VOLUME 2 — TECHNICAL SUBMISSIONS

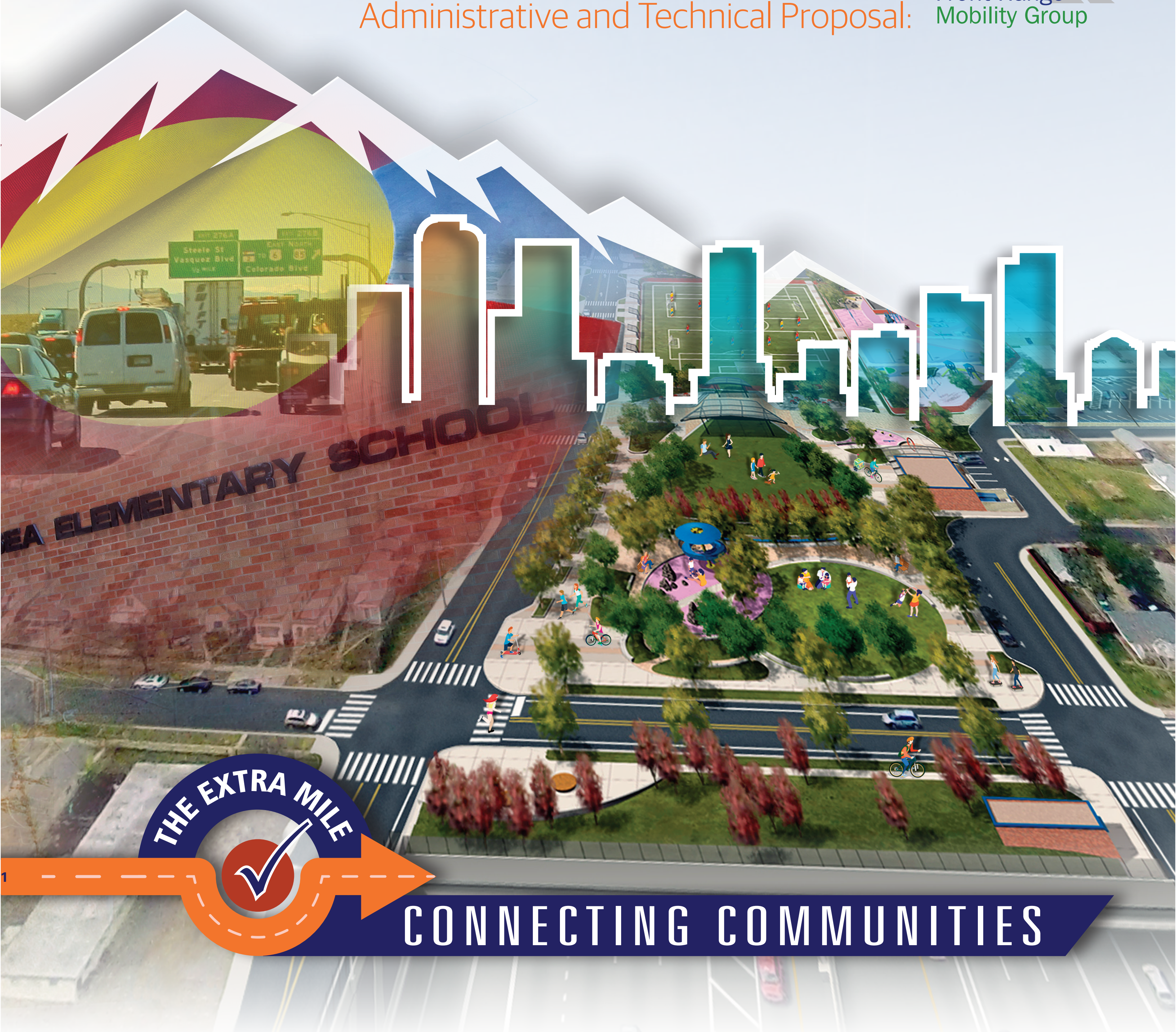
Binder 1 of 18

CENTRAL 70 PROJECT

PUBLIC DISCLOSURE

Administrative and Technical Proposal:

Front Range Mobility Group



Executive Summary

Front Range
Mobility Group

Executive Summary

2.1.1 Executive Summary

THE EXTRA MILE

Front Range Mobility Group (FRMG) was formed with the singular purpose of exceeding CDOT and the Procuring Authorities' goals and expectations for the design, build, finance, operation and maintenance of the Central 70 Project (the Project).

FRMG is a preeminent group of companies from Colorado and around the globe with proven performance delivering large-scale P3 transportation projects. Throughout the procurement, FRMG team members have been co-located in our Denver Project office, collaborating across disciplines to optimize a technical solution that goes "The Extra Mile." Our technical proposal delivers an innovative concept that includes numerous CDOT approved ATCs, including the game changing ATC 65, which provides true value-added benefits, such as a shorter construction period and significantly reduced impacts to the travelling public and the businesses and communities nearby.

FRMG's integrated approach to providing CDOT and the Procuring Authorities with a best value, high quality Project that will be safely executed on time and on budget was driven by our **"EXTRA MILE"** philosophy that ensured all aspects of our Proposal delivered on five key principles:

- QUALITY
- EFFECTIVE SOLUTIONS & DECISION MAKING
- MINIMIZED IMPACTS
- COMMUNITY BENEFITS
- PERFORMANCE & SCHEDULE ENHANCEMENTS

PART 1. Project Management FRMG's approach to the Project is founded upon our commitment to an open and transparent partnership with CDOT and the Procuring Authorities. Throughout the procurement we have consistently worked to not only achieve, but exceed Project goals as evidenced by FRMG's 75 ATCs that were developed in collaboration with CDOT and the Procuring Authorities, several of which are included in our Technical Proposal providing significant, tangible benefits for the Project and its stakeholders.

To successfully implement our technical solution, **FRMG will utilize a fully integrated Project management approach that is based on proven management systems for large-scale infrastructure projects, including projects where our team members have worked together.** Our proposed approach has been successfully implemented by our team members and it benefits from the ongoing improvements and lessons learned from our active and joint participation in the DB and P3 markets. This provides added value to CDOT and the Procuring Authorities and results in an efficiently delivered and optimized solution for the Project. Our overarching Project Management Plan contains all of the necessary systems and processes to successfully manage the Project.

Front Range Mobility Group

FRMG's organizational structure benefits from our team members' shared objectives for the Project's long-term quality and performance, and the inherent alignment of interests that stems from its corporate vertical integration and team member participation at multiple levels of the Project. This structure enables us to achieve an efficient decision making process and ensures that all team members share the common objective of safely delivering a quality project on time and on budget.

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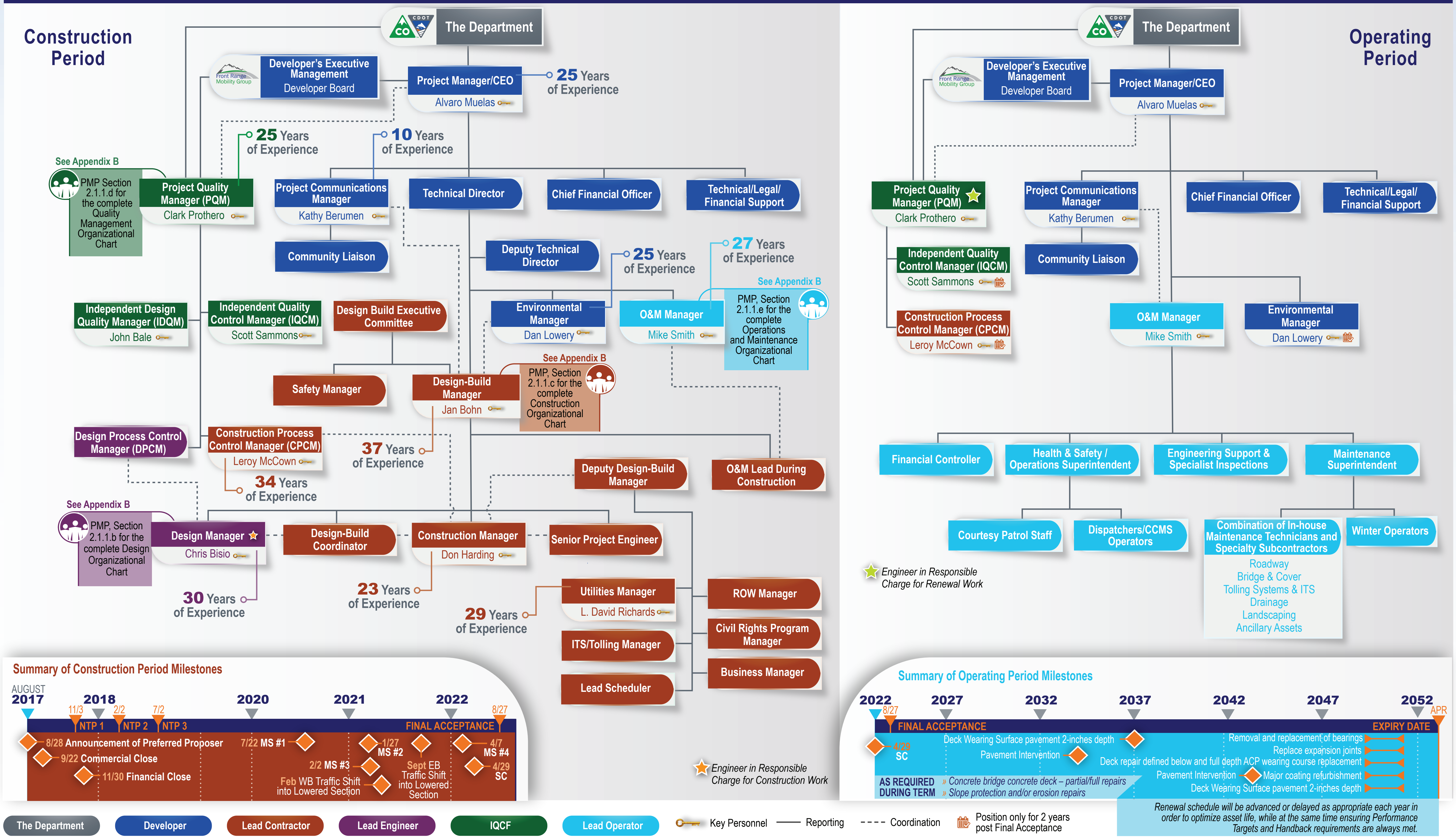
FRMG's KEY PERSONNEL AND MANAGEMENT STAFF BRING THE REQUISITE EXPERIENCE TO SAFELY DELIVER CENTRAL 70 ON TIME AND ON BUDGET



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KEY BENEFITS of FRMG's Approach to Quality

PART 2. Quality Management FRMG's collective experience implementing quality management programs in Colorado and on some of the largest and most complex P3 projects in North America translates to a robust understanding of the quality management needs of this Project, especially the critical role of the independent quality function within the local environment. We are well equipped to effectively resource and implement the approach needed to meet, and exceed, Project requirements. FRMG's approach is to continually emphasize that all team members, from designers and craft workers to senior management, are key members of our quality organization.

Experienced and Local IQCF:
Raba Kistner, Inc. and VIVID Engineering Group, Inc. have provided similar roles on other large, complex DB and P3 projects in Colorado and across the U.S. VIVID is a registered Emerging Small Business in Colorado with an office and laboratory just a few blocks from the Project.

IQCF Laboratory Commitments:
Our IQCF commits to operating an accredited AASHTO, CCRL, and ASTM E329 Laboratory and will participate in CDOT's annual Laboratory Inspection and Round Robin programs.

ISO 9001 Standards:
Although not required, FRMG will commit a certified auditor to perform ISO 9001:2015 compliance audits to provide additional assurance that we are implementing an ISO 9001-compliant program.

ELVIS:
FRMG will use the Engineering and Laboratory Vital Information System (ELVIS) as its primary Electronic Records Management System in conjunction with CDOT's Aconex. Raba Kistner's proprietary system was specifically designed for IQCF functions on major DB/P3 highway projects and is currently in use on multiple $1+ billion projects.

Proven Quality Processes and Procedures:
Our fully developed quality procedures and processes provides a strong foundation for our draft QMP and will streamline the QMP review and approval process.

SIMPLIFIED APPROACH to Traffic Management

PART 3. Maintenance of Traffic (MOT) FRMG will implement a unique and highly optimized approach to MOT and phasing for the Project that minimizes impacts to the traveling public and allocates resources carefully to achieve completion of the Key Milestones. Local connectivity and utility relocations are primary drivers in the design of our phases and staging, and we have developed innovative solutions that reduce traffic shifts and detours, increase safety, and limit construction phasing. We use single-phase construction for a majority of the cross-street bridges to maintain local connectivity for the neighborhoods, as well as shorten the schedule and eliminate segmented construction. Minimizing impacts to the public has been at the heart of our MOT strategy and has driven the sequencing of our Proposal Schedule into specific areas and phases.

Local Connectivity

ATC 65–Allows Full Construction of Lowered Section Excluding the Tie-ins

An integral part of our MOT is ATC 65, which eliminates one phase of construction while maintaining traffic on the existing viaduct for the first three years of construction. This simplifies traffic management throughout construction of the Project, and allows for nearly-full construction of the Lowered Section without traffic disruption. With this approach, we have physically separated a significant amount of the construction Work from traffic enhancing safety through the corridor.

Maintaining Connectivity for Local Businesses and the Community

Our MOT eliminated the need for a closure of the WB I-70 entrance ramp from Steele St./Vasquez Blvd by providing a temporary entrance ramp in this location. We can concurrently construct the permanent WB entrance ramps at Colorado and Steele St./Vasquez Blvd. using only temporary closure of the WB Colorado Blvd. entrance ramp.

This approach improves schedule and reduces construction costs related to additional temporary construction that would have been required, and allows for continuous connectivity in the area.

PART 4. Environmental Management, Strategic Communications, Community Development Programs, Small and Disadvantaged Business Participation and Workforce Development

Kathy Berumen

Project Communication Manger

Reggie Gamlin

Civil Rights Program Manager

FRMG is committed to the development of the community surrounding the Project and its future economic vitality.

DBE/ESB PARTICIPATION

FRMG's Small and Disadvantaged Business Participation Plan establishes processes for generating, communicating and supporting opportunities for DBE/ESB firms to participate in meaningful roles as integral and critical team members. Our plan includes several strategies designed to increase participation by DBE/ESB firms such as the Mentor-Protégé Program. This program provides mentoring and technical assistance so that DBE/ESB firms working on the Project can complete their contracts, develop and broaden their capabilities, expand their businesses and yield sustainable growth.

COMMUNITY DEVELOPMENT PROGRAMS

FRMG is invested in the positive economic impact that this Project will have, during construction and beyond. A cornerstone of our Community Development Program focuses on Swansea Elementary School, where we will create a Scholarship Program that will benefit students enrolled during the Construction Period. Other FRMG initiatives include our high school "Build a Bridge" program and our Vendor of the Month program.

STRATEGIC COMMUNICATIONS

Led by our Project Communications Manager, and in concert with the CDOT Office of Communications personnel, FRMG will facilitate a multi-faceted Strategic Communications Plan building upon the strong public awareness campaign and community engagement initiatives already established by CDOT and the Procuring Authorities

WORKFORCE DEVELOPMENT

FRMG's detailed plan for Workforce Development, including Construction On-the-Job Training (OJT) Program and Local Hiring, highlights our understanding of the need for proactive, ongoing recruiting and outreach events, and the importance of providing the local workforce with the tools they require to excel and thrive in their respective positions on the Project. FRMG is committed to helping develop Colorado's workforce, and our strategic approach for meeting and exceeding the Local Hiring Goal includes focusing on the targeted local areas for recruitment, working with DBE-staffing agencies to help source jobs, offering prospective employees resources for job placement, and proactively identifying jobs to be sourced with local labor.

ENVIRONMENTAL MANAGEMENT

FRMG's Draft Environmental Compliance Work Plan (ECWP) identifies Environmental Requirements, commitments and goals for the Project and describes the means and methods through which FRMG will monitor compliance of the Work, deliverables and final outcomes to meet or exceed the applicable goals and requirements as specified in the final EIS and ROD. Our comprehensive ECWP includes management approaches and associated processes that will be implemented for Hazardous Substances on the Project including Unexpected Hazardous Substances. FRMG's in depth understanding of the properties of onsite material has allowed us to efficiently plan our excavation approach, including a multi-step process for screening and sampling soil along the Project from a 2000 cy level to 500 cy level that will confirm or adjust our strategy for material reuse and off-site disposal.

PART 5. Operations and Maintenance FRMG Lead Operator members bring a depth of experience in operating, maintaining and rehabilitating major transportation facilities throughout North America and around the world. We have leveraged this experience with the expertise of our local partners and industry leading advisory team to prepare a robust operations and maintenance approach to meet or exceed the Project Agreement performance obligations.

KEY CHARACTERISTICS
of FRMG's O&M Approach

Early Integration of O&M Experts

FRMG's integrated approach to designing the Project includes the early involvement and close collaboration of the O&M and design teams to optimize material and design selections for constructability, durability and maintainability. This approach resulted in the joint selection of an optimized pavement strategy that was derived from over 15 design iterations.FRMG will apply our local knowledge, global experience, and the expertise of our industry leading advisory team to ensure that long-term considerations and lifecycle assumptions are reflected in the design.

Operations During Construction Performed by the Lead Contractor

There is a critical need for a coordinated and synchronized application of roadway operations, traffic management and Incident response with the Construction activities, and this need is amplified on an urban corridor with high traffic volumes. The Project will benefit from FRMG's approach to having the Lead Contractor perform Operations During Construction, leveraging the staffing and equipment resources already in place and readily available on the corridor. The Lead Contractor will be supported by the Lead Operator in the finalization and implementation of the O&M plans to be used during Construction.

Comprehensive Asset Management

FRMG uses comprehensive asset management systems to manage routine maintenance and Renewal Work. The cornerstone of our approach will be our Maintenance Management Information System (MMIS), an efficient computer-based program for record keeping, which efficiently tracks items such as inventory, Incidents, Inspections, work orders and activity data. Beginning at NTP2 and in place for the duration of the Term, the MMIS allows for efficient tracking of asset condition, along with review and analysis of FRMG's operations and maintenance performance.

Balanced Approach to Workforce Utilization

FRMG's approach to workforce utilization is to implement a combination of in-house expertise, with local Subcontracting opportunities for services that can be efficiently outsourced. FRMG acknowledges the importance CDOT and the Procuring Authorities have placed on ensuring representation from Disadvantaged Business Enterprises and Emerging Small Businesses, and we are committed to meeting these goals in part through these local subcontracts.

The combined experience of FRMG Lead Operator members consists of more than 100 P3 projects around the world and 20 non-P3 O&M contracts. This includes the provision of O&M services for more than 15,000 lane miles of roads, highways, bridges and tunnels in North America, and 23,000 lane miles globally. More than 3.5 million cars per day use roads and highways where services are provided by our Lead Operator members.

THE EXTRA MILE

An Overview of Our Technical Approach and Innovative Solutions

PART 6. Technical Approach and Solutions As a fully integrated team, FRMG has developed highly optimized solutions that balance construction efficiency, safety, risk mitigation, long-term value, and life cycle benefits into every Project Element. Through this collaborative effort, our technical design delivers a solution that can be more efficiently built and operated, minimizes disruption and provides long-lasting value.

Through significant collaboration with CDOT and the Procuring Authorities, FRMG developed 75 ATCs and other significant refinements, several of which have been included in our proposal, and have uniquely positioned FRMG to deliver the most innovative and best value solution.

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THE EXTRA MILE

FRMG CHANGES THE GAME

Quality
FRMG has developed a comprehensive and tailored quality management plan in collaboration with our IQCF to ensure proper interface between our independent quality control and process control. Our technical solution has processes in place that ensure quality is "built in" to every Element of the Work.

Effective Solutions and Decision Making
FRMG will utilize a fully integrated approach to the Project based on proven management systems for large scale infrastructure projects, including projects where our team members have previously partnered together. Our comprehensive PMP, vertically integrated team and prior experience working together ensures that decisions are made efficiently and with a view for the long-term performance of the Project.

Minimized Impacts
FRMG has reduced the Construction Period through innovative ATCs and optimized the phasing of the Project. By eliminating an entire phase, FRMG has significantly reduced Closures maximizing connectivity during construction and minimizing Project impacts.

Community Benefits
FRMG's innovative solutions significantly reduce community impacts and generate further opportunities for landscaping and public amenities along the Project while meeting or improving upon air quality and noise commitments. With numerous strategies, we have identified multiple opportunities for DBE/ESB participation, in the project during both the Construction and Operating Periods

Performance and Schedule
Our Proposal Schedule incorporates all key schedule constraints specific to the Project. Our concern for minimizing impacts to the public has been the heart of our MOT strategy and has driven the sequencing of our Proposal Schedule as we organized the Project into specific areas and phases and allocated resources carefully to achieve completion of the Key Milestones.

FRMG is:

✓ **EXPERIENCED**

Unparalleled experience in working together to deliver P3 and DB projects across North America and globally

✓ **LOCAL**

Locally based team, including Flatiron, AECOM and CH2M and dedicated local Subcontractors including IHC, Kramer, BTC and WL who bring local resources, knowledge and significant experience delivering projects for CDOT and the Procuring Authorities

✓ **INNOVATIVE**

We have leveraged our local knowledge and expertise to deliver an optimized solution that minimizes impacts during construction to the travelling public and surrounding communities

✓ **READY TO WORK!**

FRMG's local design and construction resources, including 700 craft working locally, are ready to mobilize and partner with CDOT, the Procuring Authorities, ESB/DBE firms and other stakeholders immediately upon award to meet our accelerated schedule.

Benefits of ATC 65

EAST INTERSTATE COLORADO 70 Local Connectivity Front Range Mobility Group ATC 65

FRMG's ATC 65 will greatly enhance the Central 70 Project. It will minimize impacts to the community and traveling public during construction, and maximize efficiency and quality throughout the project life cycle. This ATC will reduce the duration of construction by 6 months, reduce the duration of construction near Swansea Elementary School by 12 months, facilitate early availability of I-70 toll lanes, and provide aesthetic and mobility enhancements to the community.

ATC 21 – Eliminate Storm Sewer Bridge crossing I-70 and the North Outfall
- Eliminates utility bridge across I-70
- Allows I-70 profile to be raised, minimizing work in potentially contaminated soils and groundwater
- Reduces neighborhood impacts of complex outfall construction
- Decreases long-term maintenance of outfall pipe

ATC 25 – Modify ultimate I-70 EB alignment to optimize the EB I-270 to EB I-70
- Provides an optimal layout of the EB I-270 to EB I-70 flyover bridge
- Lowers the maximum span length of the flyover structure, allowing the use of shorter, shallower girders that are readily available from Colorado precast suppliers
- Eliminates straddle bent for the flyover structure

ATC 26 – Modify the Cover ventilation system to a Semi-Transverse System
- Eliminates the large number of jet fans directly above the I-70 roadway under the Cover
- Reduces energy costs
- Simplifies access and eliminates lane closures during ventilation system maintenance
- Permits Cover exhaust to be expelled away from Swansea Elementary School, reducing air quality impacts

DESIGN REFINEMENTS

ROADWAY:
- Refined profile to minimize excavation in the Lowered Section and be closer to existing grade of Colorado Blvd.
- Improved accuracy of cross slope correction by gathering LIDAR survey information

STRUCTURES:
- Single phase construction for a majority of the cross street bridges, maintaining local connectivity, shortening construction duration and improving quality
- Use of precast tub girder on Cover allow for easy access for installation and maintenance of Cover MEP, ITS, fireproofing and firefighting systems.

GEOTECHNICAL:
- Use of secant pile walls will minimize dewatering efforts during construction and operations

PAVEMENT:
- Rehabilitation of pavement at Peoria Street rather than full reconstruction
- Rehabilitation of sections outside reconstruction limits but within O&M limits to establish a uniform maintenance cycle

COVER MEP:
- Semi-transverse ventilation system (ATC 26) allowed for simplified MEP systems throughout the Cover

LANDSCAPE/URBAN DESIGN:
- Provided opportunities for additional community space including 3.5 additional acres of greenspace, 175 more trees, and a shared used path connecting existing and future Cover areas

TRAFFIC/SIGNING/STRIPING/LIGHTING:
- Configured sign bridge structures to accommodate LUS and VMS to improve visibility Eliminated need for guide signs in the Cover section allowing further optimization of the vertical profile

Part 1
Project Management

Front Range
Mobility Group

THE EXTRA MILE

CONNECTING COMMUNITIES

2.1.2 **Part 1**

Project Management

Front Range Mobility Group's philosophy during the procurement was to go "The Extra Mile" by developing solutions that improved safety and quality, enhanced community connectivity, and exceeded schedule and Project requirements. Our team committed to developing innovative solutions that went above and beyond the conceptual approach, yielding numerous ATCs, including 14 that are part of this Proposal.

FRMG's Extra Mile — ATC 65

ATC 65 allows for nearly full construction of the Lowered Section of the Project while maintaining traffic on the existing viaduct for the first three years. This minimizes impacts and increases safety by physically separating construction from ongoing traffic, reduces the number of lane shifts, and places I-70 in final configuration within the Lowered Section only one year after shifting traffic from the viaduct.

Details regarding our approach to integrating Project design, construction, and O&M considerations are provided in the draft Project Management Plan (PMP) included as Appendix B, as well as in our other draft plans. FRMG will continue to go The Extra Mile during each phase of the Project by searching for opportunities to further refine and improve our approach through partnership with CDOT and the Procuring Authorities.

2.1.2.a Management and Organization

We structured our Project management approach specifically to meet the challenges of the Project and to effectively leverage the local strengths and resources of our team members. A key feature of FRMG's organization is the vertical integration of companies between the Developer, Lead Contractor, Lead Engineer, and Lead Operator, which supports goal alignment and effective decision making during the Term, and fosters shared objectives for the Project as a whole, avoiding conflicts between disciplines. Our deeply rooted Colorado presence provides a long-term investment in, and commitment to, the Project and our partnership with the community, CDOT and the Procuring Authorities.

Together our team has more than 30 years of experience designing and delivering projects for CDOT and the Procuring Authorities, and have successfully developed or been awarded some of the largest and most complex P3 projects in North America, including 18 projects over $22 billion in the last decade. Our members have delivered and are delivering similar ground-breaking projects, including the current C-470 Tolled Express Lanes project (Flatiron and AECOM) and I-595 Corridor Improvements project (ACS, Dragados, and AECOM).

THE EXTRA MILE

FRMG DELIVERS:

QUALITY

FRMG's Project Quality Manager is a member of our IQCF team, providing superior integration of quality management staff and clear independence. We have also engaged Vivid Engineering Group, as a member of our IQCF, whose key individuals bring local experience implementing P3 quality programs in Colorado.

EFFECTIVE SOLUTIONS & DECISION MAKING

Our comprehensive PMP, vertically integrated team and prior experience working together ensures that decisions are made efficiently and with a view for the long-term performance of the Project.

MINIMIZED IMPACTS

FRMG leveraged its experience and local knowledge to refine the design and develop ATCs that significantly reduce construction impacts to the travelling public, nearby communities and businesses by reducing the Construction Period and optimizing the phasing of the Project.

COMMUNITY BENEFITS

FRMG will not just hear feedback, but act upon it. Our Project Communications Manager and Community Liaison report directly to our Project Manager/CEO, which effectively elevates feedback voiced by stakeholders during the day-to-day management of the Project.

PERFORMANCE & SCHEDULE ENHANCEMENTS

Our Proposal Schedule carefully evaluated key schedule constraints specific to the Project and benefited from our team's relevant experience managing projects of similar scope and complexity, including most recently the C-470 project.

2.1.2.a.i FRMG's Overall Management Philosophy and Approach

Our overall management philosophy is centered on our commitment to continue the partnerships that we have fostered with CDOT and the Procuring Authorities, and other key stakeholders during the Proposal phase. We have prioritized the Project goals to develop a PMP that will guide and promote:

- Efficient decision making by a clear governance structure that focuses on timeliness and a "Project First" approach with CDOT and the Procuring Authorities
- Clear, open communication with CDOT and the Procuring Authorities, and stakeholders to listen and incorporate feedback
- Processes and people dedicated to addressing impacts to stakeholders and ensuring that the benefits of the Project are realized locally
- A commitment to quality at all levels of our organization, including the local, independent oversight of our Quality Management Plans (QMPs) by our Independent Quality Control Firm (IQCF)

Strategy for Designing, Constructing, Operating, and Maintaining the Project

Our Project management approach and philosophy has guided us over the last two years to help us develop highly optimized and responsive solutions that demonstrate our Project understanding. FRMG has developed a significant number of impactful design refinements and ATCs, highlighted throughout this Technical Proposal, that reflect our Project management philosophy and are critical to achieving the Project Goals.

Complying with the Requirements of the Project Agreement

FRMG's overall Project management organization and participating entity organizations are detailed in the following organization charts (**Figures 2.1.2-1 and 2.1.2-2**), as well as in our draft PMP.

2.1.2.a.ii Overall Project Management Organization Structure

FRMG will be led by Project Manager/CEO Alvaro Muelas, who will be the single point of contact with CDOT and the Procuring Authorities. Alvaro will also report to FRMG's executive committee, comprised of representatives from each Equity Member.

Our Key Personnel and management structures are depicted in Section 2.1.2.a.ii.B for both the Construction Period and the Operating Period following Substantial Completion (**Figure 2.1.2-2**) . Leadership consistency by the Project Manager/CEO and the vertically integrated nature of FRMG team members allows us to start with the "end in mind," where O&M and life-cycle maintenance have already been engineered into an asset that is built to last, along with the continuity of consistent leadership and oversight. Other personnel, including certain Key Personnel, will also remain as part of FRMG's organization during the transition period from Construction to O&M for proper handover of Project activities.

2.1.2.a.ii.A Corporate Organizational Chart

Our overall corporate organization chart can be found on **Figure 2.1.2-1**.

2.1.2.a.ii.B Key Personnel Organizational Chart

Our organization chart identifying all Key Personnel and our management structure can be found on **Figures 2.1.2-2**.

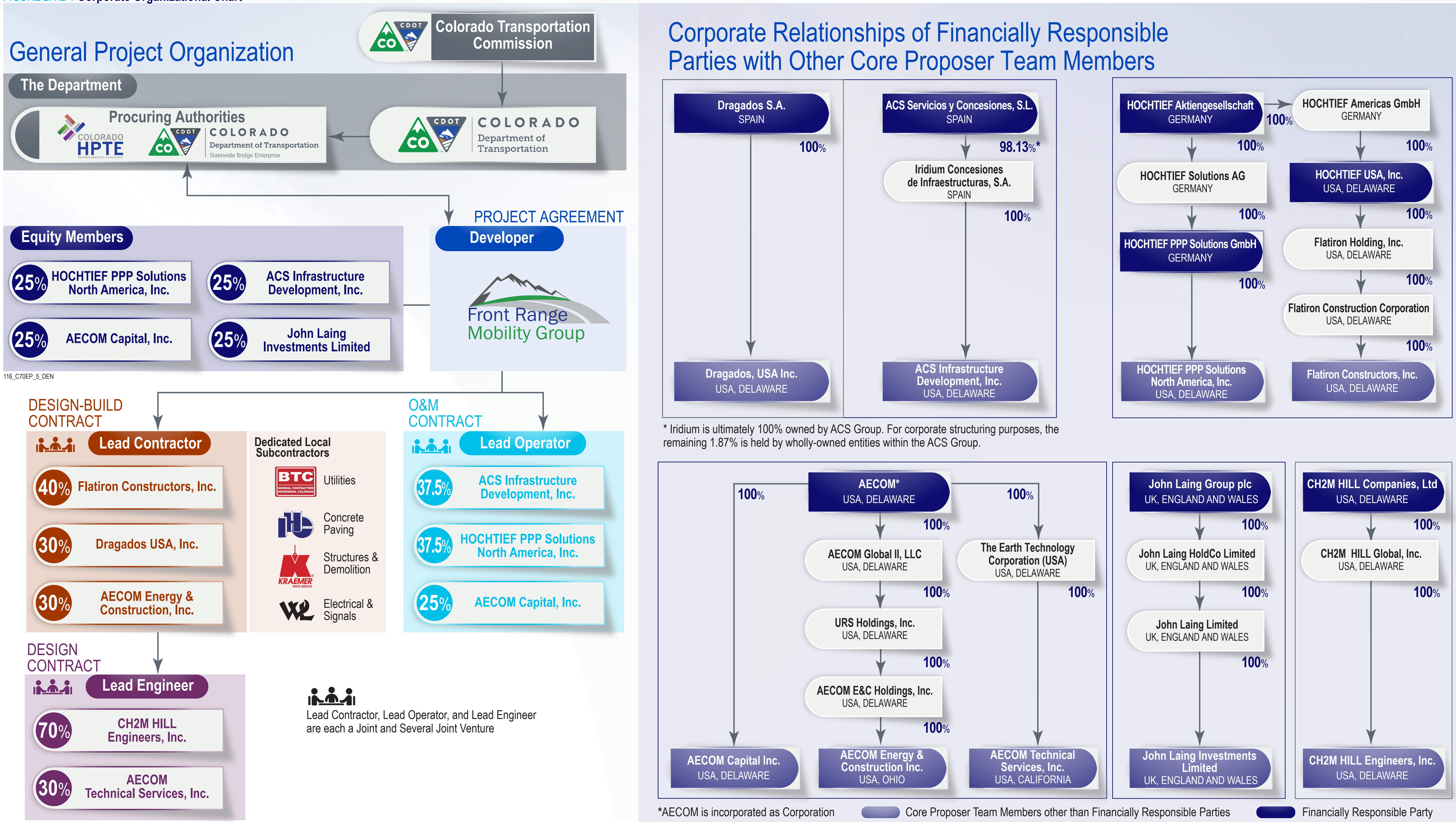
2.1.2.a.ii.C Resources

FRMG's Lead Contractor comprises three of the largest P3 and design-build contractors in North America—Flatiron, AECOM, and Dragados—and has a significant footprint in the Front Range. FRMG has teamed with locally based, subcontractors dedicated to FRMG, including premier structures builder Kraemer North America, L.L.C. (Kraemer), Colorado drainage expert BT Construction Inc. (BT), leading concrete paver Interstate Highway Construction (IHC), and WL Contractors (WL), each of which complement the Lead Contractor's local resources. These combined strengths and resources uniquely position FRMG with unmatched capacity and readiness to mobilize immediately upon Notice of Award, providing for a streamlined process to NTP1 following Commercial Close, and NTP2 following Financial Close. Additionally, our relationships with the local Disadvantaged Business Enterprises (DBEs) and Emerging Small Businesses (ESBs) ensure that we will meet the requirements in the Project Agreement for DBE/ESB utilization throughout the Term.

2.1.2.b Safety

Section 2.1.1.n of the draft PMP (Safety Management) details our approach to meeting the requirements of Section 7 of Schedule 8 to establish and implement a comprehensive safety plan that protects the health and safety of employees and the public during execution of the Project. We will take a wide-ranging and inclusive approach to FRMG's Safety Management Plan (SMP) to ensure the policies

FIGURE 2.1.2-1 Corporate Organizational Chart



The Organizational Chart includes the following updates to FRMG's Organizational structure since our SOQ: (1) "URS Energy & Construction Inc." was replaced by "AECOM Technical Services Inc." in the Lead Designer box to correct a previous error; (2) HOCHTIEF's corporate structure was updated in accordance with our Proposer Update Submissions, approved on May 16, 2017; (3) "URS Energy & Construction, Inc." is now "AECOM Energy & Construction, Inc." to reflect the change in name of this entity; and (4) "URS E&C Holdings, Inc." is now "AECOM E&C Holdings, Inc." to reflect the change in name of this entity (5) we have shown the Equity Members as shareholders of the Developer to clarify the organizational nature of the Developer during the Term and (6) We have included dedicated Subcontractors to the Lead Contractor (who are not Core Proposer Team Members) to highlight the depth of our local resources and construction organization.

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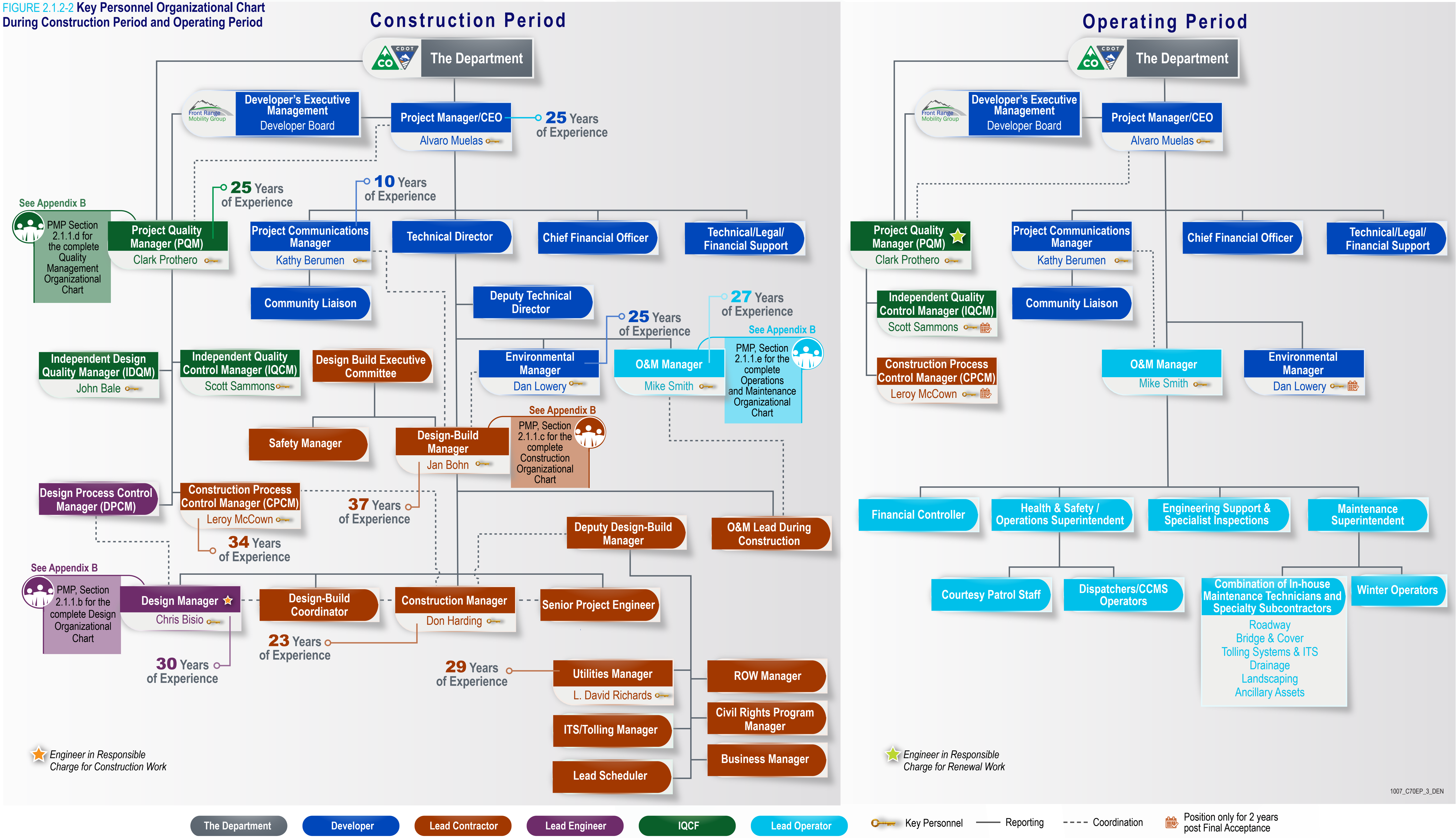
KEY PERSONNEL AND MANAGEMENT STAFF DURING

FIGURE 2.1.2-2 **Key Personnel Organizational Chart During Construction Period and Operating Period**



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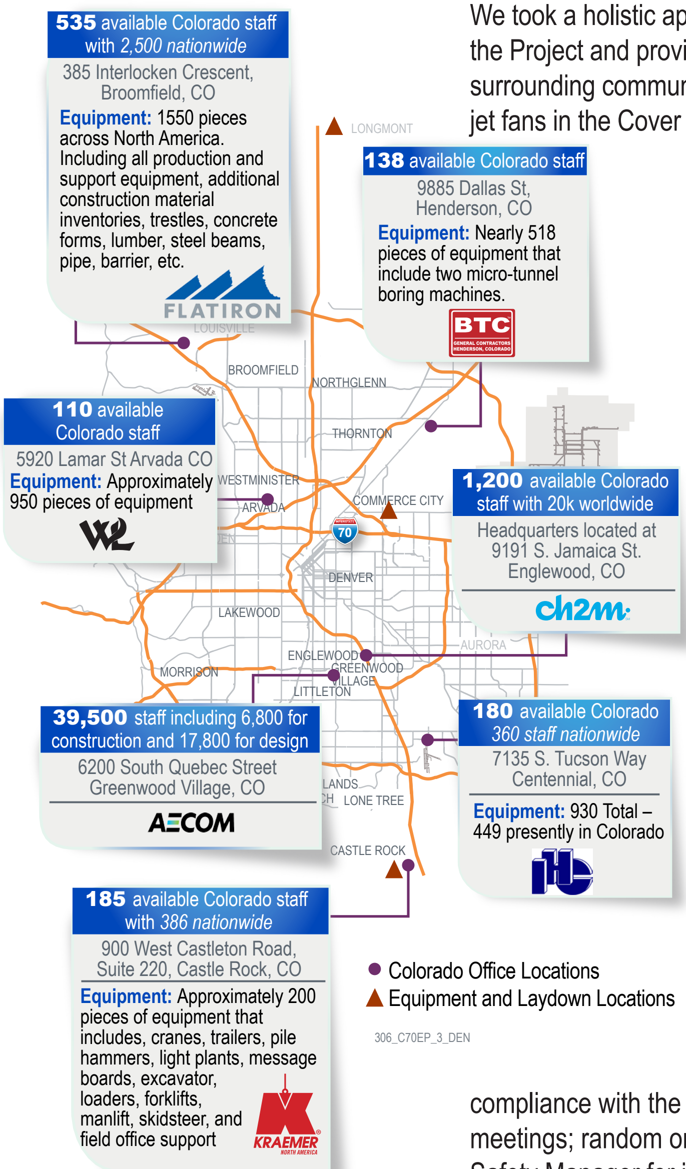
and procedures are accepted and communicated at every level of our organization and to the appropriate Project stakeholders.

SAFETY TRAINING FOR LOCAL STUDENTS

FRMG's safety training will include regular safety meetings at the schools for the children of Swansea Elementary school, Garden Place Elementary School, and Bruce Randolph Junior High so safety is kept at the forefront of students' minds. Members of FRMG's Project team will participate in the schools' regular assemblies to provide safety training aimed at students.

Our executive management team will have the overall responsibility for review and approval of the SMP prior to submission to CDOT and the Procuring Authorities. Safety Manager Robert Hobson will establish a comprehensive SMP that outlines specific roles, responsibilities, and accountability for compliance with the plan, in line with our Project management philosophy and commitment to deliver the Project safely.

FIGURE 2.1.2-3 **FRMG Team Resources**



Approach to Performing the Work

We took a holistic approach to design and developing ATCs to streamline the Project and provide a safer facility for the traveling public and surrounding community. ATC 26, as an example, replaces longitudinal jet fans in the Cover with a semi-transverse ventilation system. This consolidates a majority of maintenance activities to one area and away from the traveling public. FRMG will also develop and implement safety training for the surrounding community, emphasizing local schools, and public stakeholders.

Protecting workers on site during construction includes mandatory safety orientation, frequent communication that outlines updates and details of the SMP, as well as discipline- and site-specific training of all FRMG team members and subcontractors. All employees are empowered (and required) to stop work if unsafe practices occur. Our safety culture also includes incentives that encourage workers to share ideas, innovations and lessons learned that help safeguard values and improve the integrity of our safety program.

Ensuring Compliance with the SMP

We will review the SMP regularly to ensure the plan and actual practices are aligned. If changes are necessary to the SMP, FRMG will provide recommendations to our executive management that will be submitted to CDOT and the Procuring Authorities for approval. FRMG's Safety Manager will use several different methods for inspecting, monitoring, and evaluating effectiveness and compliance with the Project's SMP, including: monthly mass safety meetings; random one-on-one interviews of FRMG personnel by the Safety Manager for instructions and feedback; and, unannounced safety inspections and audits by the Safety Manager in partnership with OSHA.

2.1.2.c **Proposal Schedule Summary**

2.1.2.c.i Key Milestones

Immediately after award, FRMG's local design and construction resources will be ready to start working in partnership with CDOT, the Procuring Authorities and stakeholders to advance early-start activities needed to set the Project up for success. NTP1 is scheduled for November 3, 2017. NTP2, allowing for commencement of the construction and O&M Work During Construction, is scheduled for February 2, 2018. Substantial Completion is April 29, 2022 and Final Acceptance 120 days later (August 27, 2022). **Figure 2.1.2-4** below describes key milestones that are based on the assumed November 30, 2017 Financial Close required by the RFP.

