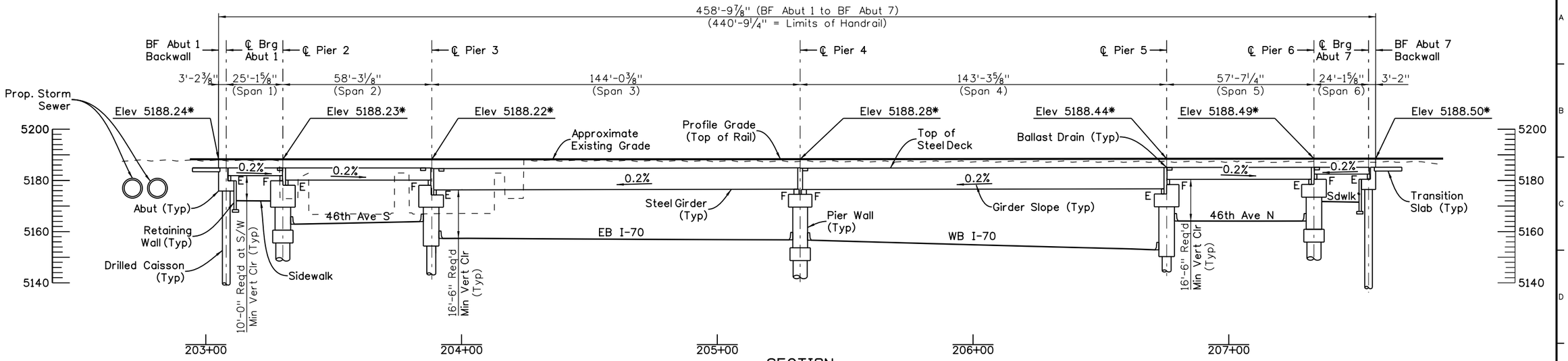
CENTRAL 70
UPRR OVER I-70
GENERAL LAYOUT (1 OF 2)

Designer: S. HAYNES
Detailer: M. VAUSE
Sheet Subset: BR S1.05
Structure Numbers: E-17-AEW, E-17-AEX
Subset Sheets: B1 of 5

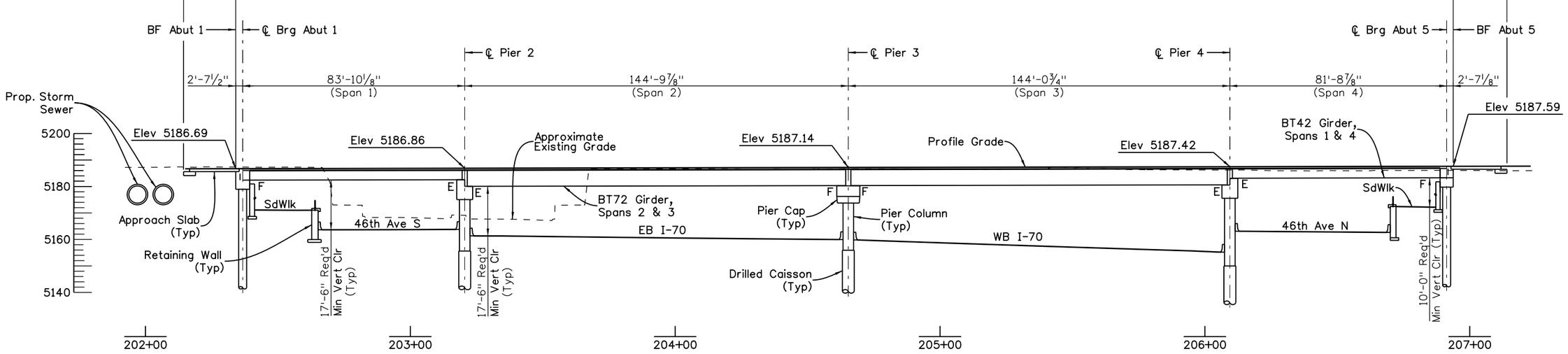
Project No./Code
FBR 0704-234

Sheet Number 602



SECTION

(Taken along Proposed UPRR Bridge HCL)
* Top of Rail Elev



SECTION

(Taken along Service Road HCL)
(Elevations are at Top of Deck)

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Checked By	X	7/15

Detail	INITIAL	DATE
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Checked By	X	7/15

Quantities	INITIAL	DATE
Quantities By	X	7/15
Checked By	X	7/15

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Print Date: 5/16/2017
File Name: See sheet edge for information
Horiz. Scale: 1:40
Vert. Scale:
Staff Bridge Branch: Unit 0221
Unit Leader: DV

Front Range Mobility Group

0002 0003 0004

Sheet Revisions

Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

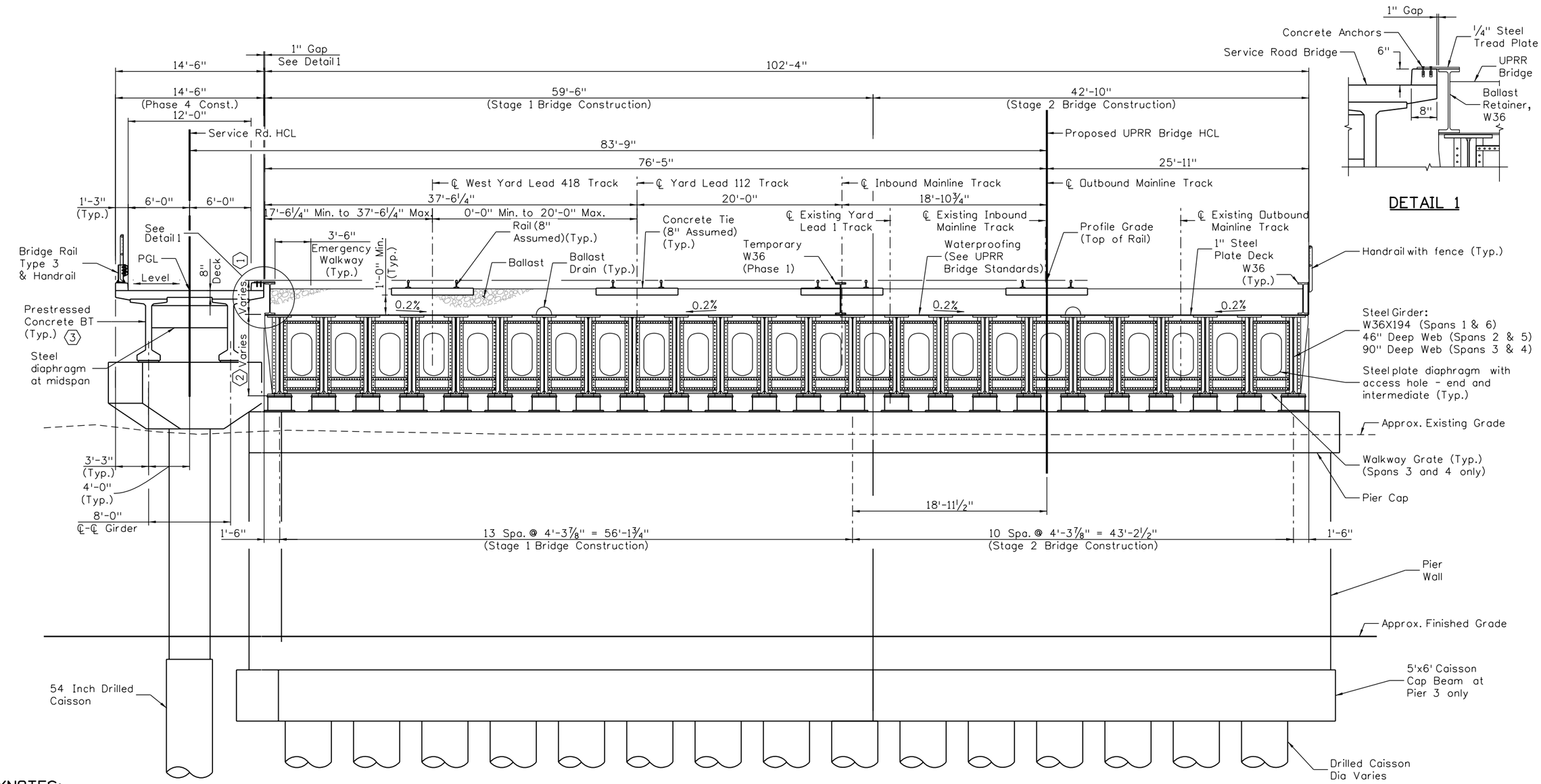
PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70 UPRR OVER I-70 GENERAL LAYOUT (2 OF 2)

Designer: S. HAYNES
Detailer: M. VAUSE
Sheet Subset: BR S1.05
Structure Numbers: E-17-AEW, E-17-AEX
Subset Sheets: B2 of 5

Project No./Code: FBR 0704-234

Sheet Number 603



DETAIL 1

KEYNOTES:

1. Top of rail to top of deck varies 2'-3⅝ min.
2. Top of Steel Deck to bottom of girder flange varies:
   Span 1 & 6 = 3'-1½"
   Span 2 & 5 = 4'-5"
   Spans 3 & 4 = 8'-1" (Max.)
3. Spans 1 & 4 BT42
   Spans 2 & 3 BT72

TYPICAL SECTION

(Looking Ahead Station)

Allowance for 6 Tracks with Min. Spacing = 15'-0"

Underdrains have not been sized and are not shown.

*All steel is ASTM A709 Weathering Steel

Quantities	INITIAL	DATE
Quantities By	X	7/15
Checked By	X	7/15

Detail	INITIAL	DATE
Detailed By	X	7/15
Checked By	X	7/15

Design	INITIAL	DATE
Designed By	X	7/15
Checked By	X	7/15

SH037078 10:25:07 AM pw:\projectwise.ch2m.com:DEN001\Documents\666933 - CDOT I-70 EAST\Work in Progress\CDOT I-70 EAST_AECOM\Div\B3-13599_BRDG_UPRR_TypSect.dgn

Print Date: 5/19/2017
File Name: See sheet edge for information
Horiz. Scale: 1:10
Vert. Scale:
Staff Bridge Branch: Unit 0221
Unit Leader: DV

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
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Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

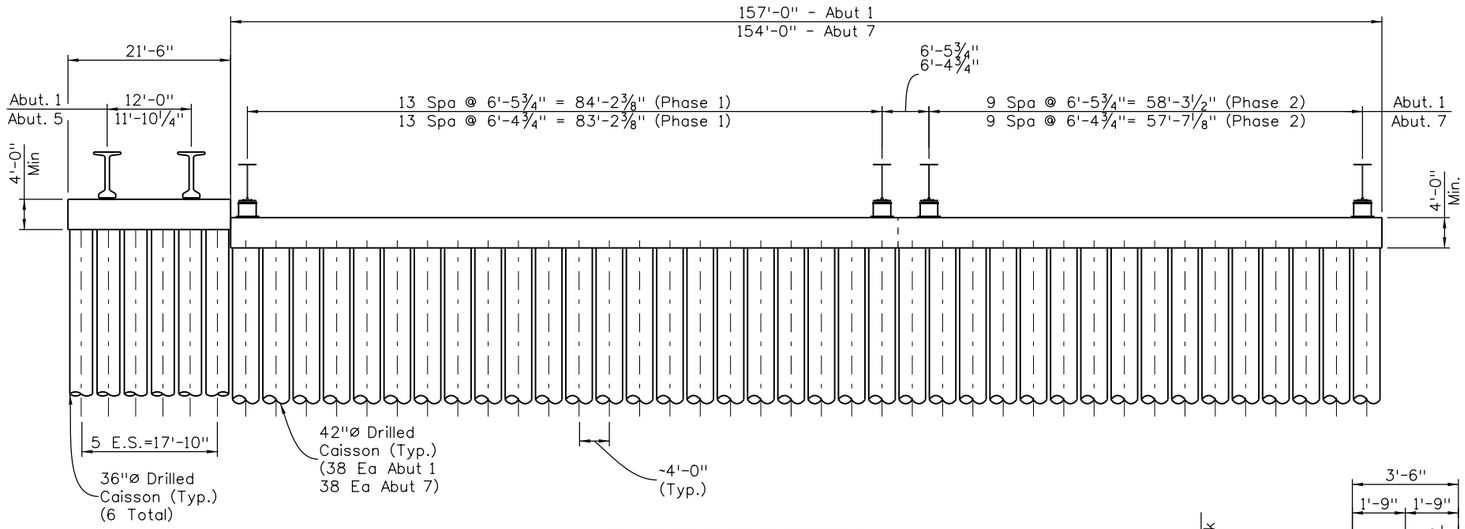
PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
UPPR OVER I-70
TYPICAL SECTION

Designer: S. HAYNES
Detailer: M. VAUSE
Sheet Subset: BR S1.05
Structure Numbers: E-17-AEW, E-17-AEX
Subset Sheets: B3 of 5

Project No./Code
FBR 0704-234

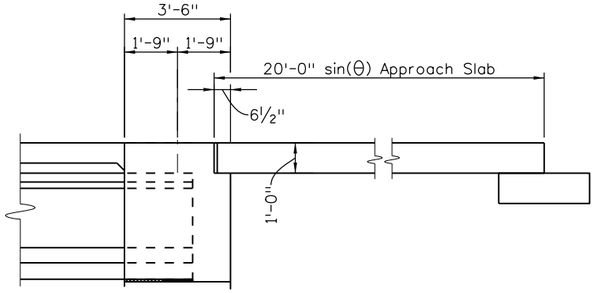
Sheet Number 604



ABUTMENT ELEVATION

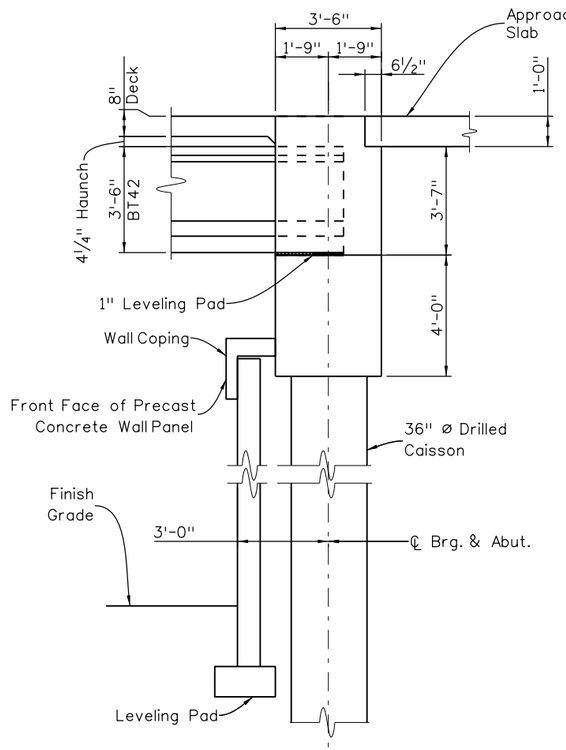
(Taken along ℄ Bearing, Looking Ahead Station)
Abutment 7 Shown, Abutment 1 Similar

FOUNDATION SUMMARY		
	Access Road	*UPPR*
Caisson ø	36"	42"
% Reinforcing	2.16	1.35
Est. Caisson Length (ft)		
Abutment 1	36	43
Abutment 2	37	44

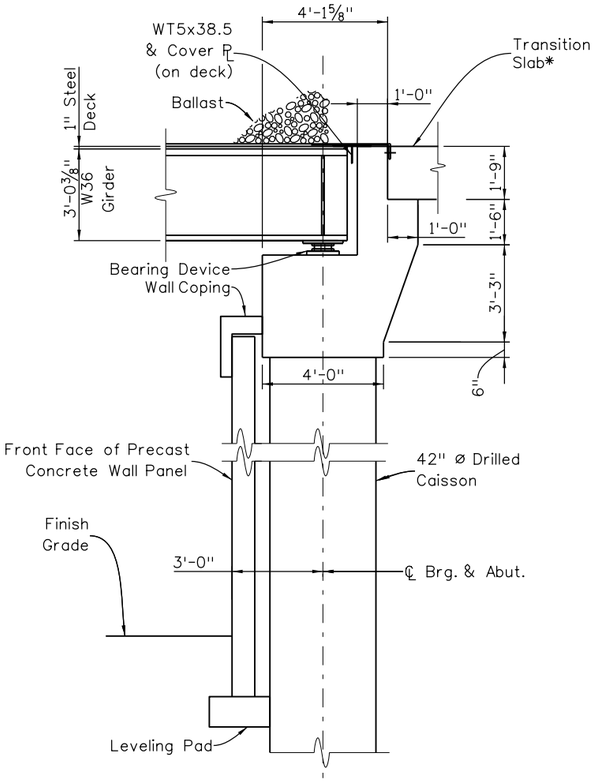


APPROACH SLAB SECTION

(Service Bridge only)



ABUTMENT DETAIL- SERVICE BRIDGE



ABUTMENT DETAIL- UPPR Over I-70

End Diaphragm not shown
* Transition Slabs are 1'-9" Deep by 12' minimum width by varies

Design	INITIAL	DATE
Designed By	X	7/15
Checked By	X	7/15

Detail	INITIAL	DATE
Detailed By	X	7/15
Checked By	X	7/15

Quantities	INITIAL	DATE
Quantities By	X	7/15
Checked By	X	7/15

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Print Date: 5/16/2017
File Name: See sheet edge for information
Horiz. Scale: Varies
Vert. Scale:
Staff Bridge Branch: Unit 0221
Unit Leader: DV

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
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Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

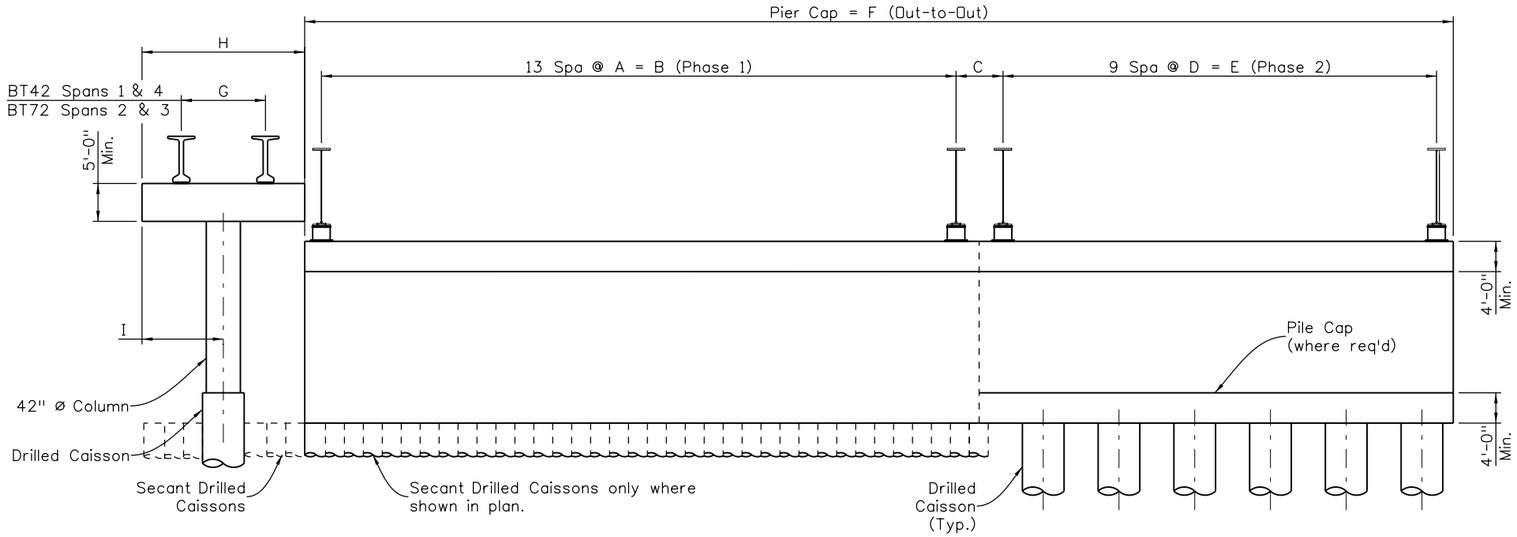
PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
I-70 OVER UPRR
ABUTMENT DETAILS

Designer: S. HAYNES
Detailer: T. SANDS
Sheet Subset: BR S1.05
Structure Numbers: E-17-AEW, E-17-AEX
Subset Sheets: B4 of 5

Project No./Code
FBR 0704-234

Sheet Number 605



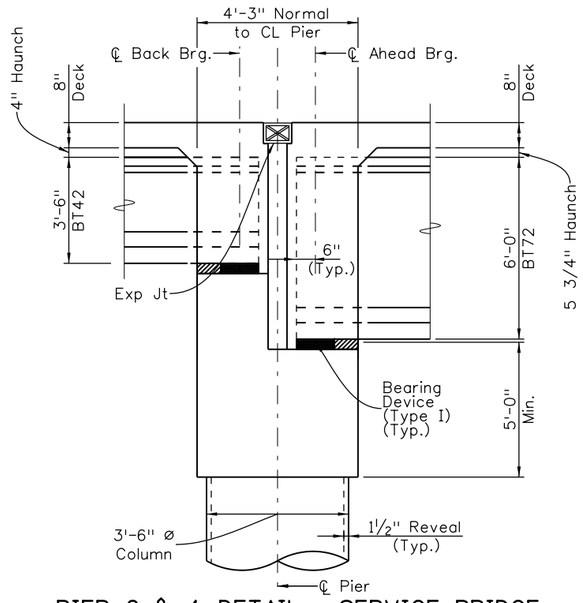
Piers 2 & 4 — Pier Wall on Caissons - Piers 3 & 5 — Pier Wall on Drilled Caissons - Pier 2, 4 & 6

PIER ELEVATION

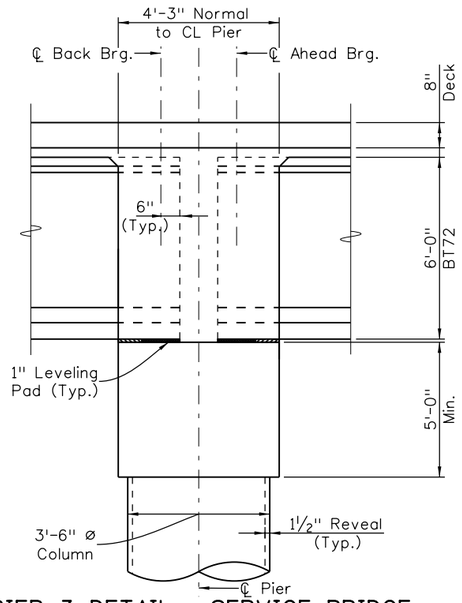
(Taken along ℄ Pier Back Bearing, Looking Ahead Station)

PIER DIMENSIONS - UPRR ONLY						
Location	*A*	*B*	*C*	*D*	*E*	*F*
Pier 2	6'-5 5/8"	84'-1 5/8"	6'-5 5/8"	6'-5 5/8"	58'-2 7/8"	152'-9 3/8"
Pier 3	6'-5 1/2"	83'-11 5/8"	6'-5 1/2"	6'-5 1/2"	58'-1 5/8"	152'-5 3/4"
Pier 4	6'-5 1/8"	83'-6 7/8"	6'-5 1/8"	6'-5 1/8"	57'-10 1/4"	151'-9 1/8"
Pier 5	6'-4 3/4"	83'-2 3/8"	6'-4 3/4"	6'-4 3/4"	57'-7 1/8"	151'-1"
Pier 6	6'-4 3/4"	83'-2 3/8"	6'-4 3/4"	6'-4 3/4"	57'-7 1/8"	151'-1"

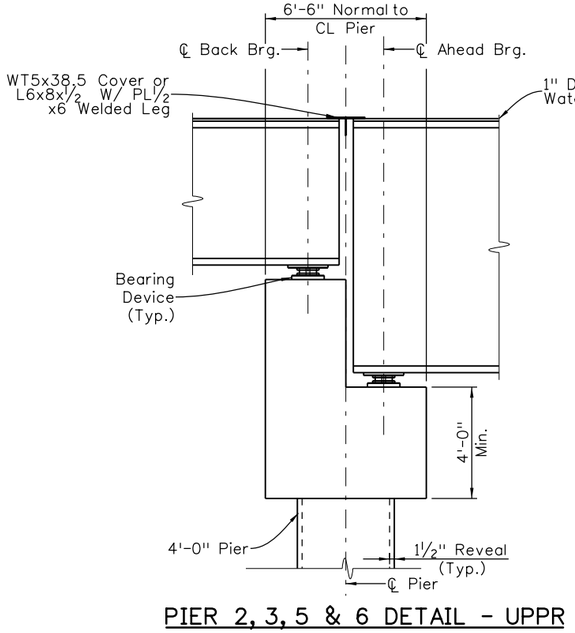
PIER DIMENSIONS - SERVICE BRIDGE			
Location	*G*	*H*	*I*
Pier 2	11'-11 5/8"	21'-8 1/4"	10'-10 1/8"
Pier 3	11'-10 7/8"	21'-7"	10'-9 1/2"
Pier 4	11'-10 1/4"	21'-5 7/8"	10'-8 7/8"



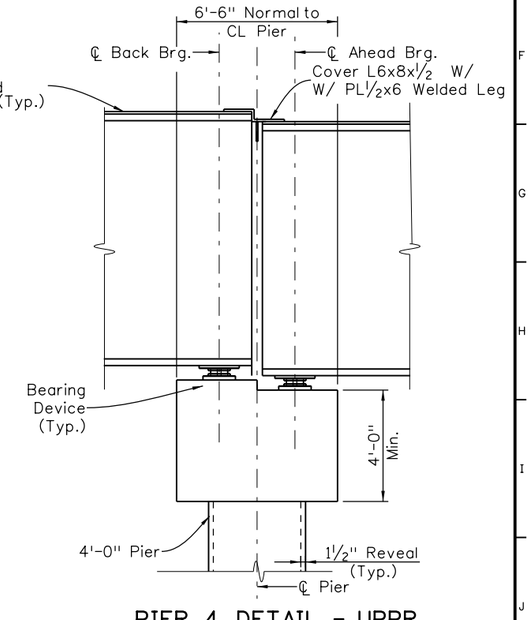
PIER 2 & 4 DETAIL - SERVICE BRIDGE



PIER 3 DETAIL - SERVICE BRIDGE



PIER 2, 3, 5 & 6 DETAIL - UPPR



PIER 4 DETAIL - UPPR

Design			Detail			Quantities		
	INITIAL	DATE		INITIAL	DATE		INITIAL	DATE
Designed By	X	7/15	Detailed By	X	7/15	Quantities By	X	7/15
Checked By	X	7/15	Checked By	X	7/15	Checked By	X	7/15

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Print Date: 5/16/2017
File Name: See sheet edge for information
Horiz. Scale: Varies
Vert. Scale:
Staff Bridge Branch: Unit 0221
Unit Leader: DV

Front Range Mobility Group

2 3 4

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

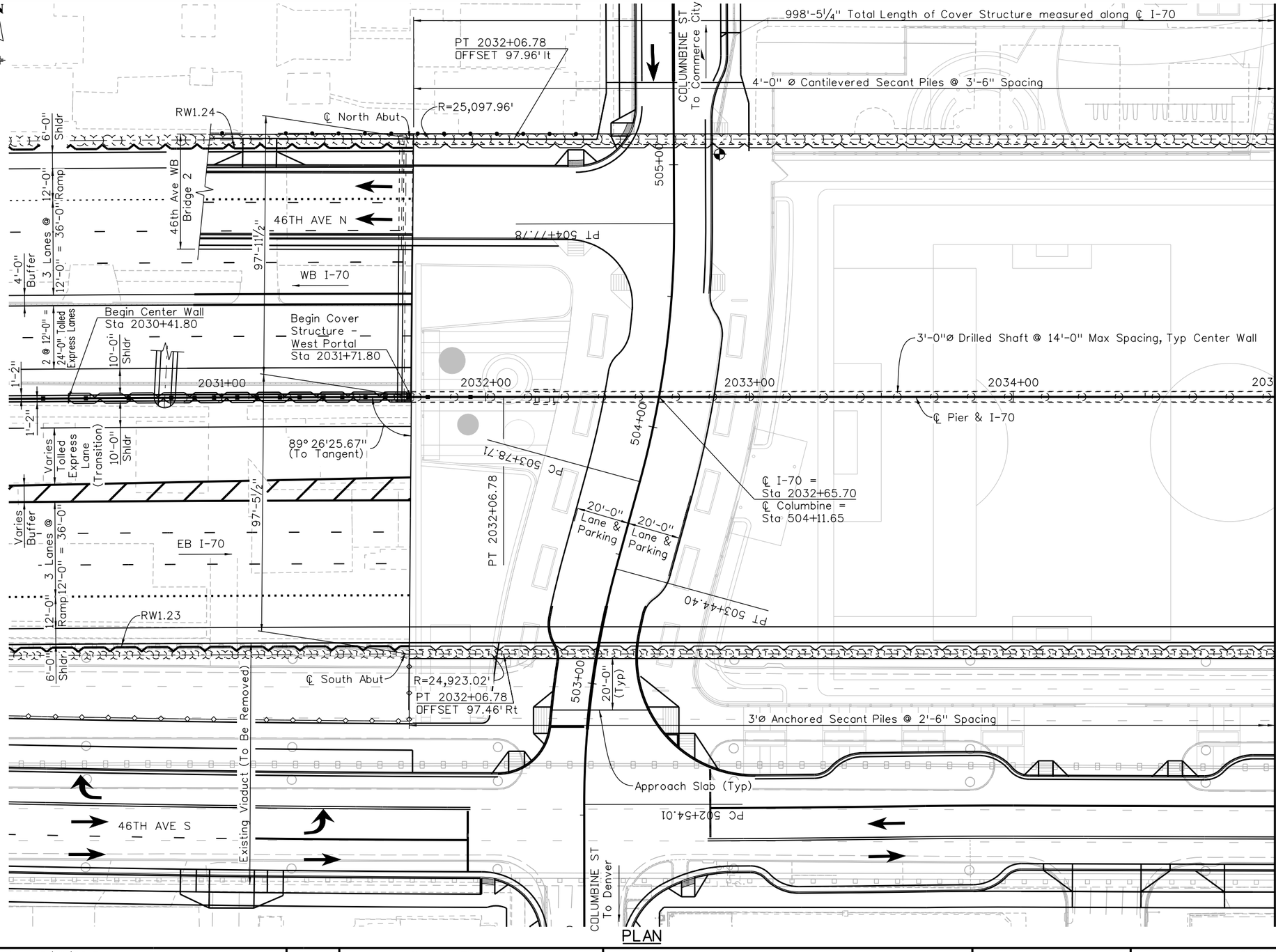
PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
UPPR OVER I-70
PIER DETAILS

Designer: S. HAYNES
Detailer: M. VAUSE
Sheet Subset: BR S1.05
Structure Numbers: E-17-AEW, E-17-AEX
Subset Sheets: B5 of 5

Project No./Code
FBR 0704-234

Sheet Number 606



PLAN

I-70 GEOMETRY

CURVE 1:
PRC= 2010+89.03
PT = 2032+06.78
Δc = 04° 51'13"
Tc = 1059.51'
Lc = 2117.75'
Rc = 25000.00'

LINE 1:
PT = 2032+06.78
PC = 2060+24.11
Bearing = N89° 59'38"E

COLUMBINE GEOMETRY

CURVE 1:
PC = 502+54.01
PT = 503+44.40
Δc = 15° 24'46"
Tc = 45.47'
Lc = 90.39'
Rc = 336.00'

LINE 1:
PC = 503+44.40
PT = 503+78.71
Bearing = N15° 21'26"E

CURVE 2:
PC = 503+78.71
PT = 504+77.78
Δc = 15° 35'38"
Tc = 49.84'
Lc = 99.07'
Rc = 364.00'

LINE 2:
PC = 504+77.78
PT = 507+38.57
Bearing = N00° 14'12"W

NOTES:

1. Utilities not shown for clarity.

℄ Indicates location of minimum vertical clearance

Design			Detail			Quantities		
	INITIAL	DATE		INITIAL	DATE		INITIAL	DATE
Designed By	X	7/15	Detailed By	X	7/15	Quantities By	X	7/15
Checked By	X	7/15	Checked By	X	7/15	Checked By	X	7/15