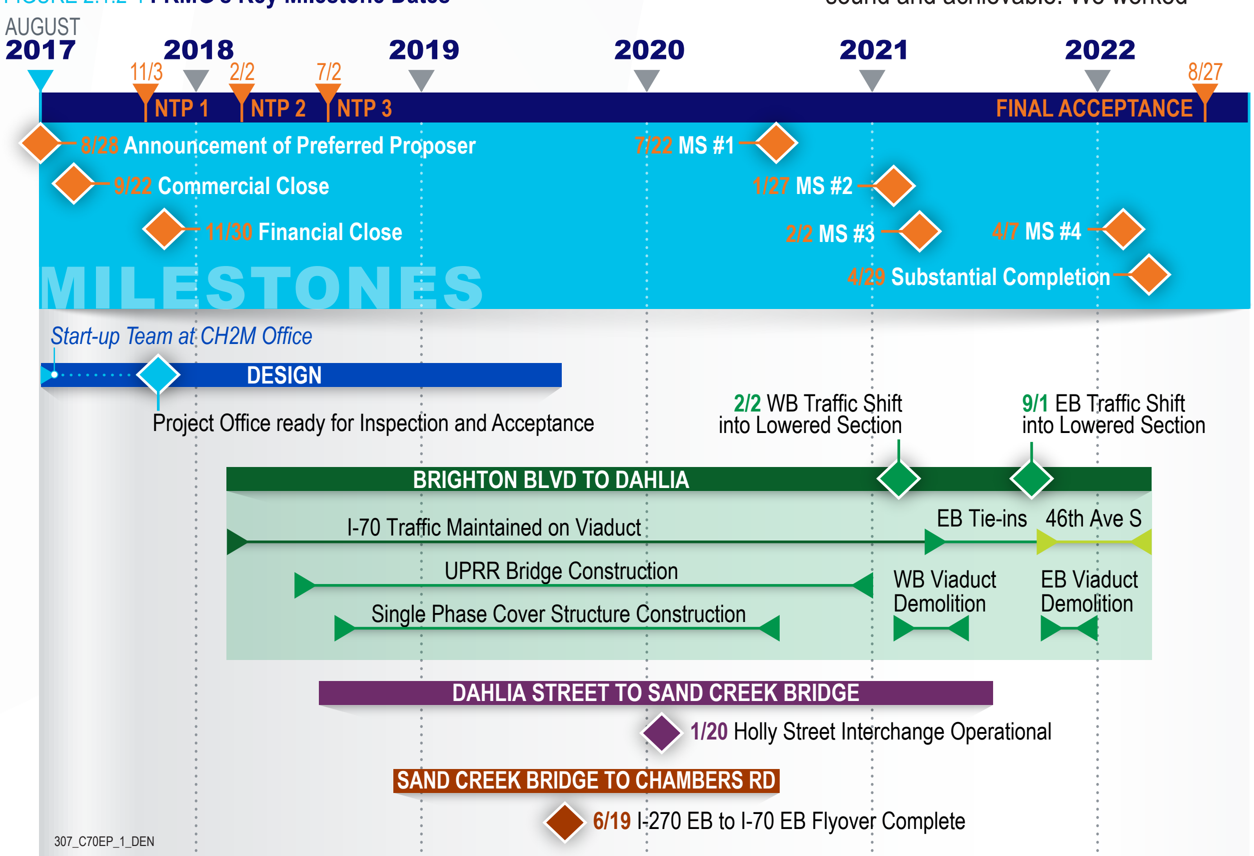
2.1.2.c.ii Approach to Developing and Updating the Baseline Schedule

FRMG developed a Proposal Schedule (found in **Appendix C**) that contains the Work Breakdown Levels I-VI that are scheduled and monitored Work on the Critical Path Method (CPM) Project Schedule provided in Primavera P6 format in accordance with the requirements of Section 3.3 of the Project Agreement and will form the basis for our Baseline Schedule submitted prior to NTP1. Our Proposal Schedule addresses the most critical schedule elements of the Project, and we have taken special measures to ensure that we meet our Key Milestones as set forth in the Proposal including:

- Beginning Railroad Work only upon 100% bridge plan approval by Union Pacific Railroad (UPRR) per the Railroad Agreement, which is a critical activity in achieving Milestone 3 and our Baseline Substantial Completion Date
- Special consideration for Utility Relocations
- Identifying all closure restrictions within the Project Agreement and tying these to relevant activities to ensure full compliance in our Proposal Schedule
- Integration of timing and volume constraints related to Reviewable Submittals
- Adequate timing for long lead items that impact our critical path, to ensure unforeseen issues or delays do not impact Key Milestones

FRMG took great care to define key inputs and factors within our Proposal Schedule to ensure our assumptions regarding resources and activities were sound and achievable. We worked

FIGURE 2.1.2-4 **FRMG's Key Milestone Dates**



hand-in-hand with our dedicated Subcontractors, including Kraemer, BTC, IHC, and WL, to review our Proposal Schedule and solicit feedback on their specific anticipated scope and activities. We also met with utilities during the procurement to better understand their process and identify specific constraints and mitigation efforts that could be factored into our approach. Additionally, we took into account historical Colorado weather conditions, and assumed a 5-day workweek to allow for recovery in the event of any unforeseen delays in activities or to mitigate resourcing constraints. We are also committed to starting significant activities prior to Financial Close (in compliance with the Project Agreement in all cases) to maximize our ability to start work as soon as possible upon achievement of Financial Close and NTP2.

2.1.2.d.i Approach to Managing Resources and Activities

FRMG's Lead Contractor will have primary responsibility for managing the Baseline Schedule with respect to resources and activities, including Subcontractors and Suppliers. Through regular update meetings, we will identify potential schedule conflicts and mitigation measures that include additional resources, work shifts, or Work resequencing. FRMG also requires Subcontractors to ensure that the entire construction effort can be managed from an overall resourcing perspective so that we can monitor the efficient allocation of all resources across the Project. FRMG will update the Baseline Schedule with scope changes during delivery and redistribute appropriate resources along with a detailed Work breakdown. Resource histograms will be shared with team members to track progress against the plan.

2.1.2.d.ii Approach to Timely Deliveries of Materials

Key long-lead items and delivery dates for each material provider have been identified, and delivery timeframes will be included as contract commitments. Specifically, Cover girders, UPRR steel girders, certain Intelligent Transportation System (ITS) equipment, and mechanical equipment (e.g., generators, exhaust fans) for the Cover area will require confirmed delivery dates from suppliers to provide greater delivery certainty. Vendors and Subcontractors whose work is approaching will be required to attend regularly schedule meetings to coordinate delivery and sequence of the components of their Work scope.

2.1.2.d.iii Overall Approach to Effectively Managing the Schedule Interface, Liaison and Coordination

2.1.2.d.iii. A Developer, Subcontractors and Suppliers Coordination

Baseline Schedule development, management, and coordination will be FRMG's Lead Contractor responsibility. The Developer will ensure appropriate interface between the Lead Contractor and CDOT and the Procuring Authorities, as well as other stakeholders discussed below through regular reporting requirements and task force meetings. The Developer will also have management and staff dedicated to technical coordination and oversight during the Construction Period, including as it relates to the Baseline Schedule.

FRMG's Lead Contractor will approach coordination with each Subcontractor based on their scope size and complexity. If a Subcontractor's scope is sufficiently complex or within the critical path, the Subcontractor will participate Baseline Schedule development to ensure Work is properly planned and monitored. Our dedicated Subcontractors have significant successful experience working together

FIGURE 2.1.2-5 **FRMG Approach to Baseline Schedule Updates**

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and strong relationships with local Suppliers to help ensure adequate resources that include local ESBs and DBEs. Specialty items that require more complex communication, including interim deliverables such as shop drawings, will be monitored through activities in the Baseline Schedule and close, frequent communication to Suppliers.

2.1.2.d.iii.B Design, Quality Management, Construction and Operations, and Maintenance Work Streams

Design and O&M Coordination: The design team interface with Submittal delivery dates is integrated into our Proposal Schedule. Our Baseline Schedule finalization includes further design packages tailored to provide an early and steady work stream to the construction team, and while balancing CDOT and the Procuring Authorities' resources for review. The design team will provide P6 schedule updates to monitor progress and schedule resources needed for submittal reviews. FRMG will develop a project-wide and area-specific metric system to proactively measure deliverable scopes of work and their schedule performance, including key milestones tracking sheets to monitor changes in the schedule. Designers are also informed of upcoming critical and non-critical activities to help manage their work and resources.

Construction Management Coordination: FRMG's construction team will use multidisciplinary meetings to communicate and coordinate with designers, O&M, and Subcontractors on upcoming work and resolve conflicts. FRMG will develop specific metrics to measure performance, including man-hours earned, commodities histograms, and information on upcoming activities to manage resources.

Quality Management Coordination: FRMG has detailed our coordination and interface approaches for quality management between the Lead Contractor, Lead Designer, Developer, and IQCF (as well as CDOT and the Procuring Authorities) in our Stage 1 and 2 draft QMPs. FRMG's IQCF team—Raba Kistner and Vivid Engineering Group —has developed a quality management and oversight approach with adequate resources that are well integrated into our overall organization while maintaining appropriate independence where required. During the Construction Period, our short-interval schedules and daily schedules will provide the Lead Contractor and Lead Designer quality personnel, and the IQCF, the necessary information to staff testing and inspection activities over the immediate and mid-term. Quality management hold points will similarly be identified to ensure that the work product conforms to the design requirements and the Stage 2 QMP. These hold points may be identified either through the P6 schedule or short-interval schedules, depending on the scope of work and testing requirements.

2.1.2.d.iii.C Developer and Procuring Authorities

FRMG will hold weekly progress meetings with CDOT and the Procuring Authorities to discuss critical submittal approvals and format and content preferences. FRMG understands the timeframes and sequencing for submission of Reviewable Deliverables and will avoid concurrent reviews of five or more Reviewable Deliverables that require review by the same CDOT specialty experts. FRMG will use Aconex to communicate and share documentation—our team members already successfully use Aconex on current CDOT projects. Additionally, we will complement Aconex by integrating our other systems, including ELVIS (for Quality Management) and the Maintenance Management Information System to streamline information and documentation.

2.1.2.d.iii.D Developer Resources and Governmental Authorities, Other Stakeholders and Agencies

Our Project Communications Manager Kathy Berumen will lead the Strategic Communications Task Force meeting to discuss plans and Permits review, Project progress, Utility coordination, and construction engineering and inspection. When activities on the Baseline Schedule need Railroad or Utility coordination, representatives for the impacted Railroad or Utility will be invited to attend that particular task force. Kathy will report to the FRMG's Project Manager and will closely coordinate with the Design-Build Manager to identify and communicate, where certain activities will impact key stakeholders and Governmental Authorities, such as the City and County of Denver.

FRMG has relevant provisions of the Project Agreement tied to our Proposal Schedule to more efficiently identify conflicts and to ensure a unified approach to permitting and Governmental Authority coordination. We will refine this approach in our detailed Baseline Schedule and further integrate the list of permits, submittals, and other Governmental Approvals. This will ensure that we continue to properly account for the necessary timing and coordination required to obtain these approvals and that we meet our Key Milestones.

Part 2

Quality Management

Front Range
Mobility Group

2.1.3 **Part 2**

Quality Management

THE EXTRA MILE

FRMG DELIVERS:

FRMG's collective experience delivering some of the largest and most complex design-build and P3 projects in Colorado and across North America gives us a detailed understanding of the expectations for quality management for a project of this magnitude delivered on an accelerated schedule. Our quality philosophy is founded on the principle that all team members, from designers and craft workers to senior management, are key members of our quality organization.

FRMG's Extra Mile

Our Independent Quality Control Firm (IQCF) team—Raba Kistner, Inc., and VIVID Engineering Group, Inc.—provide significant experience in similar roles on other large, complex design build and P3 projects in Colorado and across the U.S. VIVID is a registered Emerging Small Business in Colorado with an office and laboratory a few blocks from the east end of the Project. Although not required, FRMG will commit a certified auditor to perform ISO 9001:2015 compliance audits to provide additional assurance to CDOT and the Procuring Authorities that the IQCF is implementing an ISO 9001-compliant quality program.

2.1.3.a General Requirements

FRMG's draft Stage 1 and 2 Quality Management Plan (QMP) describes the Quality Management System (QMS) organization, management approaches, systems, processes and procedures that FRMG will use to deliver the Project. Our draft QMP will apply to Work performed by FRMG and Subcontractors at all tiers. The draft Stage 1 and Stage 2 QMPs presented in Appendices D and E, respectively, are organized in direct alignment with the requirements in Schedule 8, Section 6. The draft Stage 1 QMP is focused on non-construction-related processes and procedures. The Stage 2 QMP covers the construction-related procedures and plans.

2.1.3.a.i Organizational Chart

The Quality Organization Chart (**Figure 2.1.3-1**) shows the hierarchy of FRMG's quality organization and illustrates the Key Personnel and staff responsible for and involved in quality management activities in respect of all work streams and phases of the Project.

QUALITY

Proven, fully developed procedures and processes provide a strong basis for the Quality Management Plan, assuring CDOT and the Procuring Authorities of the strength and streamlined nature of our quality program. Our IQCF commits to operating an accredited AASHTO, CCRL, and ASTM E329 Laboratory and will participate in CDOT's annual Laboratory Inspection and Round Robin programs.

EFFECTIVE SOLUTIONS & DECISION MAKING

Weekly Quality Task Force meetings and our Quality Issues Matrix will allow us to review and track quality issues as well as regularly evaluate and make decisions about crew sizes and personnel staffing.

MINIMIZED IMPACTS

We design, build, and maintain quality into the Project at every stage with local knowledge and understanding of CDOT and the Procuring Authorities' and other stakeholders' expectations.

COMMUNITY BENEFITS

In addition to VIVID, an ESB-certified Firm with a laboratory near the Project, FRMG anticipates significant opportunities for DBE and ESB firms for PC inspection and testing services.

PERFORMANCE & SCHEDULE ENHANCEMENTS

Our experience with CDOT and on other P3 projects across the U.S. translates to a robust understanding of the needs of an independent quality function within the local environment. This will allow us to maintain scalable staffing levels to remain in lock-step with construction needs to meet the schedule.

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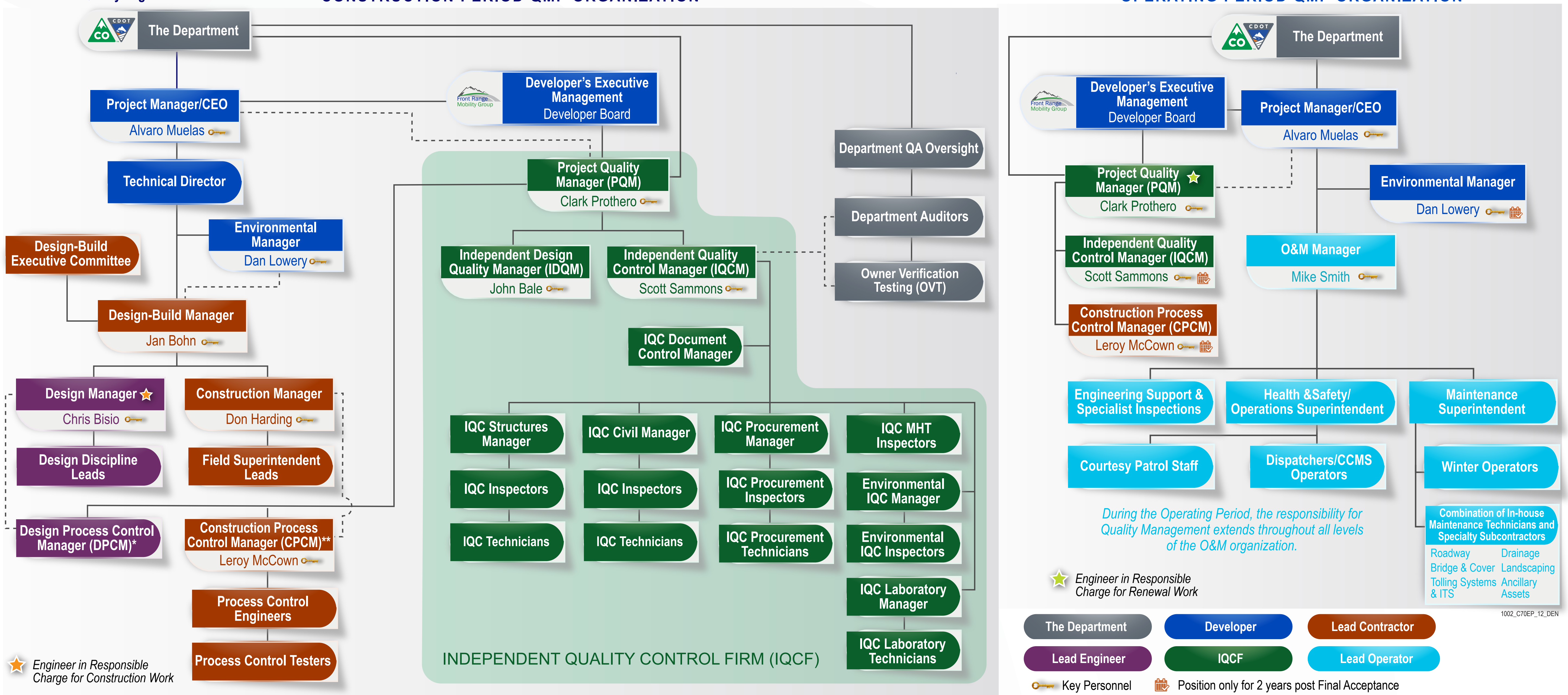
FIGURE 2.1.3-1 **Quality Organizational Chart**



*For the Detailed Quality Design Organizational Chart, see Appendix D: Stage 1 Quality Management Plan **For the Detailed Quality Construction Organizational Chart, see Appendix E: Stage 2 Quality Management Plan

ROLES AND RESPONSIBILITIES AND INTERRELATIONSHIP AND RELATIVE AUTHORITY OF QUALITY KEY PERSONNEL

Project Quality Manager: Clark Prothero, PE
Roles/Responsibilities:
» Primary point of contact to CDOT and the Procuring Authorities regarding QMP
» Reports quarterly on the performance of the QMP
» Provides all final checks, approvals, and monthly certifications related to quality
» Assures, certifies, and provides evidence that the Work meets Project requirements
» Ensures the QMP is established, implemented, and maintained
Interrelationship and Relative Authority:
» Reports directly to FRMG's executive management and CDOT and the Procuring Authorities
» Has direct supervisory responsibility for the IDQM and the IQCM and their staff
» Has the authority to stop work that does not comply with the Project Agreement
» Provides overall coordination and responsibility for the construction IQC and PC programs
» Coordinates resolution between design, construction, and CDOT and the Procuring Authorities

Independent Design Quality Manager: John Bale, PE
Roles/Responsibilities:
» Responsible for all design IQC activities for the Work
» Sees that the methods, IQC, and PC procedures for design are implemented and followed
» Performs periodic audits of the design team's quality activities
» Ensures that applicable sections of the QMP are implemented
Interrelationship and Relative Authority:
» Reports directly to the PQM and coordinates with DPCM and design PC staff
» Has authority to stop work that does not comply with the requirements of the Project Agreement

Independent Quality Control Mgr: Scott Sammons, PE
Roles/Responsibilities:
» Responsible for management of the construction IQC aspects of the QMP
» Overall coordination and responsibility for the construction IQC program
Interrelationship and Relative Authority:
» Employed by the IQCF and reports directly to the PQM and CDOT and the Procuring Authorities
» Has the authority to stop work that does not comply with the requirements of the Project Agreement

Construction Process Control Manager: Leroy McCown, PE
Roles/Responsibilities:
» Responsible for the establishment, implementation, and updates of the PC aspects of the QMP
» Promotes quality through training, in-process inspection, and enforcement of policies/ procedures
» Audits the PC inspection program and PC materials testing program
» Ensures the construction-related portions of the QMP are implemented and followed
» Coordinates resolution between design, construction, and CDOT and the Procuring Authorities
» Informs the PQM of the Project quality status during construction
Inter-relationship and Relative Authority:
» Reports to the PQM and coordinates with the IQCM and FRMG's Lead Contractor team
» Has the authority to stop work that does not comply with the requirements of the Project Agreement

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2.1.3.a.ii Quality Management Approach/Quality Processes and Procedures

FRMG has identified processes and procedures to assure we meet the requirements of the Project Agreement. Our draft QMP identifies specific quality procedures in the draft Stage 1 QMP Attachment (Design Process Control Plan (DPCP)) and draft Stage 2 QMP Attachment (Construction Quality Procedures (CQPs)). FRMG's draft QMP implements Process Control (PC) and Independent Quality Control (IQC) procedures that:

- encompass all applicable requirements
- establish Quality Hold Points and inspection/testing criteria
- verify that the Work is compliant
- document and resolve nonconformances
- audit performance against the requirements
- provide quality records to support the compliance of the procedures with "Stop Work" authority

FRMG's IQC managers and staff have no responsibilities in the management, production, and scheduling of Work. All IQC and PC Key Personnel have the authority to stop work that does not comply with the Project requirements, as detailed in the QMP procedures for stopping work.

Mechanisms for Resolution of Issues and Quality Compliance

Quality Task Force (QTF) meetings and the Quality Issues Matrix are two primary tools used to document, evaluate, review, and track issues until a resolution is reached. The QTF will review and monitor overall quality of Work, quality issues and trends, audit findings and corrective actions, nonconformances and stop work items, and Project close out and punch list items. In the QTF meetings, FRMG will work with CDOT and the Procuring Authorities to establish the process and timeline to escalate, track, and resolve quality issues, with a goal to resolve issues at the lowest appropriate level. The Quality Issues Matrix will be updated monthly to visually depict quality issues on the Project and will be compiled by and distributed to FRMG and CDOT and the Procuring Authorities personnel. Quality issues are color-coded to indicate the level of importance and sense of urgency.

2.1.3.a.iii Independence Between the PC and IQC Functions

Independence is assured by having the IQC team and DPCM and CPCM report up through FRMG's Executive Management, with no authority for, and being independent of, the management, production, and scheduling of Work. FRMG's PC and IQC operations are separate from each other, as shown on the quality organization chart. Each entity has its own responsibilities and commitments, although the two coordinate. IQC personnel are not responsible for, nor do they perform, PC activities, which are handled by the design and construction teams.

2.1.3.a.iv Proposed Organization Systems

FRMG facilitates open communication regarding quality with CDOT and the Procuring Authorities and other stakeholders at all levels of the Project through regularly scheduled meetings, such as weekly QTFs, management reviews, design Task Forces and construction and scheduling coordination. We will use Raba Kistner's proprietary Engineering and Laboratory Vital Information System (ELVIS) as the primary system for all quality documentation. ELVIS is fully compatible with Aconex, as discussed further in Section 2.1.3.a.viii. The system was specifically designed for IQCF functions on major DB/P3 highway projects and is currently in use on multiple projects over $1 billion.

2.1.3.a.v Roles and Responsibilities

FRMG Executive Management has the ultimate responsibility for all quality functions, with the Project Manager/CEO, Design-Build Manager, and O&M Manager ultimately responsible for the quality of Work within their respective areas. The roles and responsibilities of quality Key Personnel are shown on **Figure 2.1.3-1** Quality Organization Chart. During the Operating Period, Routine Maintenance and minor/major Renewal Work 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 system. The O&M Manager will oversee the specialist inspection firms performing required inspections and condition assessments. The Project Manager/CEO will oversee the major rehabilitation work using appropriate engineering and quality support firms.

2.1.3.a.vi Processes to Ensure Qualifications and Training of Quality Staff

FRMG's Executive Management will ensure the PC and IQC personnel have the appropriate education, training, and experience to meet the requirements of the Project Agreement (PA). Individuals assigned to perform services will possess contractually required certifications and qualifications. All Project personnel will be required to attend a Project orientation to understand the overall QMP and the quality policy and objectives. As part of the formal training program discussed in the Stage 1 and Stage 2 QMPs, we provide ongoing training to our quality and production teams to address any changes in the QMP. The DPCM and CPCM will provide periodic, ongoing quality training to production-level staff.

2.1.3.a.vii Methodology to Establish General Staffing Levels

FRMG's Executive Management will ensure adequate resources are assigned to the Project. Production and quality staffing levels will be a direct reflection of FRMG's Baseline Schedule to meet the anticipated production rates during each phase of the Project. Key to our approach is providing scalable testing and inspection crews to support the PC and IQC activities to maintain the anticipated production rates and schedule, in addition to maintaining weekly look-ahead schedules. During the Operating Period, we will transition some of the local construction personnel into O&M roles.

2.1.3.a.viii Document Control Processes and Procedures

> **ELVIS tracks quality personnel certifications and flags testing performed by unqualified personnel.**

The IQCF will use ELVIS as FRMG's primary system for receiving, storing, transmitting, and tracking quality records. With full connectivity to the Aconex system, ELVIS allows the IQCF to review and approve electronic quality records in real-time prior to uploading into Aconex, greatly increasing the speed with which IQC test results will be entered into CDOT and the Procuring Authorities' quality records database. ELVIS allows the IQCF, FRMG team members, CDOT and the Procuring Authorities, and stakeholders to have real-time access to quality and Project documents in the field. The IQCF will use tablets and laptop computers to access this information remotely through ELVIS. Additional benefits of ELVIS are included in Appendices D and E.

2.1.3.a.ix Process Control and Quality Control of Work

The DPCM will implement the design PC program and coordinate with the Design Manager and Deputy Design Manager for Production (DDMP) to coordinate and implement quality reviews. The DPCM will manage a team of Design Process Experts (DPEs) to conduct design quality reviews, both discipline-specific and inter-disciplinary, and to coordinate constructability, maintainability, environmental, and right-of-way reviews at each design submittal. Design work plans (DPCP-PR-019) are developed to organize the production of design products, the required coordination meetings, design progress reviews, and quality reviews. Construction PC procedures assure that activities affecting the quality of Work are accomplished under controlled conditions, using appropriate equipment, and in accordance with the requirements. **Figure 2.1.3-2** shows the PC inspection phases for major construction activities.

2.1.3.a.x Independent Quality Control of Processes and Products

The following is an overview of the IQC of processes and products:

- **Internal Audits**: IQCF conducts internal audits of FRMG, subcontractors, and suppliers in accordance with a defined annual audit schedule to determine compliance with ISO 9001:2015 and verifies compliance with the Project Agreement and the QMP.
- **Inspection and Testing**: IQC Inspection needs will be reviewed, identified, and planned using a combination of procedures. The first is CQP-0229, Work Planning, which is where FRMG construction personnel review the requirements and plan for PC and IQC inspection, testing, and hold points. The second is CQP-0230 PC, Inspection Process, which outlines the requirements

FIGURE 2.1.3-2 **PC Inspection Phases for Major Construction Activities**

Construction Work Plan	Prepared for all major activities that will identify the inspection and quality requirements and activities to be performed by the PC coordinators, construction management and staff, and subcontractors.
Readiness Review	Performed prior to start of specific critical Work activities so that all personnel involved have an understanding of the intent, design criteria, specifications, special details or regulations, and safety procedures to be followed.
Initial Inspection	Performed as work begins on a representative item or area of Project and confirms that the information agreed to during the readiness review meeting is effective and the Work product conforms to the Project Agreement.
Follow-up Inspection	Performed as needed during definable features of Work to confirm corrective actions identified in the Initial Inspection are in place and effective.
Completion Inspection	Performed at the completion of all work in a designated area or associated with a definable phase of the work.

for a readiness review meeting, including reviews and understanding of the required quality hold points, inspection, and testing requirements. The third is CQP-0310 IQC, Daily Inspection Report Process, which documents how inspections are performed.

» **Certification of the Work**: The IQCF will provide certifications of compliance with the Project Agreement for design and construction Work prior to each milestone completion, prior to Substantial Completion, prior to Final Acceptance, and at other times requested by the CDOT and the Procuring Authorities.

2.1.3.a.xi Improving the Quality Program

FRMG has identified quality objectives to assess performance of the QMP. The FRMG team collects and analyzes data to determine the effectiveness of the QMP, and to identify opportunities for continual improvement. The objectives against which data is collected and analyzed include the following: client satisfaction; compliance of work; performance and effectiveness of the QMS; planning effectiveness; effective actions to address risk; trends; and performance of vendors, subcontractors, and Subconsultants. The QTF Meetings and Quality Issues Matrix are also integral to assessing the effectiveness of the QMP.

2.1.3.a.xii Nonconformances

The detailed procedure for how FRMG will rigorously identify, categorize, track, and resolve nonconformances, either Developer- or CDOT-identified, is included in Section 5 of the draft Stage 2 QMP. This procedure describes the methods and responsibilities for preventing the use or installation of nonconforming items when other control methods, inspection reports, and surveillance reports are considered inadequate. A summary of the Nonconformance Report (NCR) workflow is shown in **Figure 2.1.3-3**.

2.1.3.a.xiii Defects, Deficiencies and Trends

FRMG measures and monitors implementation of the QMS against the Project Agreement, plans, specifications, and the QMP. Strategies we use to identify defects, deficiencies, or trends indicating declining quality include documenting, tracking, and analyzing the results, records, and trending of internal quality audits, nonconformances, stop work notices, deficiencies, root-cause analyses, corrective actions, preventive actions, Department audits and observations, and Owner Verification Testing results. Quality issues are documented in the Quality Issues Matrix and reviewed and monitored as part of the weekly QTF meetings with the goal to expedite resolution and implement corrective actions to prevent them from reoccurring as part of our commitment to continual improvement.

2.1.3.b Stage 1 Quality Management

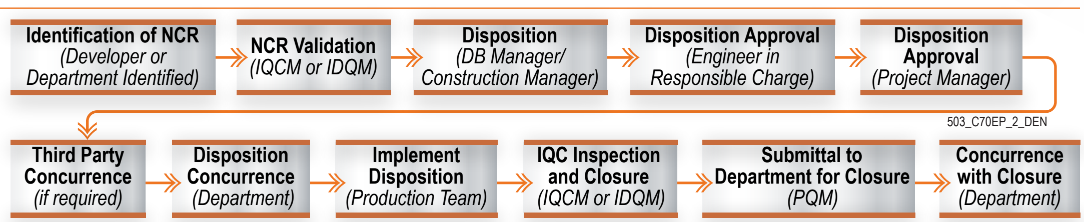
2.1.3.b.i Quality Management Obligations for Non-Construction Elements

FRMG's approach to meeting the quality obligations for non-construction elements is to provide the DPCM with both the autonomy to function in an independent role and the support necessary to implement the Stage 1 QMP processes and procedures. The DPCM reports directly to the PQM and is responsible for identifying quality requirements for non-construction elements, incorporating Stage 1 QMP processes and procedures, and managing the quality program for design and other non-construction activities. The DPCM coordinates with the IDQM for independent auditing of the Stage 1 QMP.

2.1.3.b.ii Approach for Non-Construction Quality Management Resources and Procedures

The Stage 1 QMP applies to all elements of FRMG's non-construction services. For design and other elements, including project administration, strategic communications, environmental, and right-of-way (ROW), Project Agreement requirements will be included in the Design Inputs Library prepared by the DPEs. Managers for each of these elements will designate PC resources within their teams to implement Stage 1 QMP processes and procedures. The DPCM will include these PC staff in quality training sessions and will audit the processes and products for compliance. The IDQM will also provide independent audits.

FIGURE 2.1.3-3
Summary of NCR Workflow



2.1.3.b.iii Development, Inter-Disciplinary Review and Coordination of Design

FRMG's design team is organized in a matrix structure with Design Discipline Leads (DDL) controlling uniformity across the Project and Area Design Managers (ADM) controlling multi-discipline design packages.

The DDLs and ADMs will attend design Task Forces, over-the-shoulder reviews, design progress reviews, and comment resolution meetings to coordinate with the Lead Contractor, Lead Operator, subcontractors, CDOT and the Procuring Authorities, and applicable stakeholders. In addition to design, construction and O&M requirements, these meetings will consider inter-disciplinary issues related to ROW, survey, environmental permitting, third-party agreements, utilities, railroads, and community relations. The DPEs will add appropriate items to the Design Inputs Library and assess compliance during quality reviews.

2.1.3.b.iv Design Personnel Interface

The matrix organization of the design team requires the design personnel to coordinate and work together, as discussed in Section 2.1.3.b.v. Design personnel will interact with counterparts from the Construction and O&M teams at design task forces and at ad hoc meetings to address constructability, durability, operability, and maintainability. CDOT and the Procuring Authorities and stakeholders are encouraged to attend these meetings. The design personnel will interface with the quality team daily through the DDLs, the DPEs at product reviews, and CDOT and the Procuring Authorities and IDQM at audits.

2.1.3.b.v Design Development

A. Approach for Delivering Design and Roles and Responsibilities

FRMG's Lead Engineer is composed of CH2M and AECOM. These two large local companies, combined with local Subconsultants, will be an integrated team that seamlessly works together. The design team is organized in a matrix format with equal consideration for production and PC activities. FRMG's design team includes local and specialty firms, including DBEs, that add technical expertise, production capabilities and local knowledge. An overview of the roles and responsibilities of key design staff, and key design Subconsultants is provided in **Figure 2.1.3-4**.

B. Approach to Managing Subconsultants and Off-Site Design Work

Subconsultant firms will be procured through the DPCPPR-018 Subconsultant Procurement Procedure. Once retained, Subconsultant personnel will be integrated into the design team. Most of the design team will be co-located, and we will promote a "Project-First" philosophy. Subconsultant work will be managed by the ADMs and directed by the DDLs. The DPEs will conduct quality reviews of their work and the DPCM will audit their activities and products.

FIGURE 2.1.3-4 **Key Design & Subconsultant Responsibilities**

Chris Bisio, *Design Manager (DM)*
- Serves as the primary contact for design team and serves as the Engineer in Responsible Charge
- Maintains close coordination with the Lead Contractor to plan design production and report progress

Deputy Design Manager Production *(DDMP)*
- Plans design activities in alignment with the Baseline Schedule and the Deliverable Requirements Tracking List
- Directs the DDLs and ADMs in the development of integrated teams and production of quality design products
- Manages the design team's participation in task forces and other Project coordination meetings and activities

Deputy Design Manager Operations *(DDMO)*
- Manages the Lead Engineer contract with the Lead Contractor, and the subconsultant contracts
- Manages the Project controls activities, including scheduling, costs, reports and document control

Design Process Control Manager *(DPCM)*
- Develops and implements the Stage 1 QMP and manages the DPEs and other associated personnel
- Coordinates with the IDQM and CDOT and the Procuring Authorities for audits of Stage 1 QMP activities

Design Process Experts *(DPEs)*
- Develops the Design Inputs Library and provides training to the ADM, DDLs and design teams on PC requirements
- Conducts disciplinary and interdisciplinary reviews of design products and performs audits for compliance with PC procedures

Area Design Managers *(ADMs)*
- Coordinates with other ADMs to align design teams, define interfaces between disciplines, and control production
- Manages design activities for production of quality design products for their area, including subconsultants
- Participates in coordination meetings to address team-wide issues required for an integrated Project design

Design Discipline Leads *(DDLs)*
- Coordinates with the DPEs to implement discipline-specific requirements and facilitate quality reviews
- Works with the ADMs to guide design activities and monitor compliance with discipline requirements
- Coordinates with other DDLs to align design activities between disciplines and participate in inter-disciplinary reviews

Subconsultant Responsibilities

Geocal, *Geotechnical Investigations*

Applied Pavement Technology, *Pavement Design*

Valerian, *Landscape/Irrigation Design*

RNL, *Landscape and Urban Design*

C. Coordinating Designs Developed by Different Firms and Offices

All design work will be managed and controlled in the same manner, regardless of design firm or production location. The ADMs will manage their multi-discipline design teams for production, and DDLs will control uniformity in design products across the entire Project. Design products, including those of Subconsultants, will be subject to Stage 1 QMP processes and procedures prior to submittal for CDOT and the Procuring Authorities' review. For design work performed in other offices, the ADMs and DDLs will regularly visit the production locations during design activities. Off-site design teams will be required to certify that their design products have been reviewed in accordance with their quality processes before submittal to the Area Design Manager for Stage 1 QMP review. DPEs will conduct random compliance audits at off-site locations.

2.1.3.b.vi Design Personnel Interface with the Procuring Authority

In addition to design task forces, design progress meetings and comment resolution meetings, FRMG's design personnel will routinely interface with CDOT and the Procuring Authorities' staff in the co-located Project office. Over-the-shoulder reviews will be conducted along with informal discussions of requirements and details. Design personnel also interact with Department staff during construction as design changes to Released for Construction (RFC) documents are considered.

2.1.3.b.vii Proposed Design Packages, Studies and Reports

FRMG has split the work into five distinct Work Areas, as shown in Part 3 of this Technical Proposal. Delivery of design packages, studies and reports are scheduled to match the needs of construction, as reflected in the Baseline Schedule. The design portion of the schedule is broken down by area and discipline, and the products are contained in the Deliverable Requirements Tracking List (DRTL). The DRTL identifies each Reviewable Deliverable, when it is planned for submittal to CDOT and the Procuring Authorities for review, and when it is scheduled for RFC. In some cases, several of the Reviewable Deliverable products will be assembled into one submittal package. Early design packages are anticipated to allow schedule-critical construction activities to begin as soon as possible. Early packages may be part of an overall RFC document (e.g., foundation package) or may be a standalone item (e.g., a single utility relocation). They may also define work to be undertaken at-risk to advance the most critical Project elements.

2.1.3.c Stage 2 Quality Management

2.1.3.c.i Approach to Meeting the Quality Management Obligations for Construction

Our approach to meeting the quality obligations for construction is detailed in our draft Stage 2 QMP. FRMG's CPCM will oversee all PC activities performed by the Lead Contractor and will coordinate closely with the Construction Manager and Construction Area Managers to ensure adequate PC resources are assigned to each area of work to meet production needs. In addition to the dedicated PC staff, each worker, from craft to senior management is a key member of our PC organization and has the responsibility to "build it right the first time." FRMG's IQCM will be the IQCF's lead for managing and implementing the IQC program for construction items.

Flatiron | AECOM on the C-470 project has the highest quality ranking in Colorado, at 92.3%.

2.1.3.c.ii Planning and Controlling Construction Work

The work areas we have developed to build the Project (discussed in Part 3) allow for more efficient coordination of reviews and permitting, greater ability to monitor and control work, optimal use of resources, ability to perform concurrent work in all areas, and more flexibility to work around third-party needs. Corridor-wide discipline leads will support each area. Our approach to scheduling the Construction Work to meet the Key Milestones set out in the Baseline Schedule is provided in Part 1, Sections C and D. The schedule is driven by the Maintenance of Traffic detailed in Part 3 of this Technical Proposal.

2.1.3.c.iii Management Approach for Construction

Our construction approach includes the following key strategies to manage high-quality work safely and provide on–time delivery:

- Dedicated management, crews, and support staff for each Work Area
- Integrated Project schedule, including look-ahead schedules with quality hold points

- Pre-shift daily planning meetings to review construction operations with superintendents, field engineers, project engineers, quality personnel, and site safety representatives
- Daily safety walks and reports to document safety performance
- Weekly progress, equipment, schedule, and cost meetings
- Quality training on Project-specific tasks for the construction team
- Work Plan preparation, readiness reviews, and approvals shown in look-ahead schedules
- Work Plan and Job Hazard Analysis training for superintendents, field engineers, and craft workers
- Traffic Control Plan meetings prior to implementing traffic changes
- External communications as described in Part 4 of this Technical Proposal

Integrating Design and Maintenance with Construction

Construction and O&M teams have been and will be actively involved during the design phase through participation in design task forces and constructability, operability, and maintainability reviews. We will continue discipline-specific task forces into the construction phase as needed. The design team will remain active during construction to provide our team with prompt answers and approvals of design changes necessitated by field conditions. Major tasks for the designers during construction include: processing field design changes, resolution of NCRs, submittal reviews, shop drawing reviews, and third party design support. The O&M Manager will be involved during the Construction Period to assess the impacts of design checks on durability and O&M costs and for planning the work for the Operating Period. O&M activities during construction will be performed by the Lead Contractor's O&M team.

2.1.3.c.iv Managing Staged Construction and Simultaneous O&M Activities

A detailed description of how FRMG will manage staged construction is included in Part 3. To provide safe and efficient delivery of simultaneous construction and O&M activities, the O&M work during the Construction Period will be performed by the Lead Contractor and managed by the Design-Build Manager (supported by the Construction Manager), and with oversight by the Developer. This approach will allow our team to leverage the on-site resources throughout the Construction Period to address O&M issues as they arise, in addition to the dedicated O&M crews that will be assigned during construction. Personnel responsible for O&M during construction will be included in weekly construction meetings in order to plan the upcoming O&M work. Each Construction Area Manager will be responsible for monitoring their geographic areas, and will report any issues identified to the Construction Manager who will direct the response and coordinate the work with the team.

2.1.3.c.v Interface with the Procuring Authority

FRMG will integrate CDOT and the Procuring Authorities' staff into our management system at all steps along the way. In particular, FRMG will use ELVIS for all quality documentation, which will fully connect and communicate with Aconex. FRMG will use several of the same strategies to facilitate the interface between the IQC and construction personnel with CDOT and the Procuring Authorities' staff that we use to facilitate our internal team integration. Examples include:

- Project co-location and over-the-shoulder reviews QTF Meetings and Quality Issues Matrix input and review
- Weekly meetings including design task forces, inter-disciplinary coordination meetings and construction scheduling meetings
- Monthly meetings including Critical Path Method schedule reviews

2.1.3.c.vi Constructability, Durability, Maintainability, and Environmental Compliance

Our construction, O&M, and environmental compliance staff will be integrated early in the design process to ensure we continuously consider constructability, durability, maintainability, and environmental compliance. This integration continues as the Project transitions from one phase to another. Key strategies to accomplish this include:

- Project co-location and over-the-shoulder reviews
- Weekly meetings including design task forces, inter-disciplinary coordination meetings and construction scheduling meetings
- Design Work plans
- Construction Work plans and readiness review meetings
- A dedicated team to lead the transition to the Operating Period

Part 3
Maintenance of Traffic

Front Range
Mobility Group

2.1.4 **Part 3**

Maintenance of Traffic

THE EXTRA MILE

FRMG has developed a fully optimized approach to Maintenance of Traffic (MOT) that is focused on maintaining connectivity along I-70 and the surrounding communities during the Construction Period. Our proposed approach corresponds closely with the phasing and work areas described by the CDOT and Procuring Authorities to stakeholders, while also limiting traffic shifts and detours, significantly improving the experience along the corridor during construction and increasing safety throughout the Project.

FRMG's Extra Mile — ATC 65

An integral aspect of our MOT is ATC 65, an innovative solution to significantly simplify our plan for managing traffic and minimizing impacts. A minor alignment shift in the Lowered Section of the Project integrates MOT as a primary driver, allowing for construction of the Lowered Section of I-70, with the exception of the final tie-ins, in one phase, while maintaining traffic on the existing viaduct. This greatly simplifies and improves traffic management throughout construction of the project, reduces impacts to the community and public, including eliminating the need for two long term ramp closures at the Steele St./Vasquez Blvd. Interchange, as well as faster, less segmented construction phasing.

As part of our approach, we have included an MOT Manager who will be responsible for overseeing MOT activities during construction and developing and implementing the final Traffic Management Plan (TMP), which includes the interface between the Traffic Control Plans (TCP), Transportation Operations Plan (TOP) Strategies, and Public Information (PI). Through the MOT Task Force meeting, led by the MOT Manager, FRMG will facilitate internal communications, and will focus on coordinating traffic management strategies with the CDOT, the Procuring Authorities, and local agencies.

2.1.4.a Traffic Management Control, Coordination and Sequencing Approach to Major Work Activities

FRMG's overall Traffic Management approach for construction sequencing divides the Project into five independent work areas (**Figure 2.1.4-1**) that comprise three major MOT zones. Upon completion of the new Holly Street Interchange, each area can be constructed independently, opened to traffic upon construction completion, and results in the westbound (WB) Tolled Express Lanes being available approximately 22 months early and the eastbound (EB) Tolled Express Lanes being available approximately 9 months earlier than the Reference Design approach.

FRMG DELIVERS:

QUALITY

FRMG's MOT uses a single-phase approach to construct the majority of the cross-street bridges, with reduced overlap with the existing I-70 viaduct structure, and increased quality by reducing phased construction.

EFFECTIVE SOLUTIONS & DECISION MAKING

Our MOT Task Force meetings, led by the MOT Manager, will allow us to facilitate internal communications and focus on coordinating traffic management strategies with the Department and local agencies.

MINIMIZED IMPACTS

Our sequencing optimizes traffic flow by opening usable areas as early as possible to improve access and mobility for surrounding businesses and communities. In addition to improved traffic management, ATC 65 minimizes construction impacts near Swansea Elementary School.

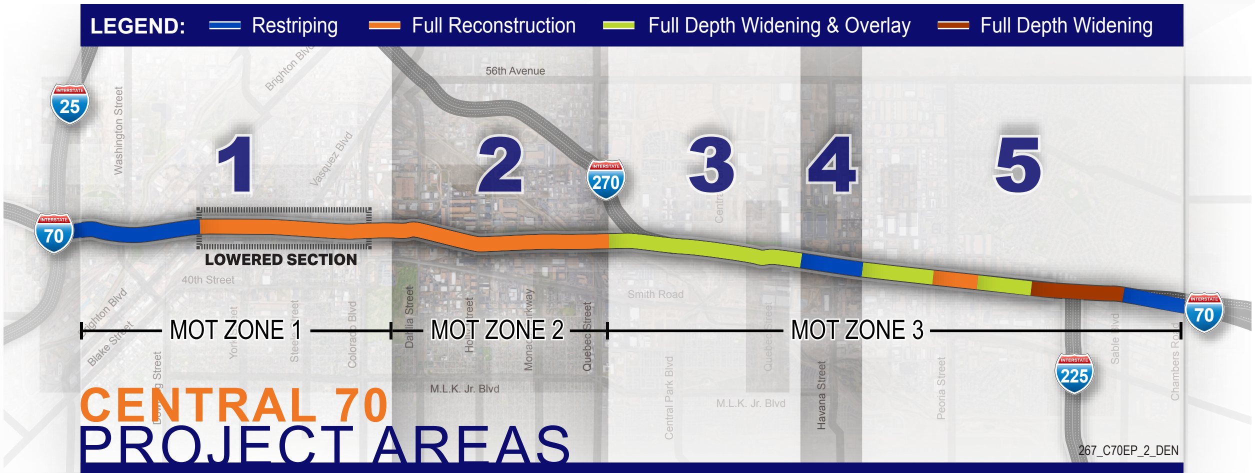
COMMUNITY BENEFITS

With five independent work areas, there are multiple opportunities for DBE and ESB participation, in particular with Colorado's robust Traffic Control pool of companies.

PERFORMANCE & SCHEDULE ENHANCEMENTS

Our MOT approach enhances schedule certainty, as we have more control over work and can construct the majority of the Lowered Section without having to impact I-70 traffic. For instance, closure of the WB entrance and EB exit ramps at Steele St. and Vasquez Blvd. will be limited to nighttime closures to construct the Lowered Section in this area. Long-term closures of these ramps are unnecessary with FRMG's MOT plan.

FIGURE 2.1.4-1 **Overall Project Areas**



MOT Zone 1 starts east of I-25 and includes all of Area 1 with work limits extending to just east of Colorado Boulevard. Area 1 is focused on the construction of the Lowered Section and is divided into two phases requiring only one traffic shift for both WB and EB I-70.

ATC 65 minimizes the traffic shifts in this Area and provides continued resident and business connection. In addition to adhering to the requirements of the Project, ATC 65 provides added value for our MOT by:

» Allowing traffic to remain on the viaduct in its existing configuration for the first three years while the majority of the Lowered Section is completed, substantially minimizing impacts to the traveling public

» Keeping the Steele St./Vasquez Boulevard Interchange EB exit and WB entrance ramps open for the duration of the Project to allow for business and community connection

» Allowing for the majority of cross-street bridges to become operational during Phase 1, expediting traffic back onto the original alignment

Our approach to sequencing Area 1 moves WB traffic into the permanent configuration in the Lowered Section in Phase 1, Stage 5, and EB traffic at the end of Phase 2, Stage 1, avoiding any other major traffic shifts for the general purpose lanes. **Figures 2.1.4-2 and 2.1.4-3** further detail the sequencing of Area 1 and how those activities align with the Proposal Schedule.

MOT Zone 2 includes all of Area 2 beginning immediately east of Colorado Boulevard and ends at Sand Creek Bridge. Three-phased construction of the Dahlia and Holly Bridges requires three traffic shifts of I-70. The construction of I-70 widening and the Quebec interchange is dependent on the early construction of the Holly Interchange to minimize traffic impacts and accelerate the overall construction schedule. **Figure 2.1.4-4** details the activities in each phase and how those activities align with the Proposal Schedule.

MOT Zone 3 encompasses the remaining Areas 3-5 of the Project from Sand Creek Bridge to Chambers Road. The coordination and sequencing of this Area yields a simplified two-phase approach to traffic management, resulting in two traffic shifts. **Figure 2.1.4-5** further details the Phases in Areas 3, 4, and 5 and the timeframe of these activities as they are reflected on the Proposal Schedule.

A major part of our TMP involves coordination with our Project Communications Manager in concert with the Strategic Communications Plan. PI efforts will spearhead our approach to informing affected stakeholders of potential impacts through the Project. Maintaining existing ITS and VMS systems will help us perform outreach to the traveling public, alerting them about upcoming construction activities and traffic shifts. We have also developed a portable VMS deployment plan that supplements CDOT's VMS boards, which will provide the traveling public with reliable Project information to plan accordingly.

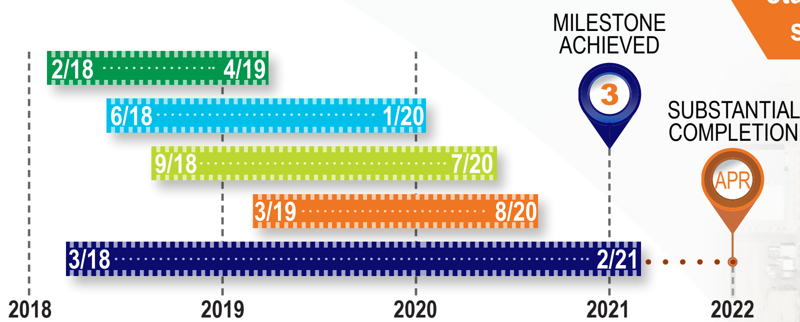
Denver has a large pool of qualified DBE/ESB-certified traffic control companies, which FRMG will solicit to staff the needs of our MOT.

THE EXTRA MILE

AREA 1
PHASE 1

FIGURE 2.1.4-2

Work during this Phase involves constructing the majority of the improvements between Brighton Blvd. and Colorado Blvd. The main focus of this Phase is construction of 100% of the Cover, most of the Lowered Section including local roadways, and moving WB traffic into the Lowered Section. We have divided this phase into five stages to manage the required traffic shifts of 46th Avenue for utility relocations, local connectivity, Cover Systems installation, construction of the cross-streets, and sequencing of ramp construction.



STAGE 1
- Temporary NB Brighton Blvd. detour
- Temporary Steele St. detour
- Temporary WB Steele St. exit
- 46th Ave. North (Steele St. to Colorado Blvd.)
- Clayton St. structure and roadway

STAGE 2
- Utility relocation in 46th Ave.
- NB Brighton Blvd.
- York St. (partial)
- Columbine St. structure and roadway
- Steele St. Bridge
- Cook St. Bridge (partial)
- Burlington Northern Santa Fe Railway (BNSF) Bridge
- Monroe St. Bridge and roadway (partial)

STAGE 3
- SB Brighton Blvd.
- York St. Bridge (partial)
- Josephine St. Bridge
- 46th Ave. North (overhang) between York St. and Josephine St., between Clayton St. and Milwaukee St.
- Fillmore St. Bridge
- EB I-70 east of Colorado Blvd.

STAGE 4
- Brighton Blvd. WB entrance (partial)
- 46th Ave. North between Colorado Blvd. and Monroe St.
- Temporary WB Steele St. entrance
- Colorado Blvd. Bridge (partial)
- Colorado Blvd. WB exit
- WB I-70 east of Colorado Blvd.

STAGE 5
- Brighton Blvd. Bridge (partial)/Brighton Blvd. WB entrance (partial) and WB exit
- York St. Bridge (partial)
- WB I-70 from Brighton Blvd. to Colorado Blvd.
- I-70 Cover
- 46th Ave. North from Brighton Blvd. to Steele St.
- Steele St. WB entrance
- Temporary EB Colorado Blvd. exit and EB entrance
- UPRR bridge
- Colorado Blvd. bridge (partial), Colorado Blvd. EB entrance
- WB I-70 traffic shift into Lowered Section

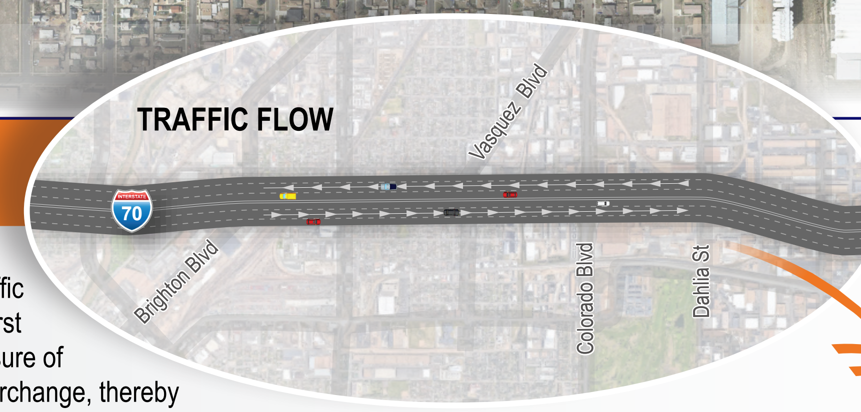
EAST INTERSTATE COLORADO 70

Local Connectivity

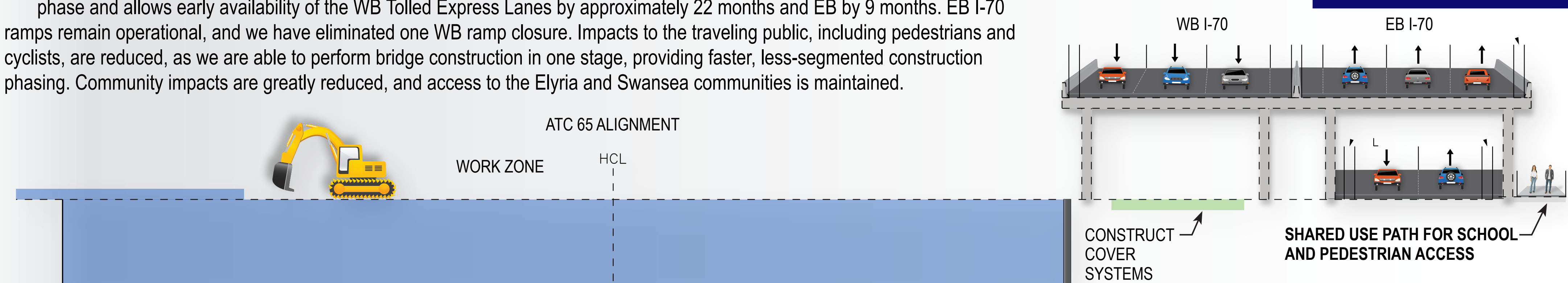
ATC 65

ATC 65 ALLOWS FULL CONSTRUCTION OF LOWERED SECTION EXCLUDING TIE-INS

ATC 65 was developed to streamline construction of Area 1 and increase schedule certainty. It reduces traffic shifts by leaving traffic on the existing viaduct for the first three years and eliminates the RFP-allowed six-month closure of EB exit and WB entrance ramps at the Steele St./Vasquez Blvd. Interchange, thereby maintaining local connectivity. In addition, ATC 65 allows us to construct operational cross-streets in one phase and allows early availability of the WB Tolled Express Lanes by approximately 22 months and EB by 9 months. EB I-70 ramps remain operational, and we have eliminated one WB ramp closure. Impacts to the traveling public, including pedestrians and cyclists, are reduced, as we are able to perform bridge construction in one stage, providing faster, less-segmented construction phasing. Community impacts are greatly reduced, and access to the Elyria and Swansea communities is maintained.



NO IMPACT TO TRAFFIC ON I-70 FOR DURATION OF THIS PHASE



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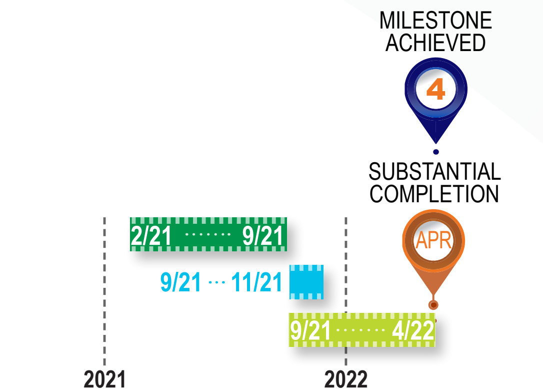
THE EXTRA MILE

AREA 1
PHASE 2

FIGURE 2.1.4-3

Work during this Phase includes the remaining improvements between Brighton Blvd. and Colorado Blvd. Here, we will move EB traffic into the Lowered Section and construct the remainder of the Project, including 46th Ave. South. Phase 2 is divided into three stages to complete the tie-ins of the Lowered Section and 46th Ave. South and its associated ramps.



STAGE 1

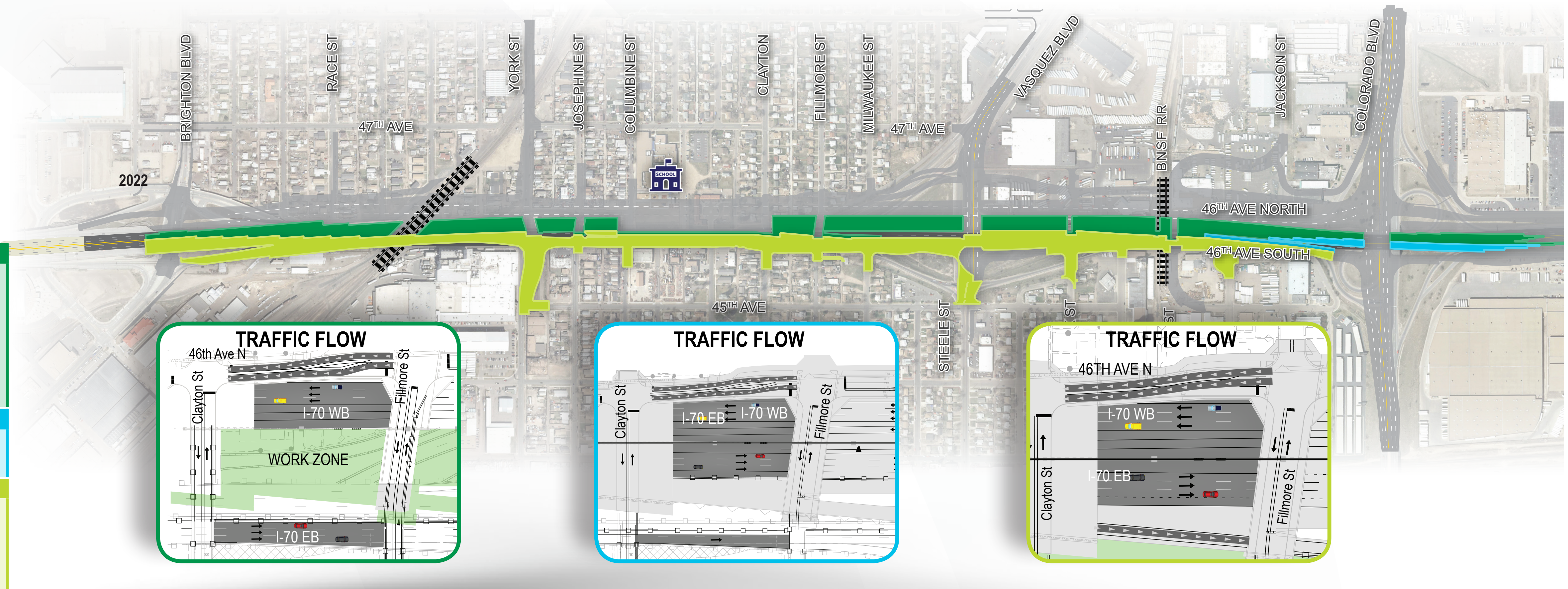
- Demolish WB viaduct
- Brighton Blvd. Bridge (partial)
- Temporary EB Brighton Blvd. entrance
- Remaining portions of the cross-street bridges
- EB I-70 pavement
- EB Steele St. exit (proposed and temporary)
- EB I-70 traffic shift into Lowered Section

STAGE 2

- EB Colorado Blvd. exit (partial)
- Remaining EB I-70 pavement at Colorado Blvd.

STAGE 3

- Demolish EB viaduct
- Brighton Bridge (partial)
- EB Brighton Blvd. entrance
- Remaining EB I-70
- Remaining EB Steele St. exit
- Remaining EB Colorado Blvd. exit
- 46th Ave. South and cross-street connections



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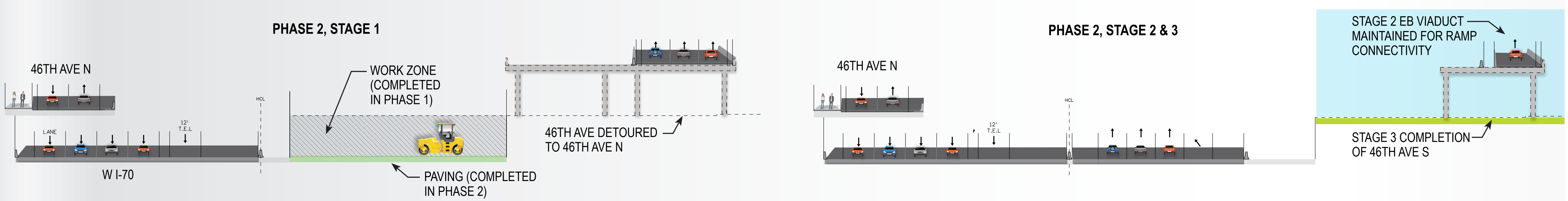
COMPLETION OF LOWERED SECTION TIE-INS AND 46TH SOUTH

Taking advantage of ATC 65 in the previous Phase sets our team up for quick completion of work in this Phase. With WB traffic in its final configuration, we can begin to remove the WB viaduct structure while we complete the remaining Lowered Section that was previously in conflict with this Area. At the end of Stage 1, EB traffic is shifted into the new alignment. EB ramp connectivity will be maintained on the viaduct, while we complete the east end tie-in at Colorado Blvd. and Steele St. EB exit ramp, eliminating this ramp closure. Stage 3 includes removal of the EB viaduct, final tie-in at Brighton Blvd., and 46th Ave. South.



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AREA 2 PHASE 1-3

FIGURE 2.1.4-4

Work in Area 2 encompasses Stapleton Dr., which houses many of the businesses along the I-70 corridor. Our phasing maintains one lane along Stapleton Dr. in both directions to ensure access for businesses. Work also includes the Holly St. diamond interchange and full reconstruction and widening of I-70 from Colorado Blvd. to Sand Creek Bridge, including associated I-70 bridges over local, CDOT, and railroad facilities.

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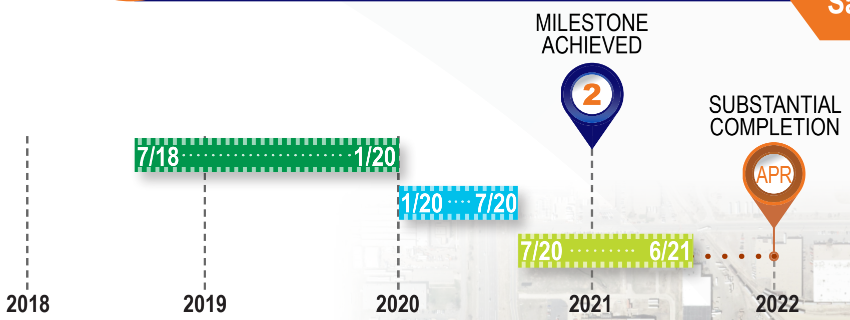
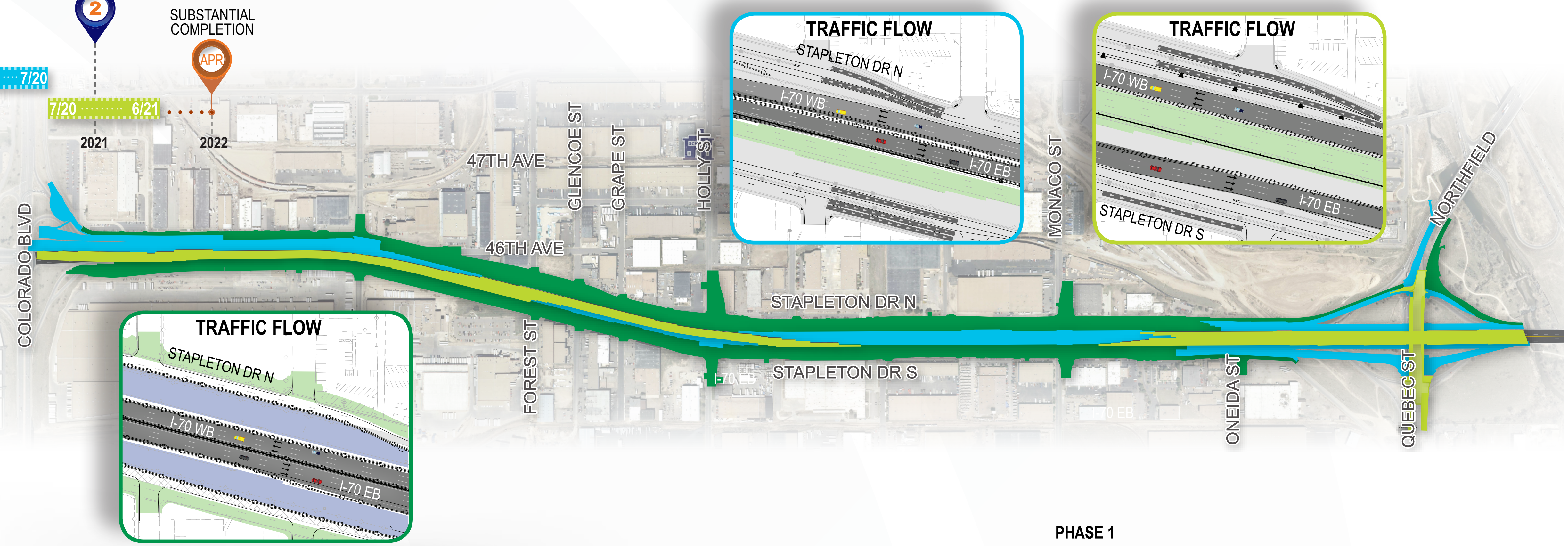


PHASE 1
- Temporary paving of I-70 median
- Stapleton Dr. North and South (partial)
- WB and EB I-70 widening
- Dahlia St. EB bridge widening
- Holly St. WB bridge widening and intersection
- Monaco St. outside bridge widening
- WB Quebec St. slip ramp to Stapleton Dr. North and bridge
- WB Quebec St. exit widening

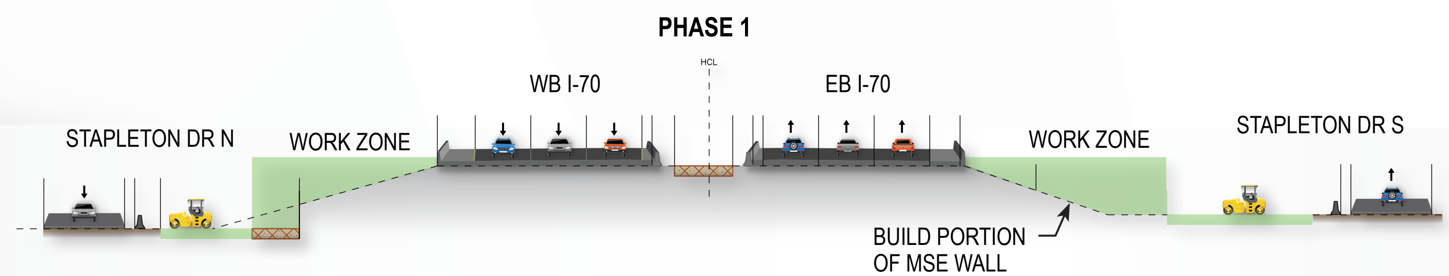
PHASE 2
- I-70 widening and median pavement
- WB Dahlia St. bridge widening
- EB Holly St. bridge widening
- Remaining Monaco St. bridge
- WB and EB railroad bridges over DRIR
- Quebec St. Bridge widening
- Quebec St. entrance and exit ramps

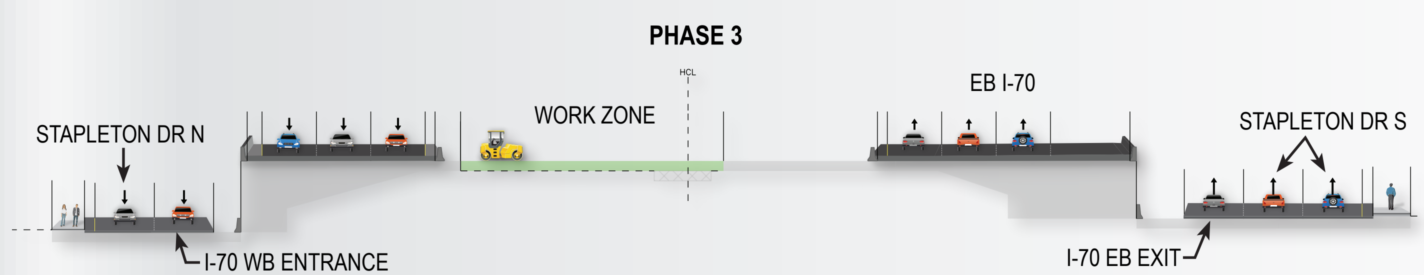
PHASE 3
- I-70 remaining pavement
- Dahlia St. remaining bridge
- Holly St. remaining bridge
- Quebec St. bridge
- Quebec St. widening
- Remaining WB and EB railroad bridges over DRIR

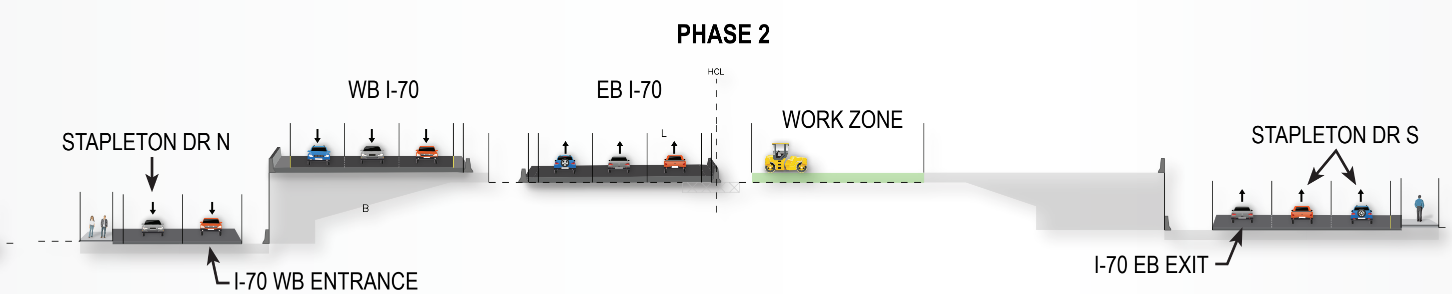


HOLLY ST. INTERCHANGE COMPLETE

The completion of construction at Holly St. is integral to interchange configurations both east and west of this Area. Once Holly St. is complete, work can begin at other I-70 ramps along the alignment that include Colorado Blvd., I-70 slip ramps to Stapleton Dr. Interchange, and the ramps at the Quebec St. Interchange. We will complete work in this area early in the Project to minimize traffic impacts and accelerate the overall construction schedule.







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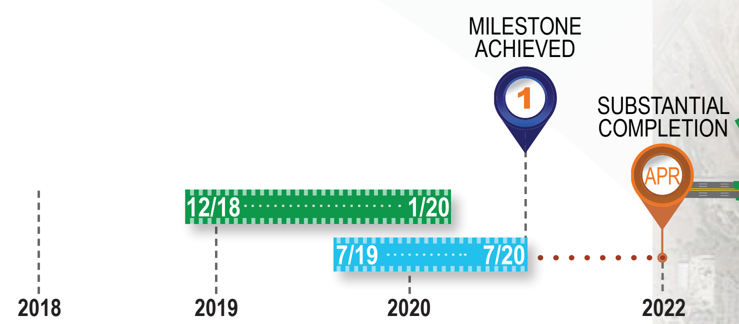
THE EXTRA MILE

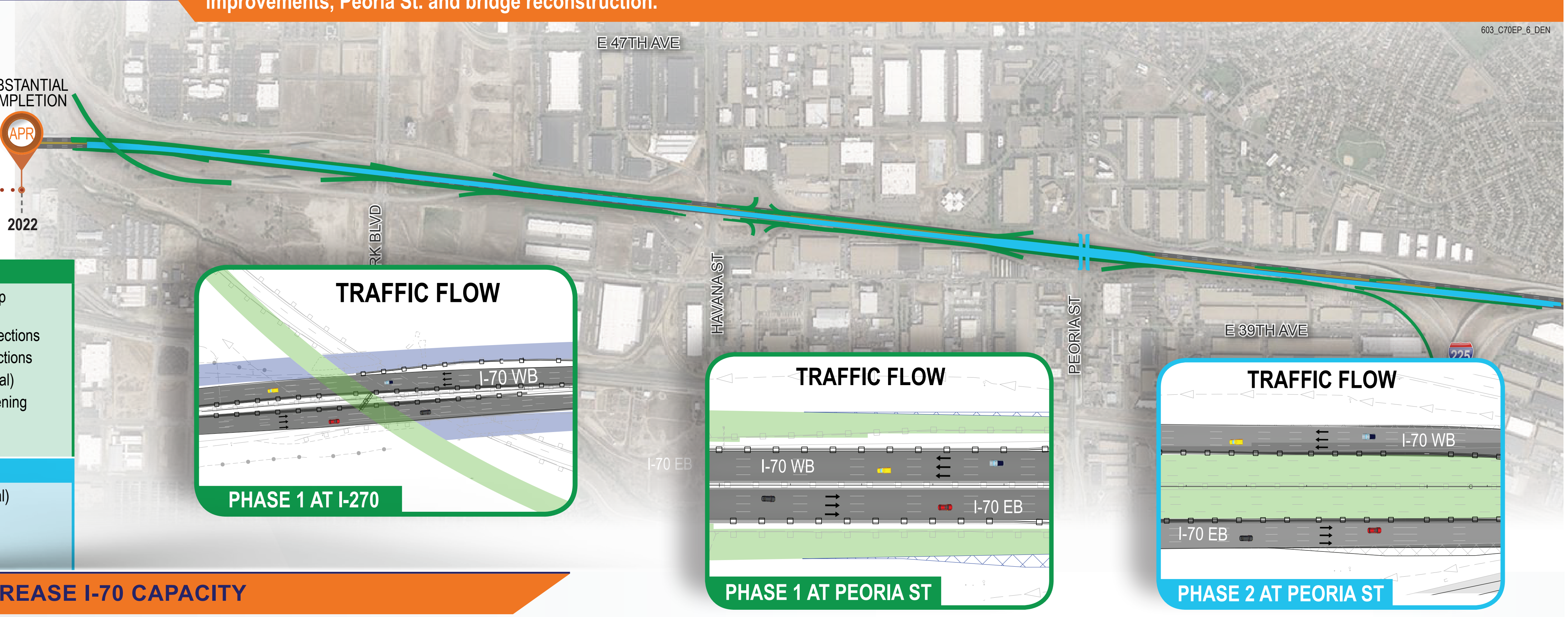
AREA 3-5

PHASE 1 & 2

FIGURE 2.1.4-5

Areas 3-5 requires a simple, two-phased approach to traffic management. Phase 1 includes full-depth construction and widening of the outside portions of I-70 and the Peoria St. bridge, ramp tie-ins, and the I-270 flyover to EB I-70. Phase 2 completes a mill and overlay of the inside portion of the I-70 Mainline, median improvements, Peoria St. and bridge reconstruction.





PHASE 1

- Construction of the I-270 flyover bridge
- I-270 roadway and ramp connections
- Demolition of the existing I-270 flyover bridge
- Widening excavation and embankment
- Widening full-depth pavement section
- Central Park Blvd. ramp connections
- Havana St. ramp connections
- Peoria St. ramp connections
- Peoria St. Bridge (partial)
- Southbound I-225 widening

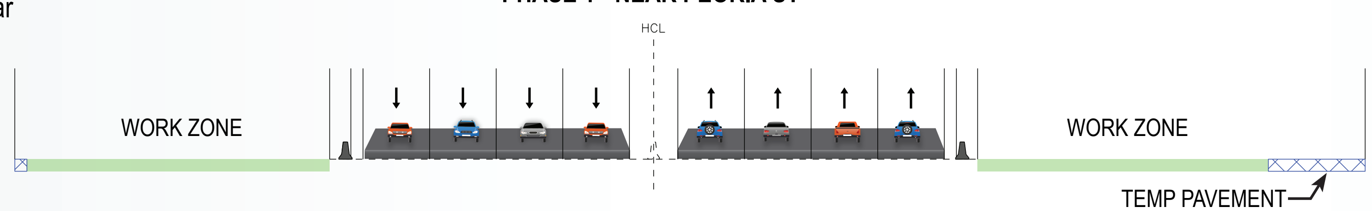
PHASE 2

- Median improvements
- Mill and overlay existing roadway
- Peoria St. bridge (partial)
- Peoria St.

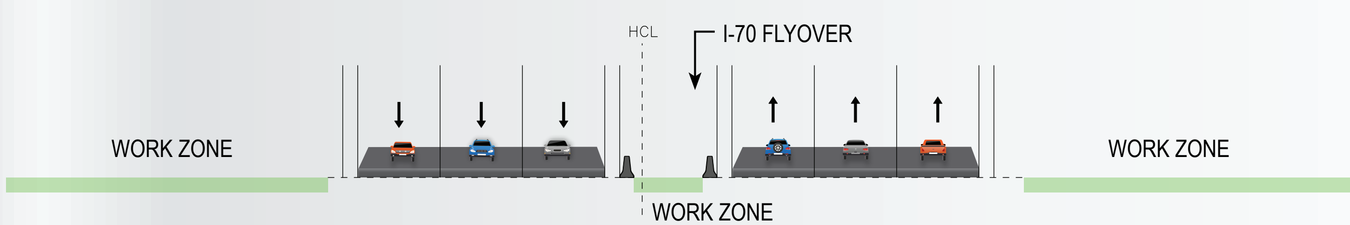
EARLY CONSTRUCTION ITEMS INCREASE I-70 CAPACITY

Areas 3-5 will be among the first construction zones completed, which will provide additional capacity for traffic on I-70. As part of this work, we will tie into the previously constructed Havana St. Interchange, and we will perform cross slope correction of the highway surface to provide proper drainage of the widened pavement section. Restriping near Chambers Rd. will return the roadway to the existing I-70 lane configuration.

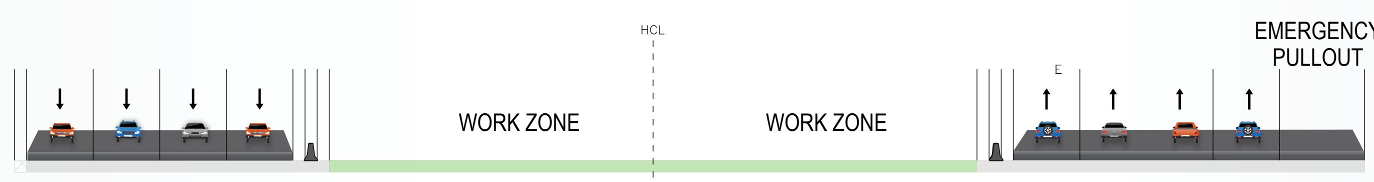
PHASE 1 - NEAR PEORIA ST



PHASE 2 - NEAR I-270



PHASE 2 - NEAR PEORIA ST



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2.1.4.b Local Agency and CDOT Roadway Impacts

We have developed additional innovative solutions to several interchanges and streets that maintain resident and local business access during construction and enhance safety and mobility. We are able to construct the majority of the cross-street bridges earlier and in single phases. This eliminates traffic shifts and increases safety. Our draft TMP identifies roadway and lane closures within the Project limits including the durations of closures and proposed detour routes. All uses of local roadways for detours will be coordinated and approved by the respective local agency.

» **Local Streets**. FRMG will follow the concurrent full roadway closure restrictions for North-South facilities. Our draft TMP contains detailed detours, similar to the one shown in **Figure 2.1.4-6**, for 51 different routes. In general, impacts to local streets are minimized through:
  - Consideration of the traffic-carrying capacity of alternate routes
  - Reducing the duration of detours to minimize impacts to the traveling public
  - Routing traffic away from residential areas as much as possible

We recognize that during construction, local streets will experience greater traffic due to adjacent closures. With this in mind, FRMG will evaluate local street traffic operations in advance of preparing detailed TCPs using the Department's Synchro and FREEVAL data sets. The traffic analysis will evaluate expected queue lengths and delays, and traffic signal timing coordination and optimization, to minimize impacts related to our MOT plans.

FIGURE 2.1.4-6 **Example Detour Detail**

» **CDOT Roadways (Brighton Blvd./Steele St./Vasquez Blvd./ Colorado Blvd./Quebec St./Peoria St.)**. These roadway improvements and bridge construction will require nighttime full closures, lane closures and traffic shifts during restricted hours. FRMG will maintain all existing through and left turn lanes during construction. Our MOT plan uses no more than the six allotted closures during the construction period for bridge construction and associated tie-ins at these roadways.

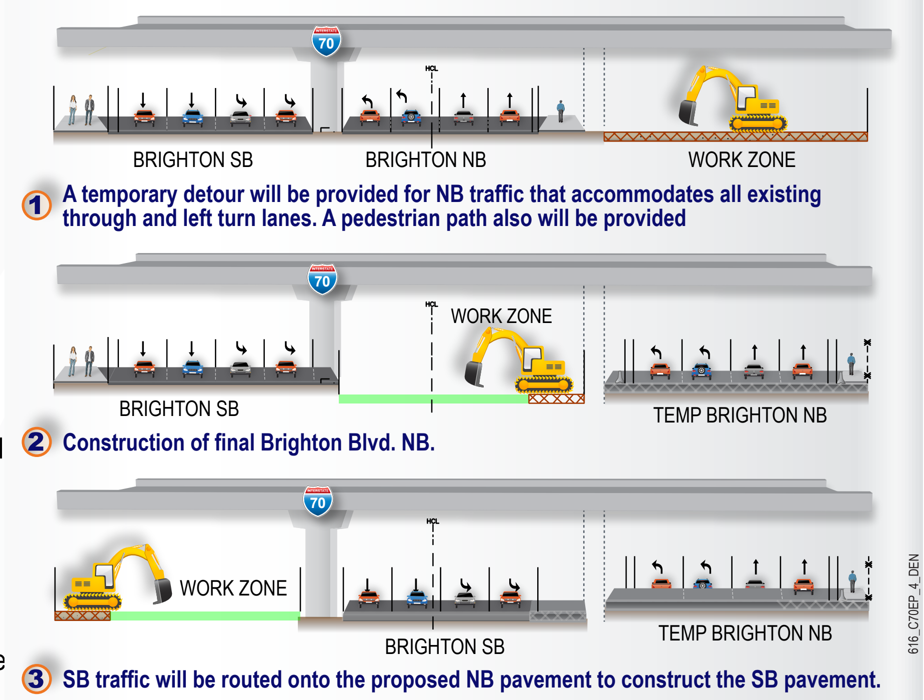
» **Brighton Blvd.** On the following page, **Figure 2.1.4-7** demonstrates a typical example of our phasing.

» **Steele St./Vasquez Blvd. Interchange.** A temporary detour adjacent to the existing roadway will be provided that accommodates all existing through and left turn lanes to allow construction of the Steele St. bridge in one stage. Traffic will then be shifted onto the Steele St. bridge in a temporary configuration until the existing viaduct is demolished. This roadway will experience nighttime lane closures and traffic shifts to complete intersection pavement.

» **Colorado Blvd.** Traffic will be in a temporary configuration while a portion of the new Colorado Blvd. bridge is constructed. Traffic will then be shifted to the new bridge in a temporary configuration while the existing bridge is demolished and the remaining bridge is constructed. Colorado Blvd. will require nighttime lane closures and traffic shifts to complete construction.

» **Quebec St./Peoria St.** At Quebec and Peoria, traffic will be shifted toward the median in a temporary configuration. Once the I-70 bridges are complete, traffic will be shifted to the widened pavement to allow construction of the remaining pavement. Both Quebec and Peoria will experience nighttime lane closures and traffic shifts to complete construction of the I-70 Bridge and intersection pavement.

FIGURE 2.1.4-7 **Brighton Blvd. Reconstruction**



2.1.4.c Full Closures of the I-70 Mainline and Ramps

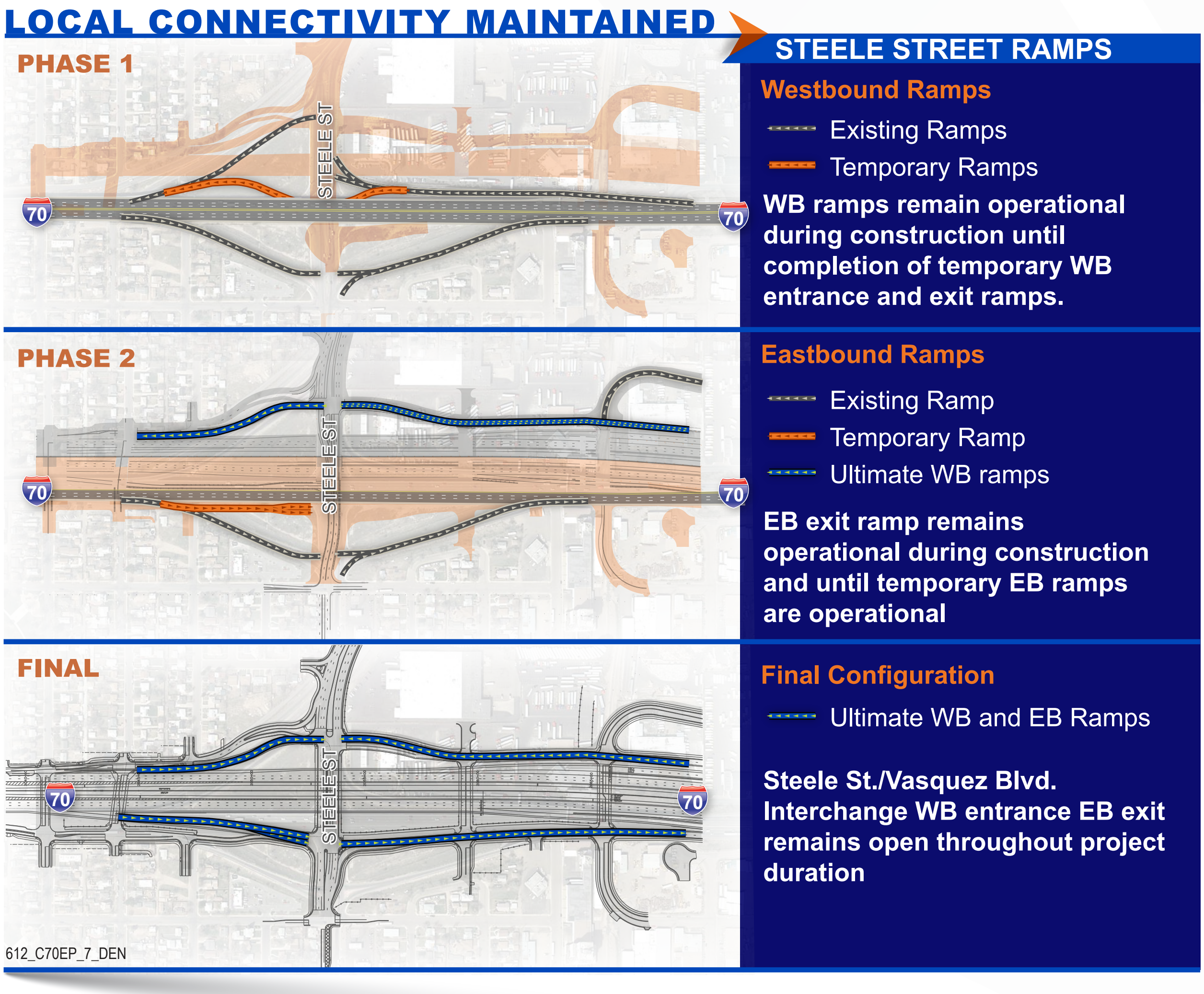
Our Draft TMP identifies I-70 full closures from I-25 to I-270 and lane closures within the Project limits including the durations of closures and proposed detour routes, as permitted by the Project Agreement. TCPs will be prepared to detail traffic routes through the Project along with necessary signage.

For each permitted closure, FRMG will submit a request that includes a description of the closure; construction activities to occur; date, time, and duration of the closure; the proposed detour route; and a description of the coordination and relationship between the requested permitted closure and any other closures in effect, any past closures and results, future closures of the same facility, and adjacent projects. Closure information will be provided to our Communications Team for development of timely messaging to all stakeholders.

- **Closures of I-70.** FRMG has developed the MOT plans to reduce the number of full closures. We will not exceed 10 nighttime closures of I-70 and four weekend closures of I-70. In fact, our Draft TMP currently anticipates utilizing seven nighttime closures and two weekend closures of I-70. This leaves us flexibility to erect sign structures and other final elements near the end of construction as needed. Our team will continue to work with CDOT and the Procuring Authorities to combine nighttime and weekend closure activities during final design.
- **Closures of Ramps.** FRMG has developed MOT plans that reduce ramp closures and comply with Schedule 10 Section 2.11.6.b.
  - **Brighton Blvd. Ramps** will experience nighttime closures and lane shifts to construct new ramps. The Brighton Blvd. WB exit ramp will require a six-month closure to construct the new ramp.
  - **York St. Ramps.** The WB York St. entrance ramp will be closed in order to construct the UPRR Bridge. The EB York exit ramp will be closed in order to demolish the EB viaduct. Steele St./Vasquez Blvd. Interchange will serve traffic bound for York St.
  - **Steele St./Vasquez Blvd. Ramps. Closure of the WB entrance and EB exit ramps will be limited to nighttime closures to construct the Lowered Section in this area. Long-term closures of these ramps are unnecessary with FRMG's MOT plan.** Further details about how FRMG will maintain local connectivity in this area can be found in **Figure 2.1.4-8**. The WB exit ramp will experience closures either during daytime or nighttime hours as allowed, as well as lane shifts to construct a temporary exit ramp. Once the proposed Colorado Blvd. WB exit ramp and 46th Ave. North connection from Colorado Blvd. to Steele is constructed, the existing WB ramp will be closed. The EB entrance ramp will be closed to demolish the remaining EB viaduct and to construct 46th Ave. South.

– **Colorado Blvd. Interchange.** As depicted in **Figure 2.1.4-9** (following page) FRMG has designed temporary ramp connections that maintains operations of the WB and EB entrance to I-70 from Colorado Blvd. during initial construction and will be included in the final MOT. This allows for an approximately 10-month earlier start of construction of the Colorado Blvd. bridge structure, while we complete construction and operation of the new Holly St. Interchange. The WB exit ramp will require closures totaling six months to construct the new exit ramp and complete the proposed Colorado Blvd. roadway. The EB exit ramp will experience closures either during daytime or nighttime hours, as allowed and as necessary, as well as traffic shifts for construction of the proposed Colorado Blvd. roadway. There will also be a one-week closure pending ATC 45 and the MOT variance process to complete construction of a temporary EB exit ramp in this area. The EB entrance ramp will experience nighttime closures and traffic shifts to construct temporary connections to the freeway.

FIGURE 2.1.4-8 **Steele St./Vasquez Blvd. Interchange**

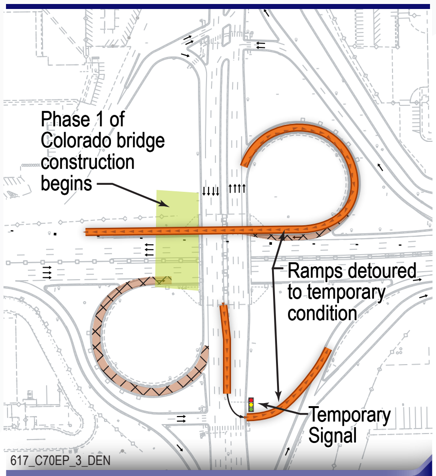


– **Stapleton Dr. Slip Ramps** will experience nighttime closures and traffic shifts to construct temporary connections to the freeway. These ramps will be closed once the Holly St. Interchange is operational.

– **Quebec St. Ramps.** The WB exit ramp will experience nighttime closures and traffic shifts in order to construct the new ramp. The WB entrance ramp will require a six-month closure in order to construct the new ramp. The slip ramp to Stapleton Drive North will be operational during the closure providing a quick detour to the Holly entrance ramp. The EB exit ramp will experience a six-month closure in order to construct the new ramp. The EB entrance ramp will require nighttime closures and traffic shifts in order to construct the new ramp.

- **EB I-270 to EB I-70 Connector** will require nighttime lane closures to complete construction of the new connector.
- **Central Park/Havana/Peoria Ramps** will require nighttime closures and traffic shifts to complete the ramp tie-ins to the widened I-70.

FIGURE 2.1.4-9
Colorado Blvd. Phase 1 Bridge Construction



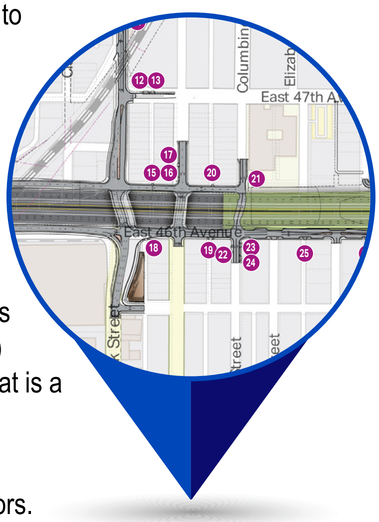
Colorado Blvd. Interchange
WB and EB entrance ramps maintained allowing bridge construction to begin early.

2.1.4.d Maintain Residential, Business and Pedestrian Access and Access to Other Adjacent Roads

The Project is adjacent to more than 50 business and residential properties requiring access improvements. Our staging approach, as shown on **Figures 2.1.4-2** through **2.1.4-5**, was developed to maintain access during the Construction Period and strictly adhere to the PA requirements. FRMG's Draft TMP has cataloged all proposed driveways and will coordinate construction activities and access concerns with each property owner. A sample of our mapping of the points can be found in **Figure 2.1.1-10**. FRMG also will provide a pick-up shuttle service for construction staff at the Colorado Blvd. Station of LRT to decrease the amount of traffic volume and vehicles parking near the Project site.