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Print Date: 5/19/2017
File Name: See sheet edge for information
Horiz. Scale: 1:40
Vert. Scale:
Staff Bridge Branch: Unit 0221
Unit Leader: DV

Front Range Mobility Group

2 3 4

Sheet Revisions

Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

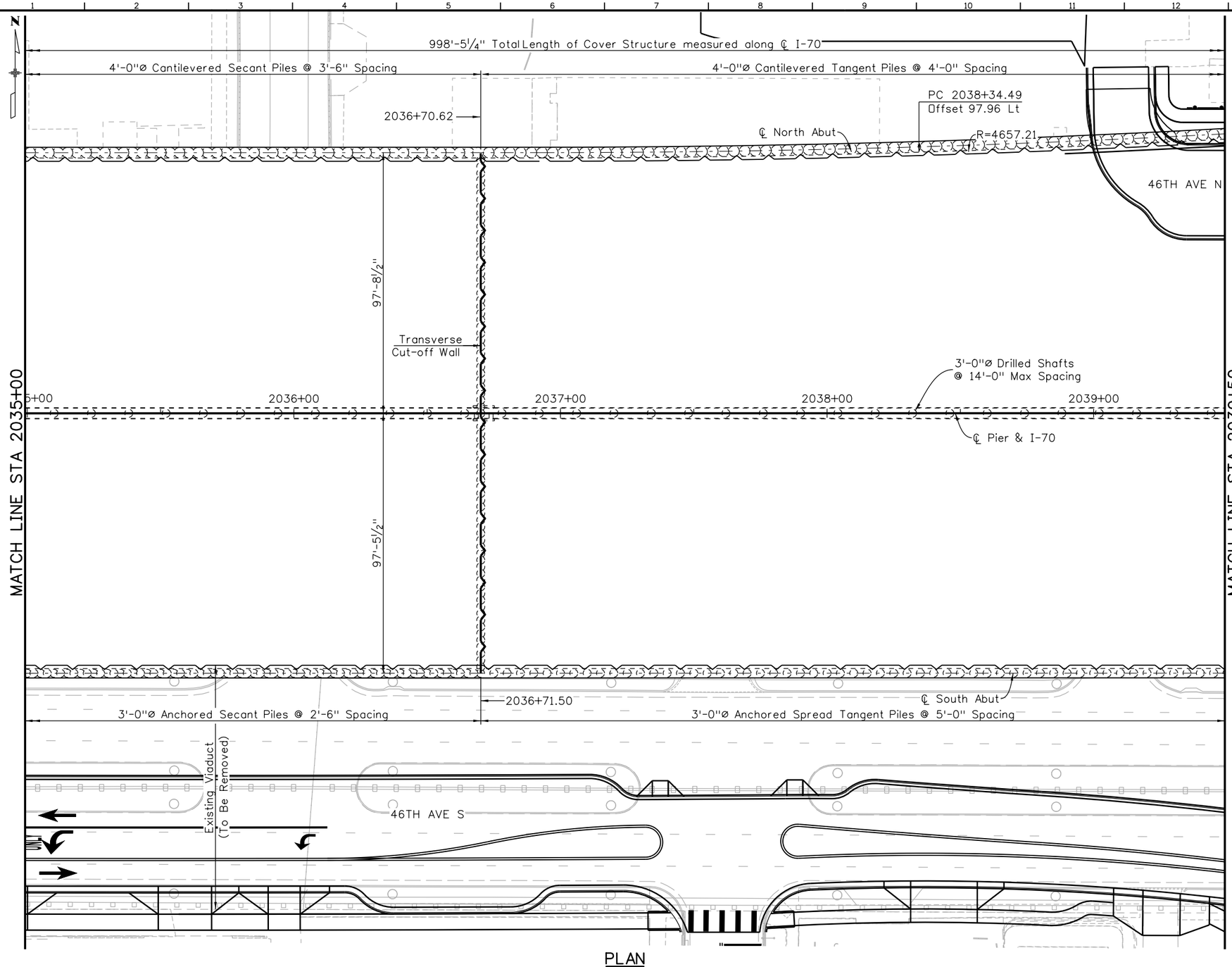
PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
COVER STRUCTURE
PLAN (1 OF 3)

Designer: M MADAY
Detailer: G MCGINN
Sheet Subset: BR S1.11
Structure Numbers: E-17-AEL
Subset Sheets: B101 of 109

Project No./Code
FBR 0704-234

Sheet Number 607



PLAN

I-70 GEOMETRY

LINE 1:
PT = 2032+06.78
PC = 2060+24.11
Bearing = N89°59'38"E

NOTES:

1. Utilities not shown for clarity.

Design	INITIAL	DATE
Designed By	X	7/15
Checked By	X	7/15

Detail	INITIAL	DATE
Detailed By	X	7/15
Checked By	X	7/15

Quantities	INITIAL	DATE
Quantities By	X	7/15
Checked By	X	7/15

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Print Date: 5/19/2017
File Name: See sheet edge for information
Horiz. Scale: 1:40
Vert. Scale:
Staff Bridge Branch: Unit 0221
Unit Leader: DV

Front Range Mobility Group

0002
0003
0004

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

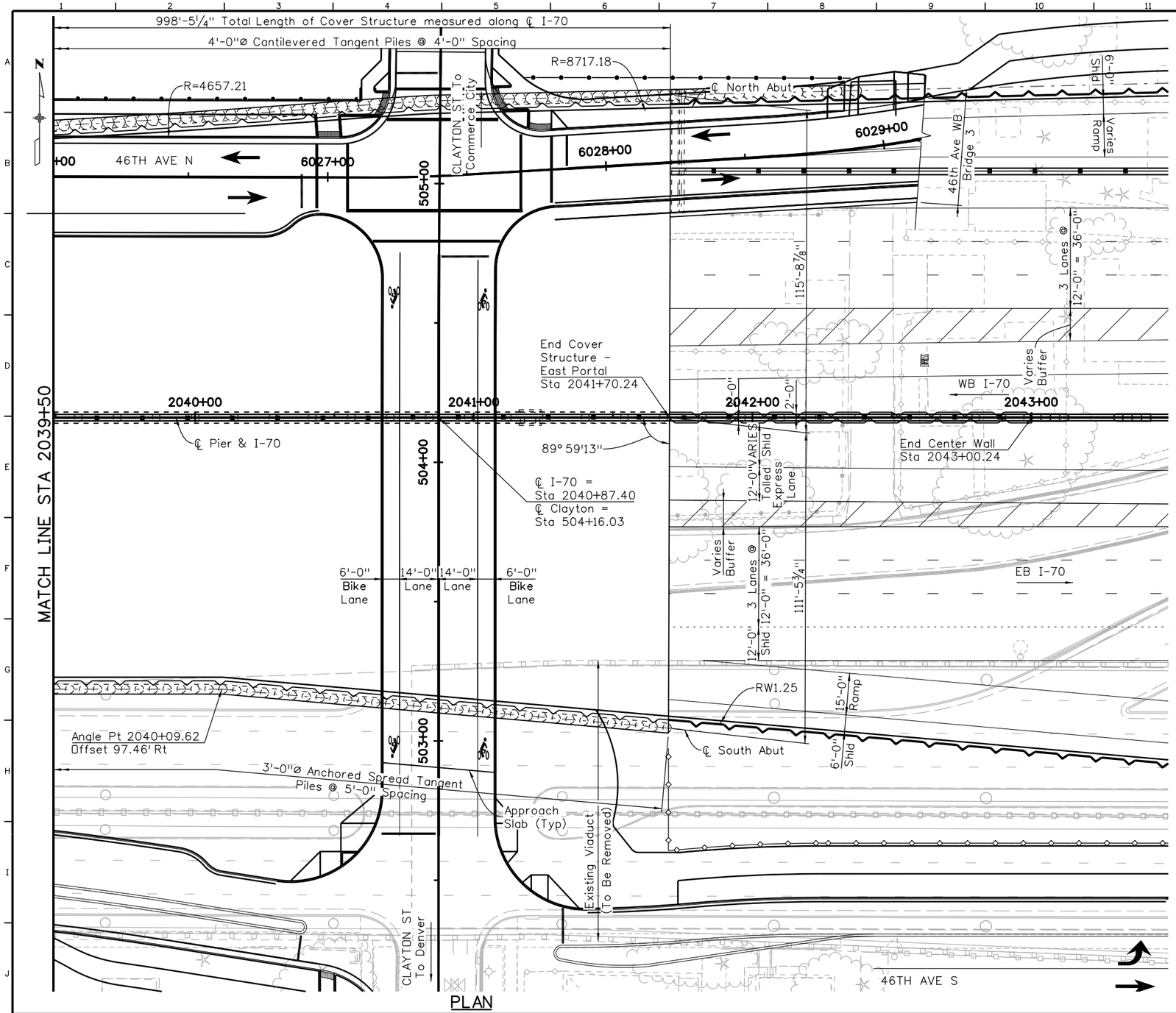
PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
COVER STRUCTURE
PLAN (2 OF 3)

Designer:	M MADAY	Structure Numbers	E-17-AEL
Detailer:	G MCGINN		
Sheet Subset:	BR S1.11	Subset Sheets:	B102 of 109

Project No./Code: FBR 0704-234

Sheet Number 608



PLAN

I-70 GEOMETRY

LINE 1:
PT = 2032+06.78
PC = 2060+24.11
Bearing = N89° 59'38"E

CLAYTON GEOMETRY

LINE 1:
PC = 500+00.00
PT = 504+21.78
Bearing = N00° 00'25"E

CURVE 1:
PC = 504+21.78
PT = 505+20.23
Δc = 00° 33'51"
Tc = 49.22'
Lc = 98.45'
Rc = 10000.00'

SPAN LENGTH TABLE

Station	North Span	South Span
West Portal 2031+72.76	97.719	
West Portal 2031+70.86		97.459
2032+00	97.709	97.459
2033+00	97.709	97.459
2034+00	97.709	97.459
2035+00	97.709	97.459
2036+00	97.709	97.459
2037+00	97.709	97.459
2038+00	98.927	97.459
2039+00	102.281	97.459
2040+00	107.802	97.459
2041+00	114.052	105.366
East Portal 2041+70.61	115.740	
East Portal 2041+69.88		111.479

* Span lengths provided at West and East portals, as well as, at the 100' station increments along I-70. These lengths are the perpendicular distance from CL Pier out to CL Abutment.

NOTES:

1. Utilities not shown for clarity.

Design	INITIAL	DATE
Designed By	X	7/15
Checked By	X	7/15

Detail	INITIAL	DATE
Detailed By	X	7/15
Checked By	X	7/15

Quantities	INITIAL	DATE
Quantities By	X	7/15
Checked By	X	7/15

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Print Date: 5/19/2017
File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: 1:40
Vert. Scale:
Staff Bridge Branch: Unit 0221
Unit Leader: DV

2003 2004

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

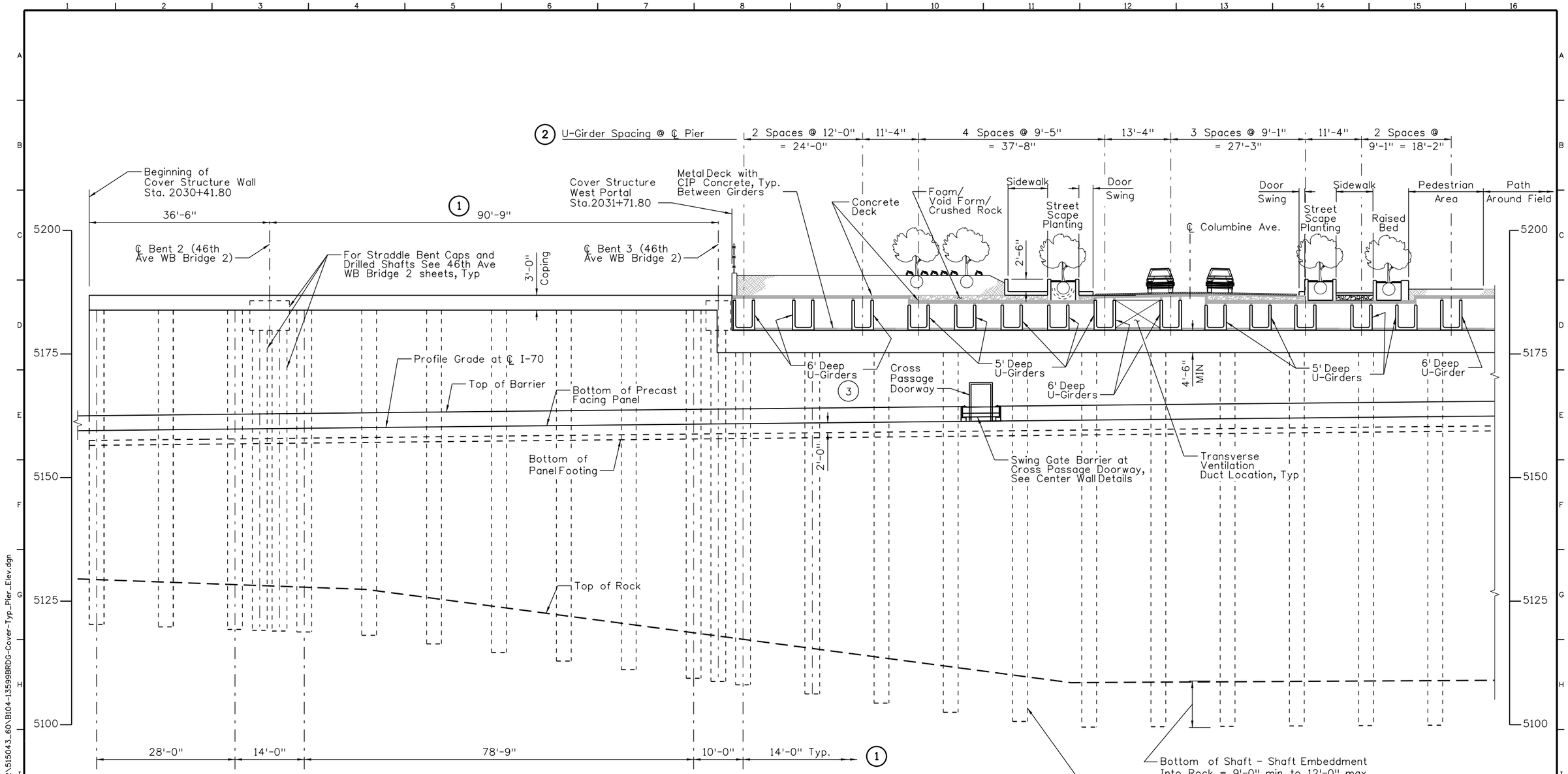
PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
COVER STRUCTURE
PLAN (3 OF 3)

Designer: M MADAY
Detailer: G MCGINN
Sheet Subset: BR S1.11
Structure Numbers: E-17-AEL
Subset Sheets: B103 of 109

Project No./Code
FBR 0704-234

Sheet Number 609



NOTES

1. Drilled Shaft Dimension Along ℄ Center Pier and ℄ I-70.
2. Girder Spacing Dimensions Perpendicular to Girders.
3. U-Girders conform to Standard CDOT box girder shapes with open tops and modified interior forms.

CENTER PIER DETAIL

(Looking North)
(Taken at West Portal, Additional Length Similar)

Design	INITIAL	DATE
Designed By	X	7/15
Checked By	X	7/15

Detail	INITIAL	DATE
Detailed By	X	7/15
Checked By	X	7/15

Quantities	INITIAL	DATE
Quantities By	X	7/15
Checked By	X	7/15

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Print Date: 5/19/2017
File Name: See sheet edge for information
Horiz. Scale: 1" = 20'
Vert. Scale:
Staff Bridge Branch: Unit 0221
Unit Leader:DV

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

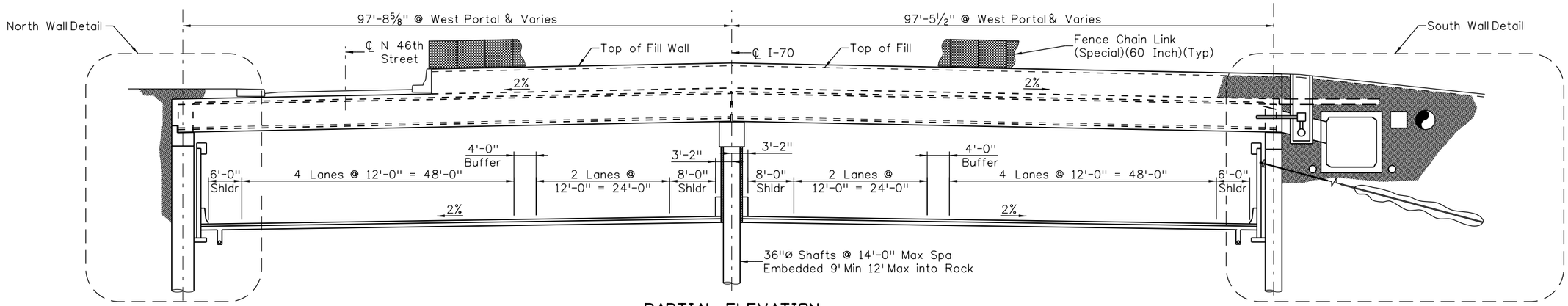
PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
COVER STRUCTURE
TYPICAL CENTER PIER ELEVATION

Designer: M MADAY
Detailer: G MCGINN
Sheet Subset: BR S1.11
Structure Numbers: E-17-AEL
Subset Sheets: B104 of 109

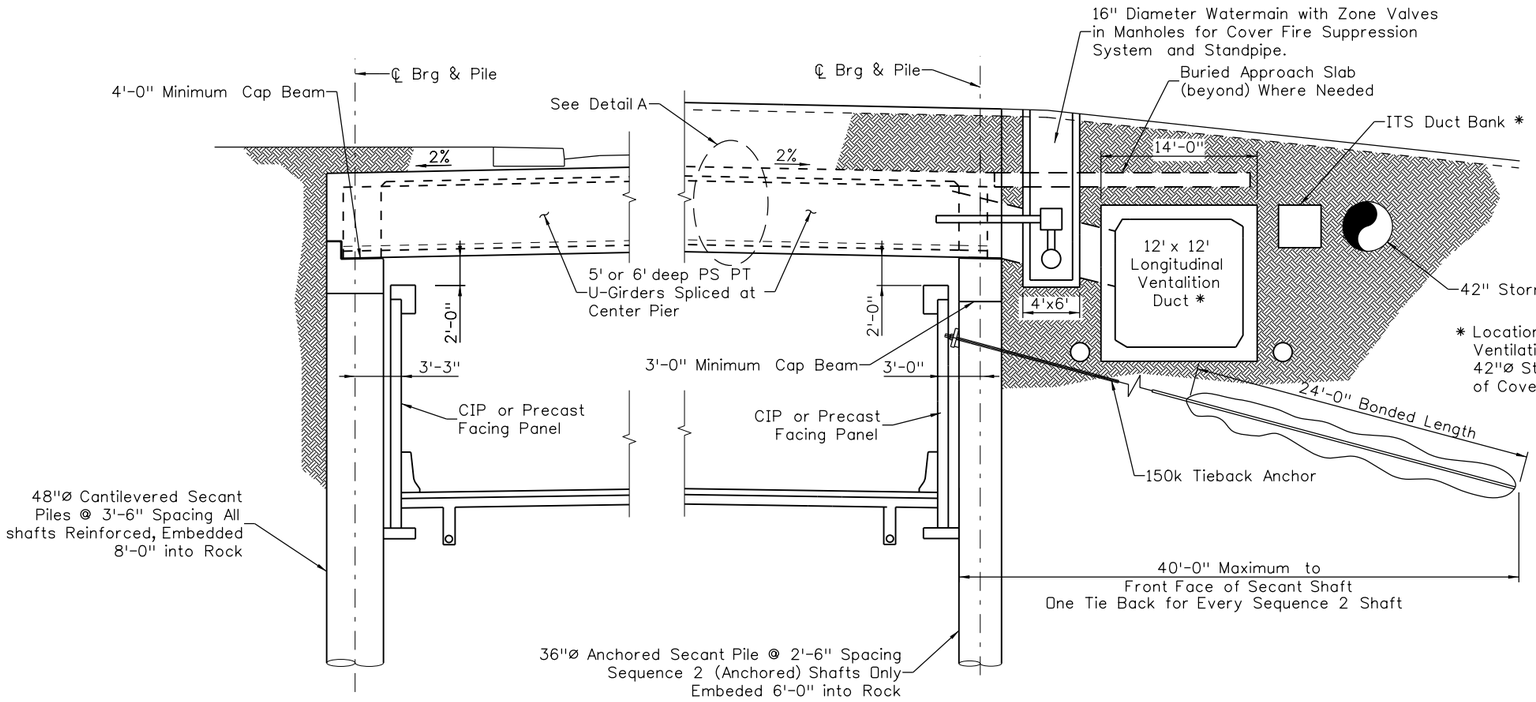
Project No./Code
FBR 0704-234

Sheet Number 610

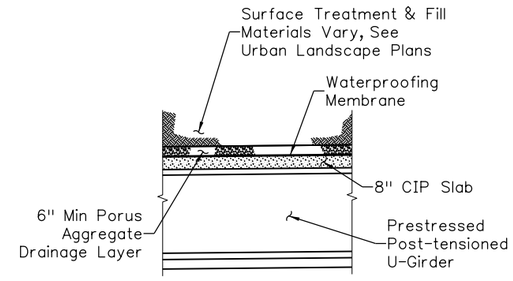


PARTIAL ELEVATION

Near Sta 2031+71.80, Looking East



NORTH WALL DETAIL



DETAIL A

* Location of Watermain, Longitudinal Ventilation Duct, ITS Duct Bank and 42"ø Storm Sewer Along South Side of Cover Structure to be Determined

SOUTH WALL DETAIL

NOTE: U-Girders conform to Standard U-DOT Box Girder Shapes with Open Top and Modified Interior Forms.

Design			Detail			Quantities		
	INITIAL	DATE		INITIAL	DATE		INITIAL	DATE
Designed By	X	7/15	Detailed By	X	7/15	Quantities By	X	7/15
Checked By	X	7/15	Checked By	X	7/15	Checked By	X	7/15

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Print Date: 5/19/2017
File Name: See sheet edge for information
Horiz. Scale: 1" = 20'
Vert. Scale:
Staff Bridge Branch: Unit 0221
Unit Leader: DV

Front Range Mobility Group

2 3 4

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

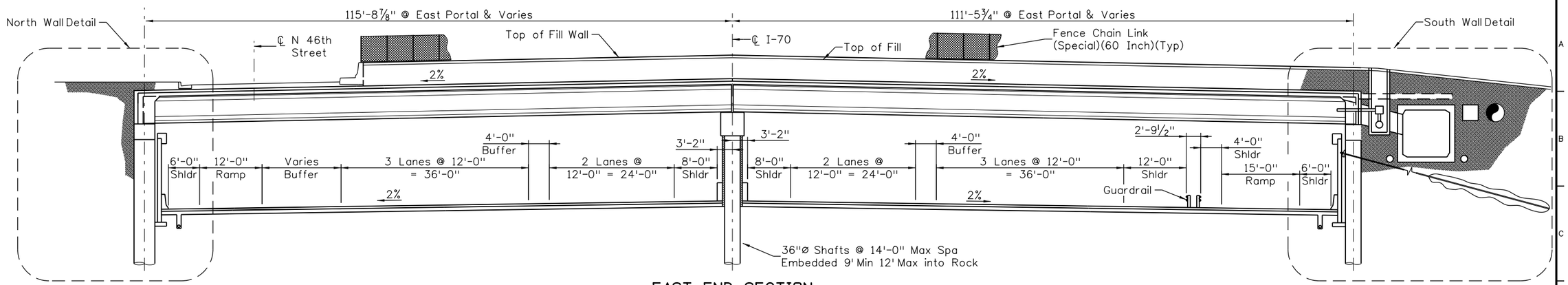
PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
COVER STRUCTURE
WEST END SECTION

Designer: M MADAY
Detailer: G MCGINN
Sheet Subset: BR S1.11
Structure Numbers: E-17-AEL
Subset Sheets: B105 of 109

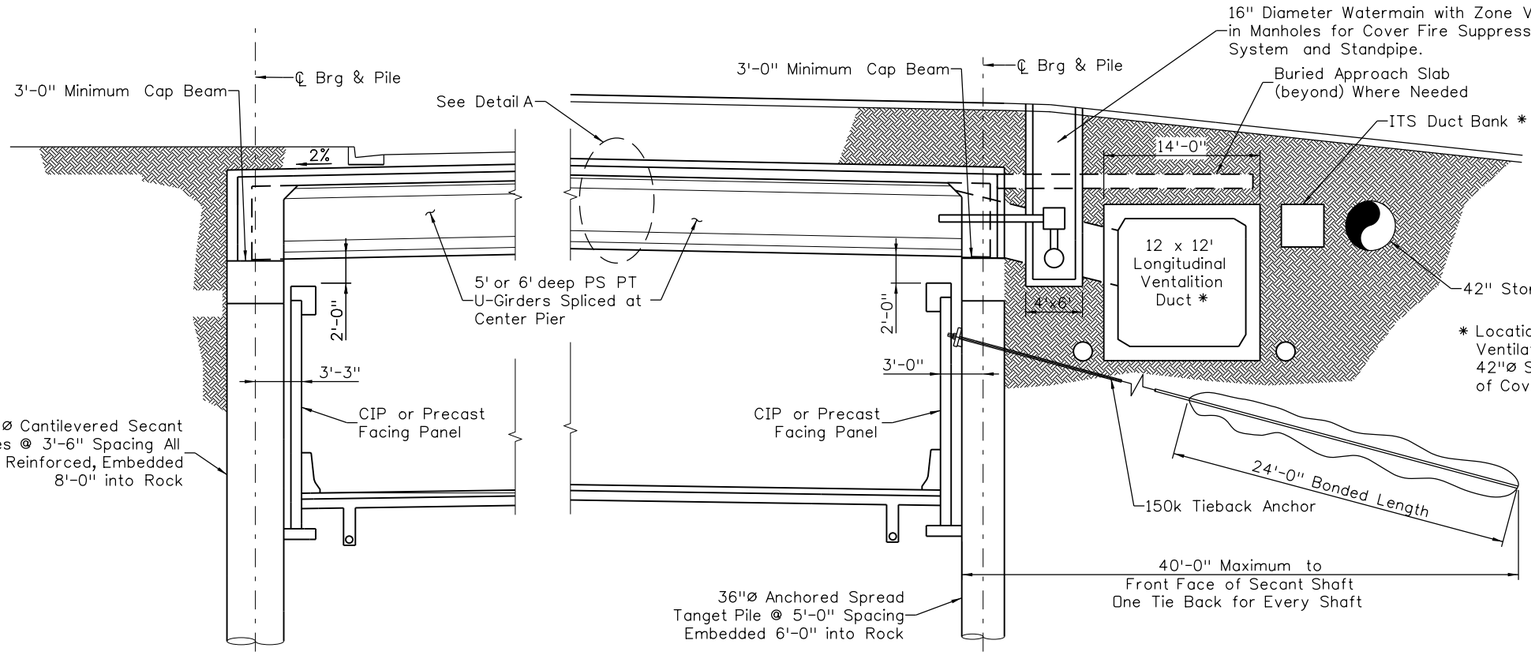
Project No./Code
FBR 0704-234

Sheet Number 611

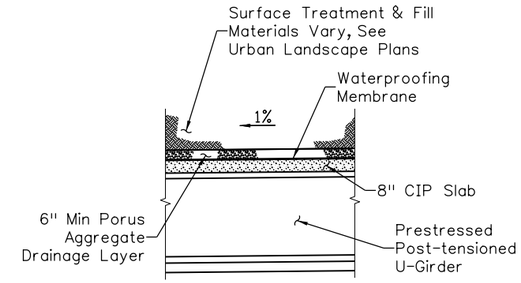


EAST END SECTION

Near Sta 2041+70.24, Looking East



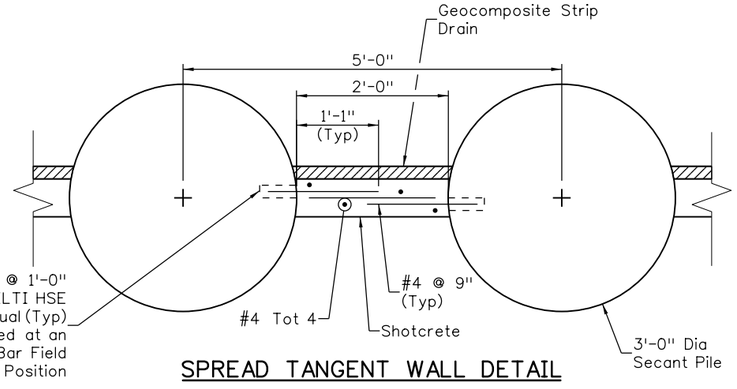
* Location of Watermain, Longitudinal Ventilation Duct, ITS Duct Bank and 42"ø Storm Sewer Along South Side of Cover Structure to be Determined



DETAIL A

NORTH WALL DETAIL

SOUTH WALL DETAIL



SPREAD TANGENT WALL DETAIL

Design	INITIAL	DATE
Designed By	X	7/15
Checked By	X	7/15

Detail	INITIAL	DATE
Detailed By	X	7/15
Checked By	X	7/15

Quantities	INITIAL	DATE
Quantities By	X	7/15
Checked By	X	7/15

DENPWP01$ 1:10:36 PM \\denpwp01\pwjobs596\291212\515043.38\B106-13599BRDG_Cover_East_End_Sect.dgn

Print Date: 5/19/2017

File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: 1" = 20'

Vert. Scale:

Staff Bridge Branch: Unit 0221

Unit Leader: DV

2 3 4

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907

Region 1 KJS

PROPOSAL

No Revisions:

Revised:

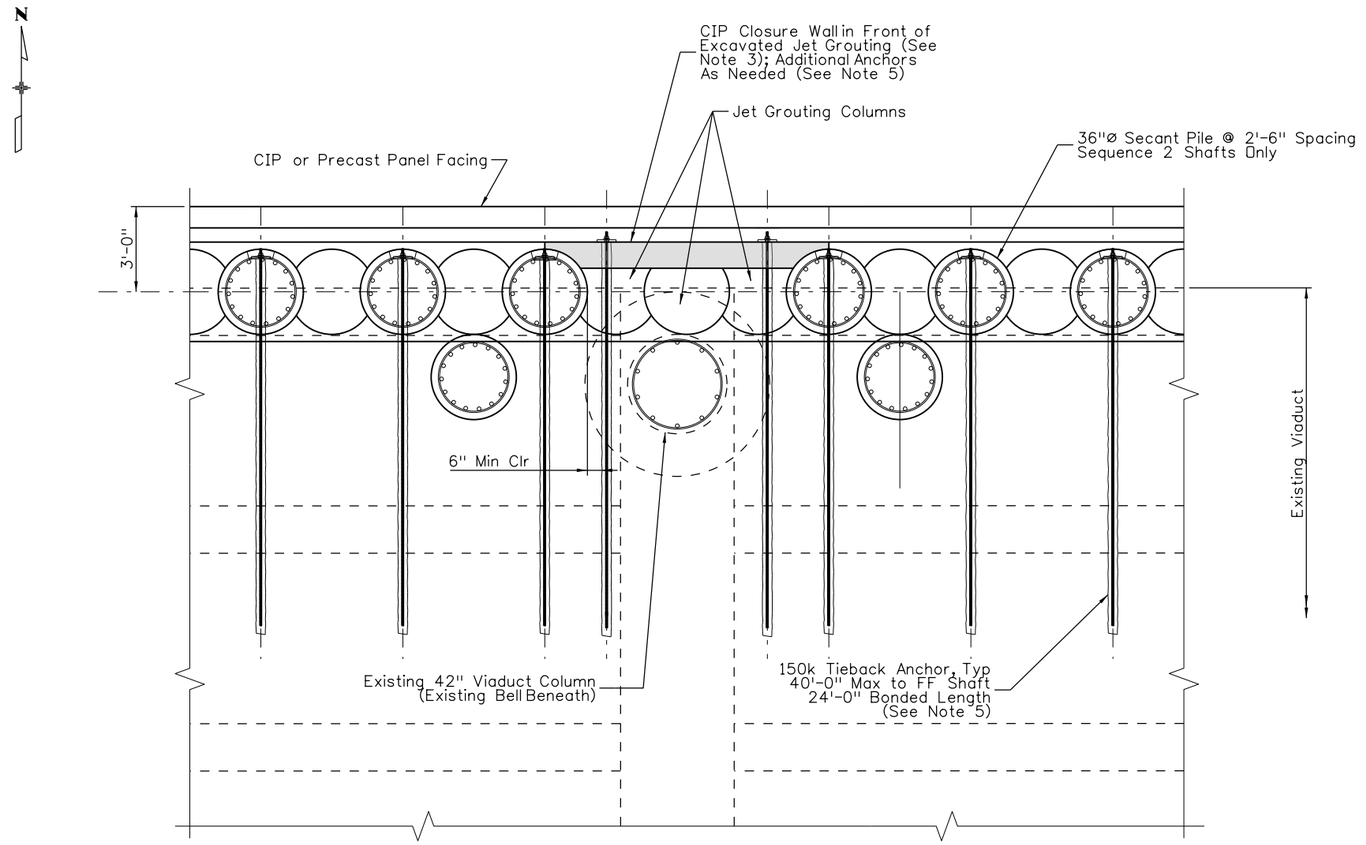
Void:

CENTRAL 70
COVER STRUCTURE
EAST END SECTION

Designer: M MADAY
Detailer: G MCGINN
Sheet Subset: BR S1.11
Structure Numbers: E-17-AEL
Subset Sheets: B106 of 109

Project No./Code
FBR 0704-234

Sheet Number 612



NOTES:

1. Excavation of the face of cemented soils (jet grouting) is temporary, and will be done in limited vertical phases.
2. Jet grouting to be designed to provide for arching action of temporary exposed face.
3. Multiple rows of anchors will be required in both the secant closure wall.