Residential and Business. Our MOT strategies reflect our commitment to maintain public and private access to the local street system. FRMG will maintain access to each residential and business property by building driveways in stages where there is only one access point and building one driveway at a time where there are multiple access points to the property. No driveway is on the critical construction path, allowing flexibility to coordinate construction windows to meet each property owner's need and schedule. Our Communications Team will continually reach out to businesses to provide information about Project updates, access and other impacts.

FIGURE 2.1.4-10
Business and Private Access



After inventorying business and private access points in the Project area, FRMG anticipates 87 driveways will need to be maintained.

Pedestrian Access. Safe and convenient pedestrian access between the Elyria and Swansea communities is vital during construction. FRMG has developed MOT plans and TOP Strategies to accommodate safe pedestrian paths between the communities and through work areas while limiting out-of-direction travel. Pedestrians will be detoured to the nearest available route when closures are required not exceeding 1,000 feet in out-of-direction travel. Pedestrian paths within the project area will be lit and fenced, as applicable. The Draft TMP identifies closures of bike and shared-use routes (e.g., Sand Creek Trail and Clayton Street) during construction and designates detour routes. For any closure of a roadway that is a designated bike route, FRMG will provide an equivalent bicycle detour route.

Among the pedestrians in this corridor are students, faculty and staff at Swansea Elementary School, for whom Clayton St. and Columbine St. serve as main corridors. These will not be closed during the school year. FRMG will provide a dedicated shared-use path along the south side of existing 46th Avenue from York St. to Fillmore St. to provide direct access to Columbine and Clayton streets and to separate pedestrians from the major construction activities of the Lowered Section of I-70. **As identified in the Draft TMP, crossing guards provided by FRMG as a value-added solution will ensure safe passage of pedestrians through the project area to and from school at Clayton and Columbine streets.**

FRMG's MOT plan is designed to help guide the traveling public through work zones through the use of a single-phasing approach. Shortened construction times opens cross-streets sooner to both vehicular and pedestrian traffic.

A location-specific pedestrian and bicycle access issue that merits special discussion and consideration is the crossing of the UPRR tracks. Currently, the only reliable access across the UPRR in the immediate Project area is 46th Ave. This access will be closed during the construction of the UPRR Bridge over I-70. **FRMG will provide a shuttle service program for students of Swansea Elementary School in coordination with Denver Public Schools Success Express to specifically address safety and delays caused by the UPRR train movements at the York St. Crossing until 46th Ave. is reopened between Brighton Blvd. and York St.** In addition, FRMG will use flagging services before and after school to assist in the control of the pedestrian crossing at York St.

Access to Other Adjacent Roads. Access to adjacent roads will be maintained through construction work zones or through a provided detour, and in conjunction with strict compliance with the full Local Agency Roadway closure restrictions.

2.1.4.e Laydown, Recycling, Staging, Disposal and Maintenance Locations

Temporary Staging/Laydown Areas

Laydown, recycling, disposal, and maintenance locations have all been taken into consideration in FRMG's approach to staging to minimize impacts to the traveling public, businesses and nearby communities. ATC 65 provides additional space for the laydown of materials within the footprint of the proposed I-70 alignment and away from the public. Specific locations for planned laydown and storage, recycling, disposal and maintenance locations used during construction materials are identified in **Figure 2.1.4-11** below.

Laydown and storage locations include a 10.5-acre warehouse/maintenance facility on 48th Ave. and Vasquez Blvd. for storage of construction tools, employee parking and equipment maintenance; a centrally located concrete batch plant site immediately adjacent to the warehouse/maintenance facility.

Recycling / Disposal

The recycling location shown is intended for the on-site processing of concrete and asphalt that will be crushed and re-used as aggregate base course or other suitable engineered material. Other demolished materials that can be recycled, such as structural steel, rebar and electrical components, will be processed within the limits of the construction work zone from which they are removed and hauled to an off-site facility. Disposal sites are not depicted on this exhibit, as construction debris and other miscellaneous project removals that are not recyclable will be hauled to the closest approved landfill, per the applicable environmental requirements of Schedule 17 and all other regulations.

Maintenance

The existing CDOT maintenance facility located on the southwest corner of I-70 and Havana St. will serve as the project maintenance facility during construction and is further discussed in Part 5: Operations and Maintenance Management.

FIGURE 2.1.4-11 **Laydown, Recycling, Staging, Disposal and Maintenance Locations**

Part 4

Environmental Management, Strategic Communications, Community Development Programs, Small and Disadvantaged Business Participation and Workforce Development

2.1.5 **Part 4**

Environmental Management, Strategic Communications, Community Development Programs, Small and Disadvantaged Business Participation and Workforce Development

THE EXTRA MILE

As a team composed of local companies and local people, FRMG is committed to the development of the community surrounding the Project and its future economic vitality. We have developed and will implement plans and processes that are environmentally progressive, comply with all Federal and State requirements, provide clear communication with stakeholders, and drive economic opportunity and local workforce development. We will continue to seek opportunities to improve communications and lessen the impact of the Project in partnership with CDOT, the Procuring Authorities, and the surrounding community.

FRMG's Extra Mile

FRMG understands that the Project will provide significant benefits beyond improved infrastructure. This includes revitalization of the surrounding communities and opportunities to improve the environmental and economic conditions of the corridor. In addition to our efforts to minimize the impacts of construction for the community through our optimized construction phasing and ATCs, FRMG has dedicated over $500,000 to grants, scholarships, workforce development, and educational programs during the Term. We have also partnered with Entravision Communications to provide project updates and information about opportunities to participate on the project through its television and radio stations.

2.1.5.a. Environmental Management

FRMG's Draft Environmental Compliance Work Plan (ECWP) identifies Environmental Requirements, commitments, and goals for the Project/ It also describes the means and methods through which FRMG will monitor compliance of the Work, deliverables, and final outcomes to meet or exceed the applicable goals and requirements as specified in the final Environmental Impact Statement (EIS) and Record of Decision (ROD).

2.1.5.a.i Management Approach and Processes Used to Manage Hazardous Substances

Subsurface

FRMG will be responsible for evaluating disturbed material throughout the Project area to determine whether the material can be beneficially reused or must be disposed of off-site. This evaluation will take into consideration historical site uses and potential sources of impacts, as well as field screening during excavation. Based on documents and information provided in the Limited Subsurface and Groundwater Investigation Report and

FRMG DELIVERS:

QUALITY

Our approaches to Environmental Management, Strategic Communications, Small and Disadvantaged Participation and Workforce Development follow comprehensive proven plans, the framework of which has been successfully implemented on other projects.

EFFECTIVE SOLUTIONS & DECISION MAKING

Our vertically integrated organization will ensure competent decision making, based on our experience within this corridor and community.

MINIMIZED IMPACTS

Through our Strategic Communications Plan we will ensure a "no surprises" approach to minimize the impact of construction, and operations and maintenance of the Project.

COMMUNITY BENEFITS

Our approach to Workforce Development focuses on the local community, and how to engage and support them through Project participation and employment by partnering with local organizations and businesses. FRMG will contribute $250,000 to a construction-related scholarship fund for qualifying Swansea Elementary School students.

PERFORMANCE & SCHEDULE ENHANCEMENTS

Our Strategic Communications plan encourages two way dialogue with the local community in order to garner support for the Project and minimize the potential for unforeseen impediments to schedule and/ or performance.

the Beneficial Reuse and Materials Management Plan (BRMMP), the most prevalent contaminants within the Project are polycyclic aromatic hydrocarbons, total petroleum hydrocarbons, gasoline range organics, and diesel range organics, and the metals arsenic and lead. Field screening will follow visual and olfactory indicators for contamination, in addition to use of a photoionization detector (PID) to screen for volatile organic impacts, with confirmation of the presence or absence of contamination limiting beneficial reuse through analytical testing. When potentially contaminated soil is encountered, FRMG will be responsible for sampling and analysis, evaluation of analytical data, and preparing waste profiles and applicable notifications. FRMG will be responsible for evaluating potentially contaminated materials (for disposal purposes) in accordance with Colorado Hazardous Waste Regulations, and in accordance with all other applicable federal, state, and local regulations.

Groundwater

Groundwater samples throughout the Project area indicated potential dewatering permit exceedances of total, potential, and dissolved metals, as well as some volatile organic compounds and semi-volatile organic compounds. Sampling also indicated pH levels outside of the range allowed by typical dewatering permits. Dewatering during the Construction Period will be completed using holding tanks to store pumped groundwater and treated in a portable treatment system. Dewatering during the Operating Period will be completed with a continuously operating dewatering system, including a permanent groundwater treatment facility and detention basin to capture groundwater from the secant walls and underdrain seepage. The sampling process includes influent and effluent sampling conducted at the treatment system. Recovered water during the Construction and Operating periods will be discharged to Segment 14 of the South Platte River via the existing storm sewer. We anticipate that the permanent water treatment facility will be permitted under a CDPHE Industrial Individual Wastewater Discharge Permit (Individual Permit).

Unexpected Hazardous Substances

With respect to the encountering or intercepting of Unexpected Hazardous Substances, FRMG will prepare and submit for Acceptance a Remedial Plan describing our approach, including: a sampling plan; means and methods of managing the Unexpected Hazardous Substances; the proposed disposal facility; the required personnel for remediating the unexpected hazardous substance; and the required coordination with Governmental Authorities for associated Governmental Approvals and Permits.

2.1.5.a.ii Environmental Compliance Work Plan

FRMG's approach to environmental management to meet or exceed the Project requirements and commitments is based on a comprehensive ECWP that incorporates the same type of quality processes and procedures that are prescribed in FRMG's Quality Management Plans (QMP), as well as a Sustainability Plan and program that reflects FRMG's vision and practices for sustainable construction efforts.

FRMG's ECWP and associated Environmental Compliance Tracking Matrix is an Environmental version of a QMP in that it incorporates the same Plan-Do-Check-Act (PDCA) processes that are the basis of our quality management system and QMP for the Project. By incorporating the PDCA process and prescribing "who, what, when, where, and how" into our environmental monitoring activities and procedures, FRMG is able to not only ensure environmental compliance for the Project, but also to reduce environmental risks and improve environmental performance.

FRMG is also proposing to prepare a Project Sustainability Plan that builds on CDOT's sustainability program efforts — Environmental Stewardship Guide — and the Project's standards and specifications as set forth in Project Agreement. **As part of our Sustainability Plan, we have proposed the development and implementation of a Construction and Demolition Debris Management Plan. This and a Construction and Operation Energy Conservation Plan, which will identify qualitative and quantitative metrics and goals to promote the reuse, recycling, and management of construction and demolition debris as well as requirements to conserve energy during the Construction and Operating Periods, respectively.** The Sustainability Plan would include performance metrics and goals, and associated monitoring and reporting.

2.1.5.b. Strategic Communications

KATHY BERUMEN
Project Communications Manger

- 10 years of experience in public relations, public information and community affairs on construction projects with a combined value of $1.4B
- Intimately familiar with the Metro Denver area, its neighborhoods, residents, and community leaders
- Most recent projects have been complex, urban design-build projects in the Denver metro area (RTD FasTracks projects)

FRMG members are deeply rooted in the local community. We fully understand the immediate and lasting impact that the Project will have on the diverse swath of stakeholders along the I-70 corridor. **Led by our Project Communications Manager, Kathy Berumen, and in concert with CDOT's Office of Communications personnel, FRMG will facilitate a multi-faceted Strategic Communications Plan (SCP), building upon the strong public awareness campaign and community engagement initiatives already established by CDOT and the Procuring Authorities**. Through the implementation of our SCP, we will create opportunities for open dialogue between all Project stakeholders and implement an approach that ensures stakeholders feel informed, engaged, and listened to. This will involve using thoughtful and strategic messaging for public information sharing; ensuring stakeholders are updated on progress, risks and possible issues; and soliciting feedback that will be reviewed and used to improve our communication tools and strategies and approach to the Project.

2.1.5.b.i Description of the Plan to Establish and Maintain Two-Way Communications with Residents, Businesses, Institutions, Organizations, and Others

The foundation of our plan to establish and maintain two-way communication with all Project stakeholders is the use of multiple platforms to communicate consistent messages in English and Spanish, and to make members of the FRMG Communication Team available to respond to questions related to the Project by impacted parties. Each phase of the Project will utilize a governing communications plan as detailed below:

Construction Period Communication Plan (CPCP)

The CPCP will be used to manage relationships with stakeholders and to ensure they have accurate information about the Project schedule, progress, and construction impacts as they arise, and that stakeholders have a venue and/or communication channels through which to provide feedback during the Construction Period. **Figure 2.1.5-1** provides an example of critical methods of Construction Period communications. Public Information outreach tools and materials are discussed in detail in **Section 5.2 of Appendix J**.

Maintenance and Operations Communications Plan (MOCP)

The MOCP will be used throughout the duration of the Operating Period to manage and implement the Public Involvement process with the traveling public. FRMG will hold a weekly Strategic Communications meeting with CDOT and the Procuring Authorities' Communication Team. During these meetings, FRMG and CDOT and the

FIGURE 2.1.5-1 **FRMG'S Construction Period Communications**

	Residents	Businesses	Institutions / Organizations	Traveling Public	Pedestrians / Cyclists
Major Concern	Construction schedule, noise and dust impact, and street access	Access, disruptions, noise and dust	Construction schedule, access, noise and dust	Lane closures, delays, detours and safety	Access, detours, and safety
Methods of Communicating to Stakeholders	Door hangers, mailers and project fact sheets Public meetings Broadcast communications Apps, Project website, and social media	Open House forums and business meetings Broadcast communications Direct, one-on-one conversations Apps, Project website, and social media	Small group meetings Community Liaison at School Outreaches Information booths at community events Email notifications and correspondence	24-hour public information hotline ITS applications and VMS signage Email notifications and correspondence Apps, Project website, and social media	Apps, Project website, and social media Project website updates ITS applications VMS signage

Procuring Authorities will discuss upcoming projects, communication needs, media advisories/press releases, safety complaints, community meetings, emergency maintenance, Lane Closure Reports, website updates, and information line recordings. Public Information will adhere to the specifications outlined in the HPTE Strategic Communications and Transparency Plan. Outreach tools and collateral during the Operating Period are discussed in **Section 6.1.1 of Appendix J**.

Crisis Communications Plan (CCP)

The CCP will be used throughout the duration of the Term to manage and implement the crisis management process and ease public concern. FRMG understands that CDOT will lead all crisis communication, and that the role of FRMG is to support CDOT with coordination and necessary information. Through the CCP, FRMG has identified the team roles, responsibilities, and protocols and the handling of crises response and post-crises activities in **Section 7 of Appendix J.**

2.1.5.b.ii Use of New and Effective Ways of Communicating

In addition to implementing traditional modes of communication, FRMG has explored innovative methods to communicate with the community and stakeholders within the context of the Project. Using existing mobile applications, like CDOT's "Colorado Roads App" and other available technology like "Powerli.ne" will allow FRMG to directly communicate time-sensitive updates for the Project. We have also established a partnership with Entravision, the details of which can be found at right.

ENTRAVISION PARTNERSHIP

A highlight of our communications strategy is our partnership with Entravision Communications Corporation, owner and operator of four local Spanish language TV stations and three local Spanish language radio stations. Our team understands the specific needs of the Globeville, Elyria, and Swansea neighborhoods, and has partnered with Entravision to provide Project updates and information about opportunities for local participation and employment. This relationship will also allow us to engage with Entravision's partners in the area to create community development programs that enrich neighborhoods and promote opportunity.

2.1.5.c Community Development Program

FRMG is invested in the positive economic impact that this Project will have, during construction and beyond. Our team stands by the commitments made to comply with Section 7 of Schedule 15 of the Project Agreement, and we will continually seek out additional innovative ways to contribute to our community, in particular, the Globeville, Elyria, and Swansea neighborhoods. A cornerstone of our Community Development Program focuses on Swansea Elementary School, where we will invest in a Scholarship Program that will benefit students enrolled during the Construction Period as students of good standing at Swansea Elementary School. Given the importance of this program and the lasting impact it will have on the students futures, FRMG will engage an organization such as the Denver Foundation to develop and manage the scholarship fund in order to ensure fair and transparent application and award process. **We will allocate a minimum of $500,000 to scholarships, educational programs and opportunities over the course of the Project, to be realized when qualified students enroll in a construction or engineering related vocation at a Colorado college or technical school.** Examples of other ways we intend to develop the community are highlighted in **Figure 2.1.5-2** (next page).

2.1.5.d Small and Disadvantaged Business Participation

Meaningful participation by small and/or diverse businesses will bring together unique and varied backgrounds that create an atmosphere for innovation and success. To this end, FRMG's Small and Disadvantaged Business Participation Plan (SDBPP) establishes processes for generating, communicating and supporting opportunities for Disadvantaged Business Enterprises (DBEs), and Emerging Small Businesses (ESBs), as integral and critical team members. The goals and benefits of our SDBPP include:

- Providing training for DBE/ESB firms, so they have an understanding of the Project and procurement processes.
- Identifying prospective challenges DBE/ESB firms face and finding ways to mitigate these issues.
- Creating a culture of transparency and open communication among FRMG members and DBE/ESB firms.

FIGURE 2.1.5-2 **FRMG's Community Development Initiatives**

PROGRAM / INITIATIVE DESCRIPTION	Term	Resources/Funds
Partnership with Swansea Elementary School Development of a construction education curriculum.	**Annually over the Construction Period** 1.5-2 hours each per week for 6-8 weeks.	6-8 FRMG Instructors
High School "Build a Bridge" Program Students apply to learn construction, engineering and other aspects of the industry. Classes include plan reading, intro to engineering, estimating and scheduling, AutoCAD and a site tour. A final project is to put a real construction bid package together. Each student submits their bid package and presents to a panel of FRMG managers.	**Annually over the Construction Period** 3 hours a week for 8 weeks.	**6-8 FRMG Instructors** $5k in scholarship awards to participants, with the grand prize winner also receiving a summer internship with Flatiron (FRMG member).
P3 Developer Internship An internship program for undergraduate (rising senior) or Construction Management / Engineering college students within the Developer's organization. Provides a foundation for future opportunities on the Project, in Colorado, and across the US to manage P3 projects with a Developer's perspective.	**3 Internships over the Construction Period** 12 weeks each	**Reports to the Developer's Technical Director**
Small / Local Business Training Academy Small group seminars to be held on-site to teach local businesses about P3's, how to bid on construction projects, perform bookkeeping, safety training, etc.	**Annually over the Construction Period** 1.5-2 hours per week for 6 weeks.	**2-3 FRMG Instructors**
Community Reinvestment Act (or Program) Provide a resource library to local businesses, including compliance manuals, safety programs, quality management plans, etc.	**Ad hoc basis over the Term**	**1 FRMG Communications Team Member**
Food Carts / Trucks Program A weekly "food truck festival" lunch program, where local food trucks are invited to park on or near the Project site.	**Weekly over the Construction Period**	**1 FRMG Communications Team Member**
Vendor of the Month Program Advertising for a different local vendor each month to include a profile of their business on social media and coupon opportunity *(inclusion of coupon for their business in flyer or mailer).*	**Monthly over the Construction Period**	**1 FRMG Communications Team Member**

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FRMG's Civil Rights Program Manager (CRPM) **Reggie Gamlin** and Small and Disadvantaged Business Participation (SDBP) Coordinator **Tamaka Thornton** comprise our experienced leadership for the SDBPP. **Figure 2.1.5-3** (next page) provides a summary of methods Reggie, Tamaka and our team will use to reach our small business goals that exceed the requirements of the Project Agreement. Each of these processes is detailed in **Appendix K** of this proposal. **FRMG has already begun our efforts in bringing qualified DBE/ESB firms on to our team, including our Independent Quality Control Firm team member, Vivid Engineering Group, Inc.; our dedicated Utility Subcontractor Goodbee & Associates, Inc.; and public information subcontractor Communication Connections Consulting.**

2.1.5.e Workforce Development

Our detailed plan for Workforce Development, including our Construction On-the-Job Training (OJT) Program and Local Hiring, highlights our understanding of the need for proactive, ongoing recruiting and outreach events, and the importance of providing the local workforce with the tools they require to excel and thrive in their respective positions on the Project. We will achieve the Construction Period OJT Goal of 200,000 employment hours and the Local Hiring Goal of 760,000 total contract employment hours (with a minimum 380,000 hours by new hires).

George Hanible will be FRMG's Workforce Development Coordinator, reporting to Reggie, our CRPM. George will be responsible for job matching and job coaching.

REGGIE GAMLIN
Civil Rights Program Manager

- 20 years of construction experience
- Established relationships with U.S. Department of Transportation's Small Business Training Resource Center, Hispanic Contractors of Colorado, and the Colorado Contractors Association
- Former director of the Rocky Mountain Minority Contractors Association
- Extensive knowledge of Americans with Disability Act, DBE, Davis-Bacon

2.1.5.e.i Achieving the Construction Period OJT Goal

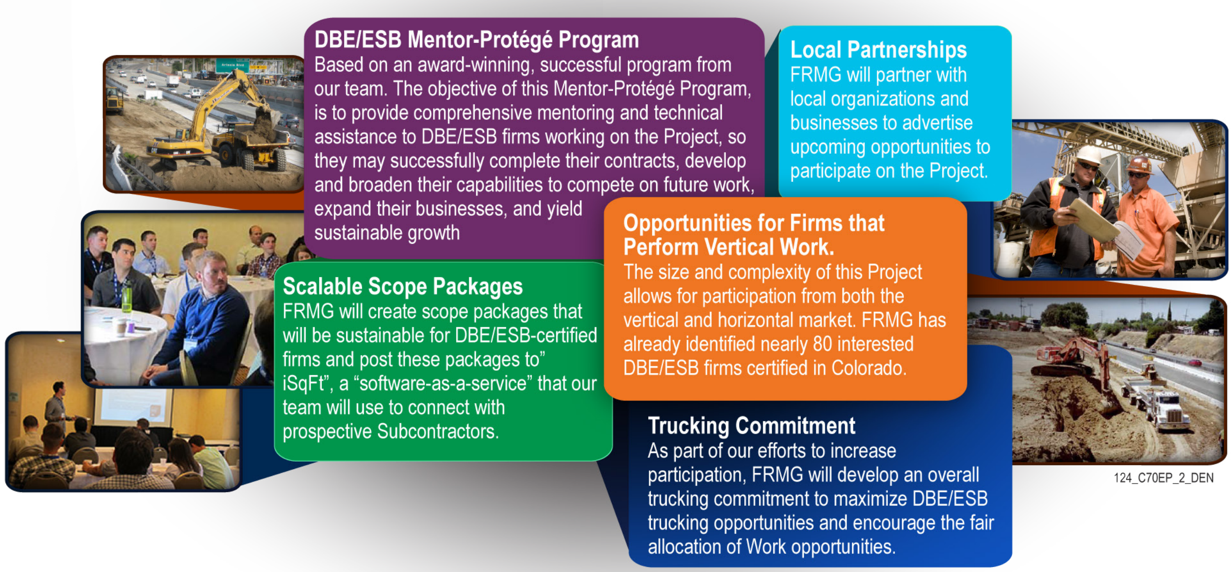
FRMG is committed to developing Colorado's workforce, in particular through the goals of the Central 70 Project and our OJT Program based on Colorado Contractors Association's (CCA) highly successful training. **Our team will partner with CCA to further develop and expand the program to meet the Construction Period OJT Goal.** CCA's industry-specific training program has been approved and implemented across the state, and FRMG will implement this program so that it maintains consistency across the local industry. We have identified four primary skilled craft areas, where trainees and apprentices will be used: Hauling Units/Truck Driving Units; Operators and Mechanics; Structures Work; and General Laborer/Entry-Level Craft. Positions within the above areas include truck drivers, heavy equipment operators, mechanics, carpenters, concrete finishers, pile drivers, electricians, and ironworkers. In addition to providing employees with hands-on training to increase their knowledge and skillset, we will pair trainees with more experienced field personnel on the Project to guide them through the course of the program and answer any questions or concerns.

2.1.5.e.ii. Achieving the Local Hiring Goal

FRMG's strategic approach for meeting the Local Hiring Goal includes focusing on the targeted local areas for recruitment, working with DBE-staffing agencies to help source jobs, offering prospective employees resources for job placement, and proactively identifying jobs to be sourced with local labor. Additionally, FRMG will establish a length of employment and estimated schedule of the distribution of hours for the Construction Period for local hires. **To achieve the Local Hiring Goal, FRMG will target 60 new hires and 50 other local hires during the Construction Period; however, our team's plan is to exceed this goal.**

Outreach events held within the construction footprint will have a particular focus on recruiting local candidates. Job openings and upcoming events will be advertised through various methods — FRMG's website and CDOT's Project website, phone calls, social media including Facebook, approved workforce development organizations, FRMG's

FIGURE 2.1.5-3 **FRMG's DBE/ESB Participation Strategies**



Entravision Communications partnership, subcontractor relationships, community resources, and working with local schools. The advertising strategy will underscore the push for local hiring and providing information on the OJT opportunities. **FRMG's on-site office also will provide a designated computer that local workers can use to apply for positions, and personnel will be available to answer their questions about the Project.**

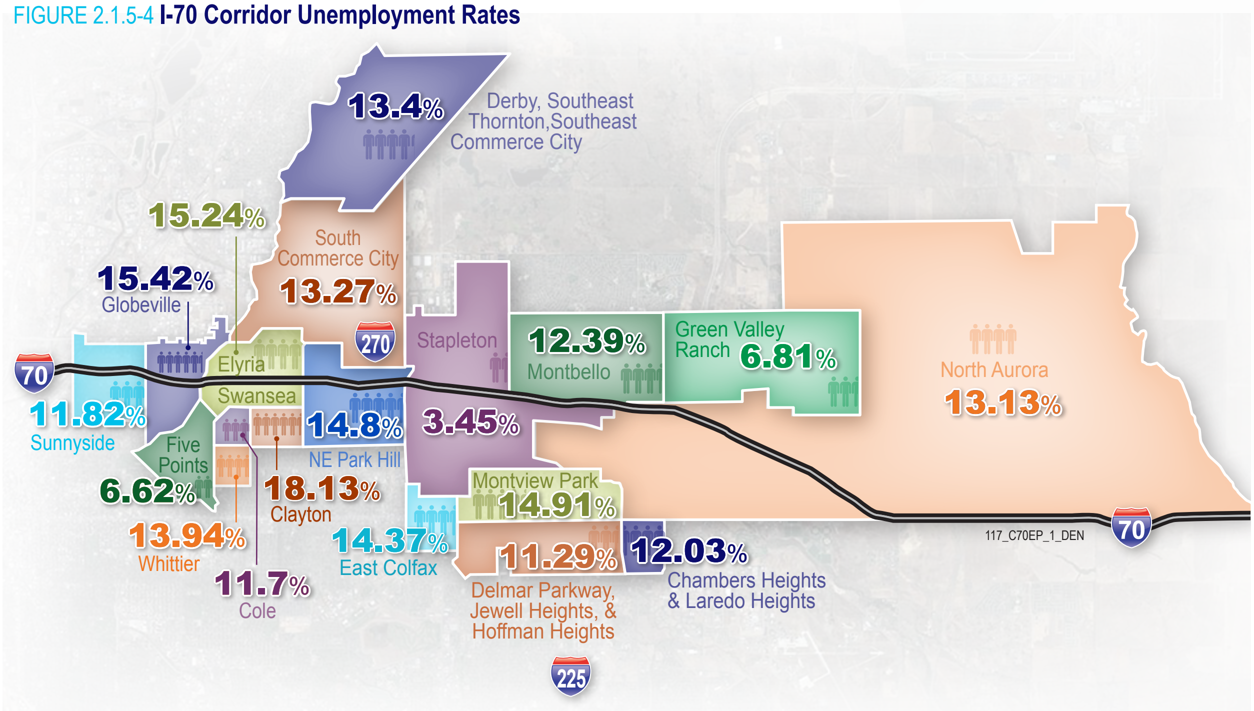
The Workforce Development Coordinator will develop a customized plan for employment of local and new hires that meets the needs of both the employee and employers. Opportunities for employees' families to participate in events sponsored and hosted for the Project will be identified, including a potential Cover design contest and/or involvement in community outreach initiatives. We have successfully implemented initiative programs like these on other projects and feel strongly that engaging our locally hired employees in this way will promote neighborhood pride directly linked to the Project.

Serving as a Resource for the DBE/ESB Community

During the Proposal phase, FRMG held numerous meetings and participated in events geared toward other prospective DBE/ESB firms who are interested in participating on the Project. Our outreach events to date introduced DBE/ESB firms to our team, as well as helped them understand the Project, the procurement process, and how FRMG can support them as a firm interested in the opportunities the Project will bring. FRMG held its final outreach event May 11, 2017, at the National Western Center. **As shown at right, DBE/ESB firms met with members of the FRMG team one-on-one to learn more about the procurement process and opportunities to participate on the Project.** FRMG will continue to host and attend these types of events throughout the Construction Period.

Figure 2.1.5-4 shows unemployment rates for neighborhoods adjacent to the I-70 Corridor as outlined in The Community College of Denver Center Workforce Initiatives' August 2016 paper, "Community Job Readiness and Workforce Assessment." These Denver metro neighborhoods provide a pool of prospective employees—approximately 178,000 individuals over the age of 18—for the Project and will be the focus of our local hiring and workforce development efforts. FRMG is prepared to carry out more targeted outreach and training in these neighborhoods.

FIGURE 2.1.5-4 **I-70 Corridor Unemployment Rates**



Part 5
Operations and Maintenance

Front Range
Mobility Group

2.1.6 **Part 5**

Operations and Maintenance

FRMG DELIVERS:

FRMG's primary operating goal is to maximize the safety and availability of the I-70 corridor. We will achieve this goal by providing superior maintenance management that protects asset infrastructure and ensures a reliable highway for the traveling public. Our experienced management and well-trained staff will operate and maintain the Project to the highest standards of safety, quality, and environmental practices.

FRMG incorporated numerous ATC's and design refinements that provide long-term O&M advantages. For example, ATC 26 uses a semi-transverse ventilation system that consolidates the majority of maintenance activities in one area and away from the traveling public. ATC 21 eliminates a structure and drainage infrastructure to keep maintenance locations **closer to the highway. ATC 67 proposes alternative LED light fixtures that reduce energy consumption and increase fixture life, while** ATC 69 keeps the power supply integral with the tunnel LED lights, simplifying maintenance.

2.1.6.a Operations Management Plan

FRMG's draft Operations Management Plan (OMP), attached as Appendix H of this Technical Proposal, meets all operations related requirements described in Schedule 11. It provides details of FRMG's approach to delivering the key Project components; safe, efficient travel for I-70 users; reliable and documented performance by FRMG staff; and successful integration with the community and Project stakeholders.

2.1.6.a.i Meeting Operations Obligations

FRMG will meet all operations obligations by efficiently executing the Approved OMP. Operations activities include patrolling and active oversight of the Central 70 corridor while simultaneously maximizing safety and lane availability for road users and minimizing lane closures. Many operational activities can be scheduled and performed cyclically; however, FRMG anticipates that a significant portion of operations taskswill consist of responses to various Incidents and other unscheduled events.

For this reason, it is critical to have pre-established policies and procedures in place should such an Incident or event occur. FRMG leveraged the extensive experience of its Lead Operator and Lead Contractor members to establish clear plans, policies, and procedures in the OMP, which will be submitted to CDOT and the Procuring Authorities for Acceptance prior to NTP2 and updated prior to Substantial Completion.

QUALITY

FRMG will build upon the comprehensive Quality Management Plan in place during Construction, to continue high-quality O&M Work. Our Project Quality Manager ensures leadership continuity and our integrated approach ensures that quality is "built-in" resulting in a superior performing highway.

EFFECTIVE SOLUTIONS & DECISION MAKING

FRMG's vertically integrated team, has always worked with the "end in mind" to provide the best life-cycle outcome for the Project. Our O&M experts worked closely with the design and construction teams to ensure durability and maintainability were at the forefront of the development of our technical solutions, ensuring an optimized approach to future maintenance and Renewal Work for the Project.

MINIMIZED IMPACTS

FRMG's fully integrated solution includes multiple design refinements that result in minimized interventions during the Term and reduced impact of routine and major O&M Work on the traveling public.

COMMUNITY BENEFITS

FRMG's approach to workforce utilization during the Operating Period, which combines in-house expertise with outsourced local Subcontractors, will provide significant opportunities for DBE/ESB firms to partner with FRMG.

PERFORMANCE & SCHEDULE ENHANCEMENTS

FRMG's O&M team was involved early in design development resulting in refined assumptions that maximize asset life and meet all performance requirements during the Term.

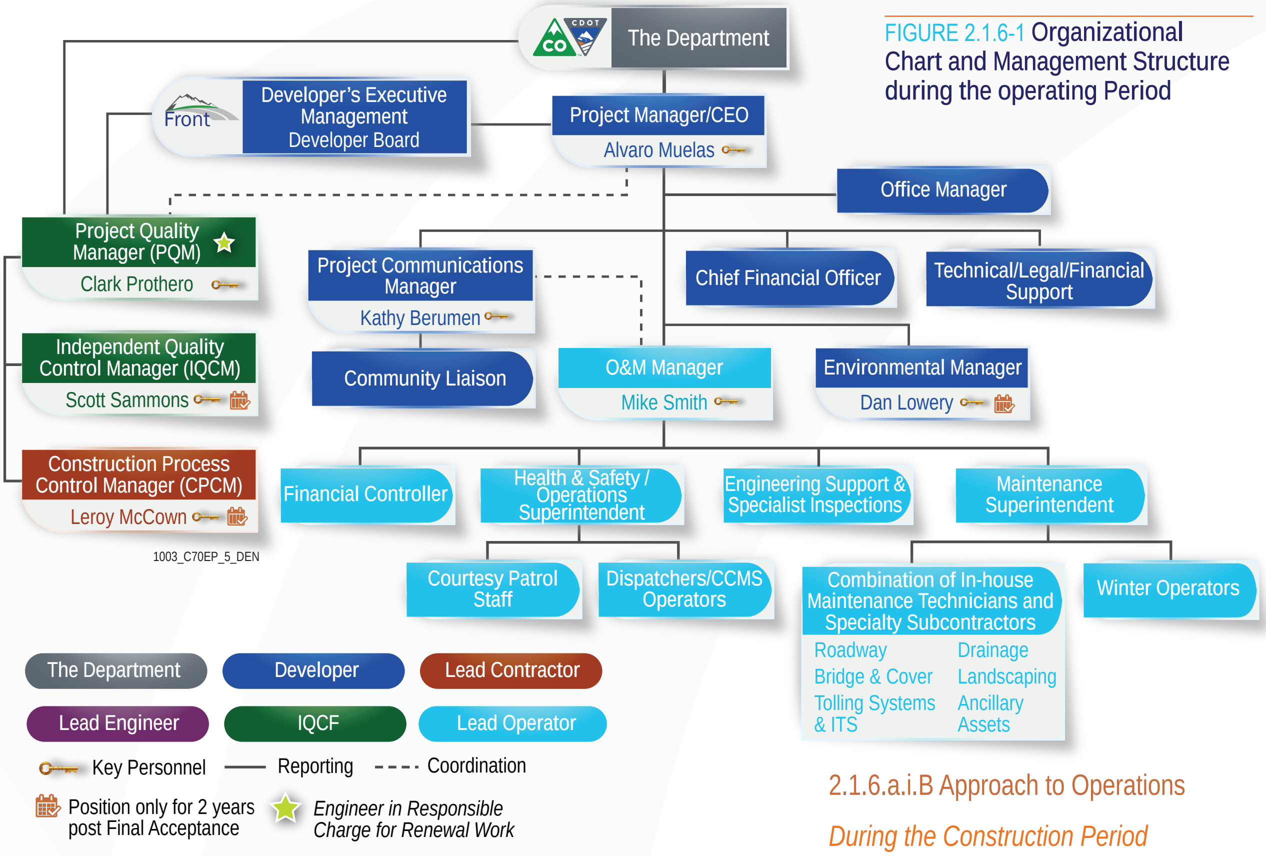


FIGURE 2.1.6-1 Organizational Chart and Management Structure during the operating Period

2.1.6.a.i.A Organizational Chart and Management Structure

Figure 2.1.6-1 details FRMG's management structure, including Key Personnel and other staff during the Operating Period. FRMG's experienced O&M Manager Mike Smith, reporting to Project Manager/CEO Alvaro Muelas, will oversee the Lead Operator and have overall responsibility for implementing the OMP and the Maintenance Management Plan (MMP). The Lead Operator's in-house staff will report to the O&M Manager, and will be supplemented by local Subcontractors for specialized periodic inspection and maintenance activities. Local Subcontractors will also be relied on to increase manpower during peaks of activity, notably for Snow and Ice Control Services.

Due to the critical need for a coordinated and synchronized application of roadway operations, traffic management, and Incident response in construction zones in general, the Lead Contractor will be responsible for performing O&M Work During Construction. The O&M Lead During Construction will report directly to the Design-Build Manager, who has overall responsibility for the Lead Contractor's obligations. Additionally, during the Construction Period, the Safety Manager and the O&M Superintendent will assume the functions of the Health & Safety/Operations Superintendent, and the Maintenance Superintendent, respectively during the Operating Period (as detailed in **Figure 2** of the OMP-*Operations During the Construction Period*).

2.1.6.a.i.B Approach to Operations

During the Construction Period

The Lead Contractor will perform the O&M Work During Construction, including Incident response and Snow and Ice Control Services. This approach improves efficiency by allocating key responsibilities for activities on the Site during the Construction Period to the Lead Contractor, and provides a significant advantage by having trained staff and heavy equipment readily available. Operating procedures for O&M Work During Construction are the same as those described for the Operating Period.

Transition from Construction Period to Operating Period

The Lead Operator's O&M Manager will be in close communication with the Lead Contractor throughout the Construction Period, participating in design reviews and interface meetings to ensure a smooth and seamless transition from the Construction Period to the Operating Period. Ninety days before Substantial Completion of the Project, FRMG will lead a task force consisting of representatives from the City and County of Denver, CDOT and the Procuring Authorities, the Lead Contractor, and the Lead Operator to plan and coordinate the transition and takeover of O&M Work by the Lead Operator at Substantial Completion. The Lead Operator will utilize legacy staff from the Construction Period wherever appropriate, to streamline the transition and provide meaningful employment opportunities for members of the community over the Term.

During the Operating Period

Detailed operations management is outlined in the OMP and the focus is on daily operational needs that support the detailed Performance and Measurement Criteria and accomplish the Project goals in terms of safety and quality. FRMG's approach maximizes the availability and safety of the Project corridor in the most efficient manner.

2.1.6.a.i.C Maintenance Facilities

O&M Work During Construction will be based out of CDOT's maintenance yard at Havana Street. After Substantial Completion, FRMG will continue to perform the O&M Work from this location until notice to FRMG that the yard is no longer available for use pursuant to the Project Agreement. The maintenance facility will house and support equipment and resources for managing and delivering operations activities for the Project including:

- Offices for management and staff and conference rooms
- Parking for staff, operating equipment, and Courtesy Patrol and maintenance fleet
- Covered storage for salt, sand, and winter deicing liquid tanks
- Garage bays suitable for equipment/ vehicle repair and cleaning
- Dry, protected laydown areas for spare parts and weather-sensitive materials

FRMG dispatchers will work at the Colorado Traffic Management Center (CTMC) to dispatch FRMG Courtesy Patrol and monitoring the Cover Command Control and Monitoring Systems. Redundant monitoring interface located at the Cover will provide flexibility and redundancy for monitoring Cover systems.

2.1.6.a.i.D Workforce Utilization

FRMG's approach to workforce utilization is to implement a combination of in-house expertise with local subcontracting opportunities for services that can be efficiently outsourced. FRMG acknowledges the importance CDOT and the Procuring Authorities have placed on ensuring representation from Disadvantaged Business Enterprises (DBEs) and Emerging Small Businesses (ESBs), and we are committed to meeting these goals in part through these local subcontracts.

2.1.6.a.ii Robustness of the Proposed Operation Strategy

FRMG developed a robust operations strategy based on our members' vast experience performing operations, including winter maintenance, on similar projects and tailored to the Performance and Measurement Criteria outlined in Schedule 11. We augmented our expertise through support from industry advisors familiar with local road operations and by meeting with local contractors performing Courtesy Patrol services, towing services and winter maintenance currently on CDOT roads. FRMG performed a detailed risk analysis to ensure that our draft OMP and strategy is appropriate with respect to anticipated Incident frequencies and response times, which we have compared against benchmark performance indicator data available from our numerous projects currently under operations. Levels of resources, need for management staff, volume and types of equipment, quantities of materials, and location of facilities, as well as changes in technology, commodity specific price fluctuations, severe Incidents, and acts of God, have all been considered in FRMG's overall strategic approach to ensure resources and costs during the Term.

2.1.6 a.iii Approach to Performing Operations

2.1.6.a.iii.A Safety of the Workforce and the Traveling Public

FRMG has a number of systems in place to ensure safety during operations. We will provide a highly trained workforce and performing Work at times of minimal traffic flow, including as intended under the Permitted Operating Period Closure regime, enhance to the safety of our workforce and the traveling public. Work requiring fixed or moving lane closures will be supplemented with specialized traffic management equipment, including attenuator vehicles and messaging and warning equipment. O&M staff will complete safety training as part of their onboarding process, which will include specific training for performing tasks on an active highway. In addition, all Subcontractors will be held to the same or equivalent safety procedures.

2.1.6.a.iii.B Detection of and Response to Emergencies, Hazardous Weather, Accidents, and Incidents

FRMG will train and equip its in-house staff and specialty Subcontractors to detect and respond to Emergencies and other Incidents on a 24/7 basis, including hazardous weather, traffic accidents, injuries, and property damage that may affect the Project. FRMG will ensure that continual coordination with first responders, including ambulance, local police, the Colorado State Patrol (CSP), and fire departments is maintained until Incidents reach resolution and traffic is restored to normal conditions.

When FRMG becomes aware of an Incident, either through our own Courtesy Patrols, CTMC staff, or notifications from third parties, Courtesy Patrols will respond to the Incident in order to secure the site and provide assistance as required to first responders, supplemented by maintenance operators as necessary for clean-up and temporary repairs.

2.1.6.a.iii.C Communicating with Procuring Authorities and Emergency Services in Relation to Incident Management

FRMG has established specific protocols and procedures that will ensure coordination and clear lines of communication with CDOT and the Procuring Authorities and Emergency Services. Prior to commencing O&M Work During Construction, and subsequently during the Operating Period, the O&M Lead During Construction or O&M Manager, respectively, will hold regular meetings with CDOT, the Procuring Authorities, and local and state officials (including first responders such as CSP, local law enforcement, Fire and Rescue, and State Emergency Management) to develop and update, as necessary, communication protocols and incident management procedures.

2.1.6.a.iii.D Interface With the Procuring Authorities, CDOT, Adjacent Maintaining Authorities, and Third-Party Entities and Stakeholders

Key to the effectiveness of our operations program is efficiently interfacing with CDOT and the Procuring Authorities, relevant third-parties, and Project stakeholders. FRMG will arrange a series of routine meetings with each relevant party in order to identify key contacts among each organization, establish guidelines, and procedures related to the coordination of maintenance activities to minimize impacts to the traveling public, ensure communication of ongoing activities in the corridor to increase the public awareness and safety.

2.1.6.a.iii.E Traffic Management and Maintaining Lane Availability During the Performance of O&M Work Through the Operating Period

FRMG's approach to maintaining lane availability includes:

- Performing the O&M Work requiring lane closures during non-peak hours (primarily at night)
- Providing advance notification to CDOT and the Procuring Authorities, the public, and other stakeholders of upcoming closures and anticipated impacts to traffic

FRMG will implement a program developed by HOCHTIEF on proprietary SnowEx technology for determining efficient routing and resourcing that details seasonal material application rates, equipment loading requirements, plow blade widths and cycle times.

- Oversight of all traffic control protocols, procedures, and traffic related activities by key management personnel
- Live traffic work performed by fully trained and certified Project staff in accordance with Manual on Uniform Traffic Control Devices (MUTCD) and CDOT standards

2.1.6.a.iii.F Courtesy Patrol Services

FRMG will utilize Courtesy Patrols to assist the traveling public, providing safety and mobility through quick response assistance when motorists are stranded or disabled. This includes clearing disabled vehicles from the lanes, changing flat tires, jump-starting batteries, and performing minor mechanical repairs to secure and remediate hazardous situations. In case of more severe incidents, Courtesy Patrols will notify and assist local agencies and emergency services as necessary. Whenever an event or Incident occurs, the Courtesy Patrols and the TMC Staff will collect data related to the nature of the Incident, response time and relevant criteria of our Incident Response Plan. This data will be entered into the

FRMG team member ACS runs a similar Courtesy Patrol program on the I-595 in Florida which has avg. annual daily traffic of over 180,000 and where response times have been on average 1/6th of the permitted time window.

Maintenance Management Information System (MMIS) for record keeping and analysis, allowing for efficient review and continuous improvement of FRMG's operations procedures and practices. For details regarding the Courtesy Patrol Services Plan, please refer to Appendix C of the draft OMP.

2.1.6.a.iii.G Performance Monitoring

During the Term, FRMG will log all inputs received and all on-site activities into our MMIS, and we will make decisions on a daily basis (or more frequently if necessary) to trigger remedial actions in accordance with the Project Agreement. Any deviation from our obligations under the Project Agreement will be noted immediately, tracked and reported appropriately, ensuring confidence in the efficiency of our system and of FRMG's self-monitoring processes.

2.1.6.a.iii.H Groundwater Dewatering

2.1.6.a.iii.H (I) Final Disposition of Water

Groundwater that enters the Lowered Section will be conveyed in a separate subdrain system to a pump station and treatment facility. FRMG will monitor and maintain this facility to ensure compliance with all discharge requirements. Once water is treated, it will be discharged into the City and County of Denver stormwater system.

2.1.6.a.iii.H (II) Environmental Approvals to Complete Dewatering

FRMG will follow the requirements of CDPS General Permit COG315000 to monitor and treat the groundwater entering the Project. The water will be treated in accordance with the specific requirements of the permit or Table B.1 of the general permit (COG315000) if no specific requirements are made. Activities during the Operating Period will follow the permanent dewatering, CDPS General Permit COG315000 – Remediation Activities Discharging to Surface Water Authorization under the Colorado Discharge Permit System.

2.1.6.a.iii.H (III) Minimizing Quantity of Dewatering

FRMG will minimize dewatering quantities during and following construction using secant caissons that will provide a reliable barrier between the groundwater and the Lowered Section. During installation of the underdrains, any significant leaking of the barrier will be remediated by injecting concrete slurry behind the barrier to seal the leak, and pressure grouting to seal any fractures found in the bedrock thus minimizing the amount of water to be removed.