Design			Detail			Quantities		
	INITIAL	DATE		INITIAL	DATE		INITIAL	DATE
Designed By	X	7/15	Detailed By	X	7/15	Quantities By	X	7/15
Checked By	X	7/15	Checked By	X	7/15	Checked By	X	7/15

DENPWP01$ 1:02:13 PM \\denpwp01\pwicsjobs596\291212\515043_31\B107-13599BRDG_Cover_Stage_Const_Center_Wall.dgn

Print Date: 5/19/2017
File Name: See sheet edge for information
Horiz. Scale: 3/16" = 1'-0"
Vert. Scale:
Staff Bridge Branch: Unit 0221
Unit Leader: DV

Front Range Mobility Group

1 2 3 4

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

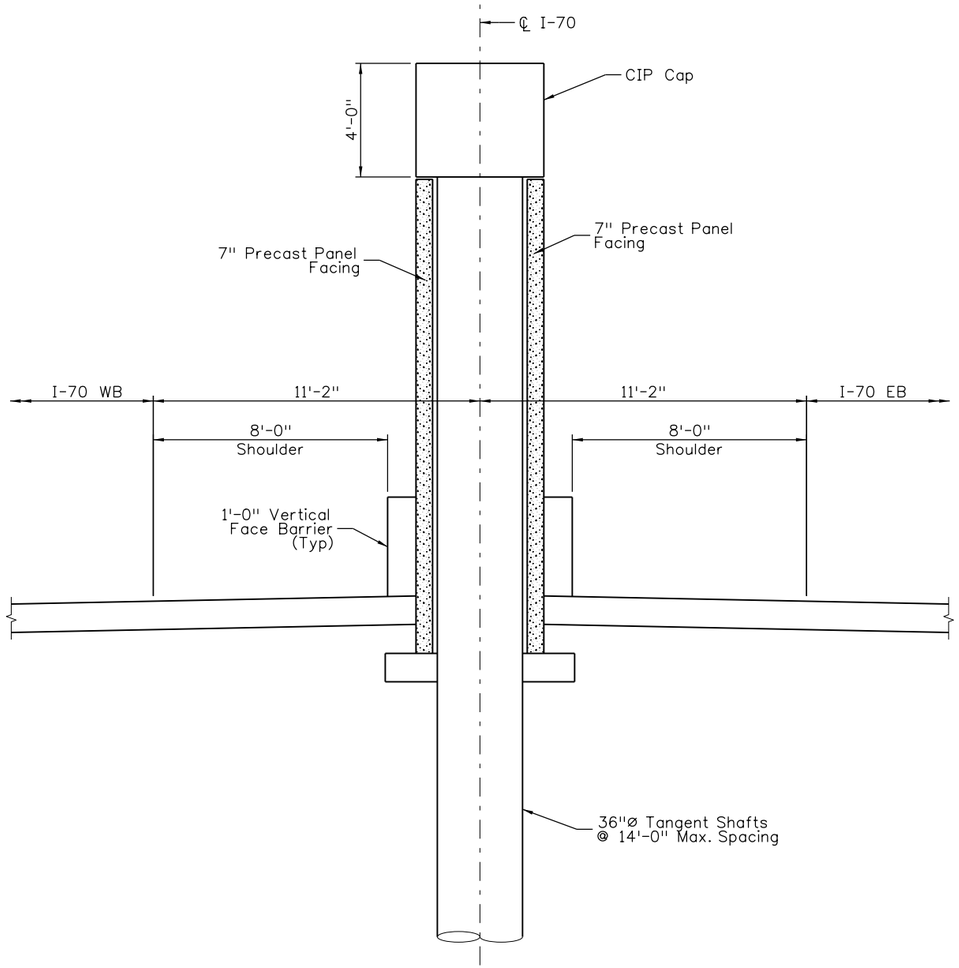
PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
COVER STRUCTURE
STAGED CONST. AT CENTER WALL

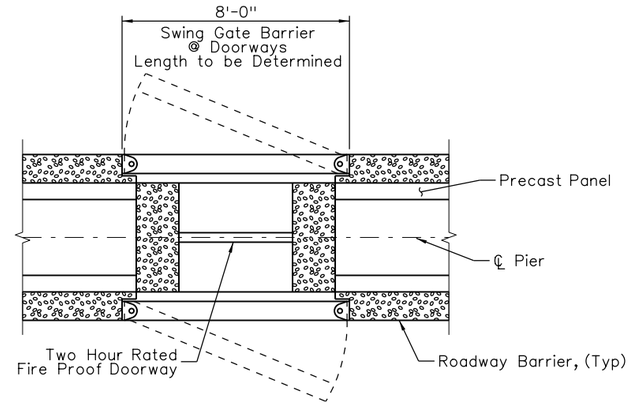
Designer: M MADAY
Detailer: G MCGINN
Sheet Subset: BR S1.11
Structure Numbers: E-17-AEL
Subset Sheets: B107 of 109

Project No./Code: FBR 0704-234

Sheet Number 613



I-70 COVER CENTER WALL
(Looking East)



I-70 COVER CENTER WALL - CROSS PASSAGE DOORWAY DETAIL

Design				Detail				Quantities			
	INITIAL	DATE			INITIAL	DATE			INITIAL	DATE
Designed By	X	7/15		Detailed By	X	7/15		Quantities By	X	7/15
Checked By	X	7/15		Checked By	X	7/15		Checked By	X	7/15

DENPWP02$ 1:02:21 PM \\denpwp01\pwicsjobs596\291212\515043_24\B108-13599BRDG_Cover_Center_Wall_Dets.dgn

Print Date: 5/19/2017
File Name: See sheet edge for information
Horiz. Scale: 3/16" = 1'-0"
Vert. Scale:
Staff Bridge Branch: Unit 0221
Unit Leader: DV

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

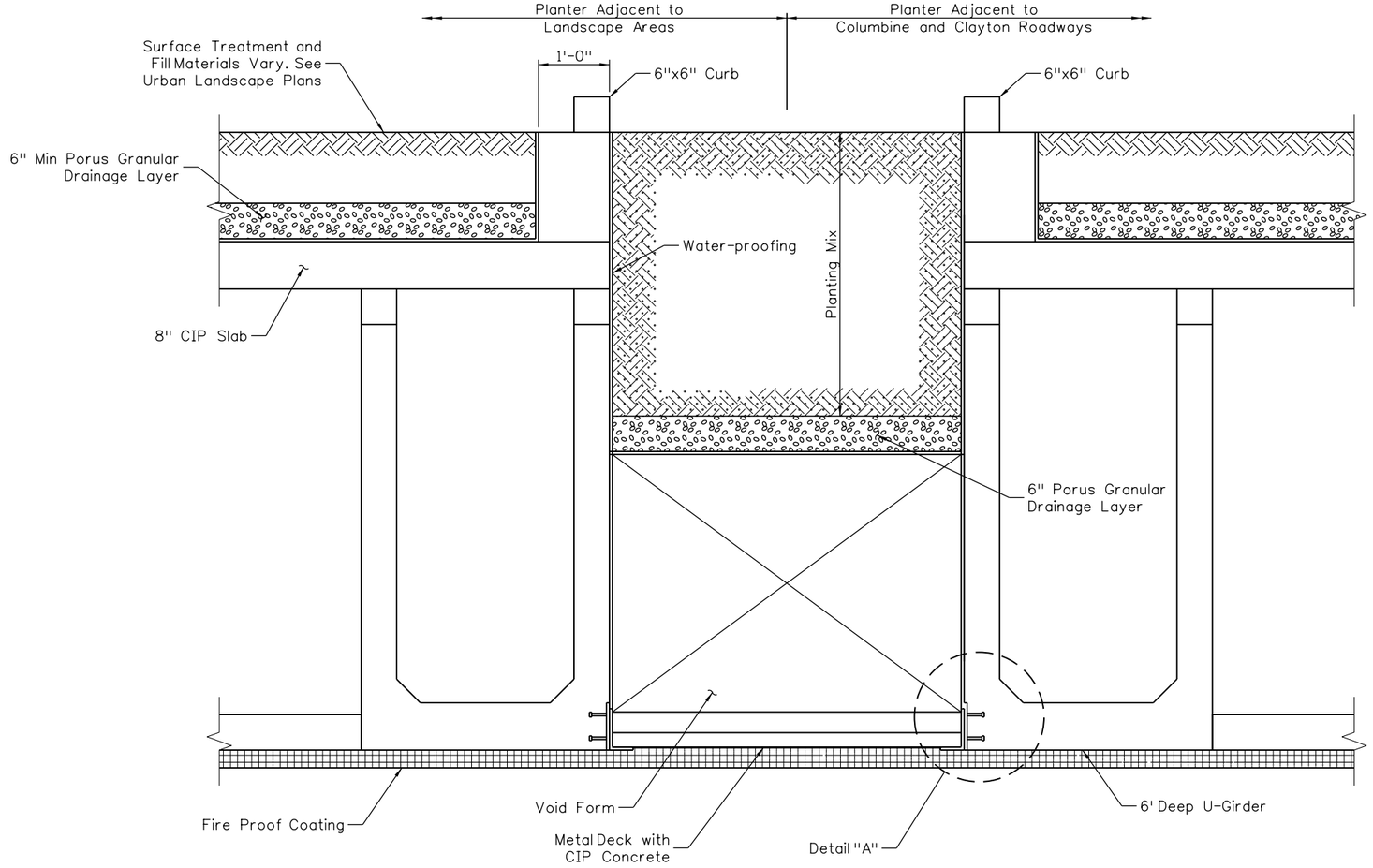
PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
COVER STRUCTURE
CENTER WALL DETAILS

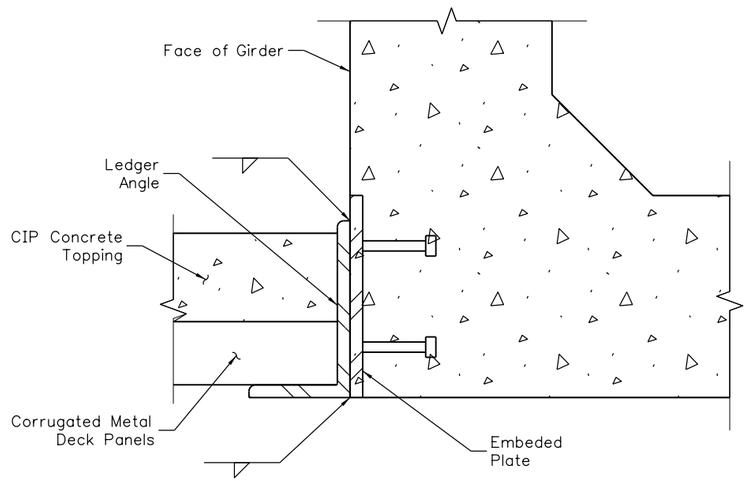
Designer: M MADAY
Detailer: G MCGINN
Sheet Subset: BR S1.11
Structure Numbers: E-17-AEL
Subset Sheets: B108 of 109

Project No./Code
FBR 0704-234

Sheet Number 614



PLANTER BOX TYPICAL SECTION



DETAIL "A"
Scale: 2" = 1'-0"

Design				Detail				Quantities			
	INITIAL	DATE		INITIAL	DATE		INITIAL	DATE
Designed By	X	7/15	Detailed By	X	7/15	Quantities By	X	7/15
Checked By	X	7/15	Checked By	X	7/15	Checked By	X	7/15

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Print Date: 5/19/2017
File Name: See sheet edge for information
Horiz. Scale: 1/2" = 1'-0"
Vert. Scale:
Staff Bridge Branch: Unit 0221
Unit Leader: DV

Front Range Mobility Group

0 2 3 4

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

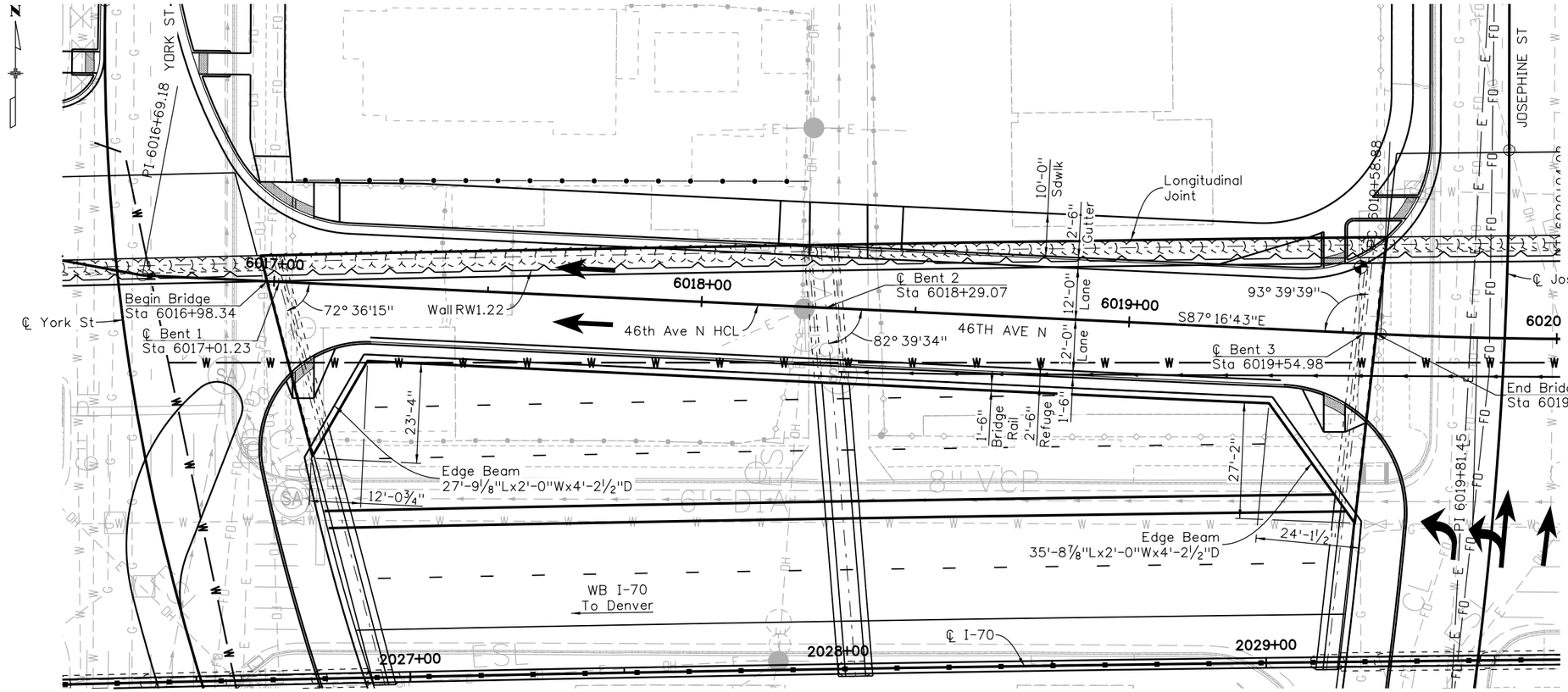
PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
COVER STRUCTURE
PLANTER DETAILS

Designer: M MADAY
Detailer: G MCGINN
Sheet Subset: BR S1.11
Structure Numbers: E-17-AEL
Subset Sheets: B109 of 109

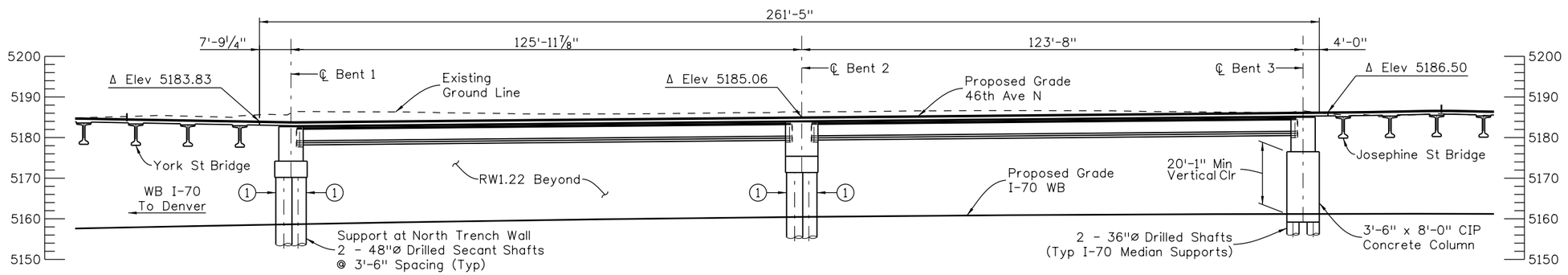
Project No./Code
FBR 0704-234

Sheet Number 615



PLAN

◈ Indicates Location of Minimum Vertical Clearance



(1) Vertical Slip Joints Typical between Structure Supports and Adjoining Retaining Walls

SECTION

(Taken Along 46th Ave N HCL)

Δ Finished Grade Elevations are Along PGL

NOTE:

1. For additional horizontal and vertical geometry, see Roadway Plans.

Design	INITIAL	DATE
Designed By	X	7/15
Checked By	X	7/15

Detail	INITIAL	DATE
Detailed By	X	7/15
Checked By	X	7/15

Quantities	INITIAL	DATE
Quantities By	X	7/15
Checked By	X	7/15

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Print Date: 5/19/2017

File Name: See sheet edge for information

Horiz. Scale: 1:30

Vert. Scale:

Staff Bridge Branch: Unit 0221

Unit Leader: DV

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907

Region 1 KJS

PROPOSAL

No Revisions:

Revised:

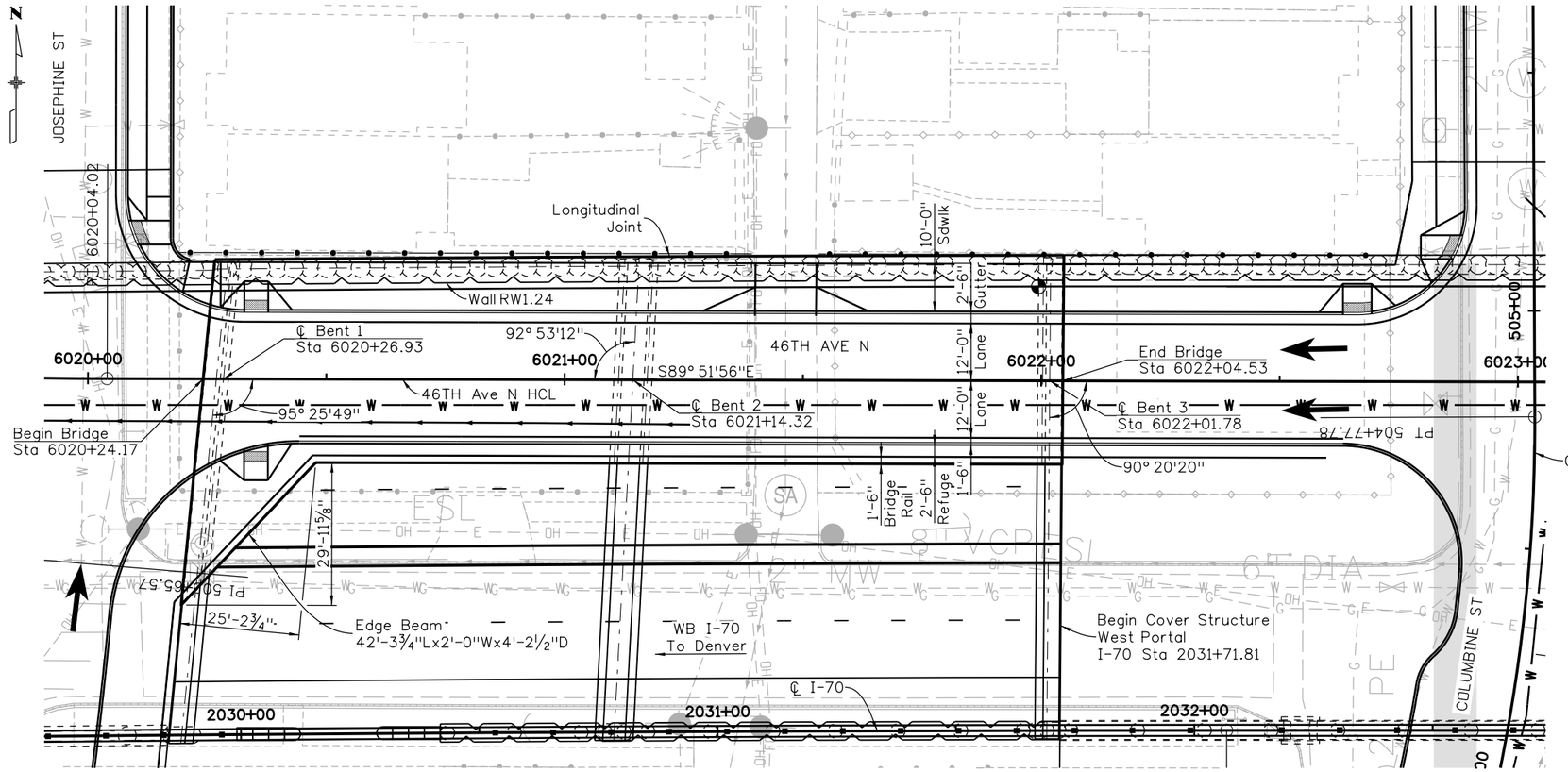
Void:

CENTRAL 70
46TH AVE WB OVERHANG
SEGMENT 1 - GENERAL LAYOUT

Designer: A YOUNG
Detailer: K SCHNEIDER
Sheet Subset: BR
Structure Numbers:
Subset Sheets: B201 of 206

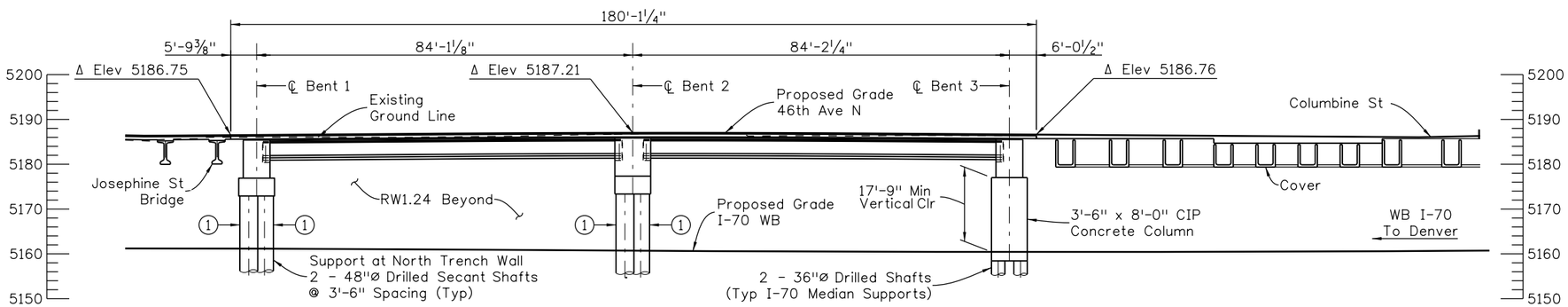
Project No./Code: FBR 0704-234

Sheet Number 616



PLAN

Indicates Location of Minimum Vertical Clearance



(1) Vertical Slip Joints Typical between Structure Supports and Adjoining Retaining Walls

SECTION

(Taken Along 46th Ave N HCL)

Δ Finished Grade Elevations are Along PGL

NOTE:

1. For additional horizontal and vertical geometry, see Roadway Plans.

Design	INITIAL	DATE
Designed By	X	7/15
Checked By	X	7/15

Detail	INITIAL	DATE
Detailed By	X	7/15
Checked By	X	7/15

Quantities	INITIAL	DATE
Quantities By	X	7/15
Checked By	X	7/15

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Print Date: 5/19/2017

File Name: See sheet edge for information

Horiz. Scale: 1:30

Vert. Scale:

Staff Bridge Branch: Unit 0221

Unit Leader: DV

Front Range Mobility Group

01 02 03 04

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907

Region 1 KJS

PROPOSAL

No Revisions:

Revised:

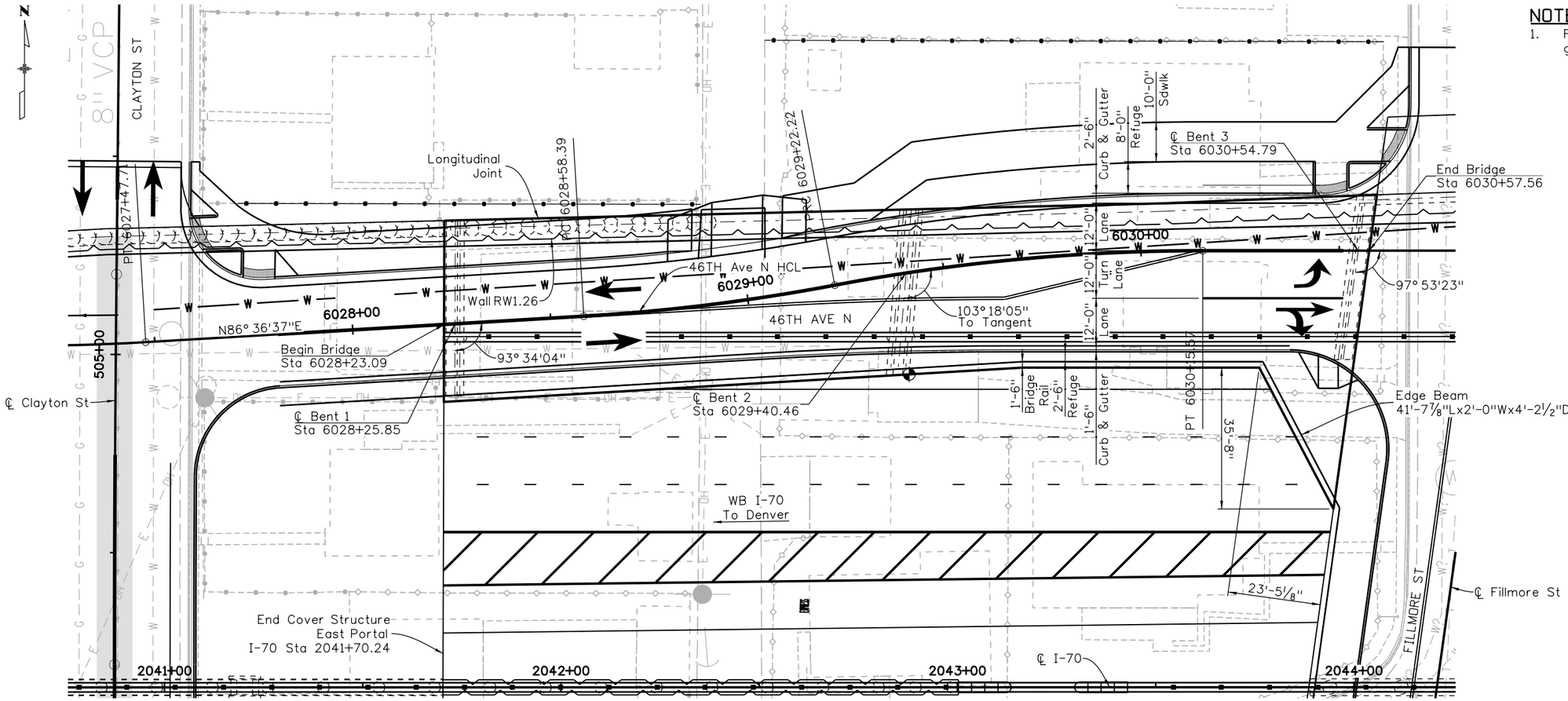
Void:

CENTRAL 70
46TH AVE WB OVERHANG
SEGMENT 2 - GENERAL LAYOUT

Designer: A YOUNG
Detailer: K SCHNEIDER
Sheet Subset: BR
Structure Numbers:
Subset Sheets: B202 of 206

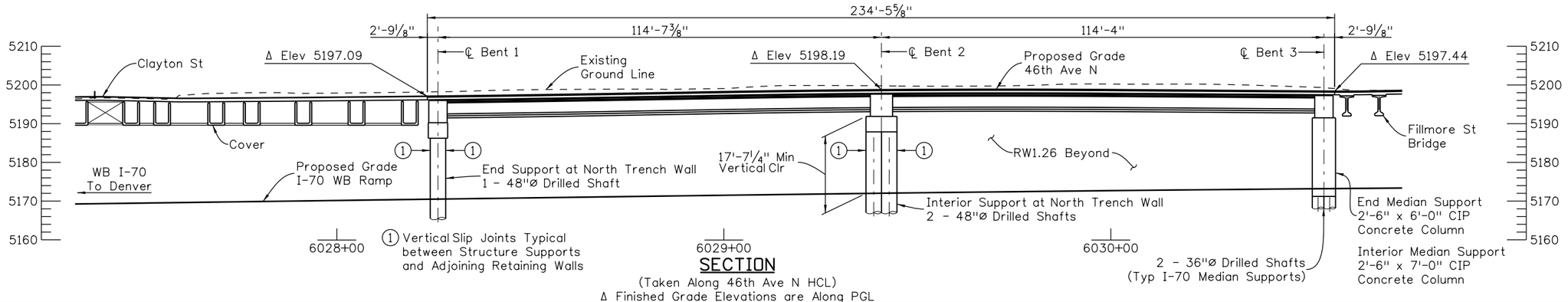
Project No./Code: FBR 0704-234

Sheet Number 617



PLAN

Indicates Location of Minimum Vertical Clearance



SECTION

(Taken Along 46th Ave N HCL)

Δ Finished Grade Elevations are Along PGL

NOTE:

1. For additional horizontal and vertical geometry, see Roadway Plans.

Design	INITIAL	DATE	Detail	INITIAL	DATE	Quantities	INITIAL	DATE
Designed By	X	7/15	Detailed By	X	7/15	Quantities By	X	7/15
Checked By	X	7/15	Checked By	X	7/15	Checked By	X	7/15

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Print Date: 5/19/2017

File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: 1:30

Vert. Scale:

Staff Bridge Branch: Unit 0221

Unit Leader: DV

2 3 4

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation

2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907

Region 1 KJS

PROPOSAL

No Revisions:

Revised:

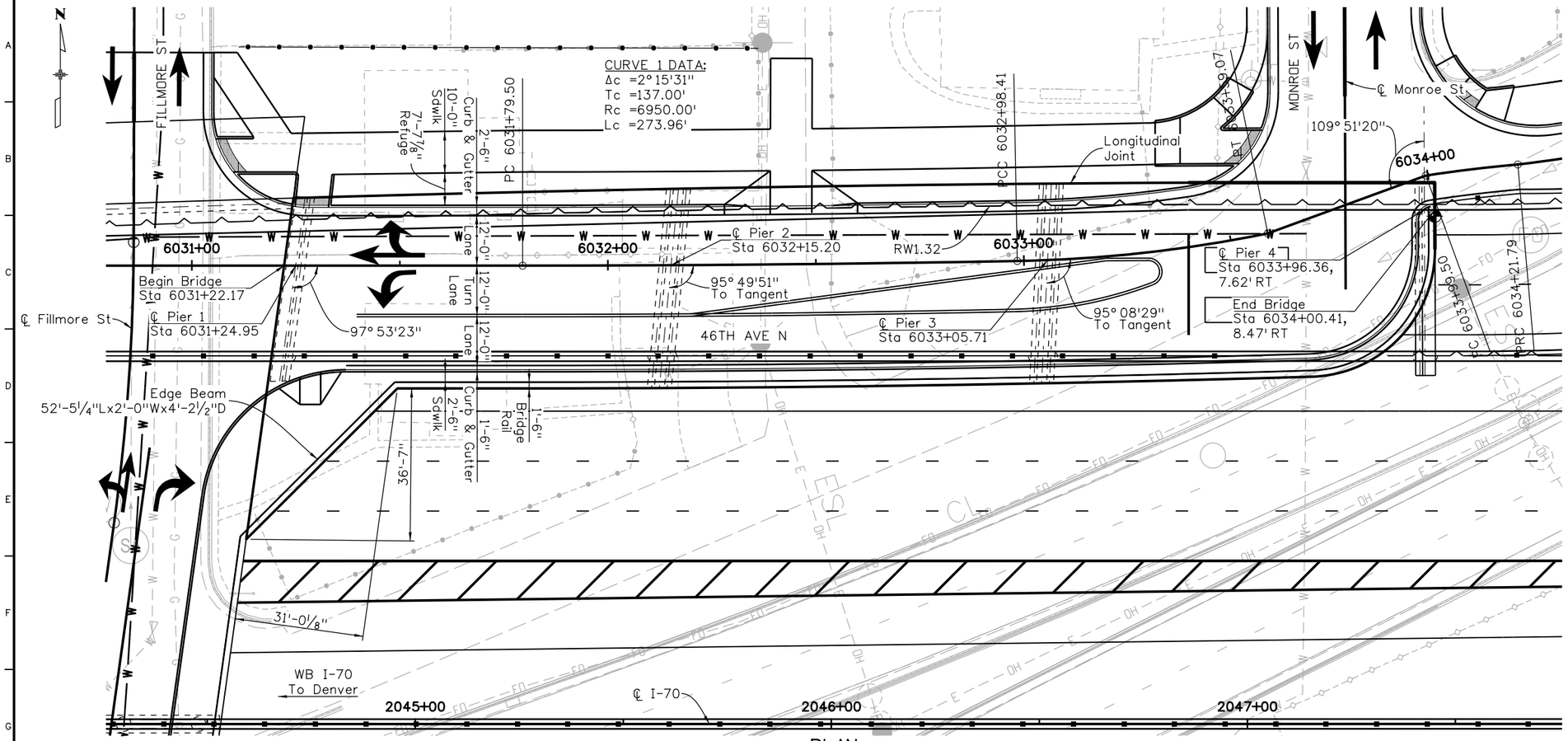
Void:

CENTRAL 70
46TH AVE WB OVERHANG
SEGMENT 3 - GENERAL LAYOUT

Designer: A YOUNG
Detailer: K SCHNEIDER
Sheet Subset: BR
Structure Numbers:
Subset Sheets: B203 of 206

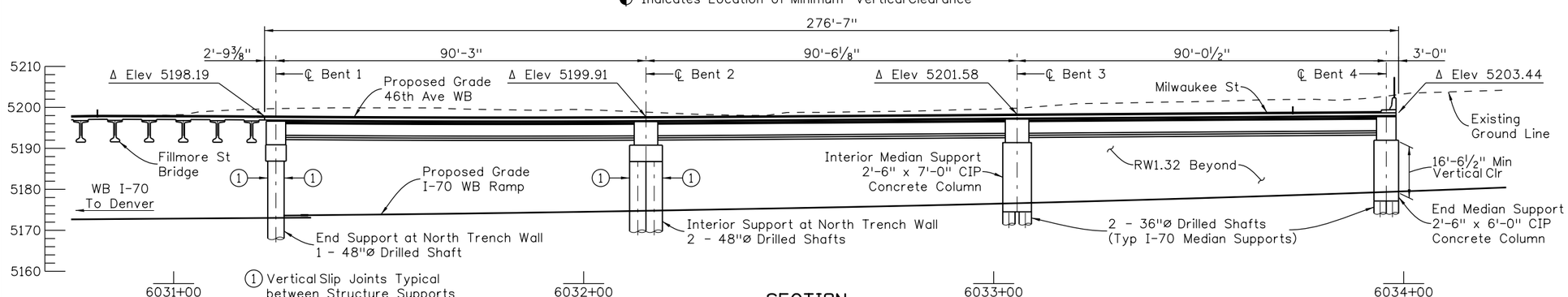
Project No./Code: FBR 0704-234

Sheet Number 618



PLAN

Indicates Location of Minimum Vertical Clearance



① Vertical Slip Joints Typical between Structure Supports and Adjoining Retaining Walls

SECTION

(Taken Along 46th Ave N HCL)

Δ Finished Grade Elevations are Along PGL

NOTE:

1. For additional horizontal and vertical geometry, see Roadway Plans.

Design	INITIAL	DATE
Designed By	X	7/15
Checked By	X	7/15

Detail	INITIAL	DATE
Detailed By	X	7/15
Checked By	X	7/15

Quantities	INITIAL	DATE
Quantities By	X	7/15
Checked By	X	7/15

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Print Date: 5/19/2017

File Name: See sheet edge for information

Horiz. Scale: 1:30

Vert. Scale:

Staff Bridge Branch: Unit 0221

Unit Leader: DV

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation

2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907

Region 1 KJS

PROPOSAL

No Revisions:

Revised:

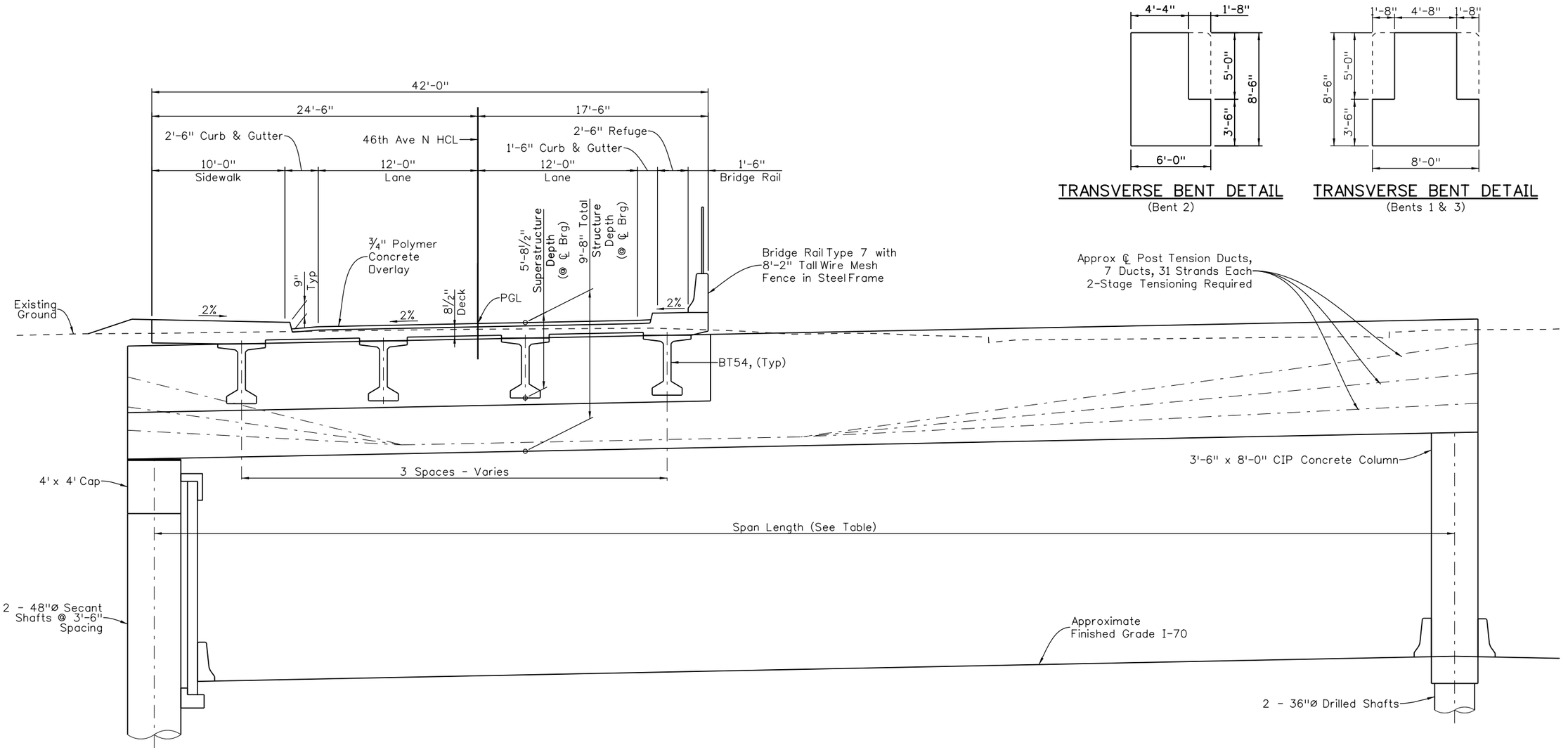
Void:

CENTRAL 70
46TH AVE WB OVERHANG
SEGMENT 4 - GENERAL LAYOUT

Designer: A YOUNG
Detailer: K SCHNEIDER
Sheet Subset: BR
Structure Numbers:
Subset Sheets: B204 of 206

Project No./Code: FBR 0704-234

Sheet Number 619



TRANSVERSE BENT DETAIL
(Bent 2)

TRANSVERSE BENT DETAIL
(Bents 1 & 3)

TYPICAL SECTION WEST OF COVER

(Taken Along Bent 2 of 46th Ave N, Bridge 2 - Looking Ahead Station)

TABLE OF SPAN LENGTHS			
Bridge 1		Bridge 2	
Bent 1	103'-10 3/4"	Bent 1	102'-0"
Bent 2	103'-1 7/8"	Bent 2	103'-1 3/4"
Bent 3	102'-1 7/8"	Bent 3	101'-8 1/4"

Design	INITIAL	DATE
Designed By	X	7/15
Checked By	X	7/15

Detail	INITIAL	DATE
Detailed By	X	7/15
Checked By	X	7/15

Quantities	INITIAL	DATE
Quantities By	X	7/15
Checked By	X	7/15

DENPWP03$ 1:01:34 PM \\denpwp01\pwicsjobs596\291211\515042_69\B205-13599_BRDG_46thWB_TypSect-1.dgn

Print Date: 5/19/2017
File Name: See sheet edge for information
Horiz. Scale: 1/8" = 1'-0"
Vert. Scale:
Staff Bridge Branch: Unit 0221
Unit Leader: DV

Front Range Mobility Group

1 2 3 4

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

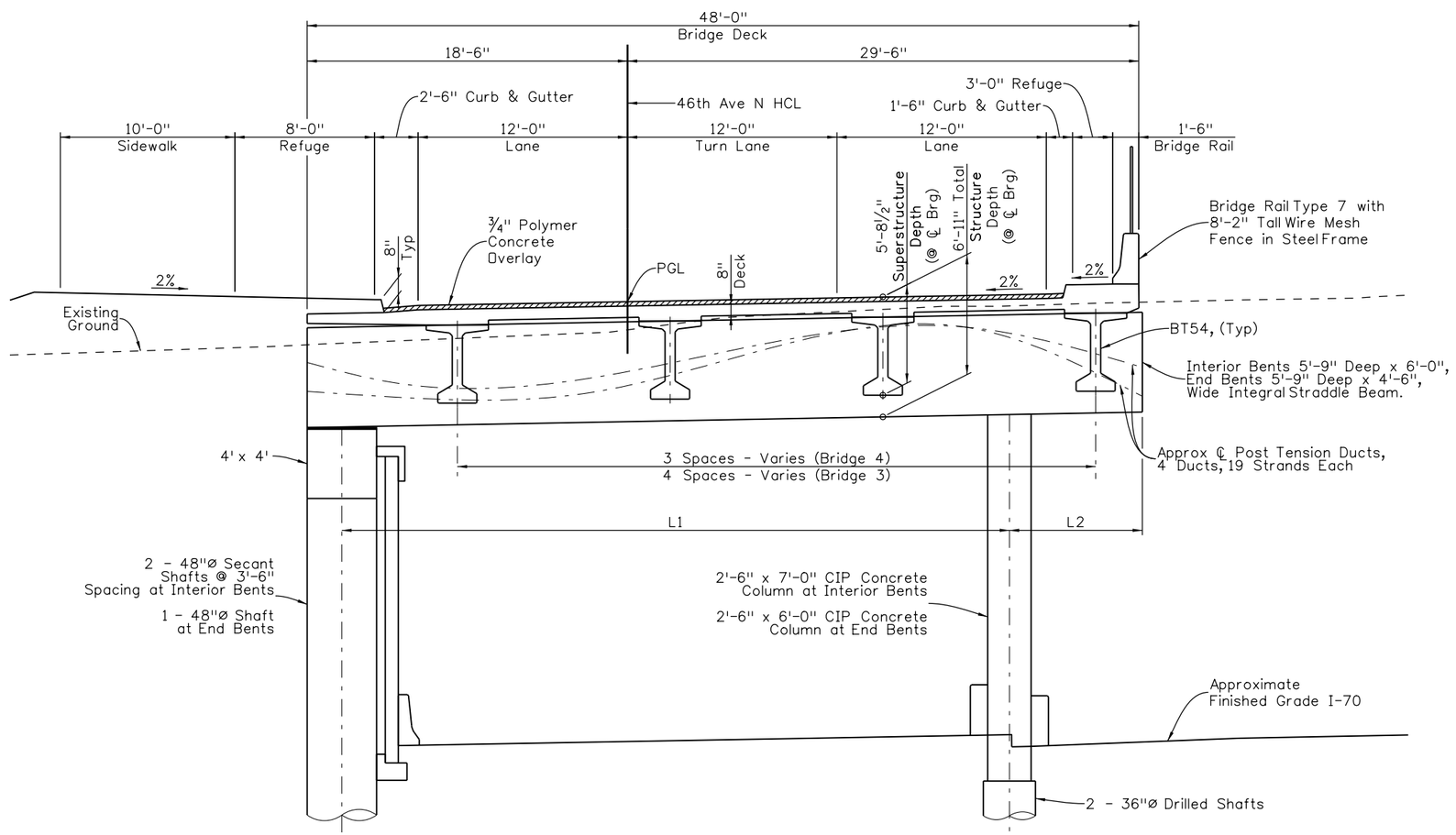
PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
46TH AVE WB BRIDGES
TYPICAL SECTION (1 OF 2)

Designer: A YOUNG
Detailer: K SCHNEIDER
Sheet Subset: BR
Structure Numbers: -
Subset Sheets: B205 of 206

Project No./Code
FBR 0704-234

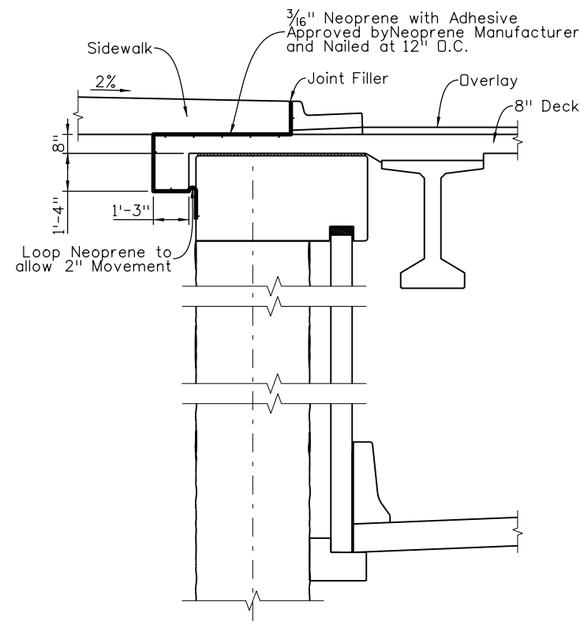
Sheet Number 620



TYPICAL SECTION

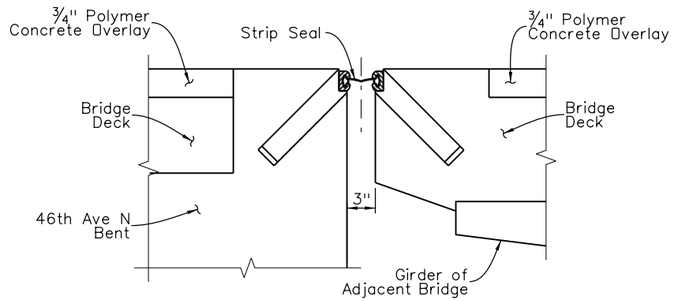
(Taken Along Bent 2 of 46th Ave WB, Bridge 4 - Looking Ahead Station)

TABLE OF SPAN LENGTHS					
	Bridge 3			Bridge 4	
	L1	L2		L1	L2
Bent 1	27'-5 3/4"	14'-8 7/8"	Bent 1	36'-5 3/8"	6'-0 1/8"
Bent 2	30'-3 3/4"	9'-7 1/8"	Bent 2	38'-5 1/4"	7'-7 7/8"
Bent 3	34'-1 1/8"	5'-8 3/4"	Bent 3	39'-6 3/8"	6'-6 1/8"
			Bent 4	39'-8 1/2"	4'-7 1/2"



WALL CONNECTION DETAIL

(Where Gutterline is within the ℄ of the Wall)



STRIP SEAL DETAIL

At Adjacent Bridges

Design				Detail				Quantities			
	INITIAL	DATE			INITIAL	DATE			INITIAL	DATE
Designed By	X	7/15	Detailed By		X	7/15	Quantities By		X	7/15
Checked By	X	7/15	Checked By		X	7/15	Checked By		X	7/15

DENPWP02$ 1:01:30 PM \\denpwp01\pwicsjobs596\291211\515042_64\B206-13599_BRDG_46thWB_TypSect-2.dgn

Print Date: 5/19/2017
File Name: See sheet edge for information
Horiz. Scale: 1/8" = 1'-0"
Vert. Scale:
Staff Bridge Branch: Unit 0221
Unit Leader: DV

Front Range Mobility Group

1 2 3 4

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
46TH AVE WB BRIDGES
TYPICAL SECTION (2 OF 2)

Designer: A YOUNG
Detailer: K SCHNEIDER
Sheet Subset: BR
Structure Numbers: -
Subset Sheets: B206 of 206

Project No./Code: FBR 0704-234

Sheet Number 621

STAPLETON DR N

Wall RW2.04

℄ Brg Abut 1

SB HOLLY ST
To Denver

506+00

NB HOLLY ST
To Commerce City

℄ Brg Abut 2

STAPLETON DR N

Wall RW2.07

PC 505+74.31

1'-6" Bridge Rail Type 7 with Fence Chain Link (Special) (60 Inch)

WB I-70
To Denver

3 Lanes @ 12'-0" = 10.9728

12'-0" Shldr

16'-0"

28'-0" Tolled Express Lanes

2'-0" Barrier

12'-0" Shldr

1'-0"

90'-10½" Out to Out WB I-70 Bridge

87'-10½" Curb to Curb

Holly St HCL

89° 18'31" To Tangent

℄ I-70

2130+00

2131+00

505+00

1'-6" Bridge Rail Type 7

4" Gap

BF Abut 1
Sta 2130+62.99

Approach Slab (Typ)

90'-6" Out to Out EB I-70 Bridge

87'-6" Curb to Curb

N6° 47'26"E

Existing I-70 Over Holly St Bridges to be Removed

Holly St HCL
Sta 504+87.62 =
= ℄ I-70
Sta 2131+32.78

BF Abut 2
Sta 2131+93.53

2132+00

89° 07'59" To Tangent

CURVE 1 DATA:
Δc =14° 27'52"
Tc =609.12'
Rc =4800.00'
Lc =1211.76'

2133+00

= ℄ I-70
Sta 2131+30.34

EB I-70
To Aurora

1'-0" Shldr

12'-0"

28'-0" Tolled Express Lanes

16'-0"

3 Lanes @ 12'-0" = 10.9728

12'-0" Shldr

1'-6" Bridge Rail Type 7 with Fence Chain Link (Special) (60 Inch)

504+00

Wall RW2.02

Wall RW2.05

8'-6" SW

11'-11⅞" Lanel

2 Lanes @ 12'-0"=24'-0"

Median

2 Lanes @ 12'-0"=24'-0"

Lane

8'-6" SW

6'-0" Bike Lane

6'-0" Lane

8" VCP

PLAN

⊕ Indicates location of minimum vertical clearance

Quantities	INITIAL	DATE
	X	7/15
Quantities By	X	7/15
Checked By	X	7/15

Detail	INITIAL	DATE
	X	7/15
Detailed By	X	7/15
Checked By	X	7/15

Design	INITIAL	DATE
	X	7/15
Designed By	X	7/15
Checked By	X	7/15

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Print Date: 5/19/2017
File Name: See sheet edge for information
Horiz. Scale: 1:30
Vert. Scale:
Staff Bridge Branch: Unit 0221
Unit Leader:DV

Front Range Mobility Group

2
3
4

Sheet Revisions		
Date:	Comments	Init.

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Region 1 KJS

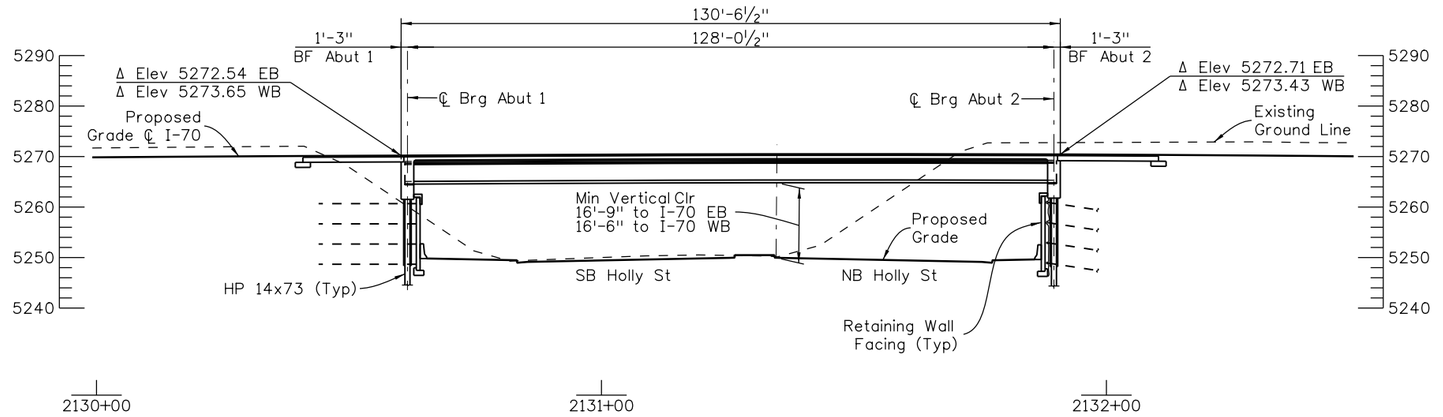
PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
I-70 OVER HOLLY ST BRIDGE
GENERAL LAYOUT (1 OF 2)

Designer: A. PLANKIS
Detailer: E MAECHLER
Sheet Subset: BR S2.01
Structure Numbers: E-17-AFH, E-17-AFI
Subset Sheets: B301 of 304

Project No./Code
FBR 0704-234

Sheet Number 622



SECTION

(Taken along ℄ I-70)

Δ Finished Grade Elevations are Along PGL

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Checked By	X	7/15	Checked By		X	7/15	Checked By		X	7/15

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Print Date: 5/19/2017

File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: 1:30

Vert. Scale:

Staff Bridge Branch: Unit 0221

Unit Leader: DV

2001
2003
2004

Sheet Revisions

Date:	Comments	Init.

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PROPOSAL

No Revisions:

Revised:

Void:

CENTRAL 70
I-70 OVER HOLLY ST BRIDGE
GENERAL LAYOUT (2 OF 2)

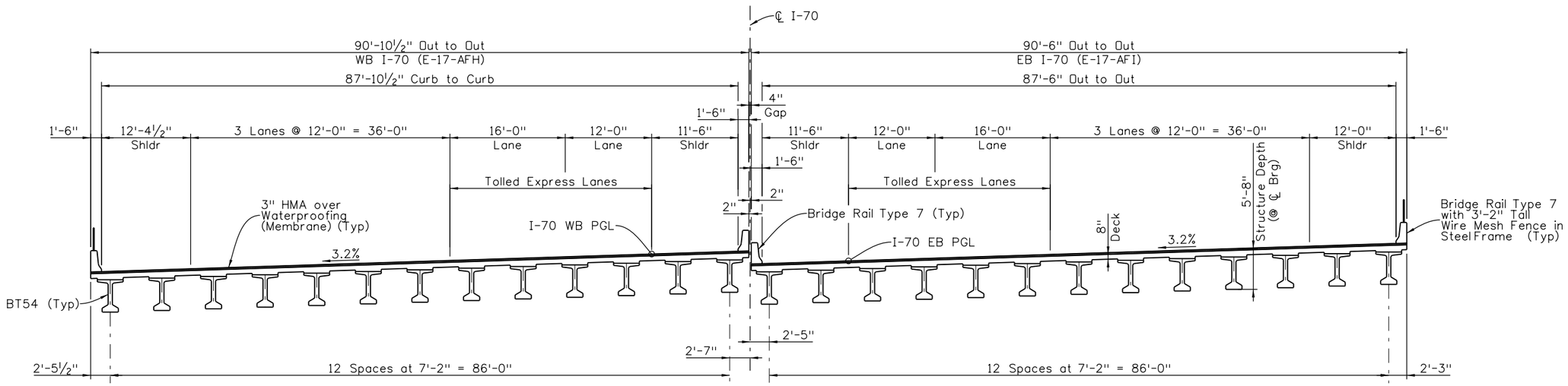
Designer: A PLANKIS
Detailer: E MAECHLER
Sheet Subset: BR S2.01

Structure Numbers: E-17-AFH, E-17-AHI

Subset Sheets: B302 of 304

Project No./Code: FBR 0704-234

Sheet Number 623



TYPICAL SECTION

(Taken Perpendicular to ℄ I-70, Looking Ahead Station)

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Checked By	X	7/15	Checked By		X	7/15	Checked By		X	7/15

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Print Date: 5/19/2017

File Name: See sheet edge for information

Front Range Mobility Group

Horiz. Scale: 1/16" = 1'-0"

Vert. Scale:

Staff Bridge Branch: Unit 0221

Unit Leader: DV

0001
0002
0003
0004

Sheet Revisions		
Date:	Comments	Init.

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Region 1 KJS

PROPOSAL

No Revisions:

Revised:

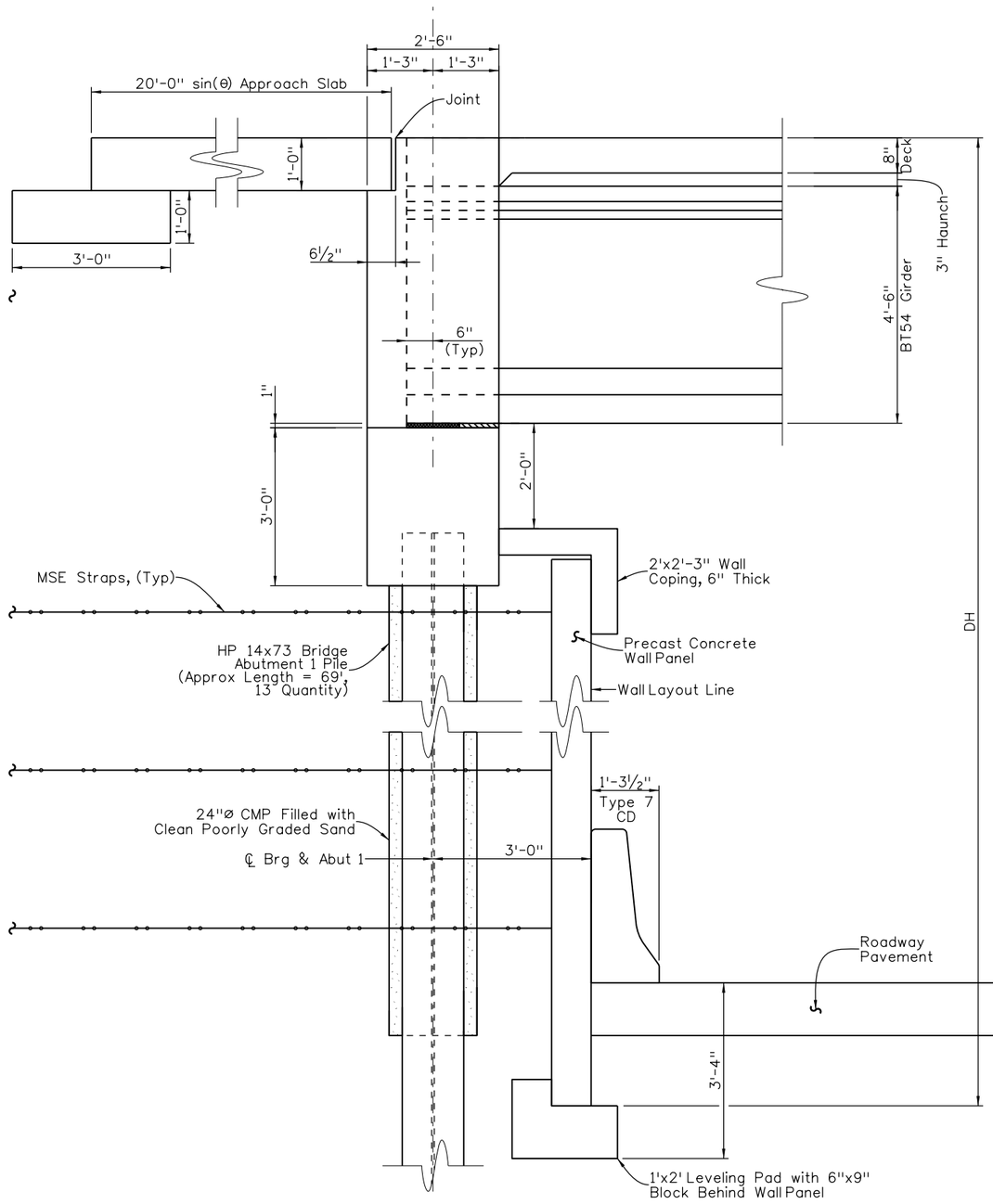
Void:

CENTRAL 70
I-70 OVER HOLLY ST BRIDGE
TYPICAL SECTION

Designer:	A. PLANKIS	Structure Numbers	E-17-AFH
Detailer:	E. MAECHLER		E-17-AFI
Sheet Subset:	BR S2.01	Subset Sheets:	B303 of 304

Project No./Code: FBR 0704-234

Sheet Number 624



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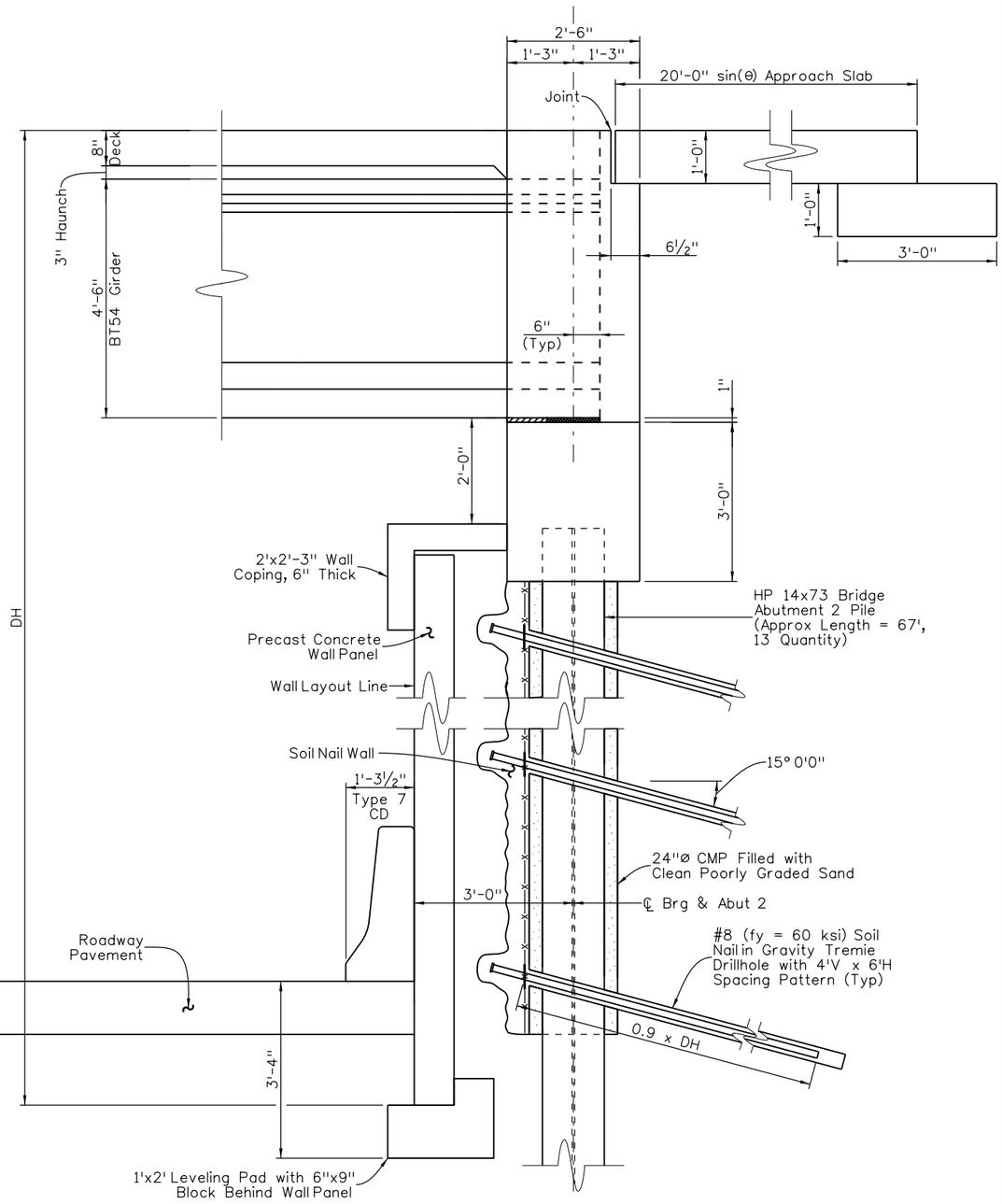

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Checked By	X	7/15

Detail	INITIAL	DATE
Detailed By	X	7/15
Checked By	X	7/15

Quantities	INITIAL	DATE
Quantities By	X	7/15
Checked By	X	7/15

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File Name: See sheet edge for information
Horiz. Scale: ⅜" = 1'-0"
Vert. Scale:
Staff Bridge Branch: Unit 0221
Unit Leader: DV

Front Range Mobility Group

01 02 03 04

Sheet Revisions

Date:	Comments	Init.