2.1.6.b Maintenance Management Plan

FRMG's primary maintenance objective is to maintain safe, smooth, and unobstructed traffic flow 24/7, 365 days a year. FRMG will maintain the conditions of existing assets during the Construction Period, and sustain the design life of the Project Elements through a proactive, comprehensive and preventive maintenance approach during the Operating Period as described in the draft MMP attached as Appendix I of this Technical Proposal. FRMG's MMP complies with all maintenance requirements detailed in Schedules 11 and 12, and further details our approach to maintenance and Handback.

2.1.6.b.i Meeting Maintenance Obligations and Organizational Chart

FRMG will meet all maintenance obligations by implementing our comprehensive MMP developed by performing a careful and informed analysis of the PA requirements and by leveraging the experience FRMG team members bring to the Project in maintaining similar highway corridors. Please refer to **Figure 2.2.6-1** for Operating Period Key Personnel and staff. FRMG will provide an optimal combination of experienced management personnel and local Subcontractors, staffing a maintenance team that has the requisite expertise and local knowledge that is critical to the success of the Project.

2.1.6.b.ii Management Approach and Strategy in Meeting the Maintenance Obligations

FRMG's management approach and strategy to meeting the maintenance obligations began during the procurement phase, with our integrated team's view for the long-term performance of the Project. We worked extensively to find opportunities in the design of the Project to minimize interventions during the Term and reduce the impact of routine and major O&M Work on the traveling public. From this early work, we've developed a baseline maintenance approach to ensure adequate resources and materials are being allocated to implement this strategy. Over the course of the Operating Period, we will input the results of the regular inspection of the different assets, as the assets are deteriorating, and as they are being maintained and rehabilitated in accordance with the MMP, to measure the effectiveness of our maintenance activities and update the MMP as necessary.

2.1.6.b.iii Robustness of the Proposed Maintenance Strategy

FRMG has prepared a robust draft MMP built on meeting or exceeding all performance obligations of the PA. We performed a detailed risk analysis to ensure that our proposed solutions are acceptable for the Project, and our Lead Operator team has collaborated with the Lead Engineer and the Lead Contractor teams to find optimal solutions that balance construction and durability constraints, with a view on providing best value for money by minimizing corrective maintenance and the risk of unplanned unavailability of the lanes.

FRMG leveraged the expertise of advisors with significant knowledge of and data related to asset maintenance across North America, including TetraTech, TranSystems, Pillar Inc., and Asset Management Associates. FRMG also undertook an independent traffic study with C&M Associates based on traffic data we collected to refine our assumptions for pavement deterioration and major interventions to correct forecast deficiencies on the Project during the Term. This approach of combining our extensive in-house maintenance experience with local expertise and specialized advisory services has resulted in a robust and efficient maintenance strategy and corresponding draft MMP that is low risk.

2.1.6.b.iv Approach to Performing Routine Maintenance Work and its Relationship to Renewal Work

2.1.6.b.iv.A Assumptions made in Developing the Regime of Routine Maintenance Work and Inspections

FRMG considered inspections and maintenance interventions, required levels of resources, size of the management staff, volume and types of equipment, quantities of materials, locations of facilities, and deterioration rate data gathered from actual projects when making the assumptions for our Routine Maintenance Work and Inspection Regime. For example, specific activities such as pavement crack sealing and diamond grinding are budgeted based on detailed performance modeling calibrated to historical performance on the Denver highway network using data provided by CDOT's Online Transportation Information System. Inspections will occur using a combination of best practices, industry standards and Project Agreement requirements. Maintenance will be accelerated where key indicators suggest that asset performance is less than anticipated. This optimization of assumptions regarding routine O&M Work will evolve over the Term, and our Renewal Work Schedule may be adjusted to address identified deteriorations while ensuring all Technical and Handback Requirements are met.

2.1.6.b.iv.B Sweeping, Cleaning, and Removal of Debris and Graffiti

FRMG will complete sweeping, cleaning and removal of debris and graffiti using primarily local crews but supplemented by specialty outsourced technical services as needed. Sweeping will be scheduled on a routine periodic basis and supplemented with additional servicing to meet non-routine accumulations of dirt and debris.

2.1.6.b.iv.C Inspection and Testing of Project Assets and Components

As part of FRMG's approach to inspection and testing of Project Elements, conformance with requirements and rectification of Defects is accomplished through ensuring staff is qualified, trained, and provided

MAINTAINING THE VIADUCT

FRMG has prepared a maintenance program to safely sustain the viaduct structure throughout the Construction Period. We have conducted a thorough review of major improvements made during the last rehabilitation project and the Structure Inspection and Inventory Report, which contains the current condition assessment of the viaduct. FRMG will conduct a complete review of the viaduct to document its condition in the Baseline Asset Condition Report and will take all steps to ensure that the viaduct structure remains safe and compliant with all Performance Requirement Targets. We will monitor the structure carefully to ensure the viaduct remains operationally safe during the Construction Period as we perform a majority of the Work in the Lowered **Section in one phase while traffic remains on the viaduct.**

with specialist-engineering support. Specialist inspections and testing will be performed by firms qualified by CDOT to perform such work. FRMG management, superintendents, Courtesy Patrol drivers and field technicians will be trained to identify safety-related and other deficiencies, categorize Defects and damage, and to understand and recognize levels of service requirements.

2.1.6.b.iv.D Identification, Classification and Rectification of Defects

FRMG's approach to the identification, classification and rectification of Defects and inspection failures includes regular condition and performance monitoring inspections. FRMG will conduct training for both management and staff that focuses on performing all Work in accordance with the OMP and MMP, including the identification of Category 1 and 2 Defects, along with the appropriate repairs for mitigation and rectification of these defects.

Category 1 defects will receive immediate attention and require communication to in-house crews for response. FRMG will use multi-purpose crews working from a crew cab/ flatbed equipment platform for immediate response to multiple activities. All Defects are reviewed by the O&M Manager or O&M Lead During Construction daily as necessary to ensure the correct classification of any Defects. While Category 1 defects will be programmed for immediate or as soon as practical response, it is the "ticking clock" component of MMIS work orders that provide an invaluable tool for timely response to Category 2 Defects. In this way, repair can be scheduled appropriately to satisfy Category 2 rectification requirements while also allowing an efficient grouping of tasks and crew assignments.

2.1.6.b.iv.E Maintenance Management Information System (MMIS)

A key element of our O&M strategy is our MMIS. FRMG will implement a computer-based MMIS to record inventory, maintenance activities, inspections, Defects, and repairs. The MMIS will be operational prior to the issuance of NTP2 and updated as required for the duration of the Term. Inputs to the MMIS will be completed by supervisory staff as work orders to ensure the repair of Defects or failures, prepare the inspection schedule and record inventory. Field staff will have access to view and update the information following identification and work completion procedures while in the field.

2.1.6.b.v Renewal Work

2.1.6.b.iv.A Life Cycle Cost Analysis

FRMG's life cycle cost analysis (LCCA) is based on a holistic asset management approach. During the procurement, the Lead Engineer and Lead Operator have together developed over 15 location-specific pavement design alternatives taking into account historical data on existing pavement and life-cycle projections for new or reconstructed pavement, to achieve the optimal solution balancing construction and maintenance. FRMG also considered the length of the Term and assessed price variations of key components including labor costs, energy, and materials, using both local and historical data relevant to civil construction works. FRMG's collaborative process between the Lead Operator and the Lead Engineer, ensures material and design selection reflects our standards for durability and optimizes life cycle costs.

2.1.6.b.iv.B Major Maintenance Repairs and Replacements Program

FRMG's approach to developing a rolling program and scheduling of major repairs and replacements is to make determinations of Useful Life projections by Asset. These projections are based on historical performance data and deterioration rates and, where applicable, theoretical performance modeling and deterioration curves considering internal experience and publicly available data comparable in terms of traffic, climate and other deteriorating factors. We then calibrated and applied assumptions across inventory quantities at rates of renewal and replacement such that Useful Life and end of the Term Handback Requirements will be met.

2.1.6.b.iv.C Processes that Assess the Condition of Critical Structural Elements

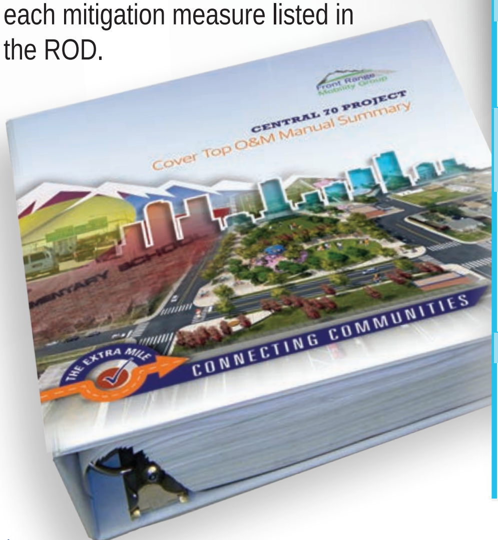
Condition assessment begins by establishing an accurate baseline. Through continuous routine inspections (including NBIS) and assessment, we will compare actual performance to the forecasted Useful Life of each Element. FRMG will establish and maintain an asset database with detailed information regarding our inspections and testing for all Elements. Asset condition will be monitored on a continuous basis throughout the Term and we will perform annual Renewal Work Plan (RWP) updates to reassess asset performance, the preservation of asset condition and mitigate any risk of Noncompliance.

2.1.6.b.iv.D Approach to Constructability, Durability and Maintainability of All Elements and Environmental Compliance and Processes to Meet Handback Requirements

Our overall project management approach and philosophy as it relates to the design process was the inclusion of maintenance input on material durability and the performance of each element through an in depth cost-benefit analysis during the design process. For example, FRMG's ATC 26 has improved the maintainability of the Tunnel ventilation system by reducing the components of the system that are near traffic and simplifying the related mechanical systems.

We will at a minimum update our Renewal Work Plan on an annual basis to reflect actual performance and ensure that shorter life assets are replaced within Useful Life requirements during the Term and that all assets provide required Residual Life at Handback. Beginning approximately six years before the end of the Term, we will prepare the Residual Life Methodology Report Acceptance by CDOT and the Procuring Authorities.

FRMG's approach to environmental compliance is detailed in Section z of the MMP, in addition to the processes identified in our draft ECWP. FRMG'S Environmental Compliance Tracking Matrix directly incorporates and tracks each mitigation measure listed in the ROD.



2.1.6.c Cover Top O&M Manual Summary

2.1.6.c.i Approach to Video Recording of Installation of Key Components on top of the Cover

During construction, the Cover Top waterproof membrane installation will be video recorded and cross referenced with stationing and lateral offset measurements to retain the ability to locate key elements of the waterproof membrane, protection system, and drainage conveyance after installation of fills and landscaping elements.

2.1.6.c.ii Recommended Load Restrictions on the Cover

Except for crossings at Columbine and Clayton Streets, maintenance vehicles larger and heavier than the AASHTO H10 vehicle will not be permitted on the Cover. Any Cover Top Maintainer maintenance vehicle traveling on fill areas (unpaved) on the Cover Top will be limited to large tire tractors or off road type equipment that will not be susceptible to sinking in or rutting that may damage the waterproofing layer. Loads on paved areas will be limited to those anticipated in the design documents. Additional fill of depths greater than that envisioned in the design will not be permitted. The Cover is designed for an additional dead load of 25 pounds/square foot (psf); any additional temporary dead load exceeding 25 psf, (including allowance for potential snow loading) will not be allowed.

2.1.6.a.iii Waterproofing Layer Damage Preventative Measures to be Carried Out during the Performance

Given the shallow depth and proximity to surface of the waterproofing layer, wherever possible, "soft dig" techniques will be required for Cover Top Maintainer landscape installations or excavations. Protocols for Cover Top maintenance will include an obligation to obtain an excavation permit with mandatory 14 day notification to FRMG prior to any machine excavation and 7 day notification prior to any manual excavation exceeding 12 inches in depth in order to prevent damage to the waterproof layer. FRMG may provide a "Cover Top Monitoring Inspector" to be present during excavations for a permit fee to represent the actual cost to FRMG. No other permitting fees will apply.

2.1.6.c.iv Snow Removal and Storage Restrictions

Snow storage will not be permitted on the Cover Top with the exception of windrows accumulated from a single event (assuming CDOT or the City of Denver will allow such storage). Snow removal activities from vehicular and pedestrian paved areas is not anticipated to present any risk to the Cover elements including the waterproofing layer.

2.1.6.c.v Elements Requiring Regular Inspections and Maintenance, and the Frequency of Such Inspections and Maintenance

FRMG will perform formal weekly inspections to confirm no excavations have occurred or are underway. FRMG Courtesy Patrol operators will perform a visual observation for excavation activities in progress, twice daily with logs of any observed permitted or unpermitted excavation work provided to CDOT monthly. No elements of the Cover structure or Cover Systems maintained by FRMG are anticipated to require regular inspections that would interface with the Cover Top Maintainer.

2.1.6.c.vi Record Keeping of Cover Top O&M Work, and the Frequency of Provision of such Records to the Department

Records of Cover Top O&M work by the Cover Top Maintainer should be kept as required in the Cover Maintenance Agreement and as required by CDOT or the City of Denver. Record keeping by FRMG is detailed in Section p of the MMP.

2.1.6.c.vii Developer Review Timeline and Requirement for any Major **Modification by the Cover Maintainer on top of the Cover that would impact** Developer's Carrying Out of the Cover O&M Work

Modifications to Cover Top features will require signed and sealed engineering drawings to be reviewed within 60 days by FRMG with additional time for CDOT review where required. Permitting fees for such modifications will be limited to the actual cost to FRMG for engaging the Engineer in Responsible Charge or other qualified structural engineer for review and acceptance.

2.1.6.c.viii Coordination and the Interface Requirements with Developer

With the exception of activities requiring excavation or loading of the Cover Top, FRMG does not anticipate interface issues. FRMG will establish formal and regular communication with the Cover Top Maintainer including monthly coordination meetings in order to minimize any impact to and to ensure that staff of the Cover Top Maintainer remains aware of the specific requirements for work.

Part 6
Technical Approach and Solutions

Front Range
Mobility Group

2.1.7 **Part 6**

Technical Approach & Solutions

THE EXTRA MILE

FRMG optimized our technical approach to the Project by developing more than 75 ATCs that were presented to CDOT and the Procuring Authorities during the procurement. Fourteen of these ATCs have been incorporated into our design, including our most significant—ATC 65. This "game changer" simplifies construction, greatly reduces impacts, and provides substantial benefits as detailed in Figure 2.1.7-2.

FRMG's Extra Mile ATC 65 & 26

FRMG incorporated numerous ATCs and design refinements that provide long-term O&M advantages. In addition to a six-month schedule savings, ATC 65 provides a safer permanent facility. We have improved the schedule, enhanced mobility during construction, improved aesthetics, reduced environmental impacts and created opportunity for more green space along the Project corridor. ATC 26 replaces longitudinal jet fans in the Cover with a semi transverse ventilation system that consolidates the majority of maintenance activities in one area and away from the traveling public.

2.1.7.a Design of the Project

FRMG has developed a technical approach and created design solutions that balance the design, construction, and O&M aspects of the Project. We have implemented the requirements of the CDOT and the Procuring Authorities, while optimizing our solutions during the Proposal phase. Through this collaborative effort, we have developed a Project design that can be more efficiently built and operated, minimizes disruption, and provides long-lasting value for the community and the traveling public. We will continue to seek innovations to the Project after award, working in collaboration with CDOT and the Procuring Authorities.

Our design approach provides a solution that complies with the requirements of the Project Agreement (PA), as summarized throughout this section and detailed in the Draft Design Drawings and FRMG's roll plot provided in Appendix A. Tab a. Draft Roadway Drawings in Appendix A includes all of the items listed in Part F 2.3.1a of the Instructions to Proposers (ITP).

Our design incorporates many refinements and innovations that exceed PA requirements, including multiple ATCs, as shown on **Figure 2.1.7-1**. Also included on this figure are the key technical standards that will be followed for each of the technical disciplines. Our most significant ATC 65 is highlighted in detail on **Figure 2.1.7-2**.

FRMG DELIVERS:

QUALITY

Designed with the whole life cycle approach in mind, we use durable, quality materials. Our innovative approach to construction of the Lowered Section reduces segmented construction and enhances durability.

EFFECTIVE SOLUTIONS & DECISION MAKING

Our proposed approach optimizes phasing and simplifies the Work, significantly improving our ability to deliver the Project on schedule. FRMG will continue to hold Task Force meetings with design, construction, and O&M personnel to implement and expedite decision making and solutions.

MINIMIZED IMPACTS

Innovative technical design solutions—including ATC 26 and ATC 65—minimize impacts to the traveling public, expedite construction phases, and provide better long-term aesthetics and mobility.

COMMUNITY BENEFITS

ATC 65 was designed for the community: It results in better air quality, reduces noise, and increases the landscape and aesthetic amenities south of the Cover between I-70 and 46th Ave. South. Additionally, our ATC 26 improves air quality near sensitive areas by moving the tunnel exhaust away from Swansea Elementary School.

PERFORMANCE & SCHEDULE ENHANCEMENTS

Production and quality staffing levels, integration of construction and O&M personnel early in the design phase, and our local knowledge and experience will allow us to meet the Project Schedule and all PA requirements.

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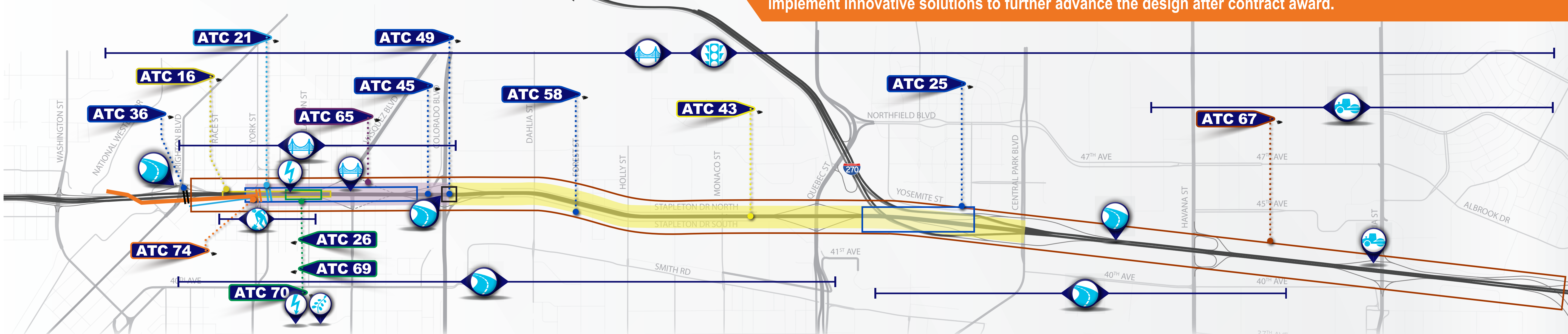
THE EXTRA MILE

FIGURE 2.1.7-1 **Design Refinements and ATCs**

FRMG'S DESIGN REFINEMENTS & ATCS

FRMG's approach is to develop an innovative design that best meets the requirements of Schedule 10, and provides CDOT and the Procuring Authorities with a Project that is easily constructed, less disruptive, and has long-lasting value to the community and traveling public. We have used this approach in the proposal phase and will continue to look for and implement innovative solutions to further advance the design after contract award.



FRMG'S DESIGN REFINEMENTS

	REDUCES MAINTENANCE
ROADWAY *(Primary Standards: CDOT Roadway Design Manual, CCD Transportation Standards and Details)*	
Optimized I-70 profile to minimize excavation in Lowered Section and be closer to existing grade east of Colorado Boulevard	●
Optimized ramp metering merge locations to increase merge distances	
Optimized Brighton Boulevard on-ramp geometry to reuse existing retaining walls	
Improved accuracy of cross slope correction east of Sand Creek by gathering LIDAR survey information	●
Performed extensive design on local streets to ensure roadway stays within ROW	
Match existing lanes plus one TEL and one Auxiliary lane between Central Park and Havana. This reduces construction impacts and maintains existing ramps.	●
Optimized grading at Colorado Boulevard to reduce retaining walls	●
STRUCTURES *(Primary Standards: AASHTO LRFD Design, AREMA Manual for Railway Engineering)*	
Widened Structures in various locations to provide adequate intersection sight distance	
Optimized retaining wall type selection depending on location and conditions	●
Optimized bridge span lengths to fit available pier locations (e.g. BNSF)	●
Minimized structure depths to minimize excavation	●
Designed casing to facilitate installation of Century Link conduit prior to bridge construction at Steele/ Vasquez.	●
Others as shown on Cover and Structures Figures later in this Part 6	●
DRAINAGE *(Primary Standards: - CDOT Drainage Design Manual, CDOT MS4 NPDES Permit, FEMA Guidelines for LOMR/CLOMR, CCD Storm Drainage Design and Technical Criteria)*	
See refinements on Drainage Figure later in this Part 6	●
GEOTECHNICAL *(Primary Standards: - AASHTO LRFD)*	
Provided a groundwater isolation system of secant pile walls where top of pavement is less than 5 feet above the groundwater table	
PAVEMENT *(Primary Standards: - CDOT M-E Pavement Design Manual, CCD MGPEC Pavement Design Standards and Construction Specifications)*	
Pavement rehabilitation at Peoria Street, rather than reconstruction through optimized profile	●
Rehabilitate sections that are outside reconstruction limits but within O&M limits to establish uniform maintenance cycle	●
COVER MEP *(Primary Standards: - NFPA 502)*	
Configured electrical switchboards to allow maintenance without traffic interruption	●
Provided semi-transverse ventilation system (see ATC 26), which simplifies many of the MEP systems	●
LANDSCAPE/URBAN DESIGN *(Primary Standards: - DPS Design and Construction Standards, CDOT Landscape Architecture Manual)*	
Advanced design of shade structures to ensure constructability	
TRAFFIC/SIGNING/STRIPING/LIGHTING *(Primary Standards: - MUTCD and Colorado Supplement, Standard Highway Signs 2012 Supplement)*	
Configured sign bridge structures to accommodate LUS and VMS to reduce number of sign bridges and improve visibility	●

All requirements in Schedule 10, including the Applicable Standards and Specifications in Schedule 10A, are being met.

FRMG'S ATC's

ATC'S INCLUDED IN THE PROPOSAL		POSITIVES	NEGATIVES *(If Any)*
16	Modified (Narrow) Type 7 barrier at median piers	Maintains 8-foot shoulder width at piers	NONE
21	Eliminate Storm Sewer Bridge and on-site outfall	Eliminates bridge across I-70, allows I-70 profile to be raised, reduces neighborhood impacts of complex outfall construction	Requires larger pump station
25	Modify ultimate I-70 EB alignment to optimize the I-270 flyover structure	Eliminates straddle bent across ultimate alignment	NONE
26	Semi-transverse ventilation system	Eliminates large number of jet fans that lowered the I-70 profile, uses less energy, facilitates maintenance	NONE
36	Reuse a portion of the existing Brighton Boulevard Bridge	Utilizes existing infrastructure	NONE
43	Modify Temporary Pullout spacing in specific locations	Minimizes temporary impacts during construction	Pullout spacing is slightly greater than specified
45	One week closure of Colorado Boulevard EB Exit ramp	Reduces impacts to community because alternative requires a temporary ramp that would close a local road for 3 months E 46th Ave)	Impacts traffic on the ramp, but reduces impacts to neighborhood traffic
49	Reduce temporary vertical clearance at Colorado Boulevard during construction of bridge over I-70	Reduces the permanent height of Colorado Boulevard	Requires temporary detour route for high clearance vehicles
58	Rehabilitate Forest Street storm sewer trunkline rather than replace	Reduces construction impacts	NONE
65	Move I-70 to the north by approximately 40 feet between Brighton Boulevard and Colorado Boulevard	See ATC 65 exhibit	NONE
67	Alternative LED light fixtures	Reduces the number of lights required	Requires Xcel approval
69	Power supply for Tunnel LED lights is integral with the light fixtures	Easier replacement, more efficient	Power supplies are not in fire rated enclosure, but power circuit is
70	Phenolic conduits in tunnel	Reduced installation time and maintenance	NONE
74	Eliminate Sanitary Sewer Bridge	Eliminates bridge across I-70, allows I-70 profile to be raised	Slightly increased relocation length

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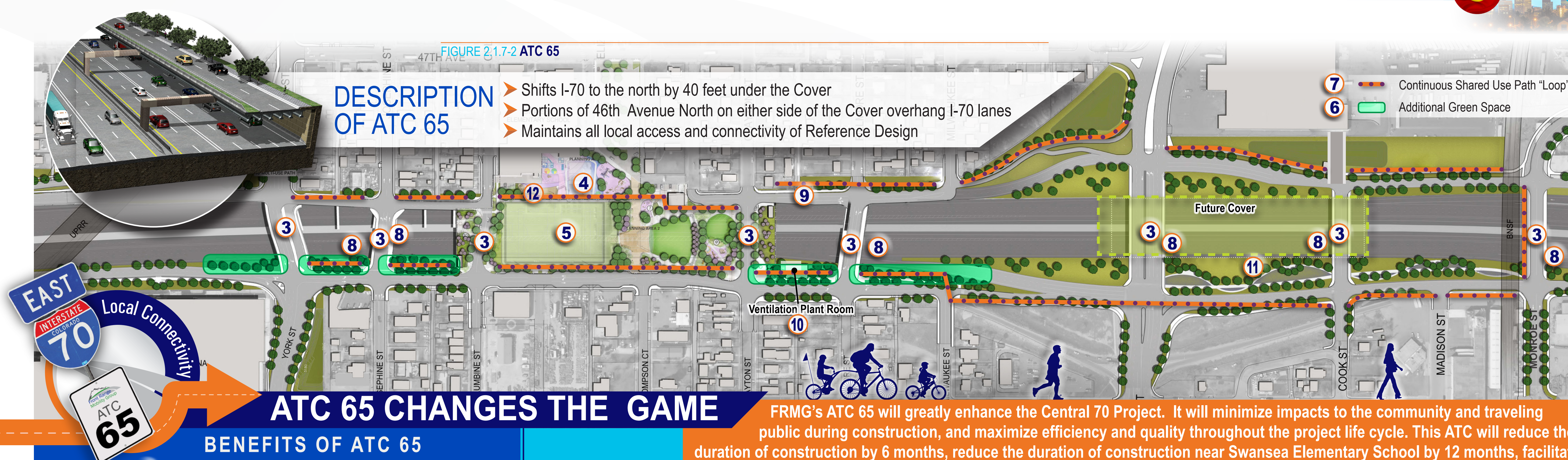
FIGURE 2.1.7-2 ATC 65

DESCRIPTION OF ATC 65

- Shifts I-70 to the north by 40 feet under the Cover
- Portions of 46th Avenue North on either side of the Cover overhang I-70 lanes
- Maintains all local access and connectivity of Reference Design



ATC 65 CHANGES THE GAME

FRMG's ATC 65 will greatly enhance the Central 70 Project. It will minimize impacts to the community and traveling public during construction, and maximize efficiency and quality throughout the project life cycle. This ATC will reduce the duration of construction by 6 months, reduce the duration of construction near Swansea Elementary School by 12 months, facilitate early availability of I-70 toll lanes, and provide aesthetic and mobility enhancements to the community.

BENEFITS OF ATC 65

(1) Shift reduces conflict of new I-70 location with existing viaduct

Maintenance of Traffic Benefits

- Less segmented construction enhances durability and reduces maintenance
- Eliminates an entire phase of construction
- Builds most of the Lowered Section and all of the Cover in one phase
- (2) Traffic is maintained in its existing location on viaduct during construction of Lowered Section
- Reduces temporary construction
- Fewer and shorter duration detours
- (3) North/ South cross streets built in a single phase
- Better buffer between active traffic and work zone (improved safety for workers and traveling public)

Schedule Benefits

- Reduces overall construction time by 6 months
- (4) 12 month shorter construction duration at Swansea Elementary School
- WB toll lanes available 22 months early
- EB toll lanes available 9 months early
- Relieves congestion on I-70 by opening WB into final configuration in one shift
- Eliminates 6 month closure of EB Exit and WB Entrance Ramps at Steele/Vasquez interchange

Community Benefits

- (5) Cover and all amenities remain in the same place as in the Reference Design
- (6) Provides additional space for enhanced landscape/ recreation amenities
- (7) Continuous shared use path connects existing and future Cover areas
- (8) Widened sidewalks/ shared use paths enhance mobility/ pedestrian access in project area including improved safety on cross street bridges and to the school
- (9) Less noise impacts at sensitive receptors (46th Avenue overhangs buffer a portion of traffic noise)
- (10) Cover exhaust and utilities moved away from Swansea Elementary School improving air quality
- (11) 175 additional trees, 35,500 SF of sidewalk added, and 3.5 acres of irrigated landscape added

Mitigation Required with ATC 65

- Requires small strip of underground ROW (12 feet wide by 265 feet long) in front of Swansea Elementary School – land to be transferred between Denver Public Schools (DPS) and CDOT
- Environmental Re evaluation will be performed to address ATC 65; Level II Re-evaluation is anticipated
- Community input will be gathered regarding additional landscape amenities
- FRMG will collaborate with DPS on construction phasing at Swansea Elementary School, including providing temporary access/parking at the school
- Design Exceptions at Steele Vasquez for ramp grade, shoulder width and queue length.

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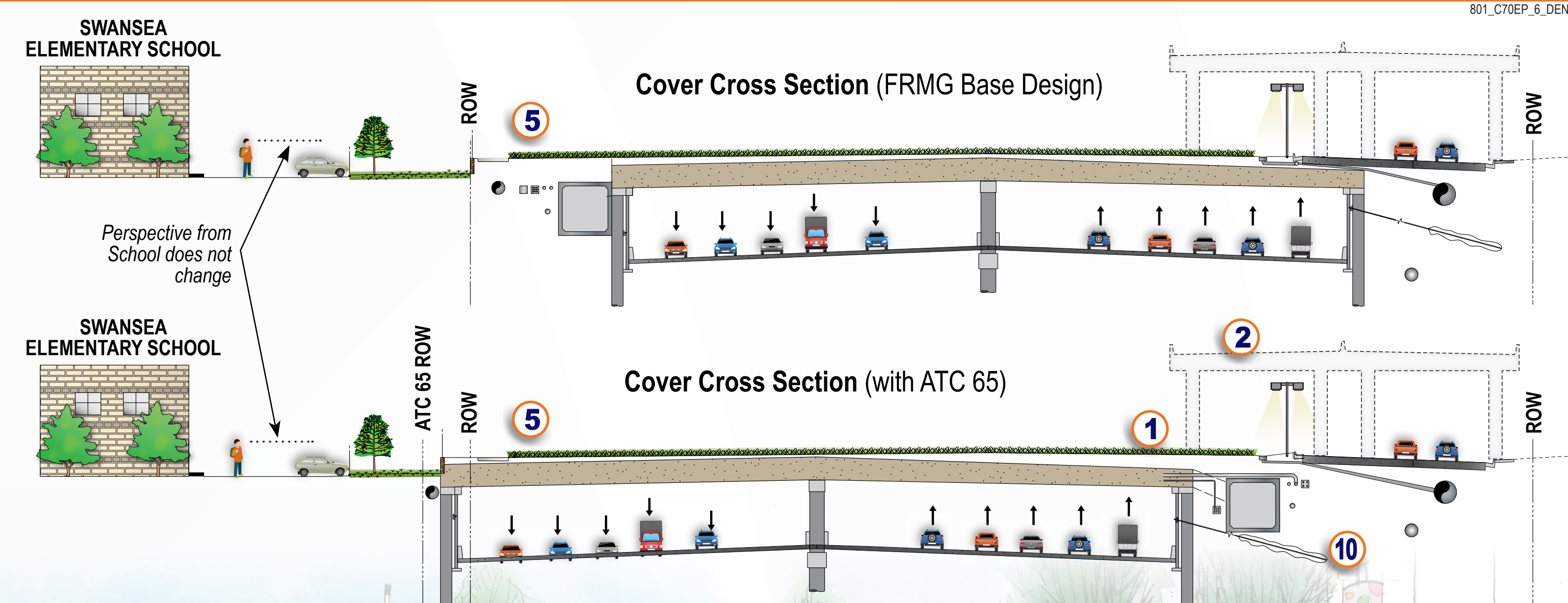

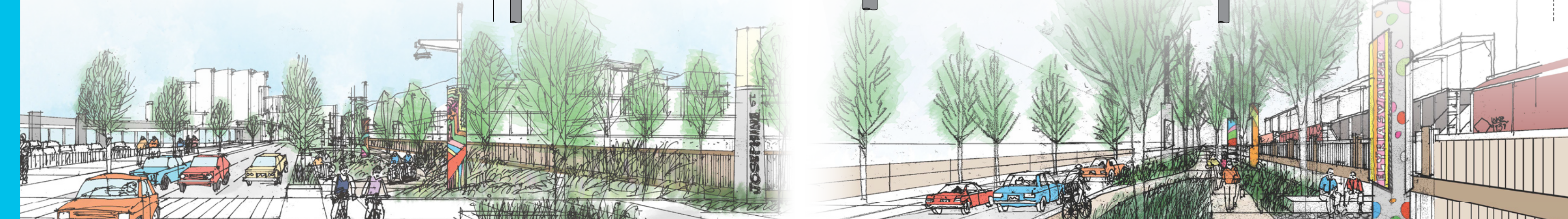

ATC 65 PROVIDES OPPORTUNITIES FOR ADDED GREEN SPACE

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2.1.7.b Design Features to Reduce Maintenance

By fully integrating FRMG's O&M team into the design process during the Proposal phase, we have incorporated refinements, optimizations, and innovations that will reduce maintenance and make our efforts more efficient, safer, and less costly, providing a whole life-cycle solution in direct alignment with the Project goals. The specific design features that reduce maintenance are shown on **Figure 2.1.7-1**.

2.1.7.c Pavement Design

GOING THE EXTRA MILE:

FRMG performed traffic counts at selected locations to provide additional calibration for CDOT traffic data. We also collected additional LIDAR data from west of Steele St./Vasquez Blvd. to east of Chambers Rd. to ensure that pavement cross slope will meet the contract requirements in overlay areas.

FRMG's pavement design delivers high-quality pavements that minimize total life-cycle cost and maximize durability. Pavement sections for the CDOT roadways, other than I-70, were prescribed in the PA and are incorporated into FRMG's design. Details of our approach to pavement design are shown in **Figure 2.1.7-3**. After extensive analysis, our team, including O&M members and our dedicated local subcontractor, Interstate Highway Construction (IHC), determined the best solution is to use concrete pavement on the I-70 mainline reconstruction areas. Concrete is a preferred material to enhance the lifespan of the roadway. **IHC, which has worked in Colorado for more than 40 years, provides our team with the benefits of being the largest concrete paver in the state.**

FIGURE 2.1.7-3 **FRMG Pavement Design Approach**

I-70 Mainline Reconstruction between Brighton Blvd. and Colorado Blvd. and between Colorado Blvd. and Sand Creek
Design Methodology: *CDOT M-E Pavement Design Manual and AASHTOWare Pavement ME Design software. New PCC pavement is a high-quality, long-lasting, and durable pavement that will minimize future maintenance and rehabilitation costs and overall life cycle cost.*
Material Types: PCCP - 13 foot slab in outside GP lane, 12 foot slab in other lanes, 15 foot transverse joint spacing; **Roadway Classification:** Interstate; **Design Traffic Loading:** 52 to 72 million cumulative heavy trucks; **Design-Life Considerations:** 30 years; **Pavement Section:** 10" Doweled JPC over 6" ABC
I-70 Mainline Widening between Sand Creek and I-225
Design Methodology: *CDOT M-E Pavement Design Manual and AASHTOWare Pavement ME Design software. Due to good condition of existing pavement, HMA overlays of varying thickness will be placed. New HMA pavement will be placed where the roadway will be widened, resulting in the same pavement surface type from pavement edge to edge.*
Material Types: HMA – SMA PG 76-28 surface course, HMA SX(100) PG 64-22 intermediate and base course; **Roadway Classification:** Interstate; **Design Traffic Loading:** 31 to 44 million cumulative heavy trucks; **Design-Life Considerations:** 20 years; **Pavement Section:** Overlay = 2-5.25" HMA including 2" SMA surface course. Full Depth Pavement = 10.5-11.75" HMA (including 2" SMA surface course) over 6" ABC
Ramps
Design Methodology: *CDOT M-E Pavement Design Manual and AASHTOWare Pavement ME Design software. New PCC pavement or HMA pavement a high-quality, long-lasting, and durable pavement that will minimize future maintenance and rehabilitation costs and overall life cycle cost.*
Material Types: PCCP or HMA; **Roadway Classification:** Ramp; Design Traffic Loading: 1.5 to 19 million cumulative heavy trucks (depending on location); **Design-Life Considerations:** 30 years for PCCP, 20 years for HMA; **Pavement Section:** 5.75 to 8" HMA over 6" ABC, 8" PCCP over 6" ABC with 15 foot transverse joint spacing and 13 foot widened slab
Local Streets – Frontage Roads (not subject to the Operating Period performance requirements)
Design Methodology: *New pavement designs per local agency design procedures, provided by the Metropolitan Government Pavement Engineers Council (MGPEC) and MGPEC-recommended design equivalent single-axle loads (ESALs).*
Material Types: HMA; **Roadway Classification:** Collectors, Local Roads; **Design Traffic Loading:** 1 to 25 million ESALs (depending on location); **Design-Life Considerations:** 20 years; **Pavement Section:** 10-13.5" HMA on untreated subgrade
Crossroads (not subject to the Operating Period performance requirements)
Design Methodology: *CDOT M-E Pavement Design Manual and AASHTOWare Pavement ME Design software. New pavement designs in accordance with the defined pavement sections specified in the RFP.*
Material Types: HMA; **Roadway Classification:** Arterials, Collectors, Local Roads; **Design Traffic Loading:** 5 to 43 million cumulative heavy trucks (depending on location); **Design-Life Considerations:** 20 years; **Pavement Section:** 7-13" HMA on 6" ABC as prescribed in the RFP for Vasquez, Colorado, Quebec, and I-270, 11-11.5" PCCP on untreated subgrade at Brighton Blvd., 9-13" HMA on untreated subgrade for remaining roads
Preventive Maintenance for Roadways not Reconstructed
Design Methodology: *For the segments of the ramps and connectors that are not fully reconstructed but still within the limits of maintenance, rehabilitation is proposed. The pavement condition will be evaluated and the rehabilitation approach will be determined during construction.*
Material Types: HMA and PCCP; **Roadway Classification:** Ramps; **Design Traffic Loading**: Varies to match ramps; **Design-Life Considerations:** 20 years; **Pavement Section:** potential for mill, HMA overlay, Concrete Pavement Repair

FIGURE 2.1.7-4 **FRMG Approach to Signing, Delineation, Pavement Markings, Signalization and Lighting**

Signing	» Maximize the utility of guide sign structures by placing ITS devices on the guide sign supports » Provide advance warning of downstream destination, including advance notification of the Tolled Express Lanes » Eliminate the need for guide signs in the Cover section » Implement appropriate guide sign support structures to meet the unique geometric environment of the Lowered Section, including the 46th Avenue overhanging section created by ATC 65
Delineation/ Markings	» Assist system users with alignment navigation and vehicle positioning and meet Project requirements for retroreflectivity and anti-skid properties
Intersection Signals	» Design and time in accordance with CCD policies and standards
Ramp Meter Signals	» Improve I-70 Mainline operation by regulating the flow of traffic from the corridor » Work closely with CDOT and Local Agency traffic engineers to develop timing protocols that maximize metering operations effectiveness
Permanent Lighting	» Provide mid-mast roadway lighting for I-70 from the median. » Design ramps to be lit from the outside edges of the road. » Provide roadway lighting for local roads from the outside edges of the roadway.

2.1.7.d Signing, Delineation, Pavement Markings, Signalization and Lighting

FRMG has maximized safety in the design of signing, delineation, pavement markings, signalization and lighting. Our approach is included in **Figure 2.1.7-4**. Our large guide signs are shown in **Appendix A** under Tab a. Draft Roadway Drawings.

2.1.7.e Earthwork Construction

FRMG's assumptions relative to earthwork are based on information in the RFP and our team members' combined years of working in the corridor. The soils in the Project area are predominantly granular, consisting of sands, silts, and sand/silt mixtures, with interbedded layers of clay. Bedrock consisting of claystone and sandstone is present from 30 to 80 feet below grade. Groundwater ranges from 25 to 40 feet below existing grade in the Project area. Analysis of information in the RFP also gave us a detailed understanding of the location and approximate quantity of contaminated material that we will encounter during construction. The locations and quantities are highlighted on **Figure 2.1.7-5** and discussed in more detail in **Section 2.1.7.e.iii**. Our planned approach to efficient and appropriate earthwork construction is expanded upon in **Figure 2.1.7-5**.

2.1.7.e.i Approach to Geotechnical and Related Issues and Identification of the Scope and Objectives of Future Investigations

The subsurface information in the RFP will be supplemented with additional borings, samples, and testing to confirm our assumptions, optimize the design to meet Project scope, and fulfill the requirements of the AASHTO LRFD Bridge Design Specifications and CDOT Pavement Design Manual. FRMG's investigation will include:

- **Bridge borings:** Generally extending into bedrock and ranging from 50 to over 100 feet deep
- **Retaining wall and other structures borings:** Depths will vary from 25 ft to 100 ft deep
- **Soil testing:** To determine classification, strength, consolidation, and corrosion properties
- **In-situ testing at selected locations:** To optimize material properties and to aid seepage control
- **Additional pavement coring and Falling Weight Deflectometer testing:** To optimize overlay design
- **Testing of selected samples at subgrade:** To verify pavement R-values
- **Measurement of groundwater** throughout the Lowered Section

2.1.7.e.ii Excavation Methods and Construction Techniques, Mass Haul Narrative, and Potential Sources for Borrow and/or Uses for Waste Material

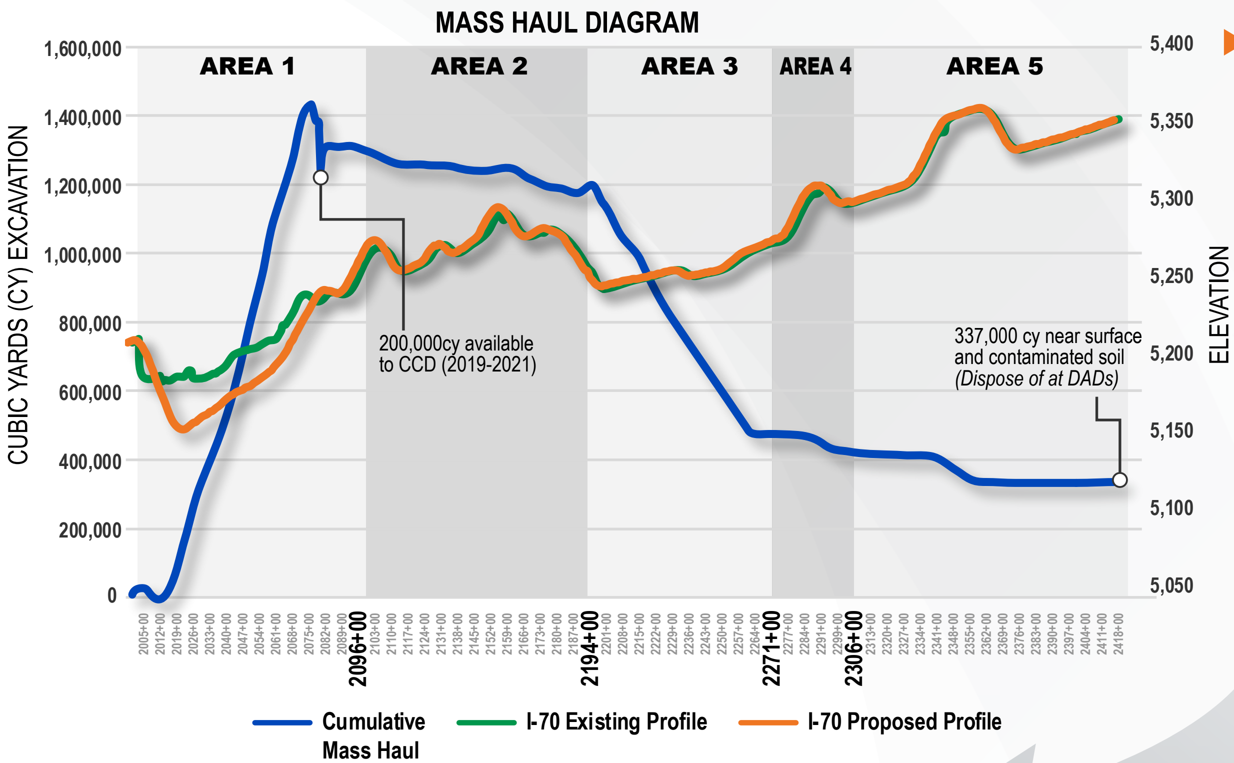
Maintaining traffic movement and ensuring the safety in and around Swansea Elementary School are major factors in FRMG's excavation methods and construction techniques. Excavation and hauling will be conducted at night, to the extent possible, to reduce air pollution from truck idling, reduce congestion, enhance pedestrian safety, and reduce distractions at Swansea Elementary School. Excavation in the Cover area will require close coordination

THE EXTRA MILE

FRMG'S APPROACH TO EARTHWORK CONSTRUCTION

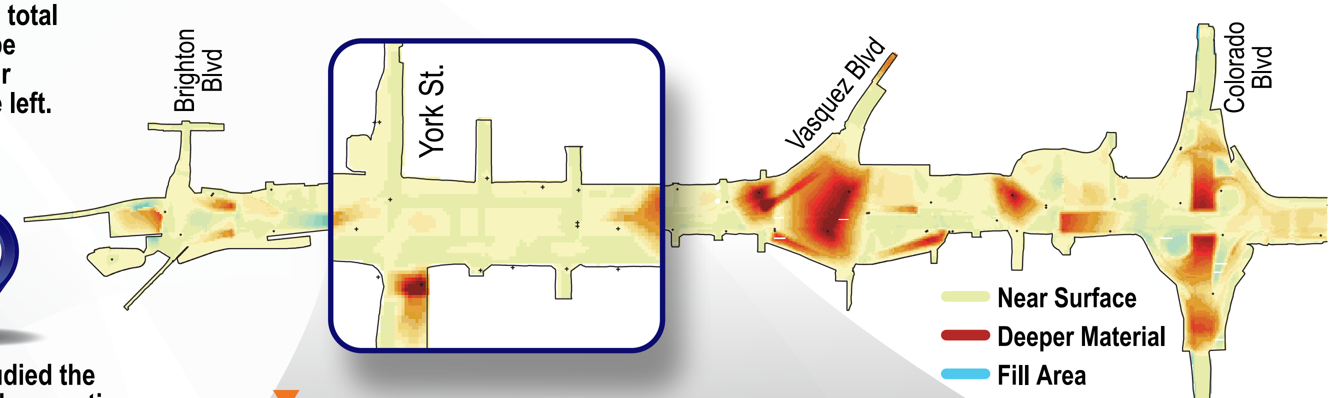
FIGURE 2.1.7-5 **Earthwork Construction**

FRMG's approach to Earthwork Construction is to fully understand the properties of on-site material to plan material movement in advance and ensure that only material exceeding the limits of the Beneficial Reuse Materials Management Plan (BRMMP) is disposed of off-site

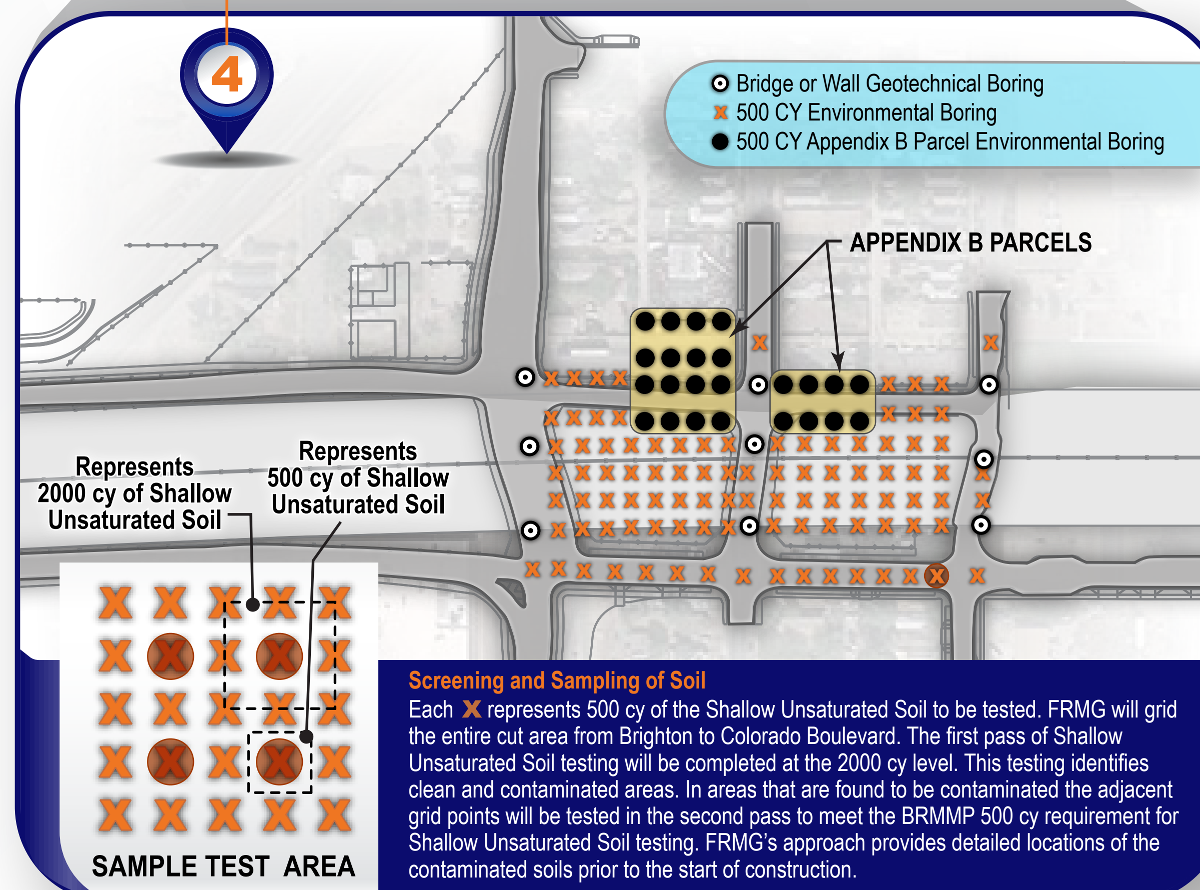


1 We have calculated the total amount of material to be excavated based on our design as shown to the left.

2 We have studied the location and properties of contaminated material in detail based on available information.



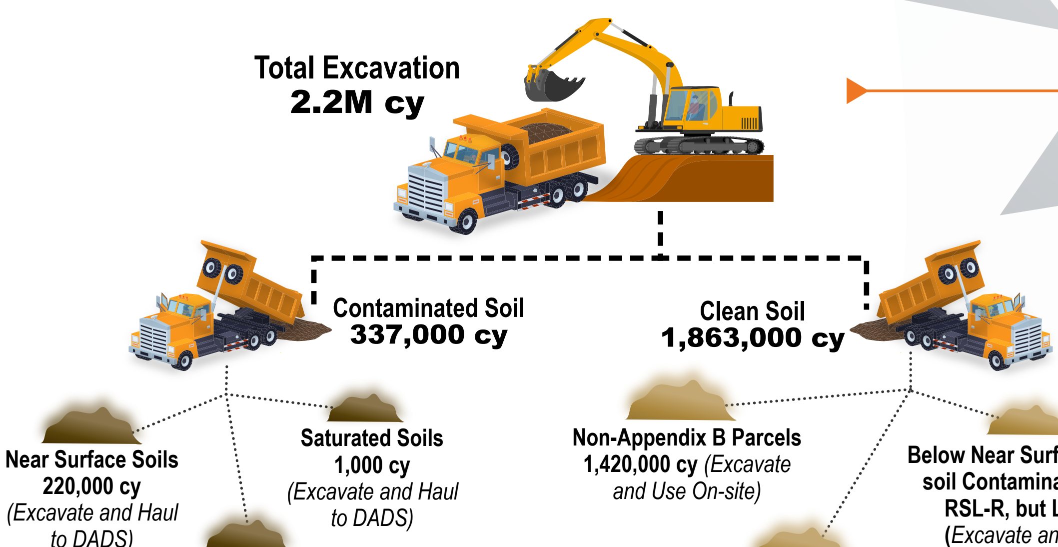
4 After award, we will perform an in-depth investigation in areas of contaminated material to confirm our earthwork construction approach and quantity of material to be hauled off-site.