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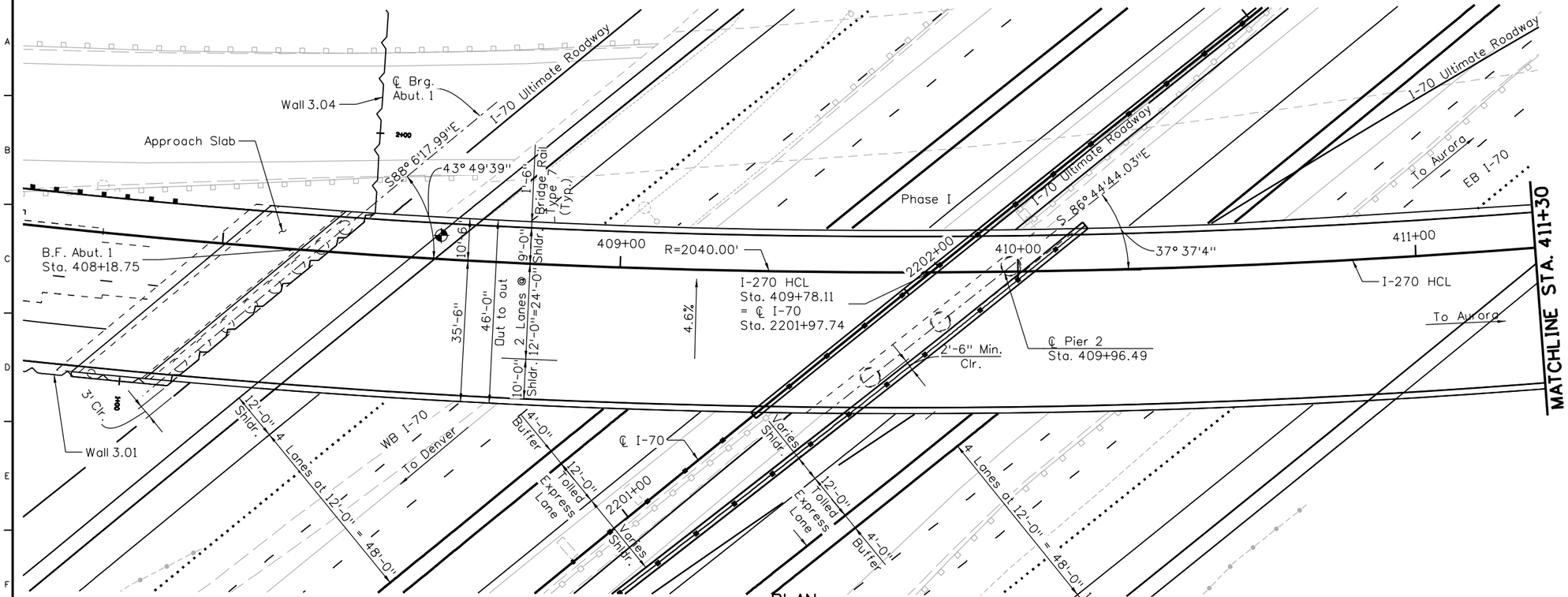
PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
I-70 OVER HOLLY ST BRIDGE
ABUTMENT DETAILS

Designer: A. PLANKIS
Detailer: E MAECHLER
Sheet Subset: BR S2.01
Structure Numbers: E-17-AFH, E-17-AFI
Subset Sheets: B304 of 304

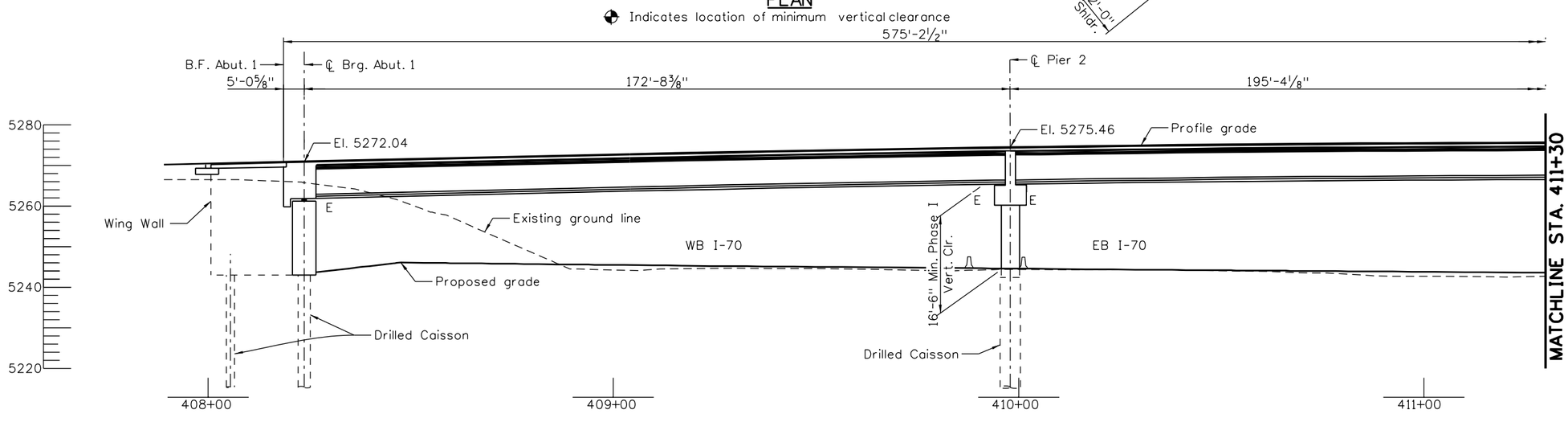
Project No./Code
FBR 0704-234

Sheet Number 625



PLAN

Indicates location of minimum vertical clearance



SECTION

(Taken along I-270 HCL)

NOTE:

1. For additional horizontal and vertical geometry, see Roadway Plans.
2. Skew angles are to tangent of the HCL.

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Checked By	X	7/15

Detail	INITIAL	DATE
Detailed By	X	7/15
Checked By	X	7/15

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Designed By	X	7/15
Checked By	X	7/15

Print Date: 5/18/2017

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Horiz. Scale: 1:30

Vert. Scale:

Staff Bridge Branch: Unit 0221

Unit Leader: DV

Front Range Mobility Group

01 02 03 04

Sheet Revisions		
Date:	Comments	Init.

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PROPOSAL

No Revisions:

Revised:

Void:

CENTRAL 70
I-270 EB CONNECTOR
GENERAL LAYOUT (1 OF 2)

Designer: M. VAUSE
Detailer: T. SANDS
Sheet Subset: BR S3.01
Structure Numbers: E-17-AFS
Subset Sheets: B401 of 404

Project No./Code: FBR 0704-234

Sheet Number 626

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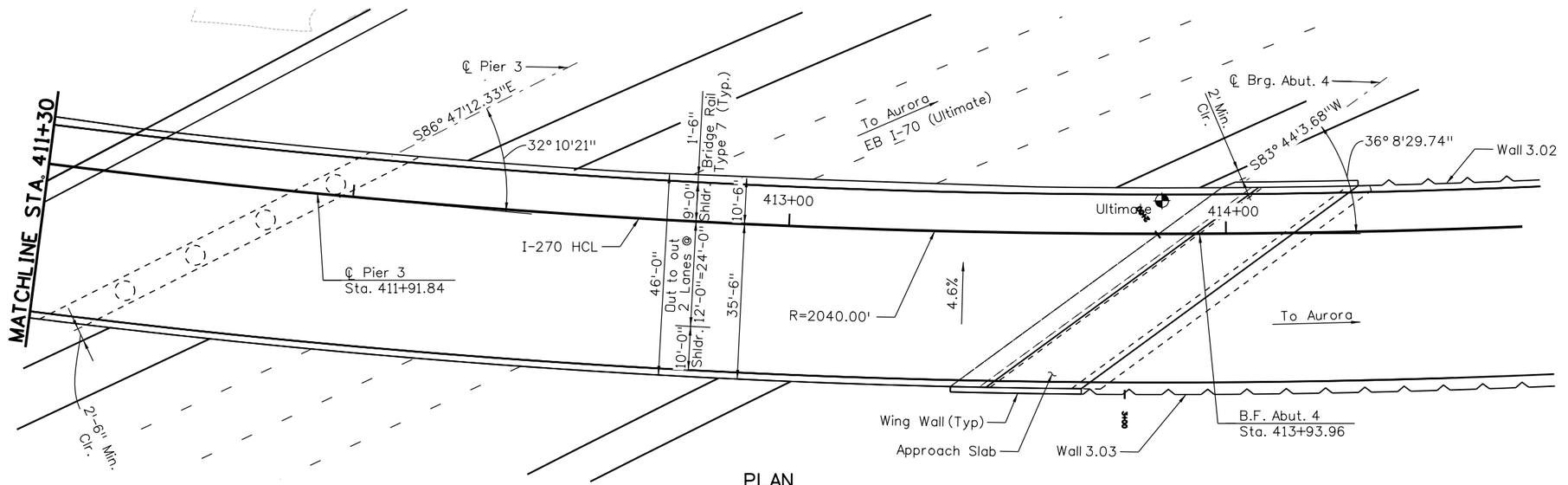
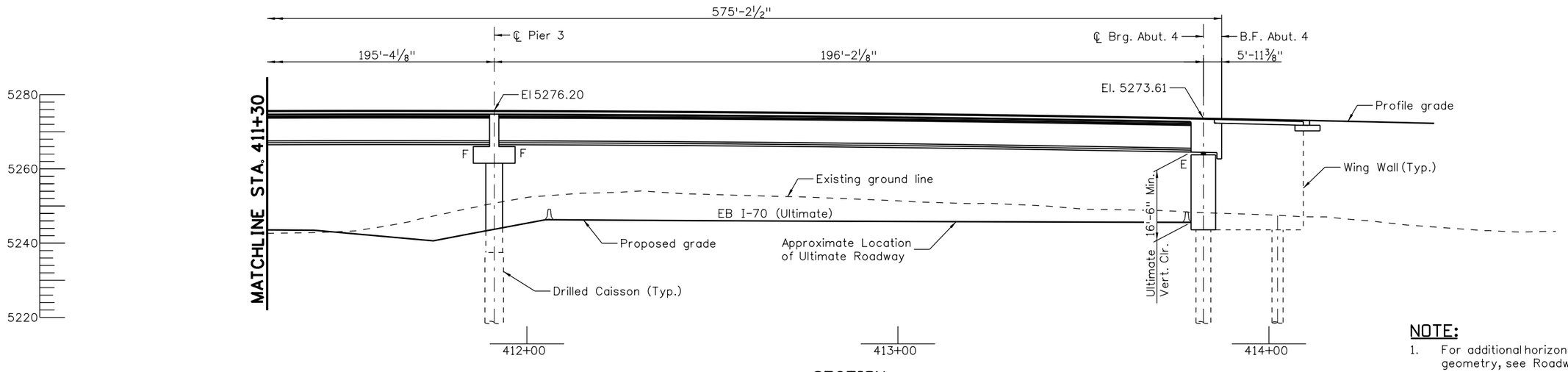


PLAN

Indicates location of minimum vertical clearance



SECTION

(Taken along I-270 HCL)

NOTE:

1. For additional horizontal and vertical geometry, see Roadway Plans.
2. Skew angles are to tangent of the HCL.

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Checked By	X	7/15

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Detailed By	X	7/15
Checked By	X	7/15

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Front Range Mobility Group

Horiz. Scale: 1:30

Vert. Scale:

Staff Bridge Branch: Unit 0221

Unit Leader: DV

2003 4

Sheet Revisions		
Date:	Comments	Init.

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Region 1 KJS

PROPOSAL

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Revised:

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CENTRAL 70
I-270 EB CONNECTOR
GENERAL LAYOUT (2 OF 2)

Designer: M. VAUSE

Detailer: T. SANDS

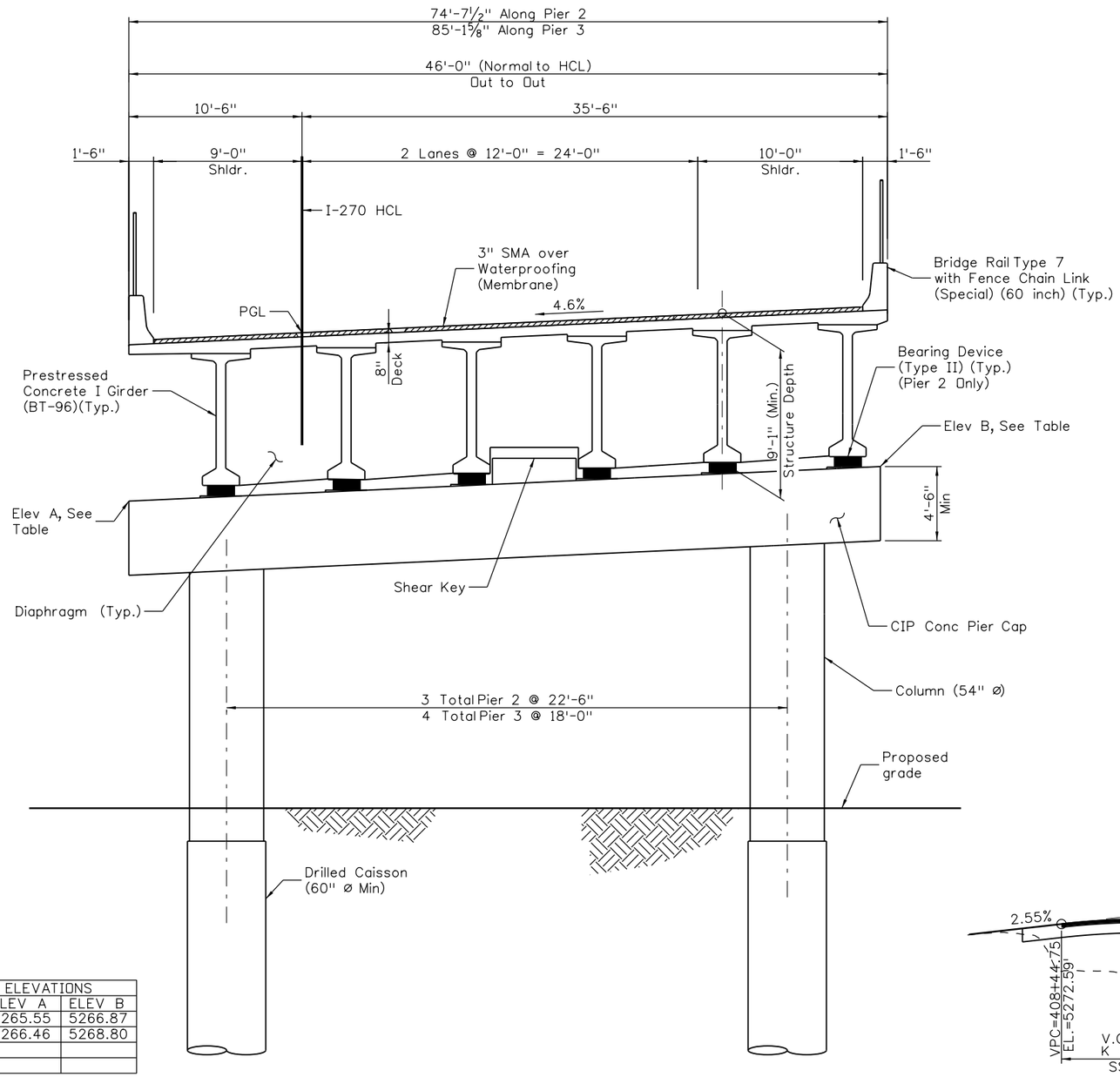
Sheet Subset: BR S3.01

Structure Numbers: E-17-AFS

Subset Sheets: B402 of 404

Project No./Code: FBR 0704-234

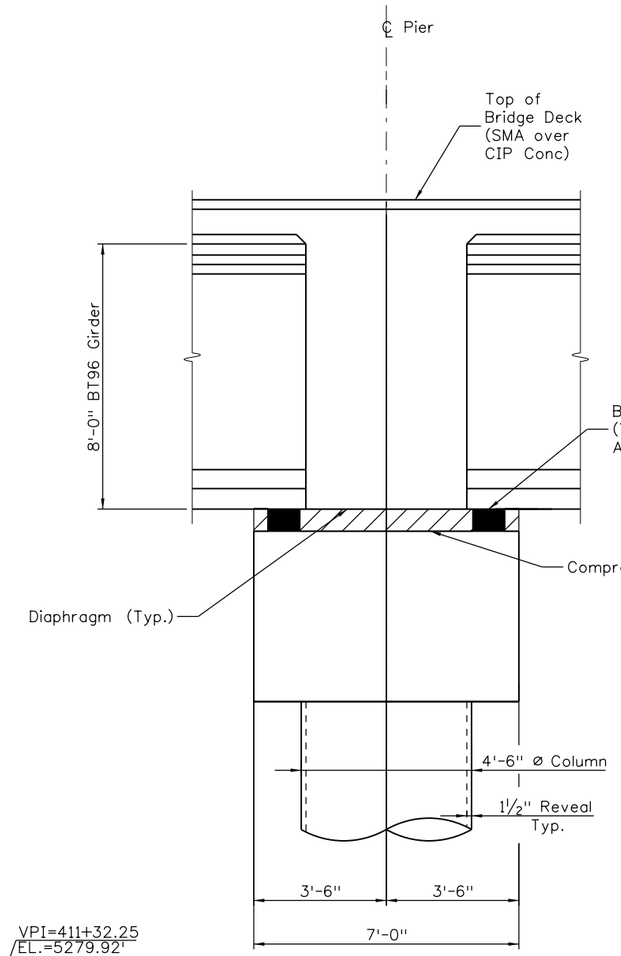
Sheet Number 627



PIER CAP ELEVATIONS		
LOCATION	ELEV A	ELEV B
Pier 2	5265.55	5266.87
Pier 3	5266.46	5268.80

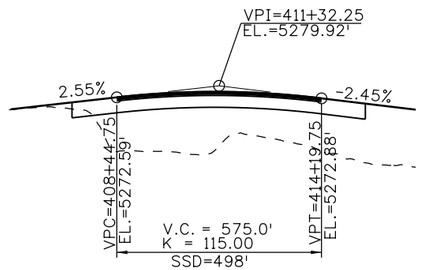
TYPICAL SECTION

(Looking Ahead Station,
Taken at Pier 2 normal to HCL)
(Pier 3 Similar)



PIER SECTION

(Pier 2 Shown Pier 3 Similar)



I-270 EB CONNECTOR PROFILE GRADE

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Checked By	X	7/15	Checked By	X	7/15	Checked By	X	7/15

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Print Date: 5/16/2017
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Horiz. Scale: Varies
Vert. Scale:
Staff Bridge Branch: Unit 0221
Unit Leader: DV

Front Range Mobility Group

0001 2 3 4

Sheet Revisions		
Date:	Comments	Init.

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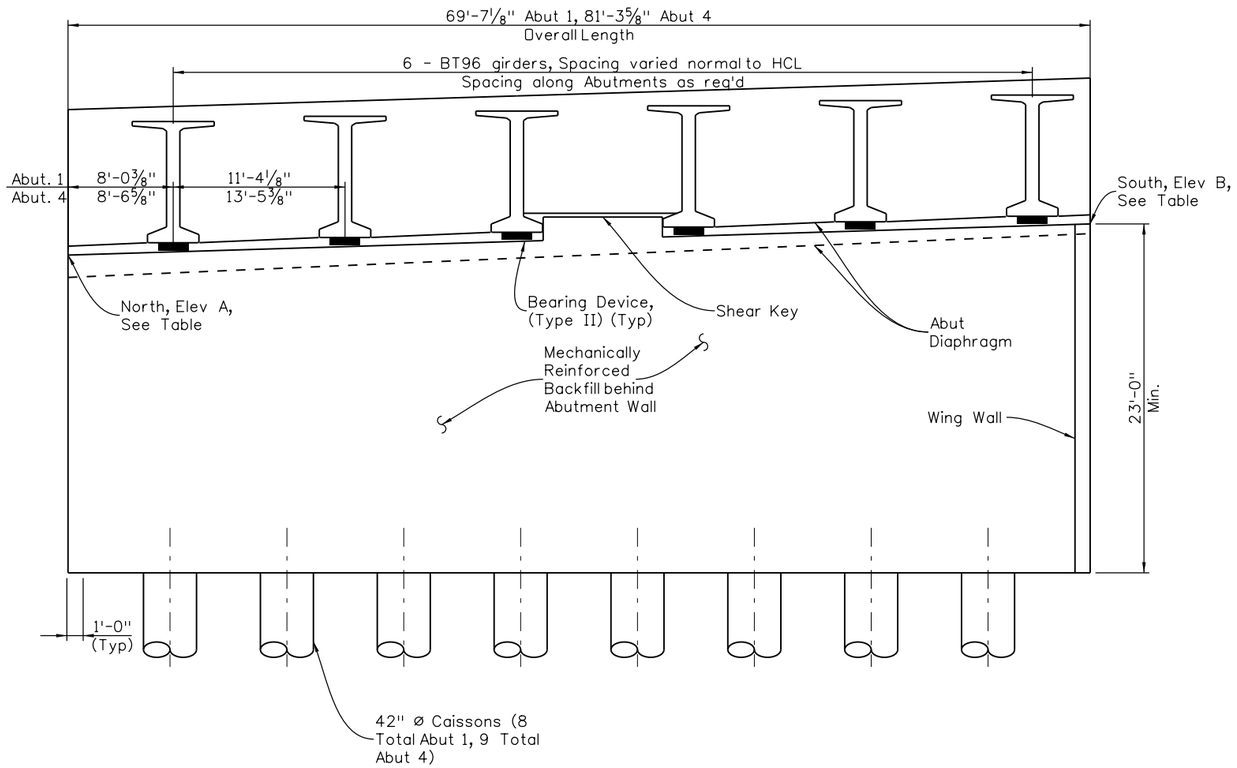
No Revisions:
Revised:
Void:

CENTRAL 70
I-270 EB CONNECTOR
TYPICAL SECTION

Designer: M. VAUSE
Detailer: T. SANDS
Sheet Subset: BR S3.01
Structure Numbers: E-17-AFS
Subset Sheets: B403 of 404

Project No./Code
FBR 0704-234

Sheet Number 628



ABUTMENT ELEVATION

(Looking ahead on Station,
Taken ALong CL Brg, Abutment 1 Shown,
Abutment 4 Similar)

ABUTMENT CAP ELEVATIONS		
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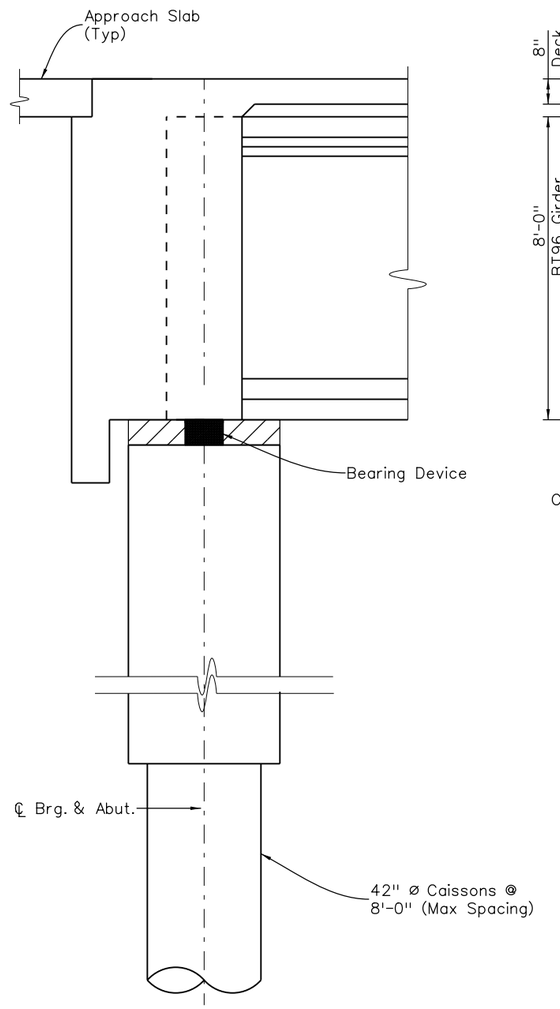
ABUT 1	5262.25	5263.21
ABUT 4	5263.12	5266.67



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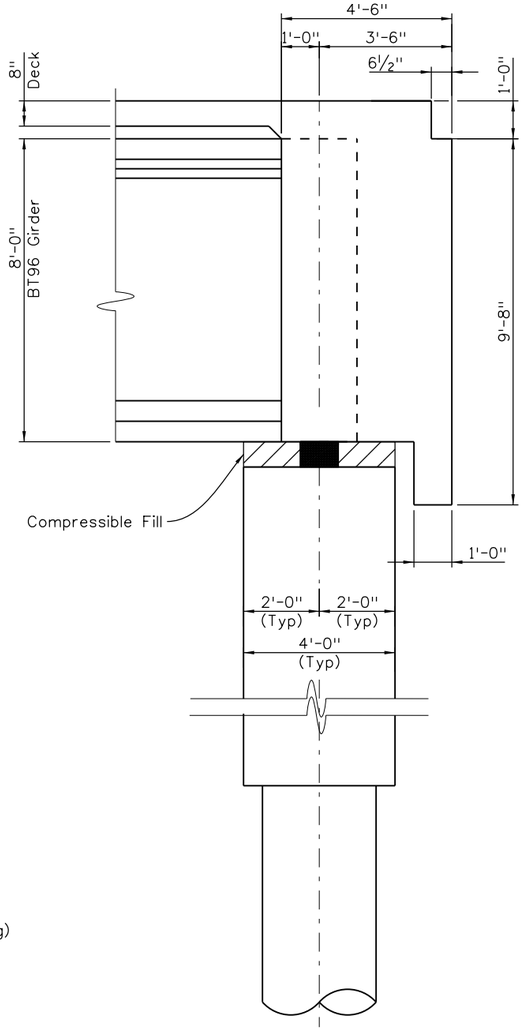
See Abutment 4 Section



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For Information Not Shown
See Abutment 1 Section

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Detail: Detailed By: Checked By — INITIAL: X, X — DATE: 7/15, 7/15
Quantities: Quantities By: Checked By — INITIAL: X, X — DATE: 7/15, 7/15

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Print Date: 5/16/2017
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Horiz. Scale: Varies
Vert. Scale:
Staff Bridge Branch: Unit 0221
Unit Leader: DV

Front Range Mobility Group

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Date:	Comments	Init.

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Revised:
Void:

CENTRAL 70
I-270 EB CONNECTOR
ABUTMENT DETAILS

Designer: M. VAUSE
Detailer: T. SANDS
Sheet Subset: BR S3.01
Structure Numbers: E-17-AFS
Subset Sheets: B404 of 404

Project No./Code
FBR 0704-234

Sheet Number 629

Front Range
Mobility Group

APPENDIX A

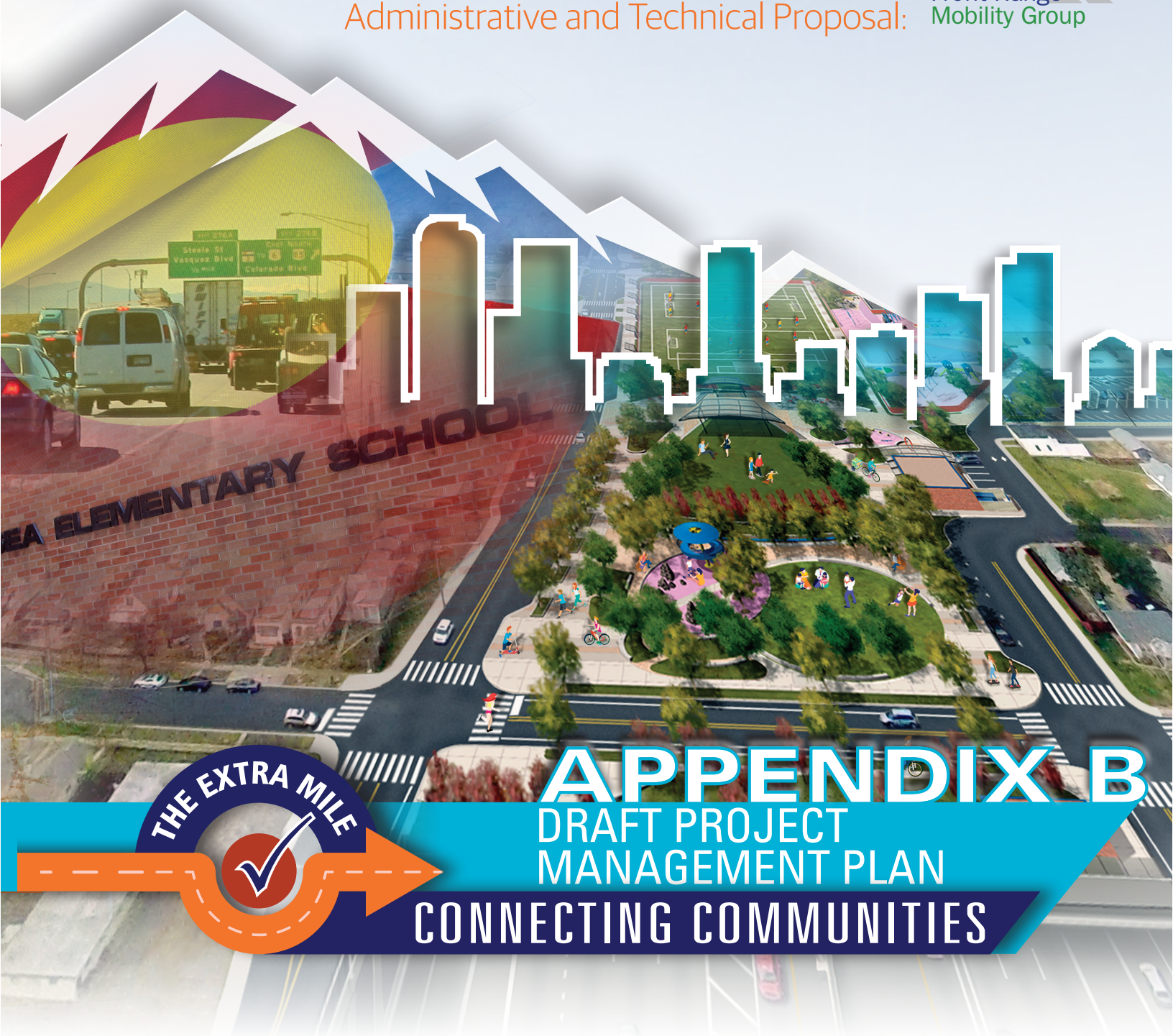
Part 2 of DRAFT DESIGN DRAWINGS

VOLUME 2 – TECHNICAL SUBMISSIONS
Binder 4 of 18

CENTRAL 70 PROJECT

PUBLIC DISCLOSURE
Administrative and Technical Proposal:

Front Range Mobility Group



THE EXTRA MILE

APPENDIX B

DRAFT PROJECT MANAGEMENT PLAN

CONNECTING COMMUNITIES

Draft

Project Management Plan

For

Central 70 Project

Prepared By:
Front Range Mobility Group

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DRAFT

List of Attachments

Attachment 1 - DRTLs

DRAFT

1.0 Introduction

The draft Project Management Plan (PMP) provides an overview of the organizational structure and management processes necessary for the successful execution of FRMG's obligations under the Project Agreement. This draft PMP is a framework for the incorporation of additional, further detailed plans and procedures that will define the process for executing various aspects of the Work. This draft PMP will updated and submitted to the Department for Acceptance prior to the issuance of NTP1.

FRMG's draft PMP is the overarching plan incorporating each of the draft Project plans submitted with our Proposal, and those that are required for submission during the Term.

Project Management Approach Based on Experience

FRMG structured its core management principles based on extensive experience designing, constructing, operating and maintaining projects globally, throughout the United States, and in the Denver area, including more than 30 years of delivering projects to the Department. FRMG members have delivered or are delivering some of the most complex P3 projects in North America, including 18 projects worth over $22 billion in the last decade. We have drawn from this experience as well as our team members' extensive collaboration with the Department on local projects, including the C-470 Express Lanes, the I-25 and Arapahoe Road Bridge Replacement, and the I-25 Ilex Street to City Center Drive projects. This draft PMP is tailor-made to ensure full compliance with the Project Agreement and the Department's stated goals and will be crucial to FRMG's commitment to delivering the Project on time and budget in safe, high quality and efficient manner over the duration of the Construction Period and Operating Period. **Figure 1** below illustrates the FRMG management approach.

DRAFT

Figure 1. FRMG Management Approach.

Throughout the procurement, FRMG emphasized integration of lifecycle considerations into our approach for design and construction. Additionally, we are committed to finding an optimized solution for the delivery of the Project, and worked with the CDOT and the Enterprises to develop over 75 ATCs.

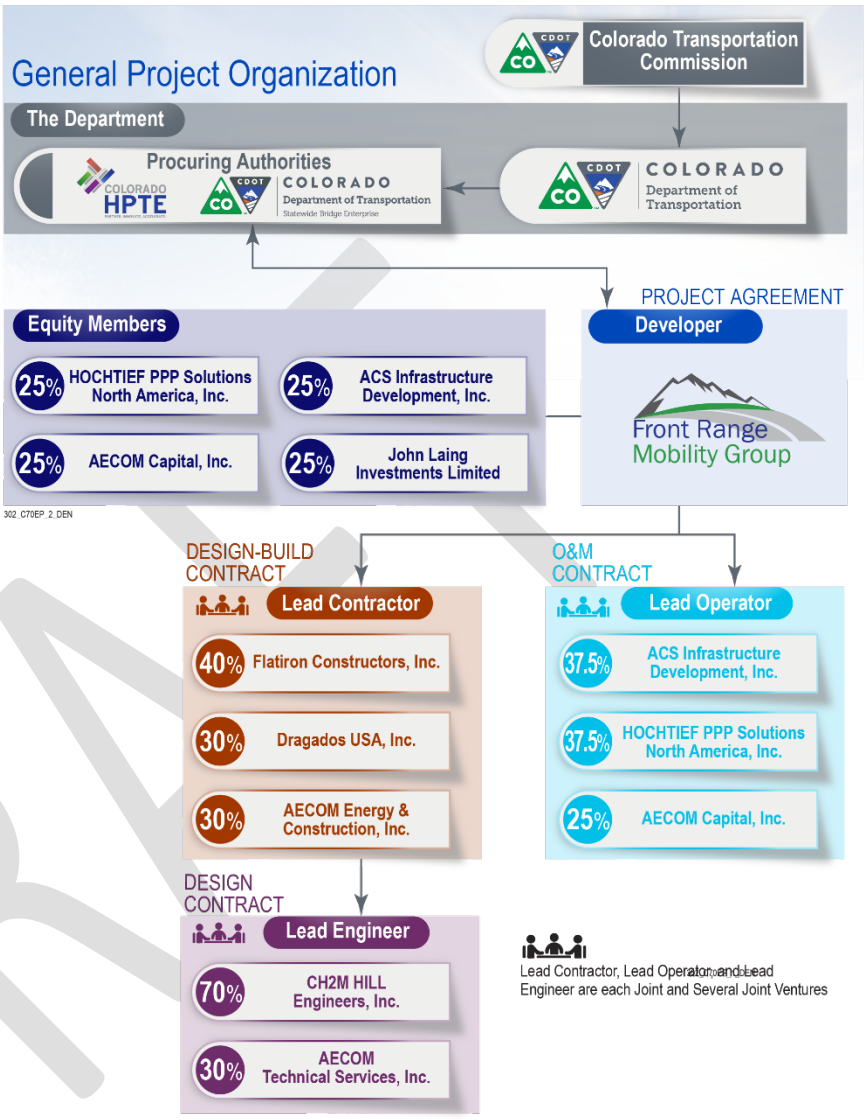
The vertical integration of FRMG through HOCHTIEF Group, AECOM, and ACS Group participating within the Developer and Lead Operator entities, and with sister companies Flatiron, Dragados and AECOM Construction comprising the Lead Contractor. This approach ensures alignment and efficiency in implementing an optimized solution for the Project.

The Developer will be the single point of contact for CDOT and the Enterprises in each phase of the Project. The Developer will subcontract the Construction Work and O&M Work During Construction to the Lead Contractor, who will subcontract the design work to the Lead Engineer. The O&M Work After Construction will be subcontracted by the Developer to the Lead Operator. The Developer will also subcontract the Independent Quality Control services to the Independent Quality Control Firm.

The Developer its management team will oversee and ensure the effective integration of all Project tasks in close coordination with the Department's management teams.

Evolution of the PMP after Proposal Submission

FRMG will work with the Department after Notice of Award to refine the draft PMP prior to NTP1. We will work closely to adapt our draft PMP to the Department's management organization and approach for the Project.



The PMP as Continuation of FRMG's Proposal Development

Our PMP is viewed as a continuation of our philosophy and commitment to the Project during the procurement period, during which Core Proposer Team Members collocated in Denver to work collaboratively to develop our Proposal. This same principle will apply after the Notice of Award.

During the Proposal period, **FRMG continuously optimized the Project across the design, build and O&M spectrum, as demonstrated in our 75 Alternative Technical Concepts.** This process was instrumental in creating a strong partnership among key individuals of our Project organization across core disciplines, who also will be involved in the delivery of the Project, providing continuity of leadership and momentum that is critical to FRMG's plan to mobilize and begin crucial tasks immediately after award. FRMG will continue to commit to go "**The Extra Mile**" in delivering the Project on time and on budget.

A successful project goes beyond just the technical aspects. An important facet of the Project is our long term partnership with the Department and fostering positive relationships with the local community. Understanding that priority, during the Proposal period. FRMG facilitated extensive Workforce Development and ESB/DBE business development outreach. Our PMP is designed to continue these efforts and ensure the Project is a long-term success to the community and the Department.

This PMP describes all aspects of the FRMG organization that have been assembled to deliver the Project, as well as the corresponding design, construction, operations, and maintenance management approaches. This document also highlights the critical interface between design and construction resources; as well as constructability, maintainability, environmental compliance, and durability aspects; and ultimately construction closeout. Key processes are described from the Quality Management Systems Manual, Safety Management Plan, Transportation Management Plan, Strategic Communications Plan, Environmental Compliance Plan, Property Management Plan, Disadvantaged Business Enterprise, Emerging Small Business, and Workforce Development Plans, as well as the Schedule Work Plan. The final section describes our approach to noncompliance reporting, evaluation, and resolution.

1.1 Project Management Plan

1.1.a. Overall Team Organization and Description

Front Range Mobility Group has developed detailed organizational charts for the Construction Period and Operating Period to reflect the Project's long-term realization. The organizational charts reflect the FRMG Developer's overall team structure, including all Key Personnel, management staff, and their reporting relationships for all Work. It also includes the designation of an individual who is a licensed professional engineer in the State of Colorado. This person will at all times, when Construction Work or Renewal Work is being conducted, serve as the engineer in charge of the observation of the Construction Work or (as applicable) the Renewal Work.

General Introduction

The organizational charts depicted in **Figure 2** FRMG Organization Chart -Construction Period and **Figure 3** FRMG Organization Chart - Operating Period show the overall Project Organization during the Construction Period and Operating Period. While the charts focus on these phases, there will also be transitional phases according to the Project progress (e.g., the Operating Period chart focuses on the key positions during the long-term operational phase). However, there will be additional organizational elements between Substantial Completion and Final Acceptance. The objective is to illustrate the organization for the majority of the two phases: Construction Period and Operating Period.

DRAFT

Figure 2. FRMG Organization Chart - Construction Period

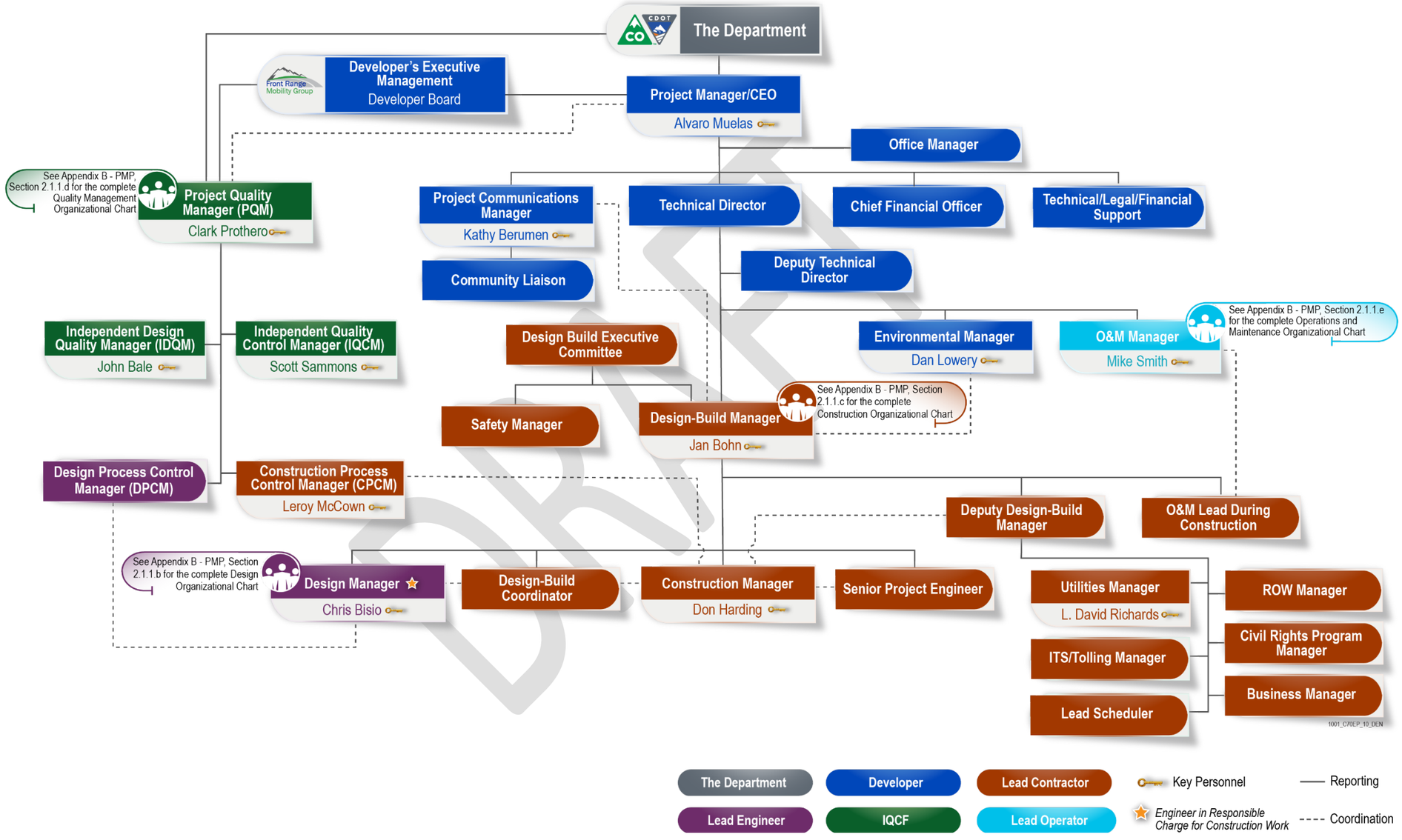
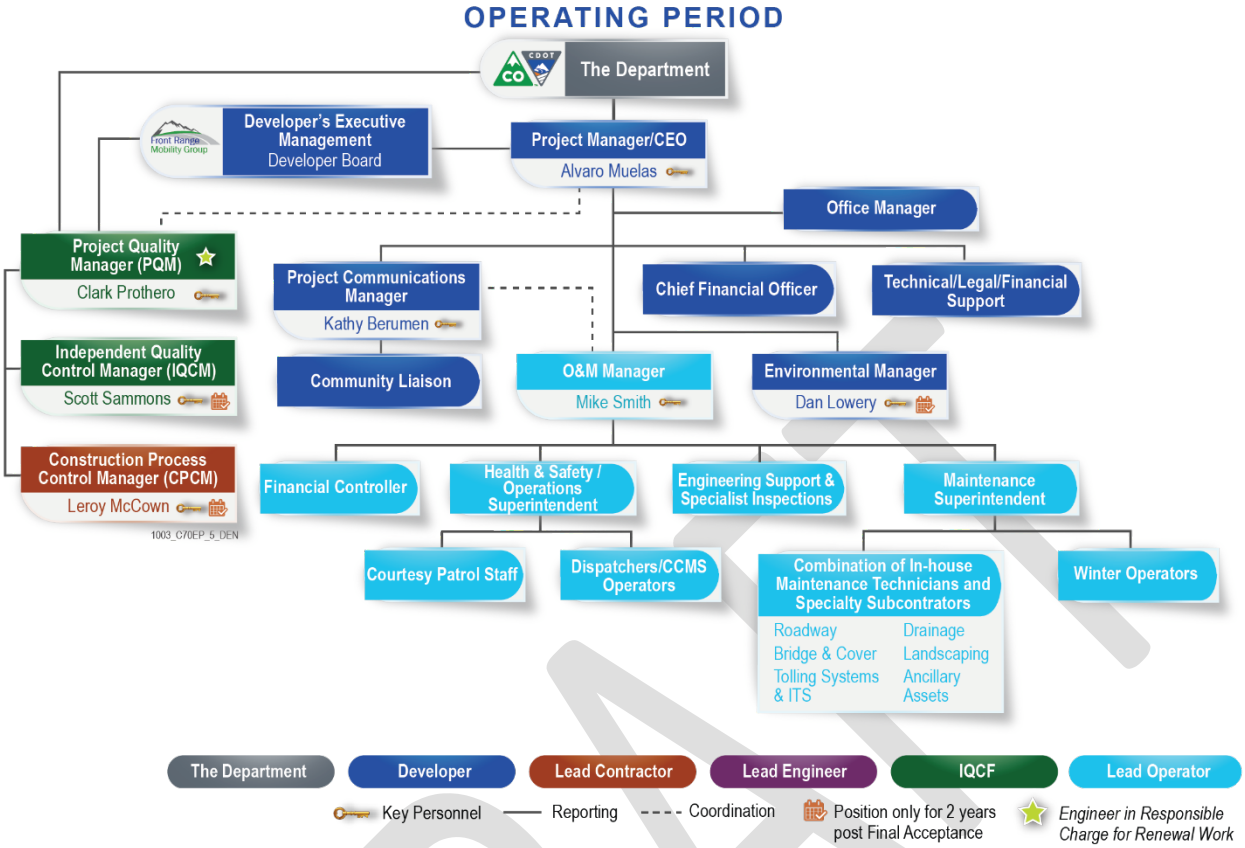


Figure 3. FRMG Organization Chart - Operating Period



Best Practice Reporting and Coordination

Our proposed reporting and coordination principles are based on the successful delivery of similar, complex P3 project in North America including the I-595 Corridor Improvements Project that is an availability payment, managed lanes project and the Eagle P3 project. FRMG's organization leveraged our combined previous experience with the provisions in the ITP and Project Agreement to provide an optimal result that encompasses the Project specific requirements from the Department. The organizational charts in Figure 2 and Figure 3 provide a distinct overview about the reporting and coordination lines, to ensure they articulate FRMG's integrated team principles and reflect the functional requirements of the Project.

Key Individuals with Relevant Experience

FRMG understands the complexities of the Central 70 Project and has focused early on to ensure the organization is based on experience integrated from other similar Projects, as shown in **Table 1**. Upon Project Award, FRMG can mobilize a very experienced team of key Individuals, with the majority already involved in the Proposal phase:

Table 1. FRMG Experienced Key Personnel.

Title	Name of Individual	Years of Experience
Project Manager/CEO	Alvaro Muelas	25
Design-Build Manager	Jan Bohn	37
Construction Manager	Don Harding	23
Design Manager	Chris Bisio	30
O&M Manager	Mike Smith	27
Project Quality Manager	Clark Prothero	25
Independent Design Quality Manager	John Bale	31
Construction Process Control Manager	Leroy McCown	30
Independent Quality Control Manager	Scott Sammons	27
Environmental Manager	Daniel Lowery	25
Utilities Manager	L. David Richards	28
Project Communications Manager	Kathy Berumen	10

This team of experienced Key Personnel will be part of the foundation of FRMG's organization and will facilitate the successful delivery of the Project.

Organizational Chart during Construction

The organization during the Construction Period reflects the multidisciplinary requirements for delivery of the Project. The organization is led by the Project Manager/CEO, who will have overall responsibility for the successful Project execution and coordinate all communication with the Department. He leads the Project delivery, along with his staff, including the Technical Director and the Design-Build Manager, who is responsible for the overall design and construction of the Project and for managing FRMG's Design-Build team. The following table provides an overview of key positions in FRMG's organization during the Construction Period:

Roles & Responsibilities in FRMG's Organization during the Construction Period		
Title of Key Personnel or other Key Positions	**Responsibility**	**Reports to** [Additional Coordination Inside of the FRMG Organization with]
Key Personnel as per Project Agreement (Schedule 27)		
Project Manager/ CEO	Responsible for overall execution and administration of Developer's responsibilities for the Project, with authority to bind the Developer on all matters delegable pursuant to Law and governing documents affecting Project execution and administration, including: (i) with respect to design, construction, commissioning, operations, and maintenance; and (ii) authority to suspend Work.	**The Department and the Developer Board of Directors** [Project Quality Manager]
Design-Build Manager	Responsible for the overall design and construction of the Project and for managing the Lead Contractor. The Design-Build Manager shall: (i) ensure that the Project is designed and constructed in accordance with the Technical Requirements; and (ii) have authority to suspend Construction Work.	**Technical Director and the Design Build Executive Committee** [Project Communications Manager, Environmental Manager]

Roles & Responsibilities in FRMG's Organization during the Construction Period		
Title of Key Personnel or other Key Positions	**Responsibility**	**Reports to** [Additional Coordination Inside of the FRMG Organization with]
Construction Manager	Responsible for ensuring that the Project is constructed in accordance with all requirements of this Agreement. Responsible for managing Construction Contractor's construction personnel, scheduling of the construction quality assurance personnel, and administering compliance with all Technical Requirements applicable to the Construction Work. The Construction Manager has the authority to suspend Construction Work.	**Design-Build Manager** [Construction Process Control Manager (CPCM), Deputy Design-Build Manager]
Design Manager	Responsible for: (i) ensuring that the overall Project design is completed and design criteria requirements are met; (ii) managing the design team's personnel; and (iii) administering all design requirements in this Agreement. The Design Manager shall have authority to suspend design Work. Engineer in responsible charge for the observation of the Construction Work	**Design-Build Manager** [Design Process Control Manager (DPCM), Design-Build Coordinator]
O&M Manager	Responsible for leading the Lead Operator in its obligations in performing O&M Work and Renewal Work.	**Technical Director** [OM Lead During Construction]
Project Quality Manager (PQM)	Responsible for overall quality management of the Project. The Project Quality Manager shall have the authority to suspend Work and shall provide monthly certification that Work is being performed in compliance with Law and the Project design.	**The Department and the Developer Board** [Project Manager/ CEO]
Independent Design Quality Manager (IDQM)	Responsible for ensuring quality management on all Design Work carried out on the Project. The Independent Design Quality Manager shall have the authority to suspend Work.	**Through Project Quality Manager (PQM) ultimately to the Department and Developer Board**
Construction Process Control Manager (CPCM)	Responsible for ensuring all methods and procedures contained in the Approved Stage 2 QMP are carried out on the Project. The Construction Process Control Manager shall have authority to suspend Work.	**Through Project Quality Manager (PQM) ultimately to the Department and Developer Board** [Construction Manager]
Independent Quality Control Manager (IQCM)	Responsible for managing all independent Quality Control aspects contained in the Approved Stage 2 QMP carried out on the Project, including having authority to suspend Work.	**Through Project Quality Manager (PQM) ultimately to the Department and Developer Board**
Environmental Manager	Responsible for ensuring compliance with all Environmental Requirements and commitments. The Environmental Manager shall have authority to suspend Work.	**Technical Director** [Design-Build Manager]
Utilities Manager	Responsible for managing all required Utility Work and coordinating the same with Utility Owners.	**Deputy Design-Build Manager**
Project Communications Manager	Responsible for overseeing all Developer communications efforts during construction, operations, and maintenance.	**Project Manager/CEO [**Design-Build Manager]

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Roles & Responsibilities in FRMG's Organization during the Construction Period		
Title of Key Personnel or other Key Positions	**Responsibility**	**Reports to** [Additional Coordination Inside of the FRMG Organization with]
Other Key Management Staff		
Developer Board/ Developer Executive Management Team (Developer Board)	Responsible for supervising the overall Project execution and the Work of the Project Manager/CEO. Will address all quality issues as a result of the reporting of the Project Quality Manager (and indirectly from the IDQM, CPCM, and IQCM).	
Chief Financial Officer	Responsible for financial matters of the Developer.	**Project Manager/ CEO**
Technical Director	Responsible for leading the technical aspects of the Project during the Construction Period.	**Project Manager/ CEO**
Community Liaison	Responsible for close coordination with the Department. Responsible throughout the Term for ensuring that local residents, businesses, and nonprofit groups are informed about the Project and have a single point of contact for all questions and concerns.	**Project Communications Manager**
Safety Manager	Responsible for Overall Project Health & Safety.	**Design Build Executive Committee**
Deputy Design-Build Manager	Responsible for leading specified important construction support functions.	**Design-Build Manager** [Construction Manager]
O&M Lead During Construction	Responsible for day-to-day management of the O&M Work During Construction.	**Design-Build Manager** [O&M Manager
Design-Build Coordinator	Responsible for coordinating the interface between Construction and Design.	**Design-Build Manager [**Design Manager and Construction Manager]
Senior Project Engineer	Responsible for leading Engineering activities for the Lead Contractor, such as scheduling, surveying, and costing.	**Design-Build Manager**
ITS/Tolling Manager	Responsible for coordinating and ensuring compliance with all ITS and tolling design, construction, integration, scheduling, and operational requirements.	**Deputy Design-Build Manager**
ROW Manager	Responsible for all of Developer's acquisition and relocation coordination and compliance requirements.	**Deputy Design-Build Manager**
Lead Scheduler	Responsible for coordinating all scheduling activities until Final Acceptance.	**Deputy Design-Build Manager**
Civil Rights Program Manager	Responsible for the day-to-day operational components of (and serving as primary contact to the Department for) all matters and requirements concerning the Civil Rights Requirements.	**Deputy Design-Build Manager**
Business Manager	Responsible for leading all tasks concerning administrative matters, including accounting, contract administration, employment, and recruitment.	**Deputy Design-Build Manager**

Figure 1 FRMG Organization Chart - Construction Period above describes the overall organization and provides further reference to sections in the PMP, which include additional details of the organizational structure for the Quality Management, Design, Construction, and Operation & Maintenance Organization.

Organizational Chart during the Operating Period

Organization during the Operating Period encompasses the overarching goals of efficient and safe operation for the Central 70 corridor. The organization is led by the Project Manager/CEO, while O&M Work will be led by the Lead Operator's O&M Manager responsible for ensuring that all O&M Work and Renewal Work requirements of the Project Agreement are met. The following table provides an overview about key positions in FRMG's organization during the Operating Period:

Roles & Responsibilities in FRMG's Organization during the Operating Period		
Title of Key Personnel or other Positions	**Responsibility**	**Reports to** [Additional Coordination Inside of FRMG Organization with]
Key Personnel as per Project Agreement (Schedule 27)		
Project Manager/ CEO	Responsible for overall execution and administration of Developer's responsibilities for the Project, with authority to bind the Developer on all matters delegable pursuant to Law and governing documents affecting Project execution and administration, including: (i) with respect to design, construction, commissioning, operations, and maintenance; and (ii) authority to suspend Work.	**The Department and the Developer Board of Directors** [Project Quality Manager]
O&M Manager	Responsible for leading the Lead Operator and ensuring that all O&M Work and Renewal Work requirements of the Agreement are met. Responsible for the day-to-day operational components of (and serving as the primary contact to the Department for) all matters and requirements concerning the Civil Rights Requirements.	**Project Manager/CEO**
Project Quality Manager (PQM)	Responsible for overall quality management of the Project. The Project Quality Manager shall have the authority to suspend Work and shall provide monthly certification that Work is being performed in compliance with Law and the Project design. Engineer in responsible charge for the observation of the Renewal Work.	**The Department and the Developer Board** [Project Manager/ CEO]
Construction Process Control Manager (CPCM)	Responsible for ensuring all methods and procedures contained in the Approved Stage 2 QMP are carried out on the Project. The Construction Process Control Manager shall have authority to suspend Work. (Position will be available through second anniversary after Final Acceptance.)	**Project Quality Manager**
Independent Quality Control Manager(IQCM)	Responsible for ensuring quality management on all Design Work carried out on the Project. The Independent Design Quality Manager shall have the authority to suspend Work. (Position will be available through second anniversary after Final Acceptance.)	**Project Quality Manager**
Environmental Manager	Responsible for ensuring compliance with all Environmental Requirements and commitments. The Environmental Manager shall have authority to suspend Work. (Position will be available through second anniversary after Final Acceptance.)	**Project Manager/CEO**

Roles & Responsibilities in FRMG's Organization during the Operating Period		
Title of Key Personnel or other Positions	**Responsibility**	**Reports to** [Additional Coordination Inside of FRMG Organization with]
Project Communications Manager	Responsible for overseeing all Developer communications efforts during construction, operations, and maintenance.	**Project Manager/CEO**
Other Key Management Staff		
Developer Board/ Developer Executive Management Team (Developer Board)	Responsible for supervising overall Project execution and Work of the Project Manager. Will address all Quality Issues resulting from reporting by the Project Quality Manager.	
Chief Financial Officer	Responsible for financial matter of the Developer.	**Project Manager/ CEO**
Community Liaison	Responsible for close coordination with the Department. Responsible throughout the Term for ensuring that local residents, businesses and nonprofit groups are informed about the Project and have a single point of contact for all questions and concerns.	**Project Communications Manager**
Health & Safety/Operations Superintendent	Responsible for Health and Safety and all Operations activities, including management of Courtesy Patrol Staff and TMC Staff.	**O&M Manager**
Maintenance Superintendent	Responsible for all maintenance activities, including management of maintenance technicians and winter operators.	**O&M Manager**

The table above focuses on the majority of the Operating Period. Positions that continue from the Construction Period during the transition either until Final Acceptance or two years after Final Acceptance are not discussed further, or are only partially shown if deemed functionally relevant. Figure 3 FRMG Organization Chart - Operating Period shows these positions and their relationships.