Screening and Sampling of Soil

Each X represents 500 cy of the Shallow Unsaturated Soil to be tested. FRMG will grid the entire cut area from Brighton to Colorado Boulevard. The first pass of Shallow Unsaturated Soil testing will be completed at the 2000 cy level. This testing identifies clean and contaminated areas. In areas that are found to be contaminated the adjacent grid points will be tested in the second pass to meet the BRMMP 500 cy requirement for Shallow Unsaturated Soil testing. FRMG's approach provides detailed locations of the contaminated soils prior to the start of construction.

3 Based on 1 and 2, we have estimated the amount of material to be hauled off-site.



Total Excavation
2.2M cy

Contaminated Soil
337,000 cy

- **Near Surface Soils** **220,000 cy** *(Excavate and Haul to DADS)*
- **Saturated Soils** **1,000 cy** *(Excavate and Haul to DADS)*
- **Below Near Surface Soils** **116,000 cy** *(Excavate and Haul to DADS)*

Clean Soil
1,863,000 cy

- **Non-Appendix B Parcels** **1,420,000 cy** *(Excavate and Use On-site)*
- **Appendix B Parcels** **370,000 cy** *(Excavate and Use On-site)*
- **Below Near Surface Soils 73,000 cy soil Contamination Greater than RSL-R, but Less than RSL-I** *(Excavate and Place On-site)*

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with Denver Public Schools (DPS) to maintain parking and access for the school.

Figure 2.1.7-5 illustrates our current understanding of the total amount of material to be excavated. In Area 1, excavation will progress from Clayton St. to the west and Steele St. to the east. Steele St. will be used for trucks servicing the excavation in both directions. Truck access on other local streets will be utilized in accordance with the Transportation Management Plan (TMP). Material will be excavated, loaded, and hauled either directly to embankments in Areas 2-5 or to stockpiles at the National Western Center or other designated waste fills. Excavation will progress in lifts, in conjunction with either secant wall and tie-back construction or soil nail installation, as applicable. Material removed west of UPRR will be placed in the embankments at Brighton Blvd., with scrapers or highway trucks that will not leave the Project site. We will sequence the work so that material required for embankments is available from excavations and the length of hauls between excavation and embankment locations is minimized. FRMG will determine if material from proposed detention ponds at the southeast corner of Colorado Blvd. and the northeast corner of Steele St. and the material in the vicinity of York St. meets the requirements for CDOT Class 1 Structural Backfill. Material not meeting the Class 1 requirement will be used as general fill.

2.1.7.e.iii Environmental Approach

A. Screening and sampling soil in accordance with the Beneficial Reuse and Materials Management Plan (BRMMP): A portion of the soils to be excavated within the Lowered Section is contaminated and requires proper disposal. Knowing the location of contaminants and soil characteristics minimizes the double handling of materials. As shown on **Figure 2.1.7-5**, FRMG will “grid” the area to be excavated in the Lowered Section to meet BRMMP requirements for testing of Shallow, Unsaturated Soil and Appendix B Parcels. Environmental sampling and geotechnical investigation can be accomplished at the same time using the grid.

First sampling will be of Shallow Unsaturated Soil located between 1 and 5 feet below original ground. In areas of known hazardous materials and in Appendix B Parcels, FRMG will use the grid to meet the requirements to test every 500 cy of excavated material. At each location, one, 10-point composite sample test will be completed to determine levels of soil contamination. Geotechnical properties will also be determined for foundation design. Outside of Appendix B Parcels, and once Nonimpacted/Unrestricted or Impacted/ Restricted Reuse criteria are met, FRMG will continue sampling the Shallow Unsaturated Soil at a rate of one, 10-point composite sample for every 2,000 cy until Non-impacted/ Unrestricted or Impacted/ Restricted Reuse criteria is exceeded or if any material change in the soil is found.

B. Completing construction phasing to allow for the reuse of materials on-site in accordance with the BRMMP: Appendix F (TMP) and materials sampling results will provide FRMG with locations of where material will come from and be placed prior to the beginning of construction. Our sampling plan meets the City and County of Denver’s Guidance for Central 70 Project Reuse of Excessive Soil on City and County Owned Properties.

C. Minimizing the disposal of materials, including excavation and construction stockpiling: Detailed advanced sampling of material to be excavated allows FRMG to plan the best use of material and minimizes the disposal of material to the Denver Area Disposal Site (DADS). We will phase the Project to place material with a Regional Screening Level for Industrial (RSL-I) designation below the allowable limits within the I-70 fills. We have identified sites to place material on the Project (as shown in **Appendix A** under Tab a. Draft Roadway Drawings), as long as the material meets the BRMMP requirements. FRMG’s design only exports material off-site that exceeds these limits.

D. Tracking and documenting the final disposition of materials: Contaminated material below the BRMMP threshold will be used on-site wherever possible. Each truck carrying contaminated material will be given a card with a unique number, material origin, and the types and levels of soil contaminants. This method was used on CDOT’s 2013 Flood Recovery project to manage debris provided a very rigorous accounting of all debris collected and its final disposition.

2.1.7.f Design and Coordination with Railroads

FRMG’s overall approach begins with staffing the Project with personnel who have worked with, or directly for, the Railroads and understand their procedures and requirements. Our staff with strong railroad backgrounds include Jeff Stapleton with CH2M, Mike Larsen with AECOM (former UPRR), and Craig Morgan with AECOM (former BNSF).

FRMG will work immediately after award to advance design of the long-lead items, such as steel girders required for railroad superstructures, to begin fabrication as early as possible. Our designs will keep the need to maintain railroad freight traffic at the forefront. We will format Railroad submittals accurately for prompt review and approval, as well as facilitate reviews and approvals by the Colorado Public Utilities Commission.

Figure 2.1.7-6 shows our plan to coordinate work that is the responsibility of the Railroads to carry out, as well as our design and construction solutions for the protection of existing Railroad facilities and operations. Combined, these will allow FRMG to achieve Key Milestones in accordance with our Baseline Schedule.

FIGURE 2.1.7-6 **FRMG Approach to Railroad Work**

Coordinating Work that is the Responsibility of the Railroads

» Follow the RRAs on the division of work between the Railroads and our team
» Assign a Railroad Interface Coordinator as primary point of contact
» Set up a SharePoint site to post critical information for Railroad work and provide access to affected parties
» Develop a detailed project schedule showing clear definition of all work to be performed within the Railroad ROW to minimize or eliminate overlapping work between the Railroad forces and the Developer
» Conduct construction interface planning meetings where field personnel from FRMG and UPRR will share work plans and coordinate overlapping work and items that FRMG must construct to facilitate the Railroads' work.
» Conduct weekly schedule update and progress meetings with railroad personnel

Solutions for the Protection of Existing Railroad Facilities and Operations

» Deliver an engineering design that does not deviate from the 100% Trackwork Plans for the UPRR and BNSF provided in Schedule 10B of the PA
» Simplify girder erection and minimize excavation along with backfill import by the reuse of onsite material
» Use temporary barriers to separate active construction zones from Railroad operations
» Use safe zones just off the Railroad ROW to store equipment and material required for new Railroad facilities
» Install active sensors to existing Railroad facilities and track to monitor settlement

2.1.7.g Design Approach to the Cover

FRMG's approach to the Cover, as outlined in our Draft Cover Design Baseline Report included in Appendix G, is to design the required mechanical, electrical, and plumbing (MEP) to maximize efficient operations and maintenance and provide a safe facility for users. Our draft report addresses the operation of each of these systems and how they are controlled.

FRMG has incorporated ATC 26 into the Cover design. **This ATC consists of a semi-transverse ventilation system, rather than the longitudinal ventilation system required in Section 12 of Schedule 10, removing the large number of jet fans directly above I-70** in the Cover with an axial fan located in a Plant Room off the Cover. As a result, ATC 26 eliminates lane closures during ventilation system maintenance and requires less electrical power. Fan equipment can be maintained in a much safer environment outside of the roadway, and vehicle emissions are not ventilated to the atmosphere via the tunnel portals, avoiding the potential for recirculation. Combined with FRMG's ATC 65, the Cover exhaust will be expelled via an exhaust plenum on the south side of I-70, away from the Swansea Elementary School. **Eliminating the jet fans allowed FRMG to raise the profile of I-70 in the Lowered Section, reducing the interface with groundwater, hazardous materials, and other issues associated with excavation in this area.**

2.1.7.h Design Approach to the Cover and Swansea Elementary School Landscape and Aesthetics

FRMG's approach to the Cover and Swansea Elementary School landscape and aesthetic design advances the effort in the I-70 Cover Plans, as well as the intent of the I-70 Cover and Swansea Elementary School Outdoor Areas Design Narrative, both in Schedule 10B of the Project Agreement. FRMG's responsibility is to implement the vision for Planning Area 1, consisting of the Swansea Elementary School outdoor areas and Planning Area 2, which is the I-70 Cover Open Space. Each of these areas is shown on **Figure 2.1.7-7.**

In the design process for Planning Area 1, FRMG will coordinate with DPS to convene a Design Advisory Group to review and approve the design of the Swansea Elementary School outdoor areas. The design process will also address vehicular routing, snow removal plans, and emergency vehicle routes. The theme of Planning Area 2, the

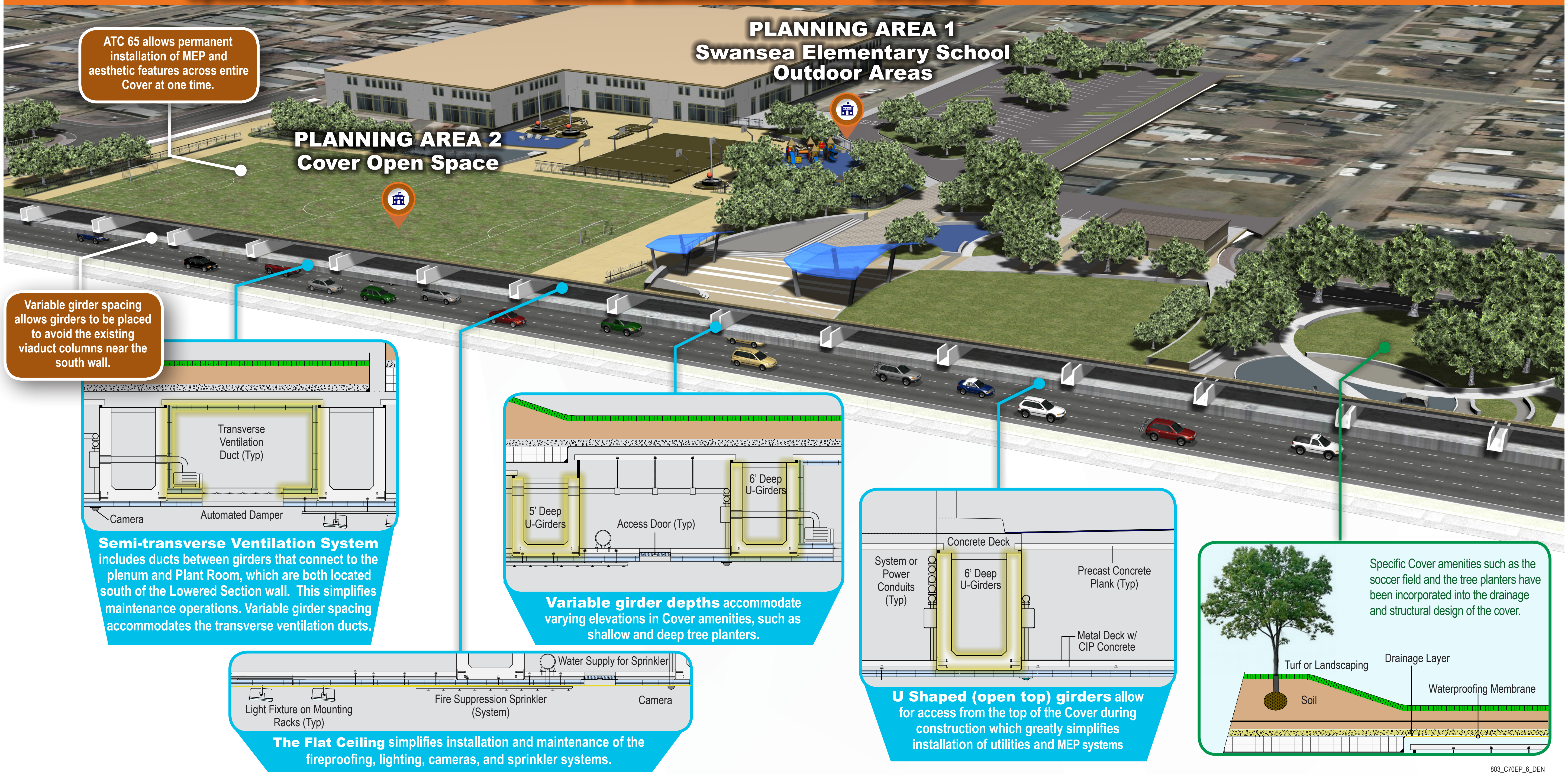
THE EXTRA MILE

FRMG'S APPROACH TO COVER STRUCTURE

FIGURE 2.1.7-7 **Cover Structure**

FRMG developed a solution to the Cover that integrates the Cover structure itself with the MEP, ITS, Fixed Firefighting System, Fireproofing, Drainage, Utilities, the Swansea Elementary School Landscape and Aesthetic Design components. The needs of each of these systems is accommodated into a solution that facilitates construction and reduces long-term maintenance.

This system is: ✓ Optimized Construction ✓ Efficient Maintenance ✓ Versatility



Semi-transverse Ventilation System includes ducts between girders that connect to the plenum and Plant Room, which are both located south of the Lowered Section wall. This simplifies maintenance operations. Variable girder spacing accommodates the transverse ventilation ducts.

Variable girder depths accommodate varying elevations in Cover amenities, such as shallow and deep tree planters.

U Shaped (open top) girders allow for access from the top of the Cover during construction which greatly simplifies installation of utilities and MEP systems

The Flat Ceiling simplifies installation and maintenance of the fireproofing, lighting, cameras, and sprinkler systems.

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Cover Open Space, is to provide a community gathering location, for both programmed and spontaneous neighborhood and community opportunities; vehicular, bike, and pedestrian access via Columbine St. and Clayton St.; a multipurpose field; events lawn; splash pad; and plaza. The design of the Cover deck will accommodate tree planting in designated areas with supplemental raised planters and mounds for additional landscape.

ATC 65 provides additional aesthetic and recreational opportunities for the community, including **3.5 acres of additional irrigated landscape, 175 additional trees, and 35,500 square feet of additional sidewalk/shared-use path,** including wider sidewalks on the widened bridges between York St. and Monroe St., as shown on **Figure 2.1.7-2**. The added sidewalk/shared-use path complements the Cover by providing a safe "loop" trail for walking and biking between the Cover, and the area of the future Cover near Steele St./Vasquez Blvd. ATC 65 represents critical connectivity to the neighborhoods south of the corridor. The proposed improvements enhance connections to Josephine St. and Monroe St., the Market Lead/40th Station, Blake St. and Brighton Blvd. These improvements connect with ongoing street and bikeway projects currently under construction or in design in the area. FRMG's draft Cover and Swansea Elementary School landscape and aesthetic design drawings are included in **Appendix A** under Tab c.

2.1.7.h.i Integration with the Cover MEP, Structures, Drainage, Utilities, and ITS

FRMG's innovative solution is to design the Cover lid using precast tub girders, installed open on the top. With thin panels placed between the girders at the bottom, the tunnel ceiling will be flat, allowing easy attachment of fireproofing panels. Most of the MEP systems, including ITS conduits, can be installed from above, using cranes to enhance installation efficiency and improve work safety.

Once the top deck slab is poured, the spaces between girders remain and are large enough for long-term O&M activities. With the ability to construct the entire Cover in one phase with ATC 65, the tub girders are designed to carry construction loading with prestressing and the Cover's top loading requirements, including live loads and fire truck access with post-tensioning across the entire width of the Cover. Construction work on roadways, drainage, traffic, ITS components, and other features can take place below the Cover while the MEP systems are being installed from above. Prefabricated lighting and fire sprinkler lines will be installed quickly from below later in the construction process. The Zayo ITS duct bank is on the south side of the Cover, and the new duct bank will also be on the south. This will facilitate temporary connections during construction. Our solution easily accommodates the wide range of surface loadings that will be required on the Cover. **Figure 2.1.7-7** shows FRMG's Cover Structure and how it accommodates the urban design/aesthetics, MEP and other components of the Cover. The Cover structure is also shown in **Appendix A** under Tab f. Draft Structure Drawings.

2.1.7.h.ii Long-Term Operation and Maintenance

FRMG will be responsible for O&M of Cover MEP and fire/life safety systems, structural components, drainage, pavement and ancillary assets, as well as ITS and Electronic Toll Collection (ETS) obligations assigned to the Developer in **Appendix B** of Section 3 of the Project Agreement. Long-term O&M activities will be performed under a careful regimen of inspection and condition assessment to maintain asset conditions and delay or avoid deterioration due to normal use. Regular periodic maintenance inspections and component servicing integrated with a robust inspection schedule will occur for all MEP, ventilation, and fire/life safety systems as detailed in the Maintenance Management Plan. As part of the preventive maintenance work, we review work needs, deficiencies, and asset conditions to determine maintenance strategies. Coordination and integration with the Cover Top Maintainer will be as outlined in the Cover Top Manual and Part 5 of this Technical Proposal.

2.1.7.i Construction Adjacent to the Swansea Elementary School

Our plan for construction maintains access to Swansea Elementary School and provides a secure and safe zone for students. We will work effectively with DPS to meet their needs during construction and minimize impacts near the school. We will provide the parking, traffic circulation, and safety provisions required to keep the school operational. **FRMG's ATC 65 accelerates construction of the Project overall and reduces the duration of construction at the school by approximately one year.**

2.1.7.i.i Traffic Phasing for Local Streets and School Bus/Parent Drop-off and Pick-up

FRMG's approach to traffic phasing (detailed in Part 3) reflects the requirements of Schedule 10, Section 2:

» Columbine St. and Clayton St. will not be closed when school is in session.
» 47th Ave. will remain open between Clayton St. and York St. during closures of 46th Ave.
» All closures in the vicinity of Swansea Elementary School will be coordinated with DPS.
» Pedestrian and bicycle movements in the vicinity of the school will be accommodated as described in Section 2.1.7.i.iii regarding the Safe Routes to School plan.
» Approaches for the school area incorporate Travel Demand Management strategies defined in FRMG's TMP.

FRMG has developed a concept for the school bus/parent drop-off/pick-up at Swansea Elementary School. This will be refined to meet the needs of DPS through coordination that will take place at the outset of the Project.

2.1.7.i.ii Duration of Construction Activities

Major milestones of the work adjacent to Swansea Elementary School are:

» Installation of noise barrier and adjacent demolition – 6/2018 to 8/2018
» Installation of shoring and permanent secant piles – 6/2018 to 11/2019
» Construction of Clayton St. bridge – 6/2018 to 8/2018
» Construction of Columbine St. bridge – 6/2019 to 8/2019
» Installation of Cover Superstructure – 6/2018 to 6/2020
» Installation of Planning Area 1 – 6/2021 to 8/2021
» Installation of Planning Area 2 – 6/2021 to 2/2022

2.1.7.i.iii Safe Routes to School

The Swansea Elementary Walk Audit Report indicates that much of the area has no sidewalk, or less than five-foot sidewalks. **FRMG will provide a dedicated shared-use path along the south side of existing 46th Ave. from York St. to Fillmore St. to provide direct access to Columbine St. and Clayton St. Crossing guards will be provided at Clayton St. and/or Columbine St. along 46th Ave. as necessary during Phase 1 of our Maintenance of Traffic (MOT) plan.** In Phase 2, the east/west connectivity will be along the newly constructed 46th Ave. North; crossing guards will be provided during this phase. Curb ramps, Americans with Disabilities Act (ADA) measures, and crosswalks along the route will be maintained throughout the Project using temporary measures where needed and by constructing permanent features as early as practical. Temporary lighting will be provided along the shared-use path.

CCD's study of pedestrian and bicycle crossing options for 47th Ave. and York St. area concluded that a pedestrian bridge would be the preferred option; however, this option has not been implemented. With this in mind, FRMG will provide a shuttle service for Swansea Elementary School students in coordination with DPS' Success Express to address safety and delays caused by the UPRR train movements at the York St. crossing until 46th Ave. is reopened between Brighton Blvd. and York St. In addition, FRMG will use pedestrian flagging services as necessary to assist in the control of potential unsafe pedestrian crossings at York St.

2.1.7.j Geotechnical Design for Major Foundation Elements

Specific foundation design elements, shown on **Figure 2.1.7-8**, include the foundations for bridge structures including the Cover, retaining walls, including special elements in the Lowered Section, and considerations for construction near the existing viaduct with ATC 65.

2.1.7.k Design Approach to Structures

FRMG's design approach to structures uses typical low-maintenance CDOT structures, consistent structure types and simplified details to achieve quality, economical design and reduce long-term maintenance. Wherever practical, the design emphasizes concrete structures over steel and incorporates fatigue-resistant and corrosion-resistant precast, prestressed members. Bridge designs include joint-less bridges to eliminate expansion devices and bearings, which are typically high-maintenance elements. We will implement specific details, such as anti-graffiti measures, aimed at minimizing periodic and routine maintenance.

FIGURE 2.1.7-8 **FRMG Geotechnical Approach**

Design Element	Geotechnical Considerations/FRMG Approach
Foundations for Bridge Structures including the Cover	» UPRR, York, Josephine, Cover, 46th Avenue overhang bridges east and west of the Cover supported on drilled caissons » All other bridges supported on driven piles » Center wall of Cover supported on widely spaced drilled caissons minimizing interference between the foundation and the storm sewer running in the I-70 median shoulder. » BNSF Market Lead bridge will have abutments supported on unanchored drilled caissons to comply with AREMA
Retaining Walls including Special Elements in Lowered Section	» Will implement a groundwater isolation approach (secant wall) to minimize dewatering and keep water below subgrade » Wall consists of drilled caissons overlapped by 6 inches from Station 2017 to Station 2037 » Caissons will be 3-foot diameter and every other one tied back where sufficient ROW exists » Caissons will be 4-foot diameter with no tiebacks where ROW constrained » Secant walls will line north and south extents of Lowered Section » Connection of north and south walls creates watertight “bathtub” or groundwater isolation effect » Secant wall serves as both temporary and permanent earth retention » Groundwater collection and treatment system for seepage through and beneath walls » System will accommodate 100 gallons per minute, with 20 gallons per minute inflow estimated » Lowered Section walls outside of groundwater will be tangent walls without overlapping caissons » Lowered Section walls east of Station 2044 will be soil nail walls for temporary and long-term excavation support. » Walls outside Lowered Section primarily Mechanically Stabilized Earth (MSE) walls or concrete cast-in-place walls
Existing Viaduct Considerations	» ATC 65 allows construction of the entire width of the permanent Lowered Section with I-70 viaduct in service » Requires that the secant walls be constructed to not interfere with existing viaduct foundation » Requires the use of jet grouted columns from the top of wall to bedrock » Additional anchors will be installed and a cast-in-place closure wall formed across the jet columns

We have extensive experience working with ultra-high performance concrete and polymer concrete overlays, which enhance quality and durability, and provide the best long-term value to the Project. Structure types and elements, including the wall types discussed above in **Section 2.1.7.j,** are shown on **Figure 2.1.7-9**. Although not required by the ITP, FRMG is providing a representative sample of bridges on the project including the Cover Structure in **Appendix A** under Tab f. Draft Structure Drawings.

The Cover structure requires critical coordination with the roadway, utilities, MEP systems, drainage, signage, ITS, tolling, landscaping and aesthetics disciplines. FRMG has developed a design concept for the Cover that utilizes standard precast concrete box girders, including precast deck panels with a cast-in-place concrete topping for the top slab and steel deck panels for the bottom slab, between box girders. This simple modular system provides deep planter wells for larger trees, plus large voids in the superstructure for ventilation ducts and utilities.

The structural design of the system uses two-phase prestressing and post-tensioning to minimize deck cracking, and provides a durable watertight deck. The structural elements required for the Cover are standard off-the-shelf components that are available and manufactured in Colorado.

Post-tensioned Concrete Straddle Bents will be used to cantilever 46th Ave. over mainline I-70. With ATC 65, these elements allow FRMG to fit the Project between the north ROW limits and the existing viaduct to the south.

2.1.7.l Design Approach to Drainage

FRMG’s drainage design meets the PA criteria, while reducing cost and construction duration. We developed a drainage system that serves the needs of the corridor and does not create adverse impacts to existing drainage systems or neighborhoods. Our approach to the main aspects of the drainage design is presented in **Figure 2.1.7-10**. Elements of our drainage system also are graphically depicted on **Figure 2.1.7-11**. Draft drainage drawings are included in **Appendix A** under Tab b. Draft Drainage Drawings.

2.1.7.m Design and Construction Approach to Utilities

FRMG has incorporated CDOT and the Procuring Authorities’ preliminary utility scope into our relocation designs, schedule, and MOT sequencing. Our priority is to design and sequence relocations to meet the needs of Utility Owners, minimize service disruptions, reduce the use of temporary systems, and mitigate impact on the schedule.

In meeting with several utility companies, the largest area of concern is the construction of the Lowered Section. Through our ATC 65, which shifts I-70 to the north, the sewer, storm sewer, and telecom systems in

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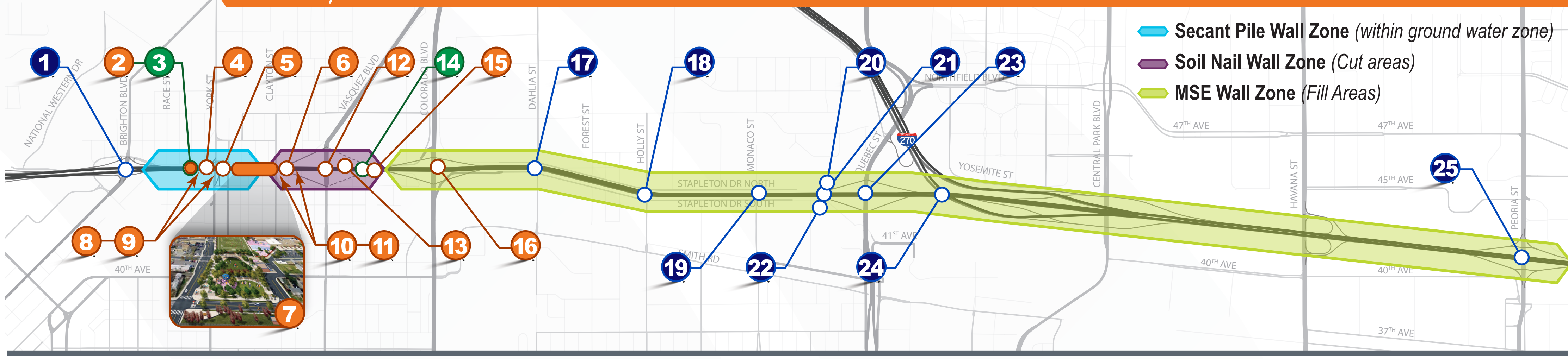
FRMG'S APPROACH TO STRUCTURES

FIGURE 2.1.7-9 **Structures**

FRMG chose bridge types that include typical CDOT girders and components, consistent across bridges to enhance production, and improve quality and durability. Retaining wall types were chosen based on location (in or out of groundwater) and situation (cut or fill walls)

BRIDGE TYPES AND LOCATION

	ASSET	SUPERSTRUCTURE	FOUNDATION
I-70 Mainline Structures			
1	I-70 over Brighton Blvd	Spread Prestressed 24" Box Girders	Steel H-piles & Drilled Caissons
17	I-70 over Dahlia Steet	Prestressed BT-42 Girders	Steel H-piles
18	I-70 over Holly Street	Prestressed BT-54 Girders	Steel H-piles
19	I-70 over Monaco Street	Prestressed BT-54 Girders	Steel H-piles
20	N. Stapleton Dr over DRIR	Prestressed 45" Box Girders	Steel H-piles
21	I-70 over DRIR	Spread Prestressed 45" Box Girders	Steel H-piles
22	EB Exit over DRIR	Prestressed 45" Box Girders	Steel H-piles
23	I-70 over Quebec Street	Spread Prestressed 28" Box Girders	Steel H-piles & Drilled Caissons
24	EB I-270 over I-70	Prestressed BT-96 Girders	Drilled Caissons
25	I-70 over Peoria Street	Spread Prestressed 28" Box Girders	Steel H-piles & Drilled Caissons
Roadway Overpasses			
2	Service Road over I-70	Prestressed BT-42 & BT-72 Girders	Drilled Caissons (Secant/Tangent Walls)
4	York Street over I-70	Prestressed BT-63 Girders	Drilled Caissons (Secant/Tangent Walls)
5	Josephine Street over I-70	Prestressed BT-63 Girders	Drilled Caissons (Secant/Tangent Walls)
6	Fillmore Street over I-70	Prestressed BT-63 Girders	Steel H-piles & Drilled Caissons
7	Cover (Columbine/Clayton)	Prestressed Post-tensioned 60" & 72" U-Girders	Drilled Caissons (Secant/Tangent Walls)
8 9 10 11	WB 46th Avenue (Unit 1) WB 46th Avenue (Unit 2) WB 46th Avenue (Unit 3) WB 46th Avenue (Unit 4)	Prestressed BT-54 Girders w/CIP Post-tensioned Straddle Bent	Drilled Caissons (Secant/Tangent Walls)
12	Steele Street over I-70	Prestressed BT-54 Girders	Steel H-piles & Drilled Caissons
13	Cook Street over I-70	Prestressed BT-54 Girders	Steel H-piles & Drilled Caissons
13	Monroe Street over I-70	Prestressed BT-54 Girders	Steel H-piles & Drilled Caissons
16	Colorado Blvd over I-70	Prestressed BT-42 Girders	Steel H-piles & Drilled Caissons
Railroad Grade Separations			
3	UPRR over I-70	Steel Plate & Rolled Girders	Drilled Caissons (Secant/Tangent Walls)
14	BNSF over I-70	Steel Plate Through Girders	Drilled Caissons



RETAINING WALL TYPES AND LOCATIONS

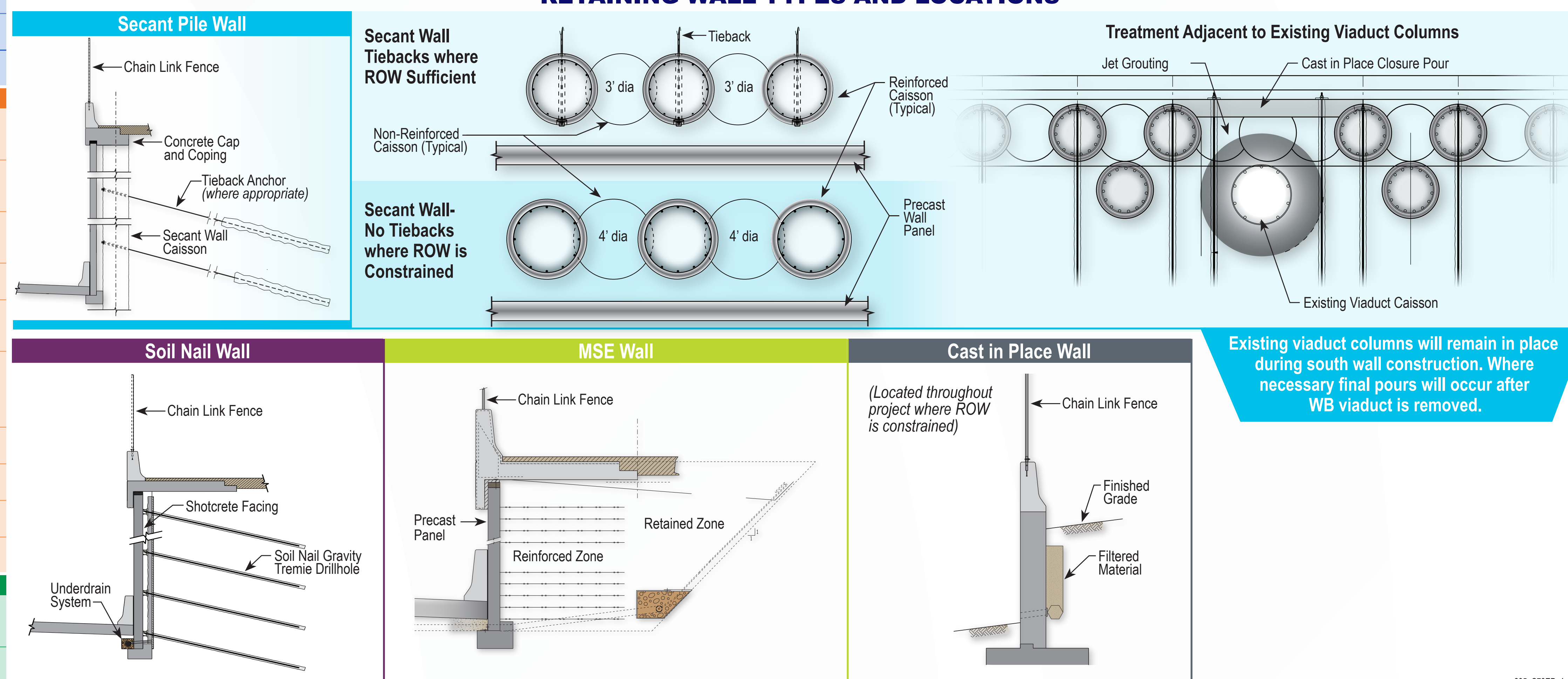


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FIGURE 2.1.7-10 **FRMG Drainage Approach**

Feature of Work	Approach
Surface Water Collection System	» Designed in accordance with CDOT, CCD and UDFCD criteria based on Jurisdictional requirements » Lowered Section drainage designed to capture 100-year event with inlets spaced to meet spread criteria » Water quality met by ponds, bio-swales, sand filter basins and hydrodynamic separators
On-site and Off-site Drainage System	» **Area 1** off-site flows from south captured in 46th Avenue South, routed through optimized detention ponds, and released at 463 cfs to CCD's Globeville Landing Outfall » ATC 21 eliminates the need for the storm sewer bridge over I-70 and the North Outfall to South Platte River; it conveys Area 1 flows in Lowered Section to pump station at York St. and ties to existing storm sewer in York St. to route drainage to South Platte River » With ATC 65, off-site flows from north of I-70 will be captured in a storm sewer system that implements a portion of CCD Master Plan » Drainage system at Colorado Blvd. optimized to utilize the storage capacity of the Colorado Blvd. ponds to minimize pipe sizes crossing I-70 » **Area 2** features multiple connections to existing Denver systems; design reverses flow east to Sand Creek beginning at Dahlia St.; additional flow from the west is treated and attenuated in the Quebec St. ponds before discharging to Sand Creek » **Areas 3**, **4** and **5** drainage is conveyed in cross culverts, ditches and storm sewers; culverts lengthened to accommodate ultimate I-70 lane configuration
Detention Facilities	» Ponds are designed for peak shaving and/or water quality purposes. » Minimum 0.5 percent slope is met for all ponds except Brighton East. » Typical water quality outlet structures utilized for water quality ponds, ponds responsible for peak shaving include a headwall with steel orifice plates » Forebays and trickle channels provided in all ponds as well as access ramps to the bottom of the pond for maintenance vehicles. » Colorado Blvd. pond includes a bubbler inlet connecting the below pond pipe to the storage capacity of the pond; allows for attenuation of peak offsite flows to minimizing pipe size under I-70 that enters the existing storm drainage system. » Design intent is that all ponds will be eligible for the Urban Drainage Detention Pond Maintenance Program. » Additional pond included at NW quadrant of Vasquez and I-70 as part of ATC 65
Approach to Reducing Maintenance Requirements for the Drainage System	» Location of pump station near I-70 at York St. eases maintenance and eliminates deep outfall pipe » Optimized size of concrete box culverts for better maintenance access » Eliminated storm sewer bridge at York St. reducing long-term maintenance » Water quality using hydrodynamic separators in areas with constrained ROW allows for Vactor truck access for maintenance » Increased pipe slopes to allow for scour velocities (self-cleaning pipe) » 4% cross slope on shoulders reduced the number of inlets

existing 46th Ave. can remain in place for a longer duration, reducing schedule risk and the need for temporary systems. FRMG has already met with CenturyLink, Zayo, Xcel, and Denver Water and Wastewater to understand their specific needs and to accommodate them in our approach to design and construction to mitigate risk.

GOODBEE AND ASSOCIATES

Goodbee and Associates, a local DBE-certified firm and a member of the FRMG team, has been an integral part of our utilities approach in the Proposal phase, having worked hand-in-hand with FRMG's design and construction teams. Goodbee's local knowledge of the utility companies and their facilities has been invaluable in this process and in assisting FRMG in performing due diligence.

2.1.7.m.i Identifying, Verifying and Documenting

FRMG's utility matrix is the tool used to identify, verify and track impacted utilities through design and construction. The original matrix provided by CDOT identified over 335 potential utility impacts. We reviewed each potential conflict and analyzed it based on the Utility Owners' requirements. Our matrix reflects 79 locations of no conflict, 126 relocations, 86 removals, and 44 utilities to be protected in place. Through potholing, survey, and document review, FRMG will confirm information previously collected by CDOT. Critical utilities are identified in **Figure 2.1.7-12.**

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FRMG'S APPROACH TO DRAINAGE

FRMG's approach to drainage design included a comprehensive study of on-site/off-site flows and existing/planned drainage systems. Using this information, we were able to optimize the drainage design for Central 70 while providing benefits to the surrounding drainage systems as well.

FIGURE 2.1.7-11 **Drainage**

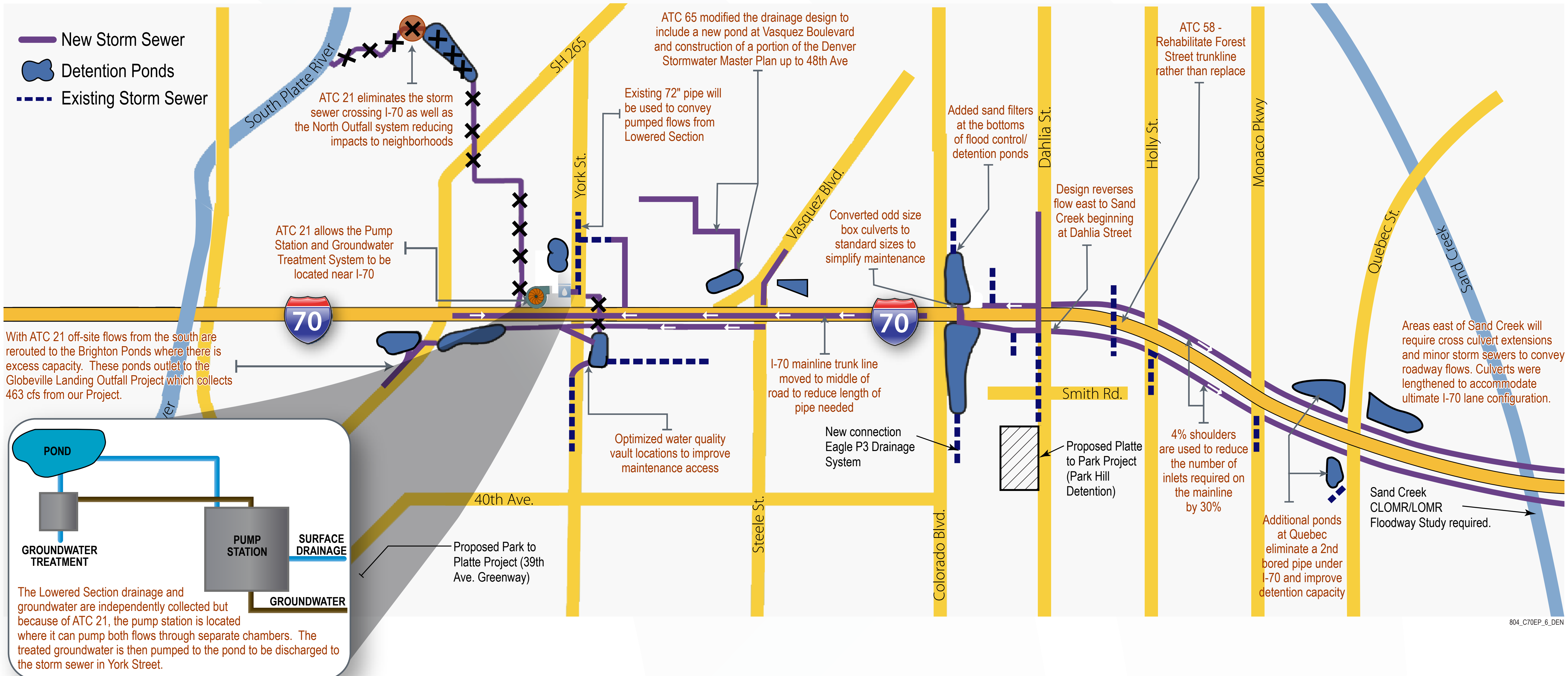

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FIGURE 2.1.7-12 **Critical Utility Issues on the Project**

Conflict	Risk Exposure	Mitigation
CNLK-C-201, 202 and 203 (Century Link)	In conflict with multiple structures and Lowered Section; 12 months required to pull and splice copper and fiber lines	ATC 65 reduces number of conflicts with line. Century Link tentatively agreed to casing to be installed at Steele St. to facilitate cable installation prior to bridge construction
SPRT-C-201, MCI-C-201 (Sprint)	UPRR bridge construction schedule	Lines will be temporarily relocated into shoofly embankment
DWD-WC-205, DWD-WC-206 (Denver Water)	Long duration shutdown notice required; bridges must be constructed in summer and lines can only be shut down in winter	Both lines will be temporarily relocated around bridge footprint the winter prior to bridge construction; new lines will be tied in the winter after bridge construction
XCEL-ET-206XCEL-ET-211, XCEL-ET-225 (Xcel Energy)	Long lead procurement and tight shutdown windows for relocation of high voltage transmission lines and towers	CDOT and the Procuring Authorities have entered into early design and work agreements; MOT and scheduling avoid early work in these areas
XCEL-GT-101 (Xcel Energy)	Outage only allowed May-September	MOT coordination; schedule sequencing

2.1.7.m.ii Coordination of Utility Relocations

The key element of our approach to the relocation of utilities is coordinating early and often with Utility Owners. FRMG will have a single point of contact with Utility Owners to avoid confusion. They will be kept informed of the progress of design, schedule, and ROW acquisition, as well as design review and approval status.

With experience on five design-build projects in the Front Range, FRMG team members are experts in the Work Order, Design Relocation Acceptance Letter, and Construction Relocation Acceptance Letter and No-Conflict Letter process and we understand the procedures necessary to gain approval from each Utility Owner along the corridor. Our team has done its due diligence, and our local knowledge and relationships with Utility Owners will allow us to streamline the process.

2.1.7.n Plan for Construction

Details of FRMG's schedule approach, construction phasing and our innovative solutions can be found in Parts 1, 3 and previous sections of this Part 6. In general, the construction of Area 1 can be completed independently from Areas 2-5. In Area 1, ATC 65 played a significant role in the construction planning by eliminating one entire phase of construction in the Lowered Section, optimizing the phasing at the Steele St./Vasquez Blvd. interchange and allowing construction of most cross-street bridges in Area 1 in a single phase. This significantly reduces the construction time in the vicinity of Swansea Elementary School. Phase 1 in Area 1 consists of constructing as much of the Lowered Section as possible while I-70 traffic remains on the existing viaduct. The Cover superstructure will be completed along with the new UPRR Bridge. Once the westbound (WB) I-70 lanes are completed, traffic will be shifted from the viaduct into the Lowered Section into its permanent WB location. In Area 1 Phase 2, the WB viaduct will be removed and the portion of the Lowered Section not completed in Phase 1 will be completed up to the limits of the eastbound (EB) viaduct. The EB lanes and temporary ramps will be constructed and traffic will be shifted from the EB viaduct into the permanent EB lanes. During the final stages of Phase 2, the EB viaduct will be removed and the remaining EB ramps and Lowered Section walls will be completed. 46th Avenue South will be constructed at the end of this phase. Temporary ramps for the WB and EB entrances to I-70 at Colorado Blvd. will be constructed to facilitate early bridge construction at this interchange. Construction of the new Holly St. interchange will be required to complete tie-ins at Colorado Blvd., thus scheduled early in the overall construction timeframe.

Areas 2-5 will be phased to facilitate construction of the I-70 bridges over local streets, CDOT roadways and railroad facilities. As the I-70 bridges are completed, traffic will be switched on to the new structures allowing subsequent phases to occur. Roadway widening work in these areas is sequenced to support the bridge construction.

2.1.7.o Reference Design Changes

FRMG's design refinements, ATCs, and changes to the Reference Design are discussed in the figures on the previous 11x17 pages included in this Part 6 of the Technical Proposal. The vast number of our changes are shown on these figures. Additional changes to the Reference Design and their benefits are described in **Figure 2.1.7-13**.

2.1.7.p Construction Dewatering

Methodology, Approach, and Criteria to be used for the Final Disposition of Water: Groundwater is anticipated in the Lowered Section from approximately the UPRR to

Thompson Ct. Secant walls will be installed in this section to permanently cut off groundwater. The installation of caissons for the secant walls will start as soon as possible and progress until all caissons are installed, except where there are utility or MOT constraints. Temporary sheet pile shoring will be used to cut off water where permanent secant caissons cannot be installed. Construction water will be pumped into settling tanks and treated in a temporary water treatment system to achieve required water quality requirements of the Colorado Department of Public Health and Environment (CDPHE) CDPS General Permit COG315000–Remediation Activities Discharging to Surface Water Authorization under the Colorado Discharge Permit System, and then discharged into the stormwater system. Once the utilities and MOT constraints are removed, the final caissons will be installed, along with the permanent pump station and water treatment system located on the north side of the Lowered Section between the UPRR facility and York St.

Environmental Approvals Required to Complete Dewatering: Environmental Approvals for dewatering include Remediation Activities Discharging to Surface Waters Permit (CDPS General Permit COG315000)

FIGURE 2.1.7-13 **FRMG Reference Design Changes**

Design Change	Benefit
Modification of sidewalk/ tree lawn width combinations between York and Columbine on north side	Balanced by providing 10-ft shared-use path between York St. and Monroe St. on both sides of I-70
Modified profiles that tie into shifted I-70 to accommodate ATC 65	Accommodates ATC 65 to realize the benefits of the ATC
Drainage line added in Columbine St. to connect to system in 47th Ave. and Joseph St. to convey Cover drainage	Accommodates ATC 65 to realize the benefits of the ATC
Modified several sign bridge locations	Consolidate to minimize visual clutter for motorists
Girder spacing refined/optimized for all baseline bridge structures in the Reference Design	Provide more economical structures

from CDPHE (for Construction Period and possibly a second permit for up to two years of the Operating Period); Industrial Individual Wastewater Discharge Permit from CDPHE (for the long-term Operating Period); Substitute Water Supply Plan from the Colorado Division of Water Resources; and a Sewer Use and Drainage Permit from CCD.

Methodology and Approach to Minimizing the Quantity of Water Required to be Dewatered: The use of secant walls in the Lowered Section will minimize construction and operating period groundwater dewatering. We sequenced construction to start at the shallow end of the Lowered Section and work to the deep section. This allows as much time as possible to clear utility and MOT constraints, install and commission the drainage pump station and water treatment facility, and install the remaining secant wall caissons. This will minimize the amount of time that a temporary dewatering facility will be in place. By installing as much of the secant wall as possible prior to excavating below the groundwater table, the amount of dewatering will been minimized.

FRMG's Draft Dewatering Design and Draft Remediation Activities Management Plan are included in **Appendix A** under Tab d. Draft Dewatering Design. Also included in **Appendix A** under Tab e. is a list of items that may require additional Governmental Approvals or Re-evaluations associated with several ATCs incorporated in FRMG's design.

FRMG has included the following Appendices, which are in draft form and will be updated and submitted, as required by the Project Agreement for Approval or Acceptance by the Procuring Authorities in order to satisfy the relevant NTP1 or NTP2 Conditions, set out in Schedule 3, Commencement and Completion Mechanics, to the Project Agreement.

2.1.8 Appendix A: Draft Design Drawings – See Appendix A: Draft Design Drawings, which are located in Part 1 and Part 2 of Binders 2 and 3 of the Volume 2 – Technical Submission.

2.1.9 Appendix B: Draft Project Management Plan – See Appendix B: Draft Project Management Plan, which is located in Binder 4 of the Volume 2 – Technical Submission.

2.1.10 Appendix C: Proposal Schedule – See Appendix C: Draft Proposal, which is located in Binder 5 and 6 of the Volume 2 –Technical Submission.

2.1.11 Appendix D: Draft Stage 1 Quality Management Plan – See Appendix D: Draft Stage 1 Quality Management Plan, which is located in Binder 7 of the Volume 2 – Technical Submission.

2.1.12 Appendix E: Draft Stage 2 Quality Management Plan - See Appendix E: Draft Stage 2 Quality Management Plan, which is located in Binder 8 of the Volume 2 – Technical Submission.

2.1.13 Appendix F: Draft Transportation Management Plan – See Appendix F: Draft Transportation Management Plan, which is located in Binders 9 and 10 of the Volume 2 **–** Technical Submission.

2.1.14 **Appendix G: Draft Cover Design Baseline Report** – See Appendix G: Draft Cover Design Baseline Report, which is located in Binder 11 of the Volume 2 – Technical Submission.

2.1.15 **Appendix H: Draft Operations Management Plan** – See Appendix H: Draft Operations Management Plan, which is located in Binder 12 of the Volume 2 – Technical Submission.

2.1.16 **Appendix I: Draft Maintenance Management Plan** – See Appendix I: Draft Maintenance Management Plan, which is located in Binder 13 of the Volume 2 – Technical Submission.

2.1.17 **Appendix J: Draft Strategic Communications Plan** – See Appendix J: Draft Strategic Communications Plan, which is located in Binder 14 of the Volume 2 – Technical Submission.

2.1.18 **Appendix K: Draft Small and Disadvantaged Business Participation Plan** – See Appendix K: Draft Small and Disadvantaged Business Participation Plan, which is located in Binder 15 of the Volume 2 – Technical Submission.

2.1.19 **Appendix L: Draft Workforce Development Plan** – See Appendix L: Draft Workforce Development Plan, which is located in Binder 16 of the Volume 2 – Technical Submission.

2.1.20 **Appendix M: Draft Environmental Compliance Work Plan** – See Appendix M: Draft Environmental Compliance Work Plan, which is located in Binder 17 of the Volume 2 – Technical Submission.

2.2 **ATCs** – See ATCs, which is located in Binder 18 of the Volume 2 – Technical Submission.

Front Range
Mobility Group

VOLUME 2 — TECHNICAL SUBMISSIONS
Binder 2 of 18

CENTRAL 70 PROJECT

PUBLIC DISCLOSURE

Administrative and Technical Proposal:

Front Range Mobility Group

THE EXTRA MILE

CONNECTING COMMUNITIES

APPENDIX A

Part 1 of DRAFT DESIGN DRAWINGS

a. Draft Roadway Drawings

Front Range
Mobility Group

DEPARTMENT OF TRANSPORTATION
STATE OF COLORADO

INTERSTATE HIGHWAY NO. 70

DENVER COUNTY

APPENDIX A: DRAFT DESIGN DRAWINGS

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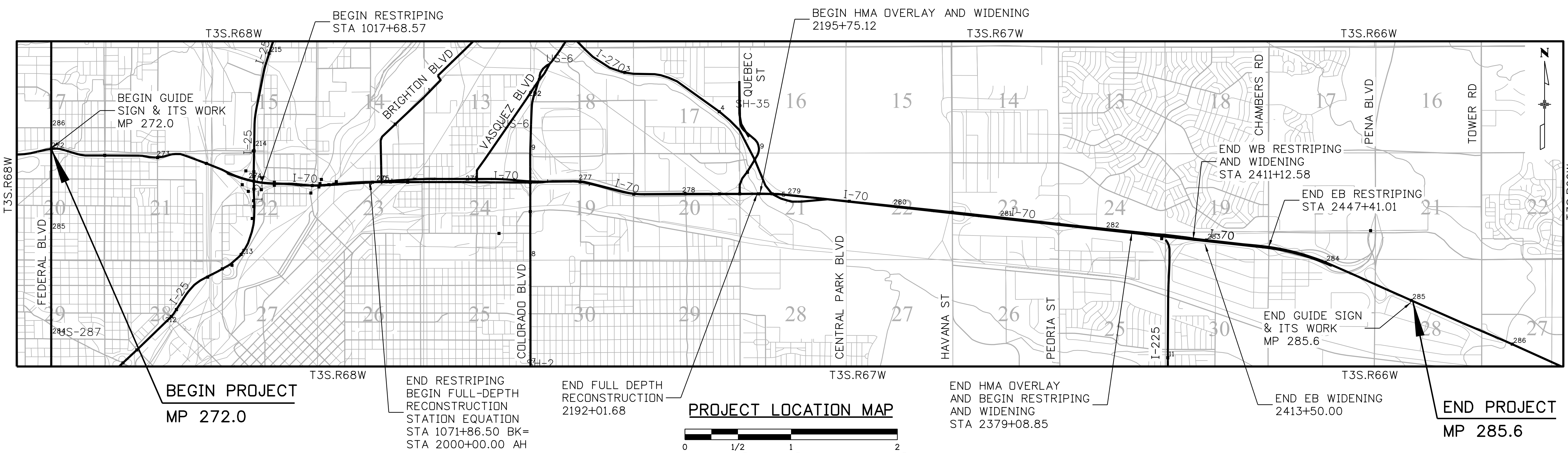

PROJECT LOCATION MAP

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

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:

Contract Information	
Contractor:	
Resident Engineer:	
Project Engineer:	
PROJECT STARTED: / /	ACCEPTED: / /
Comments:	

Project No./Code	
FBR 0704-234	
19631	
Sheet Number	1

I-70 Mainline				
Design Element	I-25 to Sand Creek (Project and Ultimate)	Sand Creek to Chambers Road (Project)	Sand Creek to Tower Road (Ultimate)	Remarks
Standards Applied	CDOT/FHWA			
General				
Roadway Classification	Interstate	Interstate	Interstate	
Posted Speed (MPH)	55	55	-	
Design Speed (MPH)	60	65	70	
Design Vehicle	WB-67	WB-67	WB-67	
Horizontal Alignment Criteria				
Curve Radius (Feet) - Minimum	1,330	1,660	2,040	
Stopping Sight Distance (Feet) - At level grade	570	645	730	
Cross Slope	2%	2%	2%	
Superelevation (e_{max})	6%	6%	6%	
Clear Zone on Tangent (Feet)				
Minimum	30	30	30	Apply curve factors, as required, Per RDG
Desirable	34	34	34	
Lane Widths (Feet)	12	12	12	
Shoulder Widths (Feet) [7]				
Inside	12	12	12	
Outside	12	12	12	
Auxiliary Lanes	6	8 + 4[6]	12	
Side Slopes				
Cut Slope	Equal to or Flatter than 3:1	Equal to or Flatter than 3:1	Equal to or Flatter than 3:1	
Fill Slope	Equal to or Flatter than 4:1 (H<15)	Equal to or Flatter than 4:1 (H<15)	Equal to or Flatter than 4:1 (H<15)	
Z-slope Dist (6:1 Slope) (Feet)	18	18	18	
Vertical Alignment Criteria				
K-Values				
Crest Vertical Curve	151	193	247	
Sag Vertical Curve	136	157	181	
Grade				
Maximum	4%[4]	3%	3%	
Minimum	0.75%[5]	0.5%	0.5%	
Vertical Clearance at Structures (Feet) - Minimum				
Highways/Streets Over Highway/Street	16'-6"	16'-6"	16'-6"	
Cover Over Highway/Street	16'-6"	16'-6"	16'-6"	
UPRR/BNSF/DRIR under Highway/Street	23'-4"	23'-4"	23'-4"	
UPRR/BNSF over Highway/Street[1]	16'-6"	16'-6"	16'-6"	
UPRR/BNSF over Highway/Street[2]	17'-6"	17'-6"	17'-6"	
UPRR/BNSF over Highway/Street[3]	20'-0"	20'-0"	20'-0"	
Overhead Wires	21'-6"	21'-6"	21'-6"	
Pedestrian/Utilities/Sign Structures over Highway/Street	17'-6"	17'-6"	17'-6"	
Bridge Structure over Sidewalk	10'-0"	10'-0"	10'-0"	
Tolled Express Lanes (Feet)				
Buffer Width	4	4	4	
Ingress/Egress Lengths	2,000	2,000	2,000	
Weave Distance per Lane at all Ingress/Egress Locations	800	800	800	

1 - Steel superstructure with 5 or more beams or 4 or more deck plate girders per track
2 - Concrete superstructure or steel through plate girder with bolted bottom flanges
3 - Steel through plate girders without bolted bottom flanges
4 - 4% maximum grade allowed between Brighton Boulevard to UPRR Bridge only, 3% maximum grade allowed east of UPRR Bridge.
5 - 0.75% minimum grade required within the Lowered Section only, 0.5% minimum grade required east of Colorado Boulevard
6 - 8 foot full depth shoulder with a 4 foot capped hard surface as shown in the Roadway Typical Sections from Sand Creek to east of Peoria, and an 8 foot full depth shoulder as shown in Roadway Typical Sections from east of Peoria Street to I-225
7 - Shoulder widths shall be as listed unless otherwise permitted by the Approved Design Exceptions in the RFP

Brighton Boulevard Ramps					
Design Element	Brighton Boulevard Westbound Entrance Ramp	Brighton Boulevard Eastbound Exit Ramp	Brighton Boulevard Westbound Exit Ramp	Brighton Boulevard Eastbound Entrance Ramp	Remarks
Standards Applied	CDOT/FHWA				
General					
Roadway Classification	Ramp	Ramp	Ramp	Ramp	
Design Speed (MPH) (Ramp Proper)	45	45	45	45	
Design Vehicle	WB-67	WB-67	WB-67	WB-67	
EN-EX Ramp Spacing on Mainline (Weave)	1,000	950	1,600	1,600	
Horizontal Alignment Criteria					
Curve Radius (Feet) - Minimum	643	643	643	643	
Stopping Sight Distance at Design Speed (Feet) - At level grade	360	360	360	360	
Cross Slope	2%	2%	2%	2%	
Superelevation (e max)	6%	6%	6%	6%	
Clear Zone (Feet)					
Minimum	20	20	20	20	
Desirable	22	22	22	22	
Number of Lanes	1	1	1	2	
Lane Widths (Feet)	12+12	15	15	12+12	
Shoulder Widths (Feet)					
Inside	4	4	4	4	
Outside	8	6	6	8	
Side Slopes					
Cut Slope	Equal to or Flatter than 3:1	Equal to or Flatter than 3:1	Equal to or Flatter than 3:1	Equal to or Flatter than 3:1	
Fill Slope	Equal to or Flatter than 4:1 (H<15)	Equal to or Flatter than 4:1 (H<15)	Equal to or Flatter than 4:1 (H<15)	Equal to or Flatter than 4:1 (H<15)	
Z-slope Dist (6:1 Slope) (Feet)	12	12	12	12	
Vertical Alignment Criteria					
K-Values					
Crest Vertical Curve	61	61	61	61	
Sag Vertical Curve	79	79	79	79	
Grade					
Maximum	5%	6%	4%	4%	
Minimum	0.5%	0.5%	0.5%	0.5%	
Vertical Clearance at Structures - Minimum					
Highways/Streets Over Highway/Street	16'-6"	16'-6"	16'-6"	16'-6"	
UPRR/BNSF under Highway/Street	23'-4"	23'-4"	23'-4"	23'-4"	
UPRR/BNSF over Highway/Street[1]	16'-6"	16'-6"	16'-6"	16'-6"	
UPRR/BNSF over Highway/Street[2]	17'-6"	17'-6"	17'-6"	17'-6"	
UPRR/BNSF over Highway/Street[3]	20'-0"	20'-0"	20'-0"	20'-0"	
Overhead Wires	21'-6"	21'-6"	21'-6"	21'-6"	
Pedestrian/Utilities/Sign Structures over Highway/Street	17'-6"	17'-6"	17'-6"	17'-6"	
Bridge Structure over Sidewalk	10'-0"	10'-0"	10'-0"	10'-0"	

1 - Steel superstructure with 5 or more beams or 4 or more deck plate girders per track
2 - Concrete superstructure or steel through plate girder with bolted bottom flanges
3 - Steel through plate girders without bolted bottom flanges

NOTE
ALL DESIGN CRITERIA INCLUDING MINIMUM VALUES SHOWN ON THE DESIGN CRITERIA TABLES HAVE BEEN MET UNLESS NOTED OTHERWISE

Vasquez Boulevard/Steele Street Ramps			
Design Element	Vasquez Boulevard Westbound Entrance Ramps	Steele Street Eastbound Exit Ramp	Remarks
Standards Applied	CDOT/FHWA		
General			
Roadway Classification	Ramp	Ramp	
Design Speed (MPH) (Ramp Proper)	45	45	
Design Vehicle	WB-67	WB-67	
EN-EX Ramp Spacing on Mainline (Weave)	1,600	1,600	
Horizontal Alignment Criteria			
Curve Radius (Feet) - Minimum	643	643	
Stopping Sight Distance at Design Speed (Feet) - At level grade	360	360	
Cross Slope	2%	2%	
Superelevation (e max)	6%	6%	
Clear Zone (Feet)			
Minimum	20	20	
Desirable	22	22	
Number of Lanes	1	1	
Lane Widths (Feet)	12+12	15	
Shoulder Widths (Feet)			
Inside	4	4	
Outside	6, 8 [4]	6	
Side Slopes			
Cut Slope	Equal to or Flatter than 3:1	Equal to or Flatter than 3:1	
Fill Slope	Equal to or Flatter than 4:1 (H<15)	Equal to or Flatter than 4:1 (H<15)	
Z-slope Dist (6:1 Slope) (Feet)	12	12	
Vertical Alignment Criteria			
K-Values			
Crest Vertical Curve	61	61	
Sag Vertical Curve	79	79	
Grade			
Maximum	5%	6%	Design exception will be submitted to FHWA for grade over 5%
Minimum	0.5%	0.5%	
Vertical Clearance at Structures - Minimum			
Highways/Streets Over Highway/Street	16'-6"	16'-6"	
UPRR/BNSF under Highway/Street	23'-4"	23'-4"	
UPRR/BNSF over Highway/Street[1]	16'-6"	16'-6"	
UPRR/BNSF over Highway/Street[2]	17'-6"	17'-6"	
UPRR/BNSF over Highway/Street[3]	20'-0"	20'-0"	
Overhead Wires	21'-6"	21'-6"	
Pedestrian/Utilities/Sign Structures over Highway/Street	17'-6"	17'-6"	
Bridge Structure over Sidewalk	10'-0"	10'-0"	

1 - Steel superstructure with 5 or more beams or 4 or more deck plate girders per track
2 - Concrete superstructure or steel through plate girder with bolted bottom flanges
3 - Steel through plate girders without bolted bottom flanges
4 – 8 foot shoulder width for first 300 feet of the ramp and 6 foot width for the remaining 1300. Design exception will be submitted to FHWA for shoulder width less than 8 foot

Colorado Boulevard Ramps					
Design Element	Colorado Boulevard Westbound Entrance Slip Ramp	Colorado Boulevard Eastbound Exit Ramp	Colorado Boulevard Westbound Exit Ramp	Colorado Boulevard Eastbound Entrance Ramp	Remarks
Standards Applied	CDOT/FHWA				
General					
Roadway Classification	Ramp	Ramp	Ramp	Ramp	
Design Speed (MPH) (Ramp Proper)	45	45	45	45	
Design Vehicle	WB-67	WB-67	WB-67	WB-67	
EN-EN and EN-EX Ramp Spacing on Mainline (Weave)	1,000	1,600	1,600	1,600	
Horizontal Alignment Criteria					
Curve Radius (Feet) - Minimum	643	643	643	643	
Stopping Sight Distance at Design Speed (Feet) - At level grade	360	360	360	360	
Cross Slope	2%	2%	2%	2%	
Superelevation (e max)	6%	6%	6%	6%	
Clear Zone (Feet)					
Minimum	20	20	20	20	
Desirable	22	22	22	22	
Number of Lanes	1	1	1	2	
Lane Widths (Feet)	12+12	15	15	12+12	
Shoulder Widths (Feet)					
Inside	4	4	4	4	
Outside	8	6	6	6	
Side Slopes					
Cut Slope	Equal to or Flatter than 3:1	Equal to or Flatter than 3:1	Equal to or Flatter than 3:1	Equal to or Flatter than 3:1	
Fill Slope	Equal to or Flatter than 4:1 (H<15)	Equal to or Flatter than 4:1 (H<15)	Equal to or Flatter than 4:1 (H<15)	Equal to or Flatter than 4:1 (H<15)	
Z-slope Dist (6:1 Slope) (Feet)	12	12	12	12	
Vertical Alignment Criteria					
K-Values					
Crest Vertical Curve	61	61	61	61	
Sag Vertical Curve	79	79	79	79	
Grade					
Maximum	6%	6%	4%	4%	
Minimum	0.5%	0.5%	0.5%	0.5%	
Vertical Clearance at Structures - Minimum					
Highways/Streets Over Highway/Street	16'-6"	16'-6"	16'-6"	16'-6"	
UPRR/BNSF under Highway/Street	23'-4"	23'-4"	23'-4"	23'-4"	
UPRR/BNSF over Highway/Street[1]	16'-6"	16'-6"	16'-6"	16'-6"	
UPRR/BNSF over Highway/Street[2]	17'-6"	17'-6"	17'-6"	17'-6"	
UPRR/BNSF over Highway/Street[3]	20'-0"	20'-0"	20'-0"	20'-0"	
Overhead Wires	21'-6"	21'-6"	21'-6"	21'-6"	
Pedestrian/Utilities/Sign Structures over Highway/Street	17'-6"	17'-6"	17'-6"	17'-6"	
Bridge Structure over Sidewalk	10'-0"	10'-0"	10'-0"	10'-0"	

1 - Steel superstructure with 5 or more beams or 4 or more deck plate girders per track
2 - Concrete superstructure or steel through plate girder with bolted bottom flanges
3 - Steel through plate girders without bolted bottom flanges

NOTE
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Holly Street Ramps					
Design Element	**Holly Street Westbound Entrance Ramp**	**Holly Street Eastbound Exit Ramp**	**Holly Street Westbound Exit Ramp**	**Holly Street Eastbound Entrance Ramp**	**Remarks**
Standards Applied	CDOT/FHWA				
General					
Roadway Classification	Ramp	Ramp	Ramp	Ramp	
Design Speed (MPH) (Ramp Proper)	45	45	45	45	
Design Vehicle	WB-67	WB-67	WB-67	WB-67	
EN-EX Ramp Spacing on Mainline (Weave)	1,600	1,600	1,600	1,600	
Horizontal Alignment Criteria					
Curve Radius (Feet) - Minimum	643	643	643	643	
Stopping Sight Distance at Design Speed (Feet) - At level grade	360	360	360	360	
Cross Slope	2%	2%	2%	2%	
Superelevation (e max)	6%	6%	6%	6%	
Clear Zone (Feet)					
Minimum	20	20	20	20	
Desirable	22	22	22	22	
Number of Lanes	2	1	1	2	
Lane Widths (Feet)	12+12	15	15	12+12	
Shoulder Widths (Feet)					
Inside	4	4	4	4	
Outside	8	6	6	8	
Side Slopes					
Cut Slope	Equal to or Flatter than 3:1	Equal to or Flatter than 3:1	Equal to or Flatter than 3:1	Equal to or Flatter than 3:1	
Fill Slope	Equal to or Flatter than 4:1 (H<15)	Equal to or Flatter than 4:1 (H<15)	Equal to or Flatter than 4:1 (H<15)	Equal to or Flatter than 4:1 (H<15)	
Z-slope Dist (6:1 Slope) (Feet)	12	12	12	12	
Vertical Alignment Criteria					
K-Values					
Crest Vertical Curve	61	61	61	61	
Sag Vertical Curve	79	79	79	79	
Grade					
Maximum	4%	4%	4%	4%	
Minimum	0.5%	0.5%	0.5%	0.5%	
Vertical Clearance at Structures - Minimum					
Highways/Streets Over Highway/Street	16'-6"	16'-6"	16'-6"	16'-6"	
UPRR/BNSF under Highway/Street	23'-4"	23'-4"	23'-4"	23'-4"	
UPRR/BNSF over Highway/Street[1]	16'-6"	16'-6"	16'-6"	16'-6"	
UPRR/BNSF over Highway/Street[2]	17'-6"	17'-6"	17'-6"	17'-6"	
UPRR/BNSF over Highway/Street[3]	20'-0"	20'-0"	20'-0"	20'-0"	
Overhead Wires	21'-6"	21'-6"	21'-6"	21'-6"	
Pedestrian/Utilities/Sign Structures over Highway/Street	17'-6"	17'-6"	17'-6"	17'-6"	
Bridge Structure over Sidewalk	10'-0"	10'-0"	10'-0"	10'-0"	

1 - Steel superstructure with 5 or more beams or 4 or more deck plate girders per track
2 - Concrete superstructure or steel through plate girder with bolted bottom flanges
3 - Steel through plate girders without bolted bottom flanges

Quebec Street Ramps					
Design Element	**Quebec Street Westbound Entrance Ramp**	**Quebec Street Eastbound Exit Ramp**	**Quebec Street Westbound Exit Ramp**	**Quebec Street Eastbound Entrance Ramp**	**Remarks**
Standards Applied	CDOT/FHWA				
General					
Roadway Classification	Ramp	Ramp	Ramp	Ramp	
Design Speed (MPH) (Ramp Proper)	45	45	45	45	
Design Vehicle	WB-67	WB-67	WB-67	WB-67	
EN-EX Ramp Spacing on Mainline (Weave)	1,600	1,600	1,600	1,600	
Horizontal Alignment Criteria					
Curve Radius (Feet) - Minimum	643	643	643	643	
Stopping Sight Distance at Design Speed (Feet) - At level grade	360	360	360	360	
Cross Slope	2%	2%	2%	2%	
Superelevation (e max)	6%	6%	6%	6%	
Clear Zone (Feet)					
Minimum	20	20	20	20	
Desirable	22	22	22	22	
Number of Lanes	2	2	2	1	
Lane Widths (Feet)	12+12	12+12	12+12	12+12	
Shoulder Widths (Feet)					
Inside	4	4	4	4	
Outside	8	8	8	8	
Side Slopes					
Cut Slope	Equal to or Flatter than 3:1	Equal to or Flatter than 3:1	Equal to or Flatter than 3:1	Equal to or Flatter than 3:1	
Fill Slope	Equal to or Flatter than 4:1 (H<15)	Equal to or Flatter than 4:1 (H<15)	Equal to or Flatter than 4:1 (H<15)	Equal to or Flatter than 4:1 (H<15)	
Z-slope Dist (6:1 Slope) (Feet)	12	12	12	12	
Vertical Alignment Criteria					
K-Values					
Crest Vertical Curve	61	61	61	61	
Sag Vertical Curve	79	79	79	79	
Grade					
Maximum	6.0%	6.0%	6.0%	6.0%	
Minimum	0.5%	0.5%	0.5%	0.5%	
Vertical Clearance at Structures - Minimum					
Highways/Streets Over Highway/Street	16'-6"	16'-6"	16'-6"	16'-6"	
UPRR/BNSF under Highway/Street	23'-4"	23'-4"	23'-4"	23'-4"	
UPRR/BNSF over Highway/Street[1]	16'-6"	16'-6"	16'-6"	16'-6"	
UPRR/BNSF over Highway/Street[2]	17'-6"	17'-6"	17'-6"	17'-6"	
UPRR/BNSF over Highway/Street[3]	20'-0"	20'-0"	20'-0"	20'-0"	
Overhead Wires	21'-6"	21'-6"	21'-6"	21'-6"	
Pedestrian/Utilities/Sign Structures over Highway/Street	17'-6"	17'-6"	17'-6"	17'-6"	
Bridge Structure over Sidewalk	10'-0"	10'-0"	10'-0"	10'-0"	

1 - Steel superstructure with 5 or more beams or 4 or more deck plate girders per track
2 - Concrete superstructure or steel through plate girder with bolted bottom flanges
3 - Steel through plate girders without bolted bottom flanges

NOTE
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I-270 and Central Park Boulevard Ramps							
Design Element	I-270 Eastbound Connector	Central Park Boulevard Westbound Entrance Ramp	Central Park Boulevard Eastbound Exit Ramp	I-70 Westbound To I-270 Ramp	Central Park Boulevard Eastbound Entrance Ramp	I-270 Eastbound to I-70 Eastbound Ramp	Remarks
Standards Applied	CDOT/FHWA						
General							
Roadway Classification	Ramp	Ramp	Ramp	Ramp	Ramp	Ramp	
Design Speed (MPH) (Ramp Proper)	55	55	55	55	55	55	
Design Vehicle	WB-67	WB-67	WB-67	WB-67	WB-67	WB-67	
EN-EX Ramp spacing on mainline (weave)	1,600	1,600	1,600	1,000	1,600	1,000	
Horizontal Alignment Criteria							
Curve Radius (Feet) - Minimum	1,060	1,060	1,060	1,060	1,060	1,060	
Stopping Sight Distance at Design Speed (Feet) - At level grade	495	495	495	495	495	495	
Cross Slope	2%	2%	2%	2%	2%	2%	
Superelevation (e max)	6%	6%	6%	6%	6%	6%	
Clear Zone (Feet)							
Minimum	20	16	16	16	16	16	
Desirable	22	18	18	18	18	18	
Number of Lanes	2	1	1	2	1	2	
Lane Widths (Feet)	12+12	15	15	12+12	15	12+12	
Shoulder Widths (Feet)							
Inside	9	4	4	4	4	4	
Outside	10	6	8	8	6	10	
Side Slopes							
Cut Slope	Equal to or Flatter than 3:1	Equal to or Flatter than 3:1	Equal to or Flatter than 3:1	Equal to or Flatter than 3:1	Equal to or Flatter than 3:1	Equal to or Flatter than 3:1	
Fill Slope	Equal to or Flatter than 4:1 (H<15)	Equal to or Flatter than 4:1 (H<15)	Equal to or Flatter than 4:1 (H<15)	Equal to or Flatter than 4:1 (H<15)	Equal to or Flatter than 4:1 (H<15)	Equal to or Flatter than 4:1 (H<15)	
Z-slope Dist (6:1 Slope) (Feet)	12	12	12	12	12	12	
Vertical Alignment Criteria							
K-Values							
Crest Vertical Curve	114	114	114	114	114	114	
Sag Vertical Curve	115	115	115	115	115	115	
Grade							
Maximum	4%	5%	4%	4%	4%	4%	
Minimum	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	
Vertical Clearance at Structures - Minimum							
Highways/Streets Over Highway/Street	16'-6"	16'-6"	16'-6"	16'-6"	16'-6"	16'-6"	
UPRR/BNSF under Highway/Street	23'-4"	23'-4"	23'-4"	23'-4"	23'-4"	23'-4"	
UPRR/BNSF over Highway/Street[1]	16'-6"	16'-6"	16'-6"	16'-6"	16'-6"	16'-6"	
UPRR/BNSF over Highway/Street[2]	17'-6"	17'-6"	17'-6"	17'-6"	17'-6"	17'-6"	
UPRR/BNSF over Highway/Street[3]	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	
Overhead Wires	21'-6"	21'-6"	21'-6"	21'-6"	21'-6"	21'-6"	
Pedestrian/Utilities/Sign Structures over Highway/Street	17'-6"	17'-6"	17'-6"	17'-6"	17'-6"	17'-6"	
Bridge Structure over Sidewalk	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	

1 - Steel superstructure with 5 or more beams or 4 or more deck plate girders per track
2 - Concrete superstructure or steel through plate girder with bolted bottom flanges
3 - Steel through plate girders without bolted bottom flanges

Peoria Street and I-225 Ramps					
Design Element	Peoria Street Westbound Entrance Ramp	Peoria Street Eastbound Exit Ramp	Peoria Street Eastbound Entrance Ramp	I-70 EB to I-225 Southbound GP Connector Ramp	Remarks
Standards Applied	CDOT/FHWA				
General					
Roadway Classification	Ramp	Ramp	Ramp	Ramp	
Design Speed (MPH) (Ramp Proper)	45	45	45	55	
Design Vehicle	WB-67	WB-67	WB-67	WB-67	
EN-EX Ramp spacing on mainline (weave)	1,600	1,600	1,600	1,600	
Horizontal Alignment Criteria					
Curve Radius (Feet) - Minimum	643	643	643	1,060	
Stopping Sight Distance at Design Speed (Feet) - At level grade	360	360	360	495	
Cross Slope	2%	2%	2%	2%	
Superelevation (e max)	6%	6%	6%	6%	
Clear Zone (Feet)					
Minimum	16	16	16	16	
Desirable	18	18	18	18	
Number of Lanes	2	2	2	3	
Lane Widths (Feet)	12+12	12+12	12+12	12+12+12	
Shoulder Widths (Feet)					
Inside	4	4	4	4	
Outside	8	8	8	8	
Side Slopes					
Cut Slope	Equal to or Flatter than 3:1	Equal to or Flatter than 3:1	Equal to or Flatter than 3:1	Equal to or Flatter than 3:1	
Fill Slope	Equal to or Flatter than 4:1 (H<15)	Equal to or Flatter than 4:1 (H<15)	Equal to or Flatter than 4:1 (H<15)	Equal to or Flatter than 4:1 (H<15)	
Z-slope Dist (6:1 Slope) (Feet)	12	12	12	12	
Vertical Alignment Criteria					
K-Values					
Crest Vertical Curve	61	61	61	114	
Sag Vertical Curve	79	79	79	115	
Grade					
Maximum	4%	4%	5%	4%	
Minimum	0.5%	0.5%	0.5%	0.5%	
Vertical Clearance at Structures - Minimum					
Highways/Streets Over Highway/Street	16'-6"	16'-6"	16'-6"	16'-6"	
UPRR/BNSF under Highway/Street	23'-4"	23'-4"	23'-4"	23'-4"	
UPRR/BNSF over Highway/Street[1]	16'-6"	16'-6"	16'-6"	16'-6"	
UPRR/BNSF over Highway/Street[2]	17'-6"	17'-6"	17'-6"	17'-6"	
UPRR/BNSF over Highway/Street[3]	20'-0"	20'-0"	20'-0"	20'-0"	
Overhead Wires	21'-6"	21'-6"	21'-6"	21'-6"	
Pedestrian/Utilities/Sign Structures over Highway/Street	17'-6"	17'-6"	17'-6"	17'-6"	
Bridge Structure over Sidewalk	10'-0"	10'-0"	10'-0"	10'-0"	

1 - Steel superstructure with 5 or more beams or 4 or more deck plate girders per track
2 - Concrete superstructure or steel through plate girder with bolted bottom flanges
3 - Steel through plate girders without bolted bottom flanges

NOTE
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Cross Streets: Brighton Boulevard to Clayton Street						
Design Element	**Brighton Boulevard**	**York Street**	**Josephine Street**	**Columbine Street**	**Clayton Street**	**Remarks**
Standards Applied	Denver	Denver	Denver	Denver	Denver	
General						
Roadway Classification	4-lane Principal Arterial	2-lane Minor Arterial	2-lane Minor Arterial	2-lane Local	2-lane Collector	
Posted Speed Limit (MPH)	35	30	30	25	25	
Design Speed (MPH)	35	35	35	25	30	
Design Vehicle	WB-67[5]	WB-67	SU-30	SU-30	SU-30	
Horizontal Alignment Criteria						
Curve Radius (Feet) - Minimum	510 [6]	510	510	198	333	
Stopping Sight Distance at Design Speed (Feet) - At level grade	250	250	250	155	200	
Cross Slope	2%	2%	2%	2%	2%	
Superelevation (e max)	NC	NC	NC	NC	NC	
Clear Zone (Feet)						
Minimum	N/A	N/A	N/A	N/A	N/A	
Desirable	N/A	N/A	N/A	N/A	N/A	
Minimum Lane Widths (Feet) – to edge of pan[4]	11	12	12	14	18	
Vertical Alignment Criteria						
K-Values						
Crest Vertical Curve	29	29	29	12	19	
Sag Vertical Curve	49	49	49	26	37	
Grade						
Maximum	6%	6%	6%	6%	6%	
Minimum	0.7%	0.7%	0.7%	0.7%	0.7%	
Vertical Clearance at Structures - Minimum						
Highways/Streets Over Highway/Street	16'-6"	16'-6"	16'-6"	16'-6"	16'-6"	
UPRR/BNSF under Highway/Street	23'-4"	23'-4"	23'-4"	23'-4"	23'-4"	
UPRR/BNSF over Highway/Street[1]	16'-6"	16'-6"	16'-6"	16'-6"	16'-6"	
UPRR/BNSF over Highway/Street[2]	17'-6"	17'-6"	17'-6"	17'-6"	17'-6"	
UPRR/BNSF over Highway/Street[3]	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	
Overhead Wires	21'-6"	21'-6"	21'-6"	21'-6"	21'-6"	
Pedestrian/Utilities/Sign Structures over Highway/Street	17'-6"	17'-6"	17'-6"	17'-6"	17'-6"	
Bridge Structure over Sidewalk	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	

1 - Steel superstructure with 5 or more beams or 4 or more deck plate girders per track
2 - Concrete superstructure or steel through plate girder with bolted bottom flanges
3 - Steel through plate girders without bolted bottom flanges
4 – See typical sections in Structure Drawings for lane widths on bridge structures
5 - The design vehicle for the intersection of Brighton Boulevard and 47th Avenue is a SU-30
6 – The existing horizontal curve, between the UPRR Pepsi Lead tracks and southern ramp terminal, matches existing conditions

Cross Streets: Fillmore Street to Colorado Boulevard						
Design Element	**Fillmore Street**	**Steele Street/ Vasquez Boulevard**	**Cook Street**	**Monroe Street**	**Colorado Boulevard**	**Remarks**
Standards Applied	Denver	CDOT/FHWA	Denver	Denver	CDOT/FHWA	
General						
Roadway Classification	2-lane Local	4-lane Minor Arterial	2-lane Collector	2-lane Collector	6-lane Principal Arterial	
Posted Speed Limit (MPH)	25	35	25	25	40	
Design Speed (MPH)	25	35	25	25	45	
Design Vehicle	SU-30	WB-67[5]	WB-67	WB-67	WB-67	
Horizontal Alignment Criteria						
Curve Radius (Feet) - Minimum	198	510	198	198	1,039	
Stopping Sight Distance at Design Speed (Feet) - At level grade	155	250	155	155	360	
Cross Slope	2%	2%	2%	2%	2%	
Superelevation (e max)	NC	NC	NC	NC	NC	
Clear Zone (Feet)						
Minimum	N/A	N/A	N/A	N/A	20	
Desirable	N/A	N/A	N/A	N/A	22	
Minimum Lane Widths (Feet) – to edge of pan[4]	14	12	18	18	12	
Vertical Alignment Criteria						
K-Values						
Crest Vertical Curve	12	29	12	12	61	
Sag Vertical Curve	26	49	26	26	79	
Grade						
Maximum	6%	6%	6%	6%	6%	
Minimum	0.7%	0.5%	0.7%	0.7%	0.5%	
Vertical Clearance at Structures - Minimum						
Highways/Streets Over Highway/Street	16'-6"	16'-6"	16'-6"	16'-6"	16'-6"	
UPRR/BNSF under Highway/Street	23'-4"	23'-4"	23'-4"	23'-4"	23'-4"	
UPRR/BNSF over Highway/Street[1]	16'-6"	16'-6"	16'-6"	16'-6"	16'-6"	
UPRR/BNSF over Highway/Street[2]	17'-6"	17'-6"	17'-6"	17'-6"	17'-6"	
UPRR/BNSF over Highway/Street[3]	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	
Overhead Wires	21'-6"	21'-6"	21'-6"	21'-6"	21'-6"	
Pedestrian/Utilities/Sign Structures over Highway/Street	17'-6"	17'-6"	17'-6"	17'-6"	17'-6"	
Bridge Structure over Sidewalk	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	

1 - Steel superstructure with 5 or more beams or 4 or more deck plate girders per track
2 - Concrete superstructure or steel through plate girder with bolted bottom flanges
3 - Steel through plate girders without bolted bottom flanges
4 - See typical sections in Structure Drawings for lane widths on bridge structures
5 - The design vehicle for the intersection of Vasquez Boulevard and 47th Avenue and of Steele Street and 45th Avenue is a SU-30

NOTE

ALL DESIGN CRITERIA INCLUDING MINIMUM VALUES SHOWN ON THE DESIGN CRITERIA TABLES HAVE BEEN MET UNLESS NOTED OTHERWISE

Cross Streets: Dahlia Street to Peoria Street						
Design Element	Dahlia Street	Holly Street	Monaco Street	Quebec Street	Peoria Street	Remarks
Standards Applied	Denver	Denver	Denver	CDOT/FHWA	Denver	
General						
Roadway Classification	2-lane Collector	2-lane Arterial	2-lane Arterial	4-lane Principal Arterial	4-lane Principal Arterial	
Posted Speed Limit (MPH)	30	30	30	40	35	
Design Speed (MPH)	35	35	35	45	40	
Design Vehicle	WB-67	WB-67	WB-67	WB-67	WB-67	
Horizontal Alignment Criteria						
Curve Radius (Feet) - Minimum	510	510	510	1,039	762	
Stopping Sight Distance at Design Speed (Feet) - At level grade	250	250	250	360	305	
Cross Slope	2%	2%	2%	2%	2%	
Superelevation (e max)	NC	NC	NC	NC	NC	
Clear Zone (Feet)						
Minimum	N/A	N/A	N/A	20	N/A	
Desirable	N/A	N/A	N/A	22	N/A	
Minimum Lane Widths (Feet) – to edge of pan[4]	12	12	12	12	12	
Vertical Alignment Criteria						
K-Values						
Crest Vertical Curve	29	29	29	61	44	
Sag Vertical Curve	49	49	49	79	64	
Grade						
Maximum	6%	6%	6%	6%	6%	
Minimum	0.7%	0.7%	0.7%	0.5%	0.7%	
Vertical Clearance at Structures - Minimum						
Highways/Streets Over Highway/Street	16'-6"	16'-6"	16'-6"	16'-6"	16'-6"	
UPRR/BNSF under Highway/Street	23'-4"	23'-4"	23'-4"	23'-4"	23'-4"	
UPRR/BNSF over Highway/Street[1]	16'-6"	16'-6"	16'-6"	16'-6"	16'-6"	
UPRR/BNSF over Highway/Street[2]	17'-6"	17'-6"	17'-6"	17'-6"	17'-6"	
UPRR/BNSF over Highway/Street[3]	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	
Overhead Wires	21'-6"	21'-6"	21'-6"	21'-6"	21'-6"	
Pedestrian/Utilities/Sign Structures over Highway/Street	17'-6"	17'-6"	17'-6"	17'-6"	17'-6"	
Bridge Structure over Sidewalk	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	

1 - Steel superstructure with 5 or more beams or 4 or more deck plate girders per track
2 - Concrete superstructure or steel through plate girder with bolted bottom flanges
3 - Steel through plate girders without bolted bottom flanges
4 - See typical sections in Structure Drawings for lane widths on bridge structures

Design Element	46th Avenue Brighton Blvd to York Street	46th Avenue York Street to Steele Street	46th Avenue/Stapleton Drive Steele Street to Quebec Street	Local Road	UPRR Sidewalk	Remarks
Standards Applied	Denver	Denver	Denver	Denver	Denver	
General						
Roadway Classification	Collector	Local	Collector	Access	Sidewalk	
Posted Speed Limit (MPH)	35	30	35	25	N/A	
Design Speed (MPH)	35	30	35	25	N/A	
Design Vehicle[6]	WB-67	WB-67	WB-67	Local Agency Standards	N/A	
Horizontal Alignment Criteria						
Curve Radius (Feet) - Minimum	510	333	510	198	N/A	
Stopping Sight Distance at Design Speed (Feet) - At level grade	250	200	250	155	N/A	
Cross Slope	2%	2%	2%	2%	2%	
Superelevation (e max)	NC	NC	NC	NC	N/A	
Number of Thru Lanes	2	2	2	2	N/A	
Minimum Lane Widths (Feet) – to edge of pan[4]	12	10, 12[5]	10, 11, 12[5]	10, 11, 18[5]	N/A	
Vertical Alignment Criteria						
K-Values						
Crest Vertical Curve	29	19	29	12	N/A	
Sag Vertical Curve	49	37	49	26	N/A	
Grade						
Maximum	6%	3%[7]	3%[7]	6%	ADA	
Minimum	0.7%	0.7%	0.7%	0.7%	ADA	
Maximum at railroad crossings	0.1%	0.1%	0.1%	0.1%	N/A	
Vertical Clearance at Structures - Minimum						
Highways/Streets Over Highway/Street	16'-6"	16'-6"	16'-6"	16.5	16.5	
UPRR/BNSF under Highway/Street	23'-4"	23'-4"	23'-4"	23'-4"	23'-4"	
UPRR/BNSF over Highway/Street[1]	16'-6"	16'-6"	16'-6"	16.5	16.5	
UPRR/BNSF over Highway/Street[2]	17'-6"	17'-6"	17'-6"	17.5	17.5	
UPRR/BNSF over Highway/Street[3]	20'-0"	20'-0"	20'-0"	20.0	20.0	
Overhead Wires	21'-6"	21'-6"	21'-6"	21.5	21.5	
Pedestrian/Utilities/Sign Structures over Highway/Street	17'-6"	17'-6"	17'-6"	17.5	17.5	
Bridge Structure over Sidewalk	10'-0"	10'-0"	10'-0"	10.0	10.0	

1 - Steel superstructure with 5 or more beams or 4 or more deck plate girders per track
2 - Concrete superstructure or steel through plate girder with bolted bottom flanges
3 - Steel through plate girders without bolted bottom flanges
4 - See typical sections in Structure Drawings for lane widths on bridge structures
5 - See Roadway Typical Sections for lane width designation
6 - Cross streets control turning movements at intersection with 46th Avenue and Stapleton Drive. 46th Avenue and Stapleton Drive design vehicle controls for thru traffic
7 - Grades at locations of ramp tie-ins are up to 6%. See Roadway Profile sheets

NOTE
ALL DESIGN CRITERIA INCLUDING MINIMUM VALUES SHOWN ON THE DESIGN CRITERIA TABLES HAVE BEEN MET UNLESS NOTED OTHERWISE

GENERAL NOTES

1. EXISTING FEATURES SHOWN AS SCREENED WEIGHT (LIGHT GRAY SCALE), EXCEPT AS NOTED WITH THE WORD (EXISTING). PROPOSED OR NEW FEATURES SHOWN AS FULL WEIGHT WITHOUT SCREENING, EXCEPT AS NOTED WITH THE WORD (PROPOSED).
2. THESE SYMBOLS ARE INTENDED TO EXPLAIN THE VARIOUS TOPOGRAPHIC FEATURES INVOLVED ON THE DESIGN PLAN SHEETS WHICH ARE PREPARED AT VARIOUS SCALES. NOTES ARE ADDED WHERE NECESSARY TO CLARIFY THE SYMBOL. A LEGEND IS PROVIDED IN THE PLANS FOR SYMBOLS NOT SHOWN ON PROJECT STANDARD SYMBOLS SHEETS.