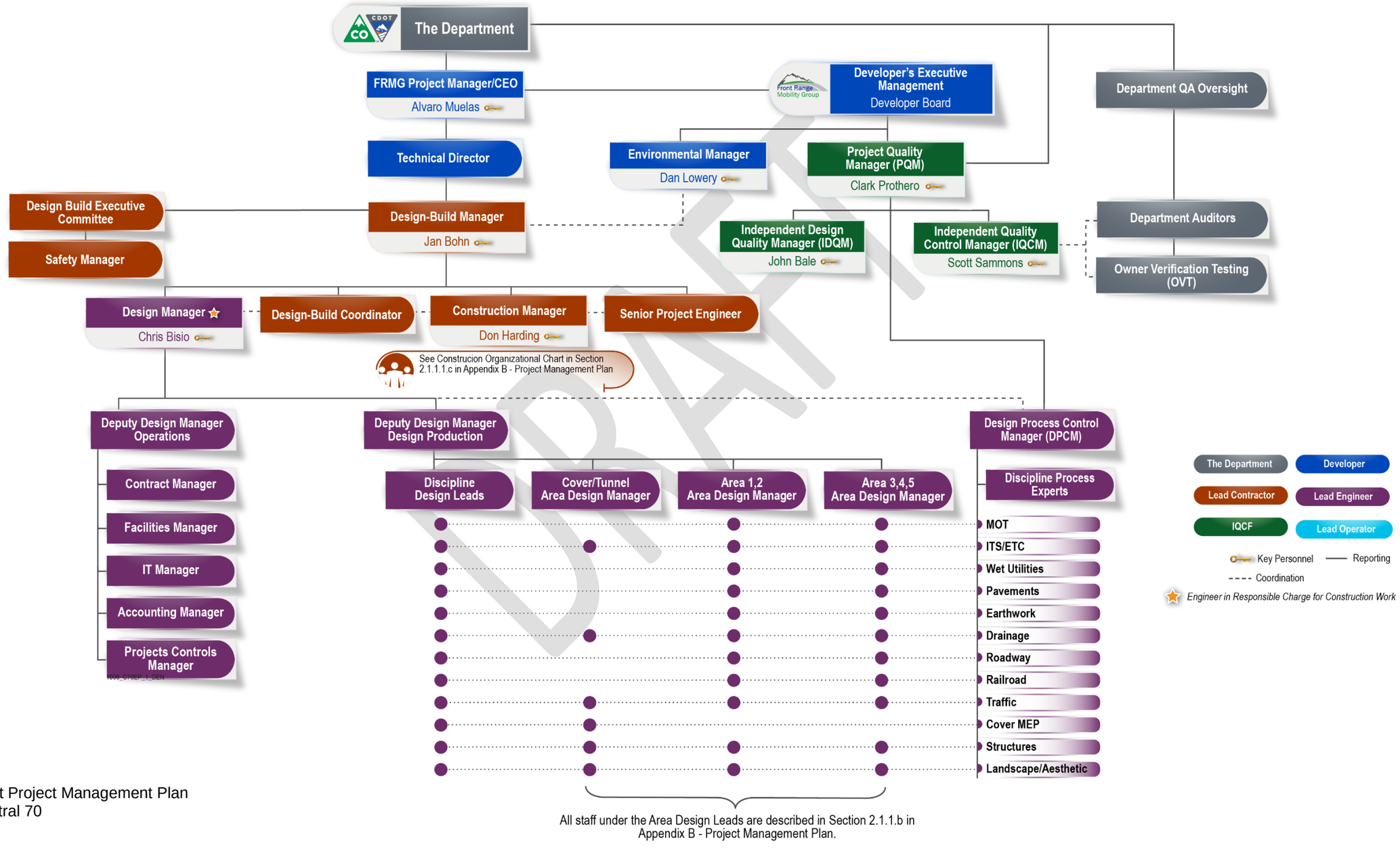
1.1.b. Design Organizational Chart and Description

FRMG's Lead Engineer for the Central 70 Project is a joint venture of CH2M Hill Engineers, Inc. and AECOM Technical Services, Inc. The resources of two these large companies (each of which has a significant local presence), combined with specialized local subconsultants, will comprise an integrated team (Design Team) working collectively to prepare design products in compliance with Project Agreement requirements.

Design Team Organization

Organization of the Design Team is shown in Figure 4. It is organized to achieve two primary Project goals. The first is the development of a truly integrated and optimized design. The second is a continuous focus on the quality of the design work and the resulting deliverable products. The organization chart shows Design Team roles detailed down to discipline leads and design staff positions. An overall presentation of the Design Team organization is provided below; roles are more fully described in the following section.

Figure 4. Design Team Organization.



Each of the following Disciplines will have the staff positions listed below reporting to the Design Discipline Lead: ***MOT, ITS/ETC, Wet Utilities, Drainage, Roadway, Railroad, Traffic, Cover MEP, and Structures***

- Lead Engineer
- Design Engineer(s)
- Design Technician(s)

Staff positions for Discipline Lead: **Pavement and Earthwork (Geotechnical)**

- Lead Engineer
- Office Engineer(s)
- Field Engineer(s)
- Geotechnical Test Technicians

Staff positions for Discipline Lead: ***Landscape and Cover Architectural***

- Lead Architect
- Staff Architects
- Landscape/Irrigation Designers

Design Team Roles

Design Team Roles and Responsibilities		
Title of Key Personnel or other Positions	**Responsibility**	**Reports to** [Additional Coordination Inside of the FRMG Organization with]
Key Personnel as per Project Agreement (Schedule 27)		
Design Manager	Responsible for (i) ensuring that the overall Project design is completed and design criteria requirements are met; (ii) managing the design team's personnel; and (iii) administering all design requirements in this Agreement. The Design Manager has the authority to suspend Work. The DM also serves as the primary contact for Design Team and maintains close coordination with the Lead Contractor to plan design production and report progress, and assures that adequate design staff resources (including subconsultants) are aligned with design discipline and schedule needs.	**Design-Build Manager**
Other Key Management Staff		
Deputy Design Manager Production (DDMP)	Responsible for (i) planning design activities in alignment with the Baseline Schedule and the Deliverable Requirements Tracking List; (ii) directing the Design Discipline Leads and Area Design Managers in the development of integrated teams and production of quality design products; and (iii) managing the Design Team's participation in Task Forces and other Project coordination meetings and activities.	**Design Manager**

Design Team Roles and Responsibilities		
Title of Key Personnel or other Positions	**Responsibility**	**Reports to** [Additional Coordination Inside of the FRMG Organization with]
Deputy Design Manager Operations (DDMO)	Responsible for (i) managing the Lead Designer contract (along with the Lead Contractor) and subconsultant contracts; (ii) managing the project controls activities, including scheduling, costs, reports, and document control; and (iii) assuring that all necessary office facilities and equipment, IT Services, vehicles, etc., are provided to design staff.	**Design Manager**
Design Discipline Leads (DDL): MOT, ITS/ETC, Wet Utilities, Drainage, Roadway, Railroad, Traffic, Cover MEP and Structures	Responsible for (i) creating the Design Input Library; (ii) coordinating with the DPEs to implement discipline-specific requirements and to facilitate quality reviews, along with working with Area Design Managers to guide design activities and monitor compliance with discipline requirements; and (iii) coordinating with other DDLs to align design activities between disciplines and to participate in interdisciplinary reviews.	**Deputy Design Manager Production**
Area Design Managers (ADM)	Responsible for (i) managing design activities for production of quality design products for their area, including subconsultants; (ii) participating in coordination meetings such as Task Forces to address team-wide issues required for an integrated Project design; (iii) coordinating with the other ADMs to align design teams; (iv) and defining interfaces between disciplines and control production activities.	**Deputy Design Manager Production**
Design Process Control Manager (DPCM)	Responsible for (i) working as an independent extension of the Independent Quality Control Team for the Project; (ii) developing and implementing the Stage 1 Quality Management Plan; (iii) managing the Discipline Process Experts and other associated personnel; and (iv) coordinating with the Independent Design Quality Manager and the Department for audits of Stage 1 QMP activities.	**Project Quality Manager** [Design Manager, Independent Design Quality Manager, Department Auditors]
Design Staff Positions		
Discipline Process Experts (DPE): in each discipline area of: MOT, ITS/ETC, Wet Utilities, Drainage, Roadway, Railroad, Traffic, Cover MEP, and Structures	Responsible for (i) providing checks against the Design Inputs Library; (ii) providing training to the ADM, DDLs, and other design team members on PC requirements; (iii) conducting discipline and interdisciplinary reviews of design products; and (iv) performing audits of design activities for compliance with PC procedures.	**Design Process Control Manager**
Lead Engineers for Disciplines: MOT, ITS/ETC, Wet Utilities, Drainage, Roadway, Railroad, Traffic, Cover MEP, and Structures	Responsible for (i) a segment of the Project while working for the ADM; (ii) completing the design with respect to discipline-specific requirements; and (iii) coordinating with other Lead Engineers working within the same design segment	**Area Design Managers**

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Design Team Roles and Responsibilities		
Title of Key Personnel or other Positions	**Responsibility**	**Reports to** [Additional Coordination Inside of the FRMG Organization with]
Design Engineers for Disciplines: MOT, ITS/ETC, Wet Utilities, Drainage, Roadway, Railroad, Traffic, Cover MEP, and Structures	Responsible for assisting the Lead Engineer with the design of a segment of the Project.	**Lead Engineers**
Design Technicians for Disciplines: MOT, ITS/ETC, Wet Utilities, Drainage, Roadway, Railroad, Traffic, Cover MEP, and Structures	Responsible for assisting the Lead Engineer and Design Engineer with the design of a segment of the Project.	**Lead Engineers**
Lead Engineer for Pavement and Earthwork (Geotechnical)	Responsible for geotechnical design on the Project while working for the ADMs.	**Area Design Managers**
Office Engineer for Pavement and Earthwork (Geotechnical)	Responsible for assisting the Lead Engineer (i) to analyze geotechnical test results; and (ii) to provide Pavement Reports, Retaining Wall Reports, Bridge Foundation Reports, or other geotechnical design information.	**Lead Engineers**
Field Engineers for Pavement and Earthwork (Geotechnical)	Responsible for working under the Lead Engineer (i) to log geotechnical borings; and (ii) to collect geotechnical samples of material in the field.	**Lead Engineers**
Lab Technicians for Pavement and Earthwork (Geotechnical)	Responsible, working under the Officer Engineer and Field Engineer, (i) to monitor the testing of geotechnical field samples; (ii) to review the testing procedures as they take place; and (iii) to preserve field samples until released by the Office Engineer.	**Officer Engineer and the Field Engineer**
Geotechnical Test Technicians for Pavement and Earthwork (Geotechnical)	Responsible for completing required testing on geotechnical samples from the field, under the direction of the Lab Technicians.	**Lab Technicians**
Lead Architect for Landscape/Cover	Responsible of all urban design aspects of the Project (reports to Area Design Managers).	**Area Design Mangers**
Staff Architects for Landscape/Cover	Responsible for a segment of the project while working under the Lead Architect; they coordinate with other Staff Architects to provide a consistent, coordinated project.	**Lead Architect**
Landscape/Irrigation Designers	Landscape/Irrigation Designers work for the Lead Architect o provide the landscaping and irrigation design. Landscape/Irrigation Designers locate and coordinate the irrigation Taps, seed mixes and proper amount of fertilizer for the landscaping areas.	**Lead Architect**

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1.1.c. Construction Organizational Chart and Description

The construction organization is composed of three firms that make up the Design-Build Joint Venture (DBJV), which is the Lead Contractor: Flatiron Constructors, Inc., Dragados USA, Inc., and AECOM Energy & Construction, Inc. A Design-Build Executive Committee comprising company executives from each of the Lead Contractor firms will provide a level of oversight to the construction management that enforces the commitments of the Lead Contractor under the terms of the Design-Build Agreement. It also will oversee project safety and provide the staffing resources shown in the organizational chart below, as well as all additional staff as needed to complete the Project on time and within budget. **Figure 5** shows the Construction Team organization and the roles and responsibilities are described in the table below.

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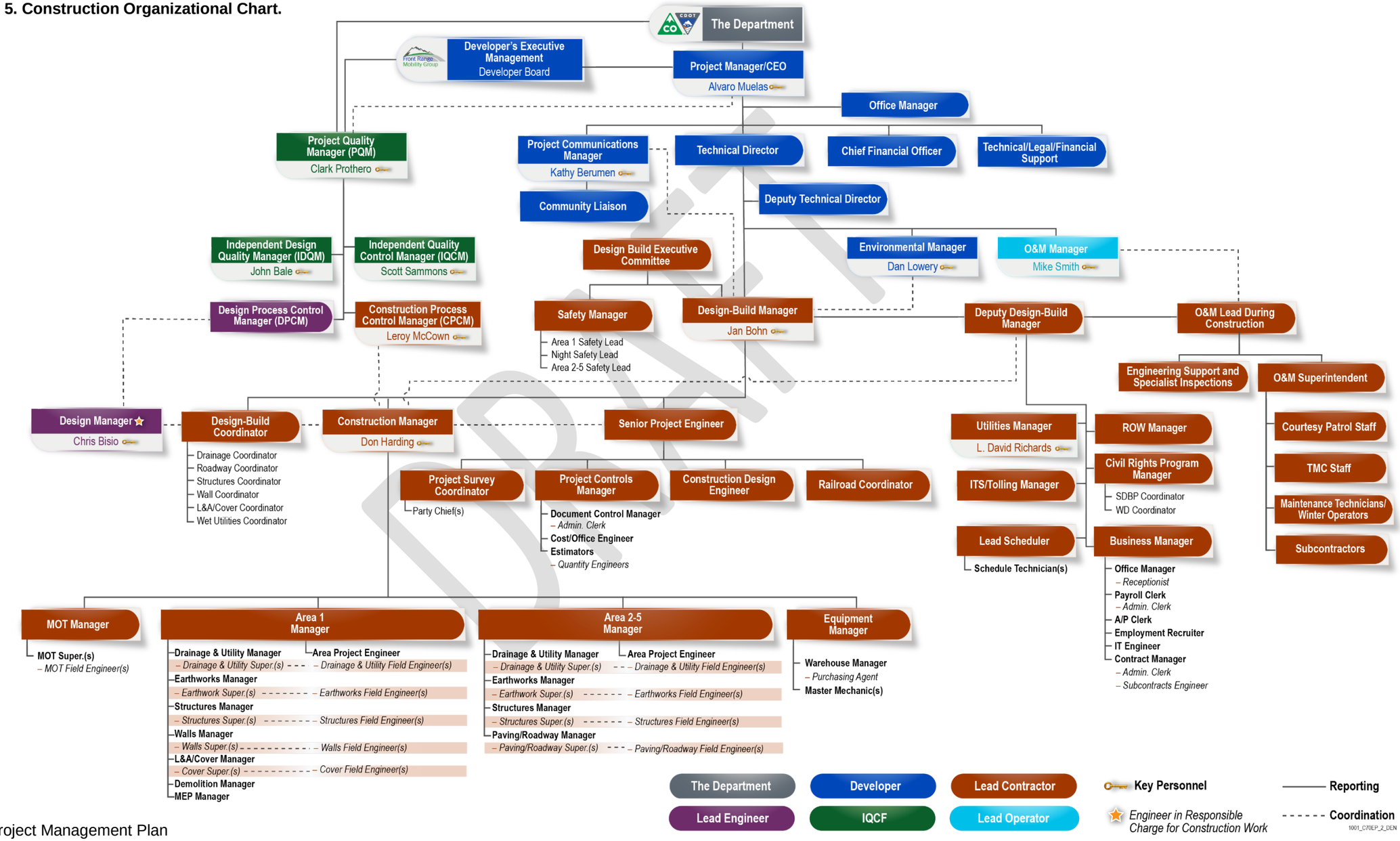
Figure 5. Construction Organizational Chart.



Construction Team Roles

Construction Team Roles and Responsibilities		
Title of Key Personnel or other Positions	**Responsibility**	**Reports to** [Additional Coordination Inside of the FRMG Organization with]
Key Personnel as per Project Agreement (Schedule 27)		
Design-Build Manager	Responsible for the overall design and construction of the Project and for managing FRMG's Design-Build team. The Design-Build Manager will: (i) ensure that the Project is designed and constructed in accordance with the Technical Requirements; and (ii) have authority to suspend Construction Work.	**Technical Director** [Project Communications Manager, Environmental Manager]
Construction Manager	Responsible for ensuring that the Project is constructed in accordance with all requirements of this Agreement. Responsible for managing Construction Contractor's construction personnel, scheduling of construction quality assurance personnel, and administering compliance with all Technical Requirements applicable to the Construction Work. The Construction Manager will have the authority to suspend Construction Work.	**Design-Build Manager** [Construction Process Control Manager, Deputy Design-Build Manager, Senior Project Engineer]
Utilities Manager	Responsible for managing all required Utility Work and coordinating with Utility Owners	**Deputy Design-Build Manager**
Other Key Management Staff		
Deputy Design-Build Manager	Responsible for providing support to Design-Build Manager. Coordinates and supports the Construction Manager's team. Responsible for managing ROW, utilities, Project Schedule, implementation of compliance with the DBE's and ESB's plan, and oversight of all aspects of the Lead Contractor's business responsibilities.	**Design-Build Manager**
Safety Manager	Responsible for implementing and managing the Safety Management Plan. Has a high degree of program visibility and the authority to perform independent safety evaluations. Ensures safety issues are acted upon in a timely manner.	**Design-Build Executive Committee**
Design-Build Coordinator	Responsible for providing a direct channel of communication and vital coordination role between construction, design, and maintenance disciplines throughout the Project	**Design-Build Manager** [Design Manager, Construction Manager]
ROW Manager	Responsible for all acquisition and relocation coordination and compliance requirements pursuant to Schedule 18 of the Project Agreement.	**Deputy Design-Build Manager**

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Construction Team Roles and Responsibilities		
Title of Key Personnel or other Positions	**Responsibility**	**Reports to** [Additional Coordination Inside of the FRMG Organization with]
Civil Rights Program Manager	Responsible for the day-to-day operational components of (and serving as the primary contact to) the Department for all matters and requirements concerning: a. Davis-Bacon and related issues b. equal employment opportunity c. Title VI of the Civil Rights Act d. Americans with Disabilities Act e. compliance with certain Federal Law requirements relating to the matters set out in Parts I through V of Appendix H to Schedule 15 f. small business participation and workforce development g. community development programs	**Deputy Design-Build Manager**
Senior Project Engineer	Responsible for oversight of survey; coordination with the railroad(s); project controls functions related to document control, job cost, estimating, and quantities. Also, responsible for design and approvals of temporary works such as shoring, falsework, slope stability, critical lifts plans, and other similar construction engineering matters.	**Design-Build Manager** [Construction Manager]
Business Manager	Responsible for the business needs of the Lead Contractor, including items such as accounts payable/receivable, payroll, IT, subcontract administration, and hiring of personnel.	**Deputy Design-Build Manager**
ITS/Tolling Manager	Responsible for coordination between Developer and the Department, supporting ICQM, ensuring compliance with ITS/Tolling requirements, leading ITS/Tolling cross disciplinary design reviews, and quality control of ITS/Tolling elements.	**Deputy Design-Build Manager**
Area 1 Manager	Responsible for ensuring construction of project between I-25 and Colorado Blvd. is built in compliance with the Project Agreement. Responsible for all resources, scheduling, quality, and safety within the limits of Area 1.	**Construction Manager**
Area 2-5 Manager	Responsible for ensuring construction of project between Colorado Blvd. and Chambers Road is built in compliance with the Project Agreement. Responsible for all resources, scheduling, quality, and safety within the limits of Areas 2-5.	**Construction Manager**
MOT Manager	Responsible for the implementation of the Traffic Management Plan (TMP) and ensuring that all MOT work is planned, communicated, and executed in accordance with Section 2, Schedule 10 of the Project Agreement.	**Construction Manager**
Other Construction Personnel		
MOT Superintendent	Responsible for overseeing the direct supervision of the craft labor foreman, crews and Subcontractors in the implementation of traffic control on the Project.	**MOT Manager**

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Construction Team Roles and Responsibilities		
Title of Key Personnel or other Positions	**Responsibility**	**Reports to** [Additional Coordination Inside of the FRMG Organization with]
MOT Field Engineers	Responsible for supporting the MOT superintendent in scheduling materials deliveries, tracking quantities, reviewing craft timecards, generating work plans, coordinating with quality, managing submittals, writing and tracking RFIs, and marking red-line drawings.	**MOT Manager**
Railroad Coordinator	Responsible for overall coordination with the railroads. This includes, but is not limited to, pre-construction conferences, utility relocations within RR ROW (in coordination with the Utilities Manager), right-of-entry agreements, construction scheduling, requests for railroad flagging, and coordinating between design and railroad(s) for all rail work and railroad structures.	**Senior Project Engineer**
Construction Design Engineer	Responsible for design of temporary works such as shoring, falsework, review of critical crane picks, and other temporary construction engineering	**Senior Project Engineer**
Project Survey Coordinator	Responsible for all survey Activities required to be carried out, including directing and reviewing all such activities, being the point of contact for all such activities, and supervising the execution of all such activities.	**Senior Project Engineer**
Survey Party Chiefs	Responsible for layout of survey on the project directed by Project Survey Coordinator.	**Project Survey Coordinator**
Project Controls Manager	Responsible for oversight of the document control process, including training for all members of the project, setting up and enforcing internal administrative procedures, oversight of project fiscal matters, and quantification of Work.	**Senior Project Engineer**
Area Project Engineer (Area 1 and Area 2-5)	Responsible for overseeing all Field Engineers in a geographic area of the project, specifically Area 1 and Area 2-5.	**Area Manager**
Discipline Managers (Drainage & Utility, Earthworks, Structures, Paving/Roadway, Walls, L&A/Cover, Demolition, MEP)	Responsible for all work within area of responsibility and within specific discipline, reporting to Area Manager. Provides oversight for discipline Superintendents for planning, scheduling, and implementing all work for that specific discipline. Ensures coordination of short interval schedule with Process Quality Control and Independent Quality Control. For oversight of Subcontracted work, Discipline Manager is responsible to manage subcontract to ensure the Subcontractor is performing all Work in accordance with the Project Agreement, including schedule progress, material submittals, and quality control requirements.	**Area Manager**

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Construction Team Roles and Responsibilities		
Title of Key Personnel or other Positions	**Responsibility**	**Reports to** [Additional Coordination Inside of the FRMG Organization with]
Discipline Specific Superintendents (Drainage & Utility, Earthworks, Structures, Paving/Roadway, Walls, L&A/Cover, Demolition, MEP)	Responsible for overseeing the direct supervision of craft labor foreman and crews. Responsible for ensuring that labor, equipment, and material resources are applied to the schedule to complete work outlined in short interval schedule. Acts as the front-line interface with quality control to ensure completion of hold points. Coordinates with discipline Field Engineers for support for scheduling material deliveries, tracking quantities, coordinating with quality, managing submittals and work plans, and writing and tracking RFIs.	**Area Manager**
Craft Foremen	Responsible for the field execution of the work, reporting directly to the Superintendent. Responsibilities include enforcing and overseeing the safety program as it relates to their crews, working with quality inspection to ensure work is documented to have been constructed in accordance with plans and specifications, and participating in pre-work meetings to ensure a thorough understanding of the work plan prior to commencement of operations.	**Discipline Specific Field Superintendents**
Discipline Field Engineers (Drainage & Utility, Earthworks, Structures, Walls, Cover, Paving/Roadway)	Responsible for supporting Discipline Superintendents in scheduling materials deliveries, tracking quantities, reviewing craft timecards, generating work plans, coordinating with quality, managing submittals, writing and tracking RFIs, and marking red-line drawings.	**Area Project Engineer**
Equipment Manager	Responsible for overall management of the Lead Contractor's rolling stock, including all trucks and heavy equipment.	**Construction Manager**
Warehouse/Parts Manager	Responsible for maintaining warehouse inventory for rolling stock and stocking the warehouse with construction small tools and consumables such as shovels, saws, ribbon, form hardware, and related items.	**Equipment Manager**
Purchasing Agent	Responsible for supporting the Warehouse/Parts Manager in maintaining warehouse inventory. Writes purchase agreements, tracks inventory, checks out tools to craft, and provides similar functions in maintaining project inventory.	**Warehouse Manager**
Master Mechanic	Responsible for maintaining the equipment fleet on the project in good working order. Ensures that deficiencies reported on daily equipment inspection forms are repaired in a timely manner, services equipment on regularly scheduled intervals, checks all wear parts, and provides other duties to ensure equipment is in safe working order.	**Equipment Manager**
Railroad Coordination Engineer	Responsible for acting as the interface between FRMG and Railroads in coordinating design reviews/approvals, permitting, and ensuring compliance with Railroad safety policies. Collaborates with Railroad workforces for track shifts to tie to our sequence of work, and schedule track outages, Railroad flaggers, and access permits.	**Railroad Coordinator]**

Construction Team Roles and Responsibilities		
Title of Key Personnel or other Positions	**Responsibility**	**Reports to** [Additional Coordination Inside of the FRMG Organization with]
Design-Build Coordinators (Drainage, Roadway, Structures, Wall, L&A/Cover, and Wet Utilities)	Responsible for providing a direct channel of communication and a vital coordination role among construction, design, and maintenance disciplines with respect to their individual disciplines.	**Area Manager**
Small and Disadvantaged Business Participation Plan Coordinator	Responsible for establishing and maintaining the compliance information gathering and reporting processes, as well as ensuring that DBE/ESB firms receive the assistance and training they need to excel on this Project. Will seek out and assist interested DBE and ESB firms in the prequalification process and use of FRMG's contract database and iSqFt. Will respond to DBE and ESB inquiries and concerns, and proactively work with our Project team to address issues before they escalate. Will meet on a regularly scheduled basis with the Department regarding DBE/ESB issues and approvals, and will submit a monthly log of phone calls, meetings, and other contacts with DBE and ESB firms for tracking purposes. Will schedule and conduct meetings with the Department to address any issues or concerns and annually review FRMG Project procedures regularly for effectiveness, and will recommend any necessary adjustments as the Project progresses.	**Civil Rights Program Manager**
Workforce Development Plan Coordinator	Responsible for (i) job matching and job coaching; (ii) screening current employees for potential enrollment in the OJT program; (iii) implementing and tracking trainees in OJT program and Local Hiring Goals; and (iv) identifying resources and referring employees to organizations that support job coaching or other resources they require, such as transportation, equipment, and childcare. Coordinates support services.	**Civil Rights Program Manager**
Office Manager	Responsible for acting as the point person for duties such as Maintenance, Mailing, and Supplies; organizing the office layout; and ordering stationery and equipment. Will ensure the office remains in good condition and will arrange necessary repairs. Will organize office operations and procedures, and provide general support to visitors.	**Business Manager**
Receptionist	Will serve visitors by greeting, welcoming, directing, and announcing them appropriately; will answer, screen, and forward any incoming phone calls, while providing basic information when needed. Will receive and sort daily mail/deliveries/couriers. Will maintain security by following procedures and controlling access via the reception desk and will update appointment calendars and schedule meetings/appointments. Will perform other clerical receptionist duties such as filing, photocopying, collating, faxing, etc.	**Office Manager**

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Construction Team Roles and Responsibilities		
Title of Key Personnel or other Positions	**Responsibility**	**Reports to** [Additional Coordination Inside of the FRMG Organization with]
Payroll Clerk	Will collect and verify timekeeping information for all employees and will initiate periodical timely payments either by preparing and administering checks or making direct deposits through a bank payment system. Will issue statements and invoices, and maintain records. Will investigate and resolve any discrepancies in payroll, and will prepare and submit reports with payroll information to supervisor.	**Business Manager**
Administrative Clerk (Payroll)	Responsible for performing clerical and administrative duties at the direction of the Payroll Clerk.	**Payroll Clerk**
A/P Clerk	Will process accounts and incoming payments in compliance with financial policies and procedures. Will perform day-to-day financial transactions, including verifying, classifying, computing, posting, and recording accounts receivables data. Will prepare bills, invoices, and bank deposits.	**Business Manager**
Employment Recruiter	Will design and implement the overall recruiting strategy, including sourcing and attracting candidates by using databases, social media, etc. Will conduct interviews and filter candidates for open positions. Will assure that all recruiting complies with Federal, state and local employment law including EEOC regulations.	**Business Manager**
IT Engineer	Will manage and monitor all installed systems and infrastructure and install, configure, test, and maintain operating systems, application software and system management tools. Will monitor and test application performance for potential bottlenecks, identify possible solutions, and work with developers to implement those fixes. Will maintain security, backup, and redundancy strategies.	**Business Manager**
Contract Manager	Will ensure consistent management of all proposals and contracts. Will oversee organizational contract development and management activities, and will enforce organizational principles of integrity and compliance. Will ensure that contracts and proposals are properly entered organizational databases and securely maintained. Will develop standards for contracts, including presentation of budget, payment terms, general language, and provisions. Will draft contractual provisions based on strategy discussions, senior management input, and organizational needs and expectations. Will ensure accuracy and appropriateness of contract text and attachments. Will serve as primary organizational contact during contract negotiations and will review contractual performance of both parties to ensure compliance with	**Business Manager**

Construction Team Roles and Responsibilities		
Title of Key Personnel or other Positions	**Responsibility**	**Reports to** [Additional Coordination Inside of the FRMG Organization with]
	terms and identification of conflicts or changes requiring resolution at contract renewal.	
Administrative Clerk (Contract)	Will perform clerical and administrative duties at the direction of the Contract Manager.	**Contract Manager**
Subcontracts Engineer	Will draft Subcontract agreements and scrutinize Subcontractor invoices. Will monitor progress of Subcontract Works/Services and manage Subcontract closeouts.	**Contract Manager**
Lead Scheduler	Will coordinate all scheduling activities until Final Acceptance (as required in Section 3 of Schedule *) Will prepare, progress, revise and submit Project Schedules.	**Deputy Design-Build Manager**
Schedule Technician	Will perform tasks related to the collection, input, and evaluation of data required to monitor project schedules. Will assist in developing, updating, and maintaining the project's CPM schedule, as well as any other look-ahead schedules (including Three Week Look-Ahead) for portions of the project. Will assist in analyzing work progress and identifying any discrepancies between the planned and actual progress, and will perform additional assignments per supervisor's direction.	**Lead Scheduler**
Document Control Manager	Will oversee document management systems, Manage the accuracy and integrity of business documents throughout the document life cycle (including filing, archiving, retrieving, purging, and destroying).	**Project Control Manager**
Administrative Clerk (Document Control)	Will perform clerical and administrative duties at the direction of the Document Control Manager.	**Document Control Manager**
Cost/Office Engineer	Will ensure that field personnel use correct costs. Will collect all RFIs and construction submittals that have been prepared by the field personnel and submit them for delivery to the required parties.	**Project Control Manager**
Estimators	Will collect and analyze data to estimate the time, money, materials, and labor required to prepare construction tasks.	**Project Control Manager**
Quantity Engineers	Will provide takeoffs to be used by the estimators.	**Estimators**

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1.1.d. Quality Organizational Chart and Description

FRMG's executive management has the primary responsibility for ensuring that all quality functions necessary to meet the requirements and standards of the Project Agreement are met, including appropriate ensuring roles, responsibilities, and levels of authority are defined throughout FRMG's organization via the organizational structure and documented. FRMG's responsibility and authority for the organization is detailed within the Stage 1 QMP and Stage 2 QMP including appropriate measures to demonstrate compliance to the Department. Responsibility and authority within our organization has been proposed to facilitate the resolution of any issues at the lowest appropriate level of responsibility while maintaining transparency throughout the organization.

To further ensure the successful implementation of the QMP, FRMG executive management has the responsibility to ensure Process Control and Independent Quality Control personnel have the appropriate education, training, and experience to meet the requirements of the Project Agreement and has established the following positions and responsibilities to deliver the QMP as detailed herein.

Organizational Chart

Figure 6, Project Quality Organization Chart, demonstrates FRMG's understanding in delivering an effective Quality Program that ensures the Work meets the requirements of the Project Agreement. The Quality Organization Chart shows the hierarchy of FRMG's Quality Organization. Solid lines show authority and reporting structure. Dotted lines show coordination and communication relationships. Changes to the organization structure will be distributed to the FRMG team and the Department.

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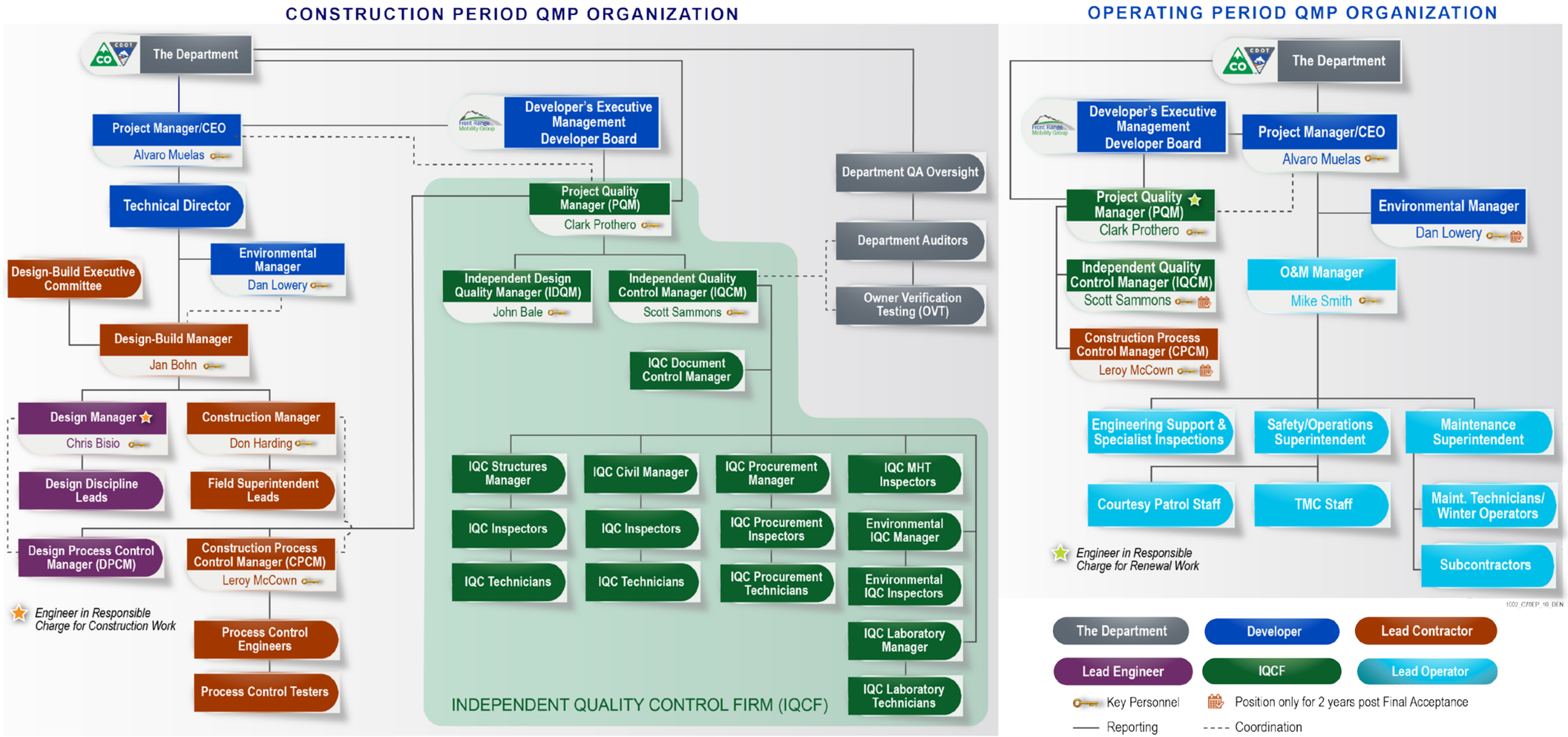
Figure 6. Project Quality Organization Chart.



Quality Team Roles

Quality Team Roles and Responsibilities during the Construction Period		
Title of Key Personnel or other Positions	**Responsibility**	**Reports to** [Additional Coordination Inside of the FRMG Organization with]
Key Personnel as per Project Agreement (Schedule 27)		
Project Quality Manager (PQM)	The PQM is part of the Developer's management team, responsible for overall quality management of the Project. The PQM has the authority to suspend Work and provides monthly certification that Work is being performed in compliance with Law and the Project design. Additional Areas of Responsibility include: • Serves as the primary point of contact to the Department for all issues related to the QMP, including its preparation, implementation, review, and updates • Reports on the performance of the QMP to FRMG's Executive Management and the Department for review and continual improvement of the QMP • Provides all final checks, approvals, and monthly certifications related to quality • Assures, certifies, and provides documented evidence that the Works meets the requirements of the Project Agreement • Has overall authority and responsibility for the success of the QMP • Ensures that appropriate authority and responsibilities are assigned and communicated throughout the QMP • Ensures the QMP is established, implemented, and maintained • Has direct supervisory responsibility for the IDQM, the IQCM, and their staff • Has NO authority for the management and production of the design or construction of Work • Approves RFC Documents prior to release • Provides overall coordination and responsibility for the construction IQC and PC programs • Coordinates resolution of quality issues among design, construction, and the Department • Documents the completion of any Nonconforming Work Remedy and (if applicable) any Corrective Action, once accomplished; will promptly notify the Department so it can perform its verification	**The Department, Developer's Executive Management** [Project Manager/CEO]

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Quality Team Roles and Responsibilities during the Construction Period

Title of Key Personnel or other Positions	Responsibility	Reports to [Additional Coordination Inside of the FRMG Organization with]
Independent Design Quality Manager (IDQM)	Responsible for all design QC activities for the Work. FRMG's IDQM is a registered professional engineer (PE) in Colorado, who is employed by the IQCF and has the following responsibilities: • Assure that the methods, QC, and process control (PC) procedures contained in the approved Stage 1 QMP are implemented and followed by FRMG's design team, Subcontractors, fabricators, Suppliers, and vendors in the performance of the Work • Perform periodic audits of the Lead Engineer's quality activities; these will address alignment with the Stage 1 QMP and Appendices and compliance with Project Agreement requirements • Has NO authority for the management, production, or scheduling of the Construction Work • Ensures that applicable sections of the QMP are implemented and followed by FRMG, Subcontractors, fabricators, Suppliers, and vendors in performance of the Work • Review and approve the QMP prior to submittal to the Department • Has the authority to Stop Work that does not comply with the requirements of the Project Agreement	**Project Quality Manager**
Design Process Control Manager (DPCM)	Responsible for all design process control activities, including: • Ensure that the Stage 1 QMP is being implemented, that appropriate training is being provided, and that the requirements of the Stage 1 QMP are being followed • Review and approve the QMP prior to submittal to the Department • Facilitate compliance of design work with the requirements of the Project Agreement and the Approved QMP • Establish and enforce the Lead Engineer's quality processes and procedures • Provide and manage appropriate technical personnel for design process controls and quality activities • Ensure the adequacy and enforcement of quality procedures and processes for design work • Establish and implement control procedures that direct design work performed by subconsultants and FRMG Subcontractors meet the requirements of the Stage 1 QMP and the Project Agreement • Report regularly to FRMG's Executive Management regarding the status of the Stage 1 QMP and its activities	**Project Quality Manager** [Design Manager]

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Quality Team Roles and Responsibilities during the Construction Period

Title of Key Personnel or other Positions	Responsibility	Reports to [Additional Coordination Inside of the FRMG Organization with]
	• Ensure that design quality records are properly prepared, completed, maintained, and delivered to the Department, as required by the Project Agreement, to provide evidence of PC and IQC activities performed and quality results achieved • Ensure that Design quality staff are independent of Lead Engineer's production staff and regularly report to the DPCM regarding design quality activities • Continually promote awareness of the requirements of the Stage 1 QMP and the Project Agreement throughout the Design organization The DPCM has no responsibility or authority with respect to the performance of design work but does have the authority to stop design work that does not comply with the requirements of the Project Agreement. This includes activities to ensure the quality of the design work, including: • Identify, evaluate, and document quality problems • Initiate action to prevent occurrence of nonconforming design work • Recommend or initiate quality improvement solutions through established organizational channels • Ensure the implementation of quality improvement solutions When nonconforming design work is identified, stop all design work that is affected by the Nonconforming Work until the deficiency is corrected	
Construction Process Control Manager (CPCM)	Responsible for ensuring all methods and procedures contained in the approved Stage 2 QMP are carried out on the Project; will have the authority to suspend Work. Additional Areas of Responsibility include: • Review and approve the QMP prior to submittal to the Department • Has NO authority for the management and production of the construction of Work • Ensure the construction-related methods and procedures of the QMP are implemented and followed by FRMG, Subcontractors, fabricators, Suppliers, and vendors in performance of the Work both on- and off-site • Provide overall coordination and responsibility for the construction PC program • Provide coordination and distribution of construction PC and IQC procedures, standards, and guidelines	**Project Quality Manager** [Construction Manager]

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Quality Team Roles and Responsibilities during the Construction Period

Title of Key Personnel or other Positions	Responsibility	Reports to [Additional Coordination Inside of the FRMG Organization with]
	• Develop PC inspection and tests procedures for, along with verification and logging of, PC personnel qualifications • Coordinates resolution of quality issues between design, construction, and the Department • Trains personnel in quality procedures and specific responsibilities in the PC process • Informs the PQM of the Project quality status during construction **Functional Responsibility:** The CPCM promotes quality through training, in-process inspection, and enforcement of policies/procedures. Additionally, the CPCM assists in the management of the NCR process and monitors resolution of NCRs in accordance with CQP-0130_Nonconforming_Items. **Inspection:** The CPCM audits the PC inspection program, including inspection documentation for adequacy and conformance to the Stage 2 QMP, as a basis for the monthly Project report. On a random basis, the CPCM or designee(s) audits specific PC inspection processes. **Testing:** The CPCM audits the PC materials testing program, including documentation for adequacy and conformance to the Stage 2 QMP. The CPCM or designee will coordinate in process testing of the work with a qualified testing agency or in-house technician. Prior to NTP 2, the CPCM will obtain the American Society for Quality (ASQ) certification as either a Quality Inspector, Quality Engineer, or Manager of Quality.	
Independent Quality Control Manager (IQCM)	Responsible for managing all independent Quality Control aspects contained in the approved Stage 2 QMP carried out on the Project, including having authority to suspend Work. Additional Areas of Responsibility include: • Review and approve the QMP prior to submittal to the Department • Has NO authority for the management and production of the construction of Work • Has the authority to stop work that does not comply with the requirements of the Project Agreement • Establishment, implementation, and update of the QMP • Overall coordination and responsibility for the construction IQC program	**Project Quality Manager** [Department Auditors, Owner Verification Testing]

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Quality Team Roles and Responsibilities during the Construction Period		
Title of Key Personnel or other Positions	**Responsibility**	**Reports to** [Additional Coordination Inside of the FRMG Organization with]
	• Coordination and distribution of construction IQC and PC procedures, standards, and guidelines • Development of IQC inspection and test procedures verification of and logging of IQC personnel qualifications • Coordination of quality issues between design, construction, and the Department • Training personnel in quality procedures and specific responsibilities in the QA process • Informing the PQM of the Project quality status during construction **Functional Responsibility:** The IQCM conducts regular audits of the Stage 2 QMP, including documentation, testing, and inspection. In addition, the IQCM performs statistical analysis of IQC test data. The data will be made available to the Department and the PQM. The IQCM identifies and verifies the completion of NCRs. **Inspection:** The IQCM audits the IQC inspection program, including inspection of documentation, for adequacy and conformance to the QMP. On a random basis, the IQCM or his/her designee(s) audits specific PC inspection processes. **Testing:** The IQCM audits the IQC materials testing program, including documentation, for adequacy and conformance to the QMP. The IQC testing personnel will perform IQC tests for construction processes and activities. IQC tests will be performed at the frequency recommended by the Project specifications and documents or in accordance with third-party work agreements. Routine laboratory tests, including but not limited to concrete testing, sieve analysis, and material classification, will be performed by or at the direction of IQC testing personnel at frequencies described the CDOT *Field Materials Manual*. **Audits:** The IQCM performs audits of IQC documents to assure that construction performed is in conformance with the Project Agreement. The PQM will conduct periodic reviews to determine that the QMP and the measures therein are functioning properly and are being followed. Prior to NTP 2, the IQCM will obtain the American Society for Quality (ASQ) certification as either a Quality Inspector, Quality Engineer, or Manager of Quality.	

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Quality Team Roles and Responsibilities during the Construction Period		
Title of Key Personnel or other Positions	**Responsibility**	**Reports to** [Additional Coordination Inside of the FRMG Organization with]
Other Quality Staff		
PC Testing Personnel	All PC testing personnel performing concrete and hot bituminous pavement process control tests will meet the requirements of Section CP-10 of the CDOT *Field Materials Manual*.	**Process Control Engineer**
IQC Testing Personnel	All IQC testing personnel performing concrete and hot bituminous pavement process control tests will meet the requirements of Section CP-10 of the CDOT *Field Materials Manual*. All IQC testing personnel performing tests for pre-stressed and precast products will be qualified in accordance with Section 3.0 of the CDOT *Staff Bridge Fabrication Inspection Manual, Fabrication Inspection of Pre-Stressed and Precast Concrete Products*. IQC testing personnel have the authority to stop work that does not comply with the requirements of the Project Agreement.	**Independent Quality Control Manager**
IQC Inspection Personnel – Structural Steel Fabrication	All IQC Inspection Personnel performing inspections for pre-stressed and precast products will be qualified in accordance with Section 3.0 of the CDOT *Staff Bridge Fabrication Inspection Manual, Fabrication Inspection of Pre-Stressed and Precast Concrete Products*. All IQC Inspection Personnel performing fabrication inspections of structural steel elements will be qualified in accordance with Section 4.0 of the CDOT *Staff Bridge Fabrication Inspection Manual, Fabrication Inspection of Structural Steel Items for CDOT Roads and Bridge*. IQC testing personnel have the authority to Stop Work that does not comply with the requirements of the Project Agreement.	**Independent Quality Control Manager**
Design team Roles and Responsibilities		
Process Control Engineers	Responsible for overseeing the PC testing and inspections per the QMP and within their respective areas of work, as well as for receiving inspections and ensuring that FRMG team members have the correct submittals and Certificates of Compliance (COC).	**Construction Process Control Manager**
PC Testers	Responsible for performing the PC testing per the QMP and within their respective areas of work.	**Process Control Engineers**
IQC Document Control Manager	Responsible for managing the document control efforts for the IQC work, including receiving, storing, transmitting, and tracking documents. Also, responsible for transmittals, submittals, and correspondence of quality records for the Construction Work. This includes ensuring that quality documents are regularly uploaded from ELVIS to Aconex. Responsible for the Control of Documents and Records associated with the QMP.	**Independent Quality Control Manager**

Quality Team Roles and Responsibilities during the Construction Period		
Title of Key Personnel or other Positions	**Responsibility**	**Reports to** [Additional Coordination Inside of the FRMG Organization with]
IQC Discipline Managers: Structures, Civil, Procurement, Environmental,	Responsible for managing the IQC inspections and testing functions per the QMP and within their respective areas, including structures, civil, procurement, and environmental.	**Independent Quality Control Manager**
IQC Inspectors: Structures, Civil, Procurement, MHT, Environmental	Responsible for performing the IQC inspection functions per the QMP and within their respective areas, including structures, civil, procurement, MHT, and environmental.	**IQC Managers**
IQC Technicians: Structures, Civil, Procurement,	Responsible for performing IQC testing functions per the QMP and within their respective areas of work, including structures, civil, procurement, and environmental.	**IQC Inspectors**
IQC Laboratory Manager	Responsible for managing the laboratory for IQC testing per the QMP. This includes equipment calibrations; technician training and qualifications; maintaining laboratory accreditations (AMRL, CCRL, ASTM); participation on proficiency sample processes; and audits.	**Independent Quality Control Manager**
IQC Laboratory Technicians	Responsible for performing the IQC testing for all required areas of work in accordance with the QMP and Project Agreement.	**IQC Laboratory Manager**

Quality Personnel Review and Approval of QMP Prior to Submittal to the Department

The Quality Management Team (PQM, IQCM, IDQM, CPCM, and DPCM) will review and approve the Stage 1 and Stage 2 QMPs prior to submittal to the Department for review and Approval. The Quality Management Team has the responsibility to assure, certify, and provide documented evidence that the Work meets the requirements of the Project Agreement. The PQM reports the status of Work conformance monthly to the Department.

FRMG Responsibility for Personnel Performing Work

FRMG has the responsibility to ensure that personnel performing Work have the education, skills, and experience to meet the requirements of the Project Agreement. Personnel records of qualification will be kept as a quality record and stored in Aconex in accordance with FRMG document control processes.

The responsibilities of personnel who manage, perform, and ensure the quality of the Work include:

- Initiate risk-based thinking and actions appropriate to prevent Nonconforming Work
- Identify, evaluate, and document quality concerns
- Make recommendations or initiate actions to improve quality of the Work
- Stop Work that is affected by (or affects) identified Nonconforming Work

1.1.e. Operations and Maintenance (O&M) Organizational Chart

The organizational charts depicted below in **Figure 7** and **Figure 8** indicate the personnel required for the O&M Work During Construction and O&M Work After Construction, including activities related to Emergency and Incident response, routine operating and maintenance activities and Renewal Work. FRMG will provide management, supervision, professional, and technical services; quality control; labor; materials; utilities; and equipment to perform all the duties and obligations to operate and maintain the Project in the O&M Limits during the Operating and Construction Periods. It will do this by utilizing internal expertise and/or qualified Subcontractors to satisfy all requirements of the Project Agreement largely detailed in Schedule 11 Operations and Maintenance Requirements and Schedule 12 Handback Requirements.

FRMG will employ similar strategies for O&M Work During Construction (Figure 7) and O&M Work After Construction (Figure 8). Staffing requirements and organizational structure will reflect the specific needs and challenges of each stage, as indicated in the charts below. As detailed in Section 1.1.a above, the Lead Contractor will have day-to-day responsibility for the O&M Work During Construction, given the critical need for a coordinated and synchronized application of O&M and construction operations during the Construction Period to provide safe and efficient delivery of both and to avoid interface related disruptions. This need is amplified on the Project's corridor due to the high-volume traffic conditions, phasing and the complexity of traffic management required for construction of the Cover, demolition of the viaduct and the varying O&M Limits During Construction (compared to solidified O&M Limits After Construction).

For this reason, O&M during Construction will be performed by the Lead Contractor under the oversight of the Design-Build Manager, who will report to the Project Manager/CEO, with additional support and oversight provided by the Developer and the O&M Manager.

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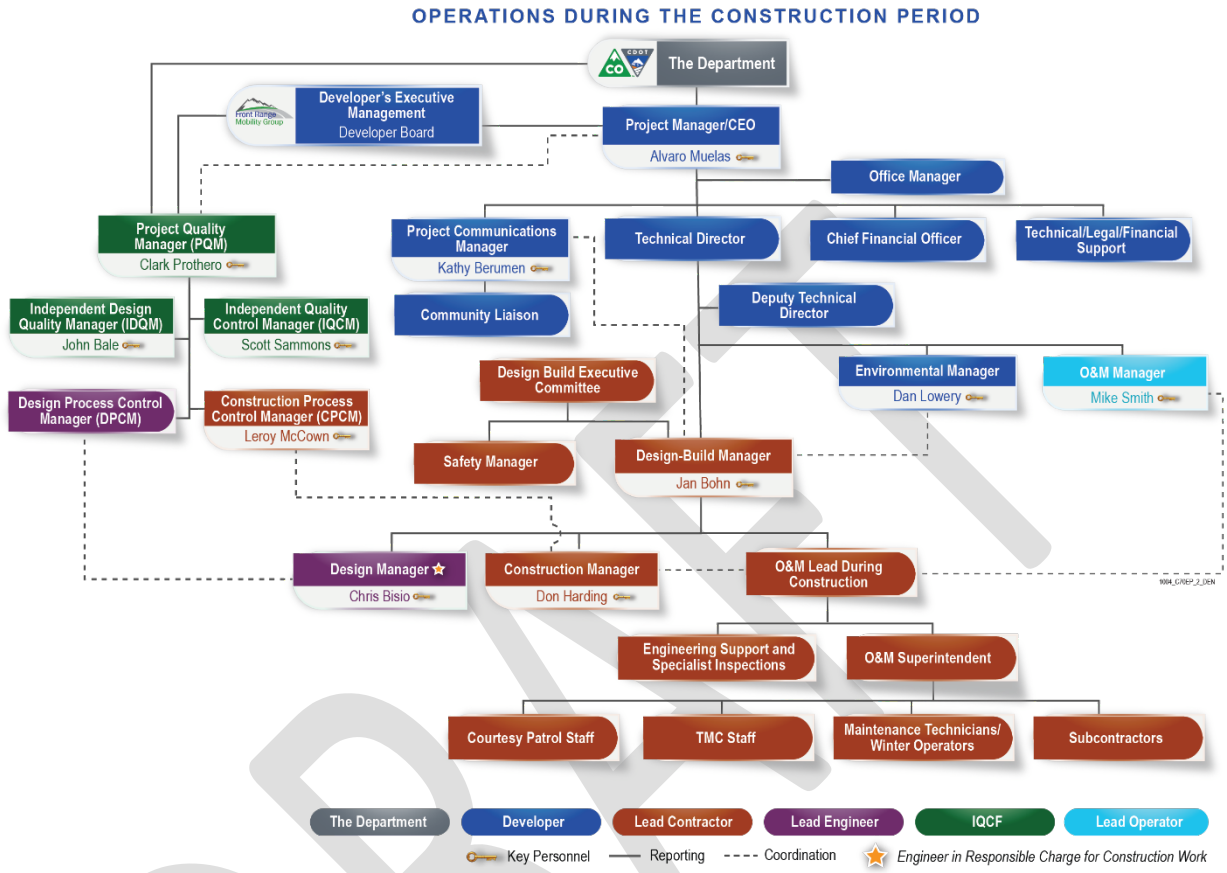
Figure 7 Operations and Maintenance Organization Chart – Construction Period



During the Operating Period, the Developer will provide oversight of all O&M Work performed by the Lead Operator and will retain the obligation to deliver major Renewal Work activities such as pavement renewals. These Renewal Works will be subcontracted to contractors qualified to perform such work for the Department. Oversight of this work, including engagement of appropriate engineering and quality support, will be performed by the Project Manager/CEO with coordination and assistance from the O&M Manager and specialist inspectors responsible for providing condition assessments. Additionally, the PQM and IQCM (through two years following Final Acceptance) will continue to play an important role in the quality process, overseeing the Quality Management Program and liaising with the O&M Manager and Project Manager to implement strategic Project quality goals.

Routine maintenance and minor rehabilitation items will be performed by the Lead Operator under the direction and oversight of the O&M Manager. The Maintenance Superintendent will assist the O&M Manager and perform field oversight, direction, and inspection of repairs performed by in-house maintenance technicians and Subcontractors working on the Project.

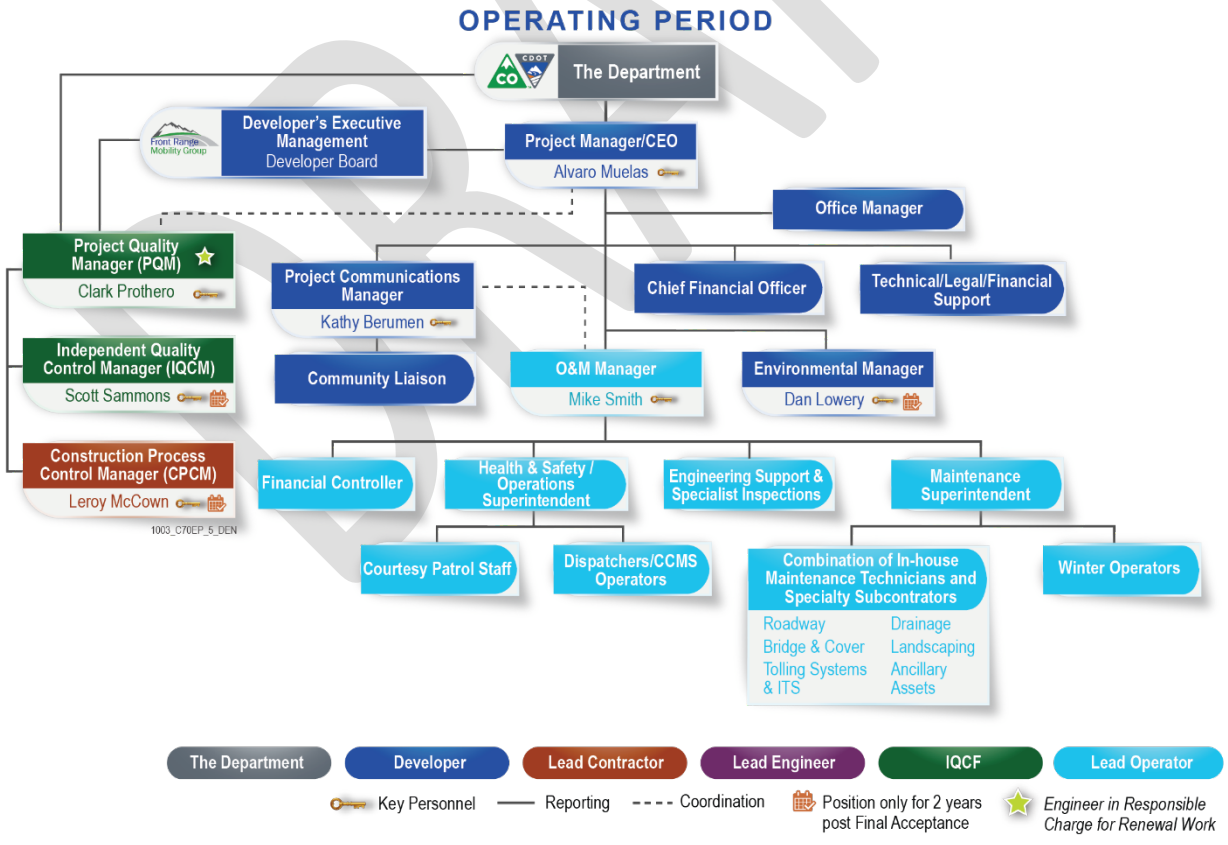
The O&M Manager will oversee the specialist inspection firms performing required inspections and condition assessments that require qualifications beyond those of in-house staff. These

specialists' inspections include items such as onboard pavement testing and structures inspections. The O&M Manager will provide all specialist inspection results to the Project Manager/CEO for purposes of oversight, as well as to provide needed information related to Renewal Work.

Emergency and Incident response activities are detailed in the draft Operations Management Plan (Appendix H). During the Operating Period, the Health & Safety/Operations Superintendent will oversee the FRMG courtesy patrol drivers (Courtesy Patrol), as well as the dispatch staff/CCMS Operators. All relevant staff, including maintenance technicians, Courtesy Patrol drivers, and winter maintenance operators will participate in an on-call program whereby additional off-hours resources are available for any major incidents and Emergency repairs 24 hours a day, seven days a week. A comprehensive training program will ensure that all such staff has adequate preparation for the performance of Emergency work on an open high-speed facility.

The O&M Work for roadway, drainage, bridge, tolling systems, and Intelligent Transportation Systems (ITS) discipline leads for any O&M related Work will be the responsibility of the Operations and Maintenance Superintendents during the Construction Period; it will be the responsibility of the Health & Safety/Operations Superintendent and Maintenance Superintendent during the Operating Period.

Figure 8. Operations and Maintenance Organization – Operating Period.



The O&M staff that will be in place during both the Construction and Operating Periods is detailed in the tables below.

O&M Team Roles and Responsibilities during the Construction Period		
Title of Key Personnel or other Positions	**Responsibility**	**Reports to** [Additional Coordination Inside of the FRMG Organization with]
Key Personnel as per Project Agreement (Schedule 27)		
O&M Manager	Responsible for ensuring that all O&M Work requirements of the Project Agreement are met. During the Construction Period, this Manager retains oversight responsibility, but the O&M Lead During Construction will be responsible for the day-to-day activities on the Site. Additional Responsibilities for the O&M Manager during Construction will include: Liaise with the Department on an ongoing basis to address all concerns related to the Project Interface with design and construction to ensure all Work during the Construction Period meets maintainability and Handback requirements. Oversee the ongoing implementation of corrective and preventative actions, and continuously monitor the QMP for improvement opportunities Liaise with the Department on an ongoing basis to address and resolve any quality concerns	**Technical Director**
Other O&M Managers and Staff		
O&M Lead During Construction	Responsible for the day-to-day coordination and oversight of O&M activities during the Construction Period to assure complete coordination with all construction activities. Responsibilities will include: • Make certain all individuals have enough information to undertake the task they are responsible for • Ensure adequate personnel are assigned to the Project to meet the requirements set out in the Project Agreement for the O&M Work • Ensure the completion of ongoing inspections, maintenance and production, and submission of the required reporting as outlined in the Technical Requirements • Oversee assessment of assigned personnel to ensure they meet the required qualifications and experience • Oversee assessment of retained material testing laboratories and inspecting firms to ensure they meet the required certification for the task they are responsible for • Ensure O&M Work is completed in accordance with the OMP and MMP • Ensure Work activities in accordance with the Performance and Measurement Criteria During	**Design-Build Manager** [O&M Manager]

O&M Team Roles and Responsibilities during the Construction Period

Title of Key Personnel or other Positions	Responsibility	Reports to [Additional Coordination Inside of the FRMG Organization with]
	Construction (Appendix A-1 of Schedule 11) are achieved • Oversee the ongoing implementation of corrective and preventative actions, and continuously monitor the QMP for improvement opportunities • Identify, monitor, log, address, and resolve quality issues and nonconformance throughout the Operating Period	
Operations & Maintenance Superintendent	Responsible for the following: • Successfully executing all O&M Work by ensuring that safety measures meet or exceed the parameters set out by the corporate safety manual • Ensure all O&M Work as identified in the OMP and MMP satisfies the approved plans, specifications, and applicable codes • Review, maintain, and update the O&M Work Schedule identified in the OMP and ensure milestone and Completion dates are met • Hire and manage both staff and hourly employees to meet the Operations and Maintenance Requirements identified in Schedule 11, as well as the OMP and MMP • Successfully execute all operations by ensuring that safety measures meet or exceed the parameters set out by the safety manual • Review, maintain, and update the O&M Work Schedule identified in the MMP, and ensure milestone and Completion dates are met • Oversee the care and maintenance of heavy equipment and light-duty vehicles on the Project • Assign work orders based on identification and categorization of O&M Defects	**O&M Lead during Construction**
Courtesy Patrol Operators	• Continuously patrol within the Project during peak and non-peak traffic hours and weekends • Provide towing and motorist assistance services • Provide towing services for the Tolled Express Lane(s) and General-Purpose Lane(s) • Provide on-call severe weather emergency or planned Special Event towing services • Quickly locate, assist, and/or remove any disabled vehicles on-site as soon as possible	**O&M Superintendent**
Winter Operators	• Operations of Winter Maintenance Fleet	**O&M Superintendent**
Maintenance Technicians	• Maintenance of Elements • Inspection, Identification, and Categorization of Defects	**O&M Superintendent**
TMC Staff	• Operations and Monitoring of CCMS • Dispatch of FRMG's Courtesy Patrol Vehicles • Logging Maintenance Management Information System data from Maintenance Technicians	**O&M Superintendent**

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Included in the table below is our Operations and Maintenance Management and support personnel during the Operating Period.

O&M Team Roles and Responsibilities during the Operating Period

Title of Key Personnel or other Positions	Responsibility	Reports to [Additional Coordination Inside of the FRMG Organization with]
Key as per Project Agreement (Schedule 27)		
O&M Manager	Responsible for ensuring that all O&M Work and Renewal Work requirements of this Agreement are met. Additional responsibilities include: • Coordinate and oversee all O&M Work to ensure adequate communication within FRMG during the Operating Period • Ensure that all individuals have enough information to undertake the task they are responsible for • Ensure adequate personnel are assigned to the Project to meet the requirements set out in the Project Agreement for the O&M Work • Ensure the completion of ongoing inspections, maintenance and production, and submission of the required reporting as outlined in the Technical Requirements • Liaise with the Department on an ongoing basis to address all concerns related to the Project • Oversee assessment of assigned personnel to ensure they meet the required qualifications and experience • Oversee assessment of retained material testing laboratories and inspection of firms to ensure they meet the required certification for the task they are responsible for • Ensure O&M Work is completed in accordance with the OMP and MMP • Ensure work activities in accordance with performance specifications are achieved • Oversee the ongoing implementation of corrective and preventative actions and continuously monitor the QMP for improvement opportunities • Identify, monitor, log, address, and resolve quality issues and nonconformance throughout the Operating Period • Liaise with the Department on an ongoing basis to address and resolve any quality concerns	**Project Manager/CEO** [Project Communications Manager]
Financial Controller	Full financial responsibility for the Project on behalf of FRMG Responsible for invoicing and payments between Department and Subcontractors	**O&M Manager**
Health & Safety Officer/Operations Superintendent	• The successful execution of all operations by ensuring that safety measures meet or exceed the parameters set out by corporate safety manual	**O&M Manager**

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