BUILDING STRUCTURES

MISCELLANEOUS BUILDING STRUCTURE (PRIMARY)
MISCELLANEOUS STRUCTURE (SECONDARY)
FOUNDATION OR PAD (CONCRETE OR BLOCK)

RAILROAD

RR TELEGRAPH POLE
RR SWITCH
RR GUY POLE
RR SIGNALS WITH OR WITHOUT GATE
RR CROSS BUCK SIGN
RR SIGNAL CONTROLLER CABINET
RR MISCELLANEOUS SYMBOL
RR TRACK CENTERLINE

MISCELLANEOUS TOPOGRAPHY

GRAVE HEADSTONE SYMBOL
MAIL DROP BOX
FLAG POLE
TRASH BARREL POST
GRAVE SYMBOL
RADIO STATION ANTENNA
MISCELLANEOUS TOPOGRAPHY

SURVEY/ROW

SECTION CORNER
QUARTER, SIXTEENTH, AND SECTION CORNERS
PROTECT EXISTING MARKER
SET EASEMENT MONUMENT
TEMPORARY EASEMENT POINT
RIGHT OF WAY MARKER
BLM MARKER (BLM)
PROPERTY PIN (PP)
NOAA MARKER (NOAA)
QUARTER, SIXTEENTH, AND SECTION CORNERS
FEDERAL MONUMENT (FED)
WITNESS CORNER (WC)
BENCH MARK (BM)
USGS MARKER (USGS)
LOCAL OR PLSS MONUMENT
SECONDARY CONTROL MONUMENT
RIGHT OF WAY MARKER (ROW)
PROJECT CONTROL MONUMENT — N 9.88, E 3.81, EL 0.00
DENSIFICATION CONTROL MONUMENT — N 10.13, E 3.81, EL 0.00
HIGH ACCURACY REFERENCE NETWORK CONTROL MONUMENT — N 10.38, E 3.81, EL 0.00
PERMANENT, PROPERTY, SLOPE, & UTILITY EASEMENT LINE
TEMPORARY EASEMENT LINE (EXISTING)
PROPERTY BOUNDARY LINE (EXISTING AND PROPOSED)
ACCESS CONTROL LINE
BARRIER ACCESS CONTROL LINE
RIGHT OF WAY LINE
VIRGIN RIGHT OF WAY LINE (PROPOSED)
CITY LIMIT LINE (EXISTING)
COUNTY LINE (EXISTING)
QUARTER SECTION LINE
SECTION LINE
SIXTEENTH SECTION LINE
STATE LINE (EXISTING)
TOWNSHIP LINE (EXISTING)

LANDSCAPING

DECIDUOUS TREE
DECIDUOUS SHRUB
TEETER TOTTER SYMBOL
SWING SET SYMBOL
CONIFEROUS TREE
CONIFEROUS SHRUB
MISCELLANEOUS TREES
BENCH
SPRINKLER HEAD
TREES GROVE
HEDGE OR SHRUB GROVE
EDGE OF WETLANDS

TRAFFIC STRIPING

CENTER YELLOW SOLID DOUBLE
CENTER YELLOW SOLID BROKEN (NO PASS)
4 INCH WIDE
8 INCH WIDE
LANE LINE BROKEN
LANE DROP
CHANNELIZING OR EDGE LINE
4 INCH WIDE
8 INCH WIDE
DOTTED BROKEN
STOP LINE
- INTERNATIONAL SYMBOL OF ACCESS
R X R - RAILROAD CROSSING
- BICYCLE PED ACCESS

NOISE & RETAINING WALLS

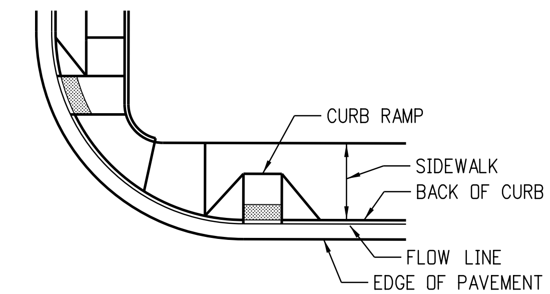
RETAINING WALL (SEE PLANS FOR WALL TYPE)
NOISE WALL

PAVEMENT OVERLAY & WIDENING HATCH LEGEND

PROPOSED OVERLAY PAVEMENT
PROPOSED FULL DEPTH PAVEMENT
PREVENTATIVE MAINTENANCE AREA

NOTE: PAVEMENT OVERLAY & WIDENING HATCH LEGEND APPLIES FROM SAND CREEK TO CHAMBERS RD.

CURB AND GUTTER



GUARDRAIL

GUARDRAIL END ANCHORS
GUARDRAIL IMPACT ATTENUATOR
GUARDRAIL-TYPE 3 OR 6
GUARDRAIL-TYPE 4 OR 7
GUARDRAIL-TYPE 5 OR HANDRAIL
GUARDRAIL-TYPE 3A DOUBLE OR TYPE 6 DOUBLE
CABLE BARRIER

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 PROJECT
STANDARD SYMBOLS (1 OF 2)

Designer:
Detailer:
Structure Numbers
Sheet Subset: GENERAL
Subset Sheets: G8 of 9

Project No./Code
FBR 0704-234
19631
Sheet Number 8

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GAS

PROPANE TANK
GAS JUNCTION BOX
GAS VAULT
GAS LINE MARKER OR AIR VENT
GAS METER LOW PRESSURE
GAS METER HIGH PRESSURE
GAS MISCELLANEOUS
GAS LIGHT
GAS VALVE HIGH OR LOW PRESSURE

— G — G — G — SIZE — G — G — G — G —
GAS LINE LOW PRESSURE

— G — HP — G — SIZE — HP — G — HP — G
GAS LINE HIGH PRESSURE

— PG — PG — PG — PG — PG — PG — PG —
PROPANE GAS LINE

— G? — G? — G? — G? — G? — G? — G? —
GAS LINES MISCELLANEOUS

OIL

OIL METER HIGH AND LOW PRESSURE
OIL VALVE HIGH AND LOW PRESSURE
OIL MISCELLANEOUS

— O — O — O — O — O — O — O —
OIL LINE LOW OR HIGH PRESSURE

— O? — O? — O? — O? — O? — O? — O? —
OIL MISCELLANEOUS LINE

SANITARY SEWER

SANITARY SEWER MANHOLE
SANITARY SEWER MISCELLANEOUS SYMBOL

SIZE, MATERIAL, OWNER
SANITARY SEWER PIPE

— ? — ? — ? — ? — ? —
SANITARY SEWER PIPE MISCELLANEOUS

LIGHTING

LIGHT STANDARD
HIGH MAST LIGHT STANDARD
SPOT OR FLOOD LIGHT

ELECTRICAL

ELECTRICAL PEDESTAL OR PULL BOX
TRANSMISSION TOWER
WIND POWERED GENERATOR
RELOCATED LIGHT STANDARD
DECORATIVE LIGHT STANDARD
CATENARY POLE FOUNDATION
ELECTRICAL MANHOLE
POWER POLE
TRANSFORMER ON POLE
ELECTRICAL OUTLET
ELECTRICAL MISCELLANEOUS
GUY WIRE
ELECTRICAL VAULT OR TRANSFORMER
GUY POST
FIRE ALARM BOX

— E — E — E — E — E — E — E —
ELECTRICAL UNDERGROUND LINE

— E — OH — E — OH — E — OH — E
ELECTRICAL OVERHEAD LINE

— E? — E? — E? — E? — E? — E? — E? —
ELECTRICAL MISCELLANEOUS LINE

TELEVISION

CABLE TV POLE
CABLE TV RISER
COMBINATION POLE-POWER, TELEPHONE
TV ANTENNA
TV MISCELLANEOUS
TV MANHOLE

— TV — TV — TV — TV — TV — TV — TV —
TV UNDERGROUND CABLE

— TV — OH — TV — OH — TV — OH — TV
TV OVERHEAD CABLE

— TV? — TV? — TV? — TV? — TV? — TV? — TV? —
TV MISCELLANEOUS CABLE

PIPES

METAL
CONCRETE
PIPE WITH END SECTION
HEADWALL
— ? — ? — ? — ? —
PIPE MISCELLANEOUS

DITCHES AND WATERWAY

CHECK DAM UNDER 4 FT
HEADGATE 1
DIVERSION BOX SYMBOL
SPRING SYMBOL
FLOW GAUGE
MISCELLANEOUS WATERWAYS
FLOW DIRECTION
DITCH WITH FLOW
EDGE OF WATER, CANALS, PONDS, STREAM OR RIVER

STORM SEWER

INLET TYPE 13
INLET TYPE C
INLET TYPE D
INLET VANE GRATE
INLET TYPE R XX FT LENGTH
STORM SEWER MANHOLE
MANHOLE EXISTING
STORM SEWER MISCELLANEOUS
STORM SEWER PIPE
— ? — ? — ? — ? — ? —
STORM SEWER PIPE MISCELLANEOUS

WATER

WATER SPIGOT
WATER VALVE
WATER MANHOLE
FIRE HYDRANT
WATER METER
WATER WELL SYMBOL

SIZE, MATERIAL, OWNER
— W — W — W — W — W — W — W —
WATER LINE

— W? — W? — W? — W? — W? — W? — W? —
WATER MISCELLANEOUS LINE

TELEPHONE

TELEPHONE GUY POLE
FIBER OPTIC CABLE MARKER
TELEPHONE MANHOLE
COMBINATION POLE-POWER
TELEPHONE MISCELLANEOUS
COMBINATION GUY POLE-POWER

— T — T — T — T — T — T — T —
TELEPHONE UNDERGROUND CONDUIT OR CABLE

— FO — FO — FO — FO — FO — FO — FO —
FIBER OPTICS UNDERGROUND CABLE

— T — OH — T — OH — T — OH — T
TELEPHONE OVERHEAD LINE

— T? — T? — T? — T? — T? — T? — T? —
TELEPHONE MISCELLANEOUS LINE

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

Front Range Mobility Group

CENTRAL 70 PROJECT
STANDARD SYMBOLS (2 OF 2)

Designer:	Structure Numbers
Detailer:	
Sheet Subset: GENERAL	Subset Sheets: G9 of 9

Project No./Code
FBR 0704-234
19631
Sheet Number 9

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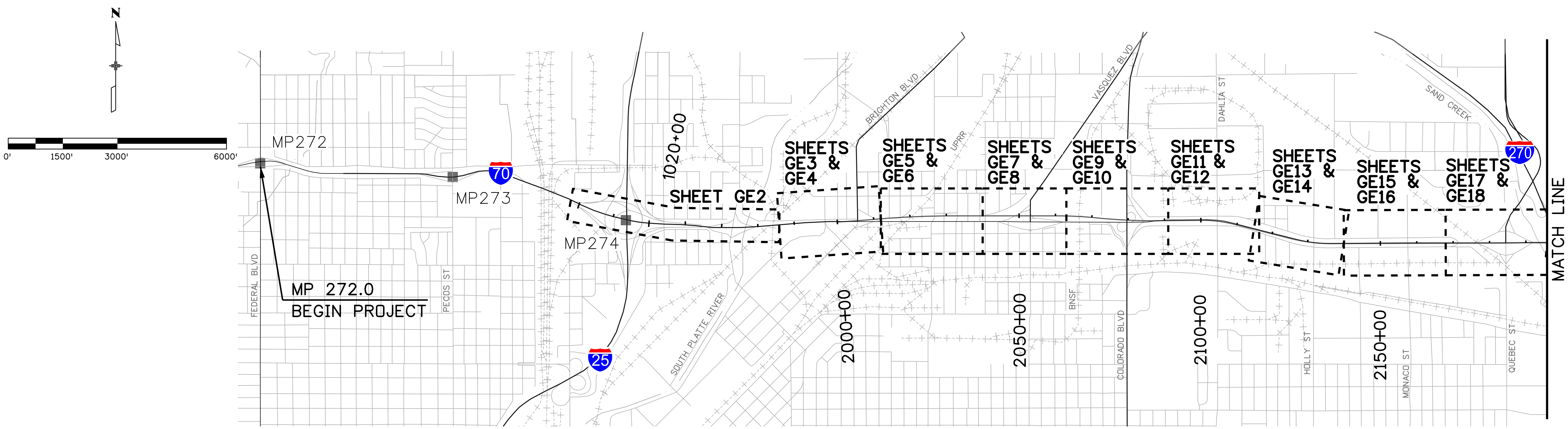

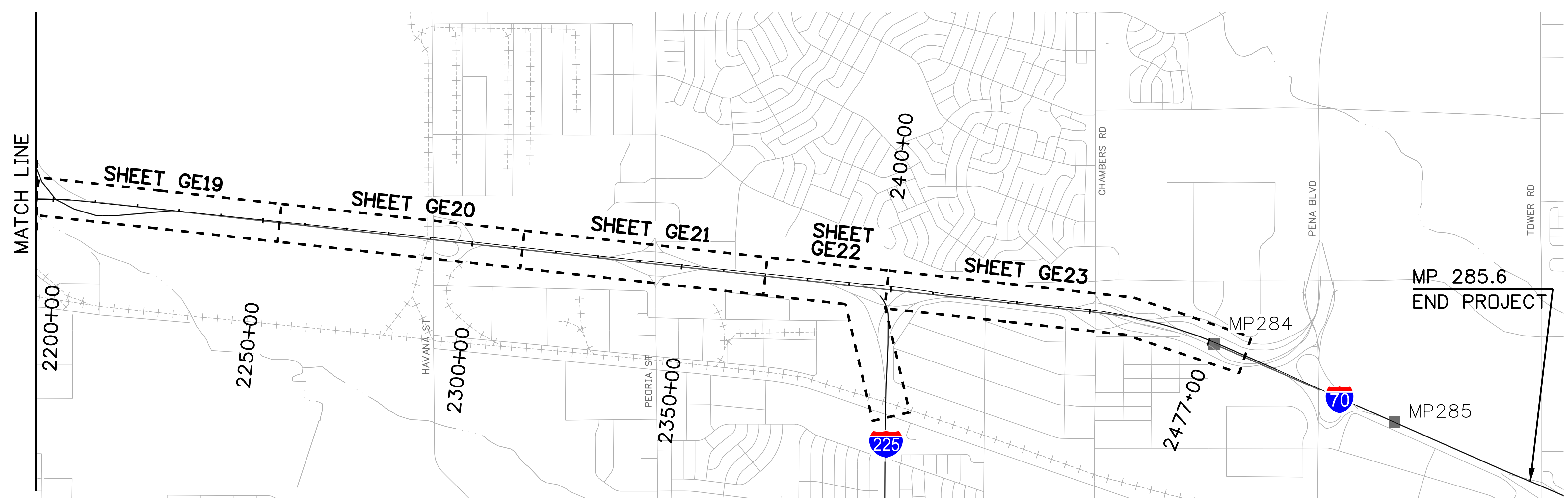

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Print Date: 5/19/2017
File Name: See sheet edge for information
Horiz. Scale: As Noted
Vert. Scale: As Noted
Unit Information
Unit Leader

Front Range Mobility Group

Sheet Revisions		
Date:	Comments	Init.

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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:
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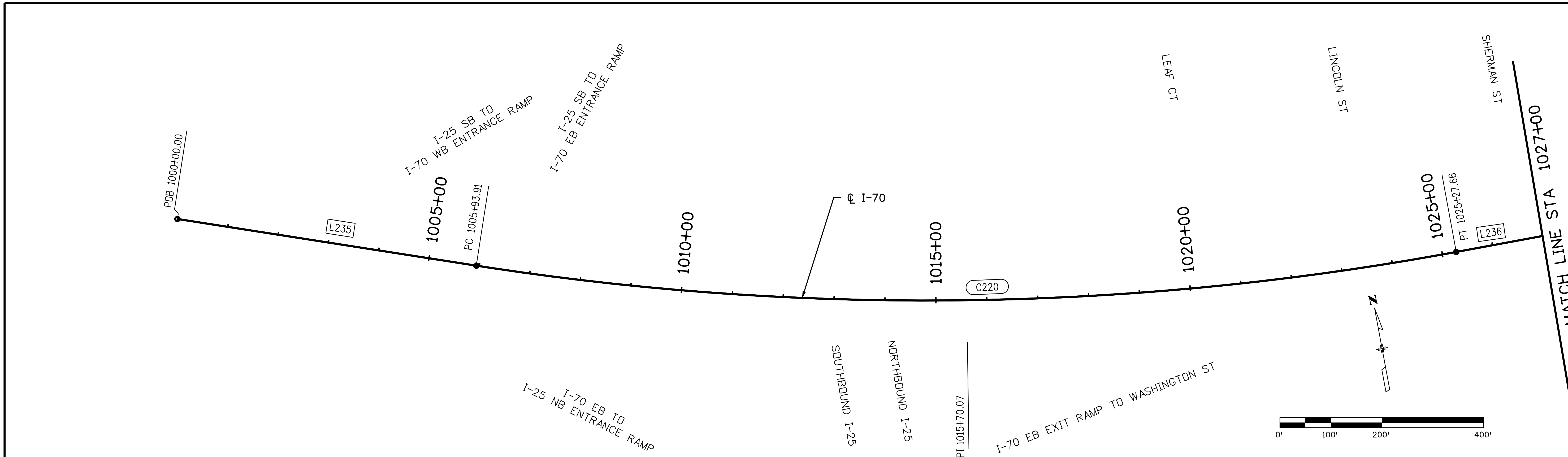
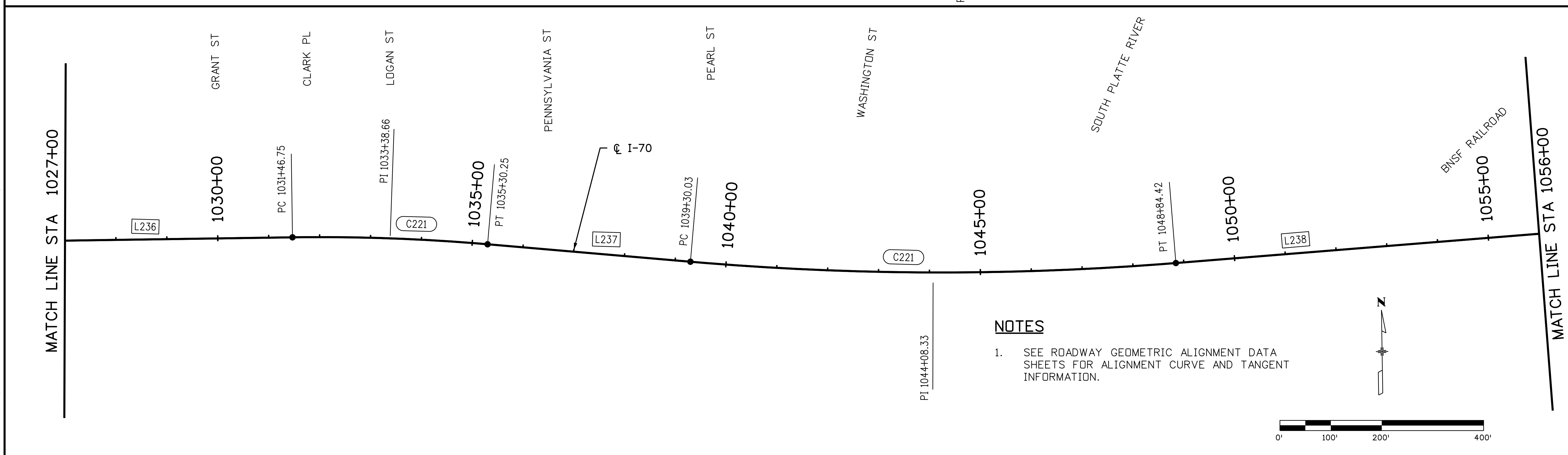
CENTRAL 70
ROADWAY GEOMETRIC PLAN
KEY PLAN

Designer:
Detailer:
Structure Numbers
Sheet Subset: GEOM
Subset Sheets: GE1 of 29

Project No./Code
FBR 0704-234
19631
Sheet Number 10





NOTES

1. SEE ROADWAY GEOMETRIC ALIGNMENT DATA SHEETS FOR ALIGNMENT CURVE AND TANGENT INFORMATION.

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.

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CDOT
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 GEOMETRIC PLAN
I-70
STA 1000+00 TO STA 1056+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: GEOM		Subset Sheets: GE2 of 29	

Project No./Code
FBR 0704-234
19631
Sheet Number 11

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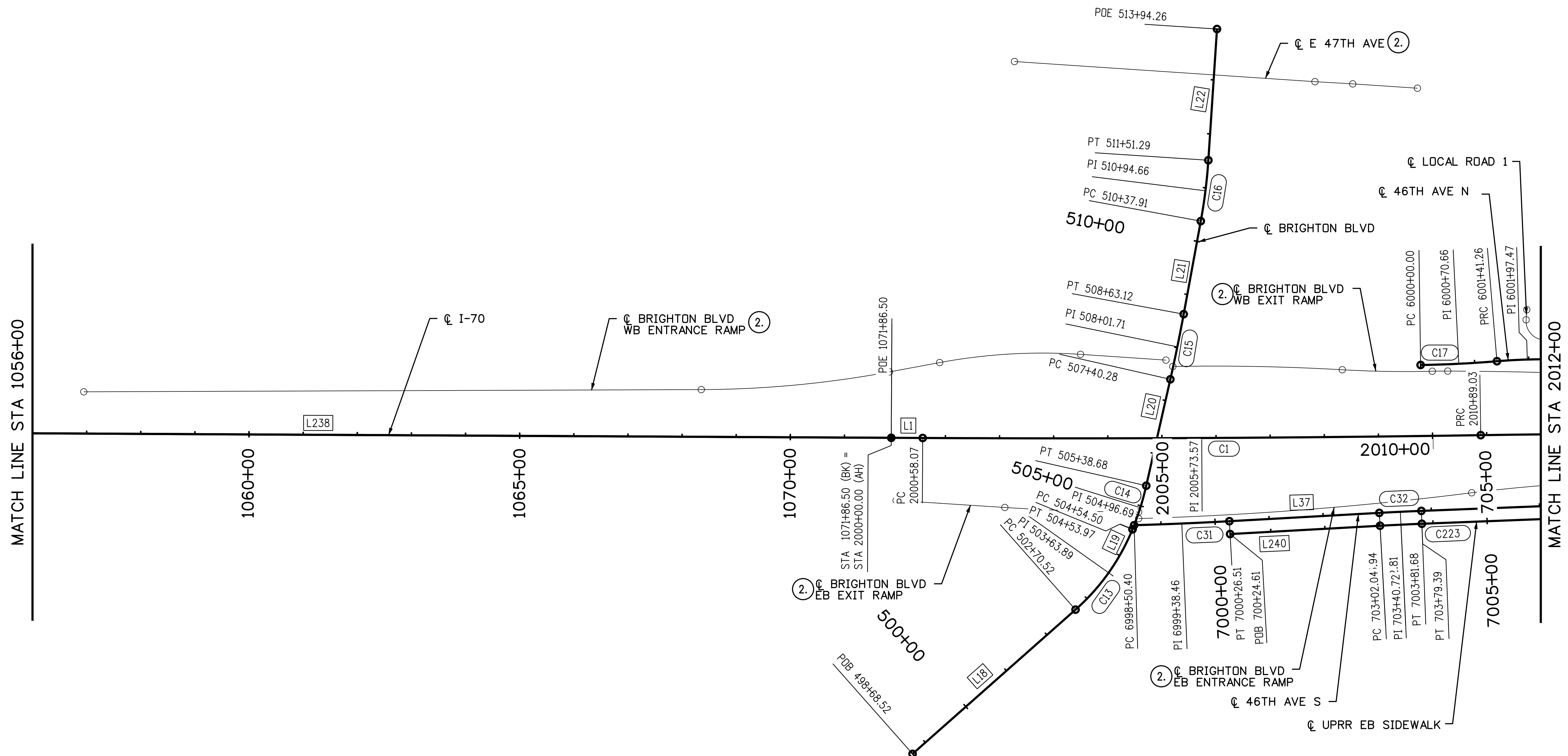
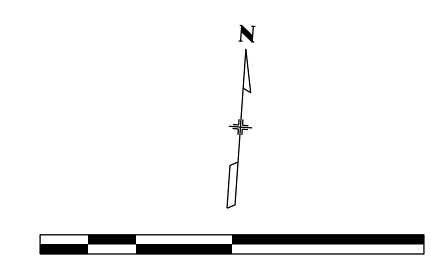


NOTES

1. SEE ROADWAY GEOMETRIC ALIGNMENT DATA SHEETS FOR ALIGNMENT CURVE AND TANGENT INFORMATION.
2. SEE SHEET GE4 FOR ADDITIONAL ROAD STATIONING AND ALIGNMENT INFORMATION.



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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:
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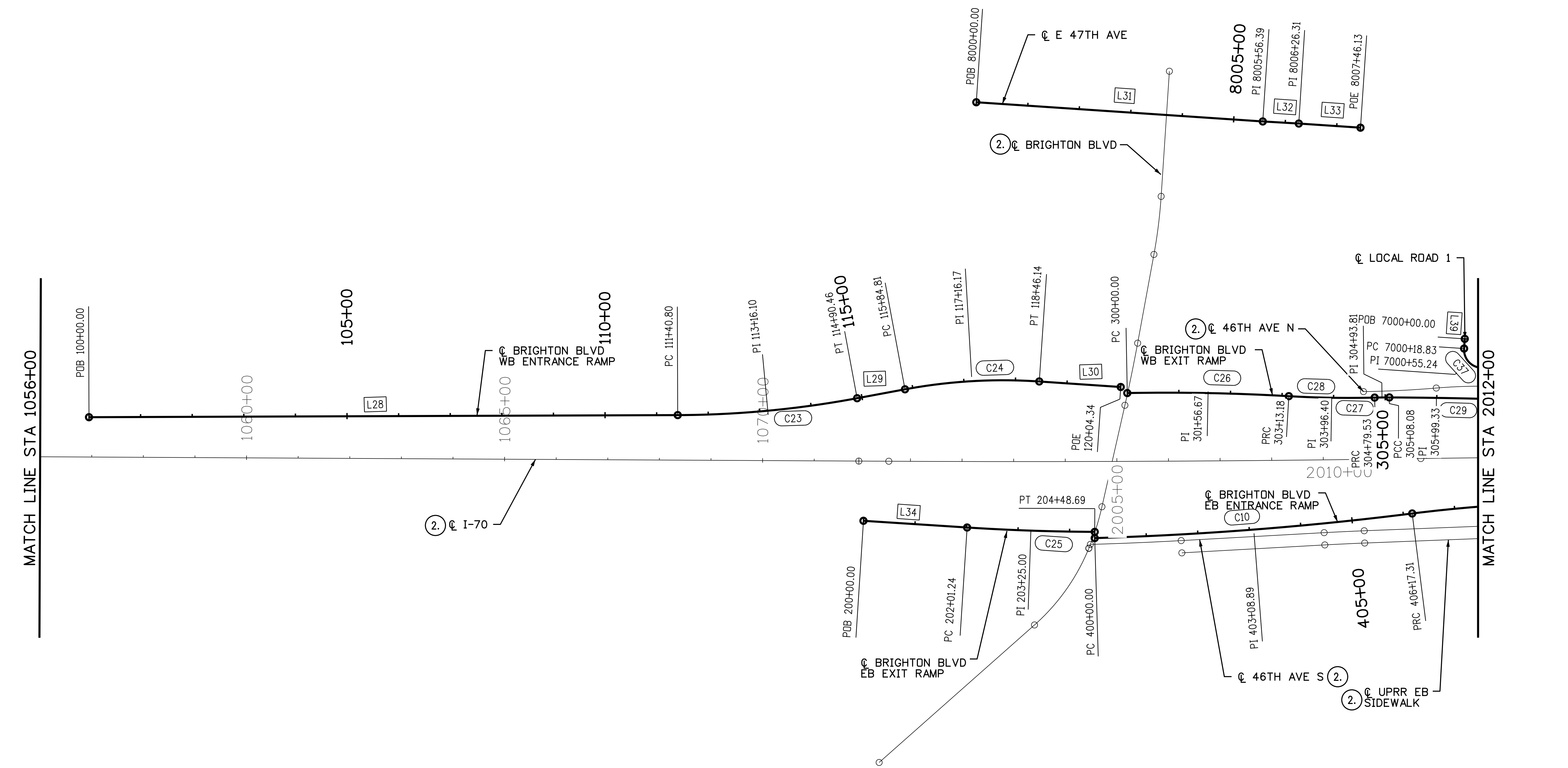
Void:

CENTRAL 70
ROADWAY GEOMETRIC PLAN
I-70 - 46TH AVE - CROSS STREETS
STA 1056+00 TO STA 2012+00

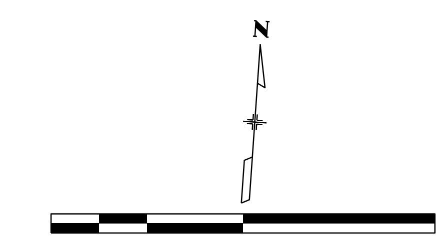
Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	GEOM	Subset Sheets: GE3	of 29

Project No./Code
FBR 0704-234
19631
Sheet Number 12



NOTES

1. SEE ROADWAY GEOMETRIC ALIGNMENT DATA SHEETS FOR ALIGNMENT CURVE AND TANGENT INFORMATION.
2. SEE SHEET GE3 FOR ADDITIONAL ROAD STATIONING AND ALIGNMENT INFORMATION.



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Print Date: 5/19/2017		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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PROPOSAL
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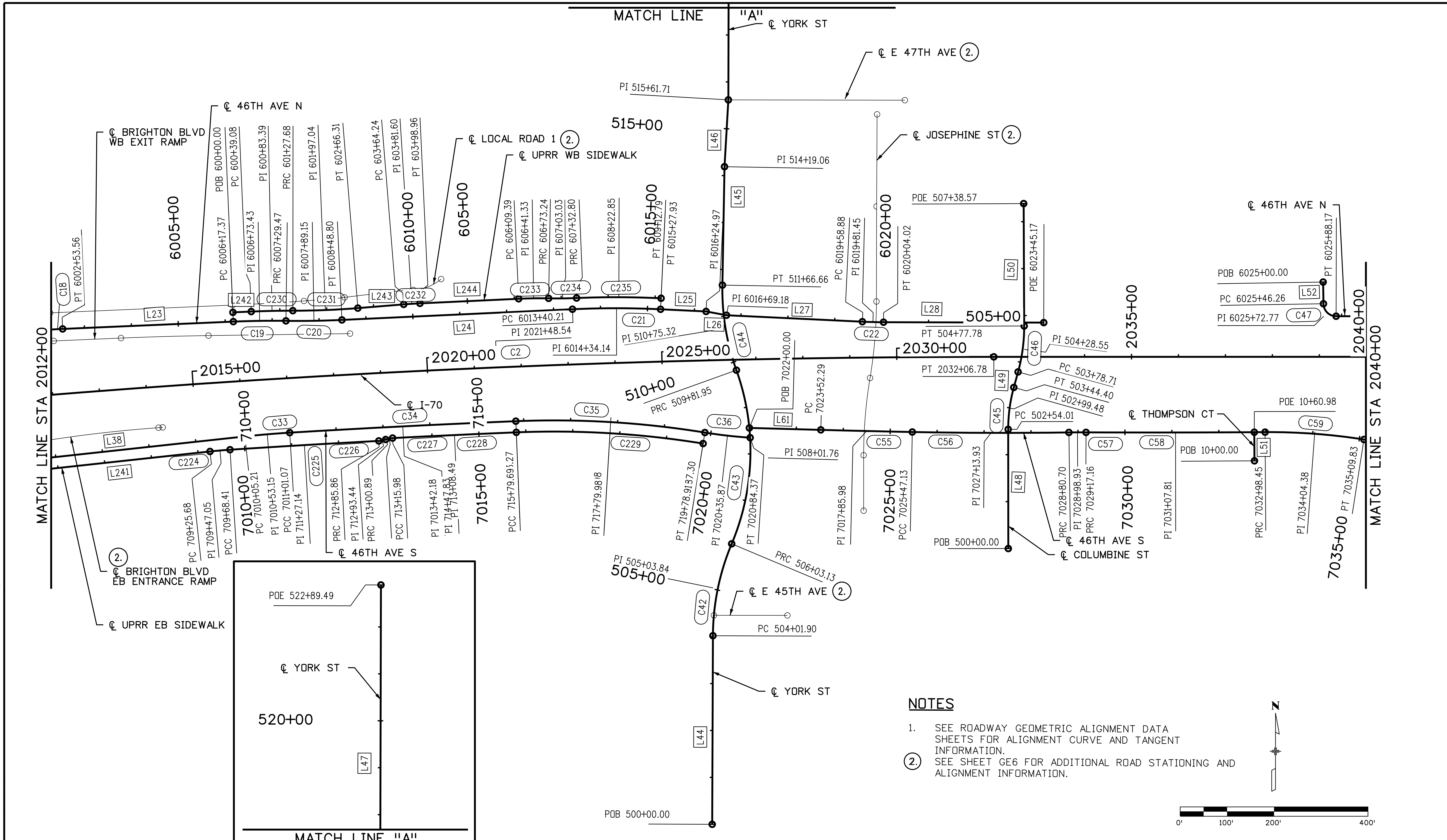
CENTRAL 70
ROADWAY GEOMETRIC PLAN
RAMPS - CROSS STREETS
STA 1056+00 TO STA 2012+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	GEOM	Subset Sheets: GE4	of 29

Project No./Code
FBR 0704-234
19631
Sheet Number 13



NOTES

1. SEE ROADWAY GEOMETRIC ALIGNMENT DATA SHEETS FOR ALIGNMENT CURVE AND TANGENT INFORMATION.
2. SEE SHEET GE6 FOR ADDITIONAL ROAD STATIONING AND ALIGNMENT INFORMATION.

Print Date: 5/19/2017	Sheet Revisions	Colorado Department of Transportation	PROPOSAL	CENTRAL 70 ROADWAY GEOMETRIC PLAN I-70 - 46TH AVE - CROSS STREETS STA 2012+00 TO STA 2040+00
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:	Project No./Code: FBR 0704-234
Horiz. Scale: As Noted			Revised:	19631
Vert. Scale: As Noted		Region 1	Void:	Designer: / Detailer: / Structure Numbers
Unit Information		KJS		Sheet Subset: GEOM / Subset Sheets: GE5 of 29
Unit Leader				Sheet Number 14

Front Range Mobility Group

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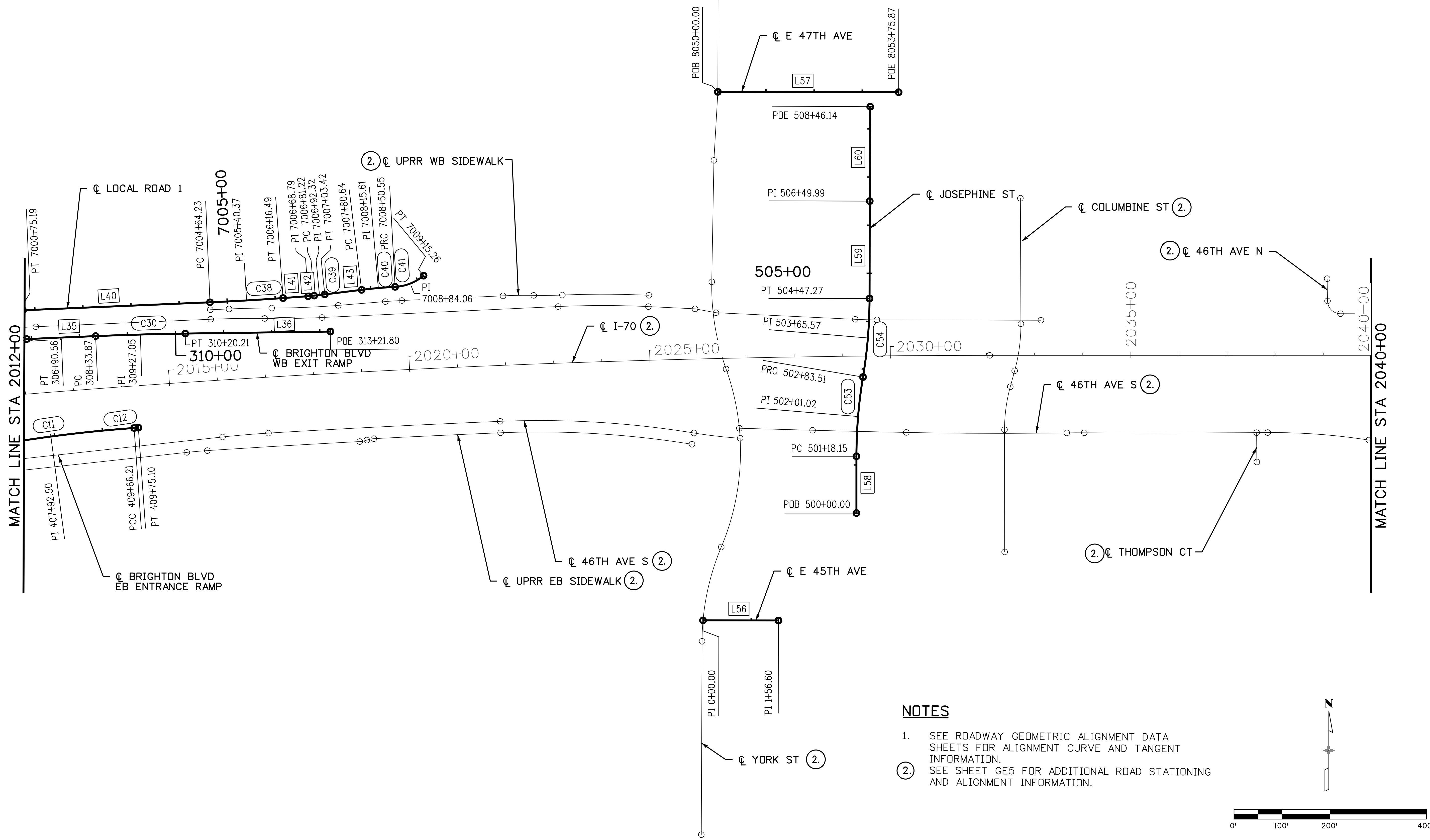

NOTES

1. SEE ROADWAY GEOMETRIC ALIGNMENT DATA SHEETS FOR ALIGNMENT CURVE AND TANGENT INFORMATION.
2. SEE SHEET GE5 FOR ADDITIONAL ROAD STATIONING AND ALIGNMENT INFORMATION.

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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:
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CENTRAL 70
ROADWAY GEOMETRIC PLAN
RAMPS - CROSS STREETS
STA 2012+00 TO STA 2040+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	GEOM	Subset Sheets: GE6	of 29

Project No./Code
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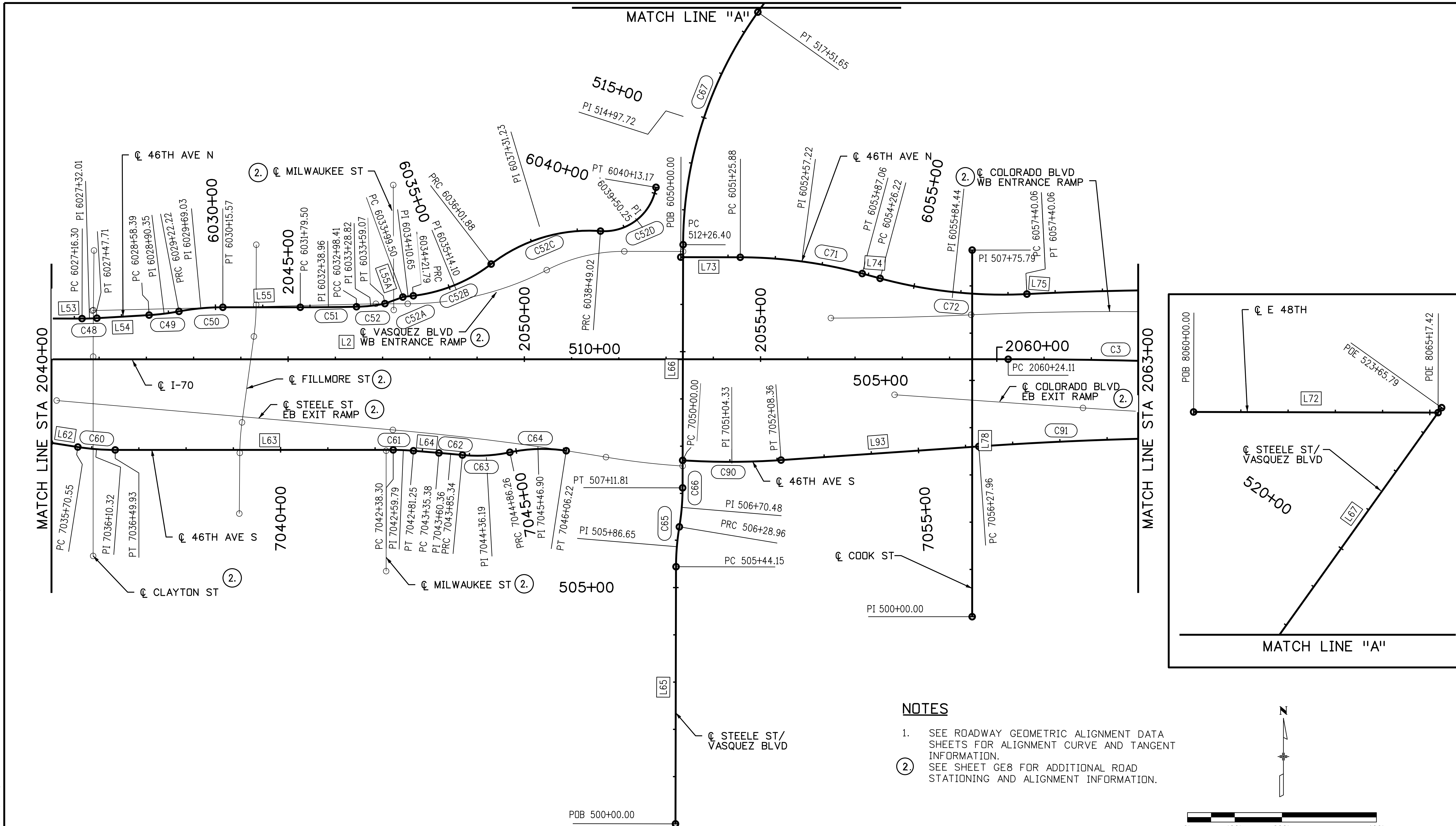
19631
Sheet Number 15



NOTES

1. SEE ROADWAY GEOMETRIC ALIGNMENT DATA SHEETS FOR ALIGNMENT CURVE AND TANGENT INFORMATION.
2. SEE SHEET GE8 FOR ADDITIONAL ROAD STATIONING AND ALIGNMENT INFORMATION.

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

Sheet Revisions

Date:	Comments	Init.

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Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY GEOMETRIC PLAN
I-70 - 46TH AVE - CROSS STREETS
STA 2040+00 TO STA 2063+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: GEOM
Subset Sheets: GE7 of 29

Project No./Code
FBR 0704-234
19631
Sheet Number 16

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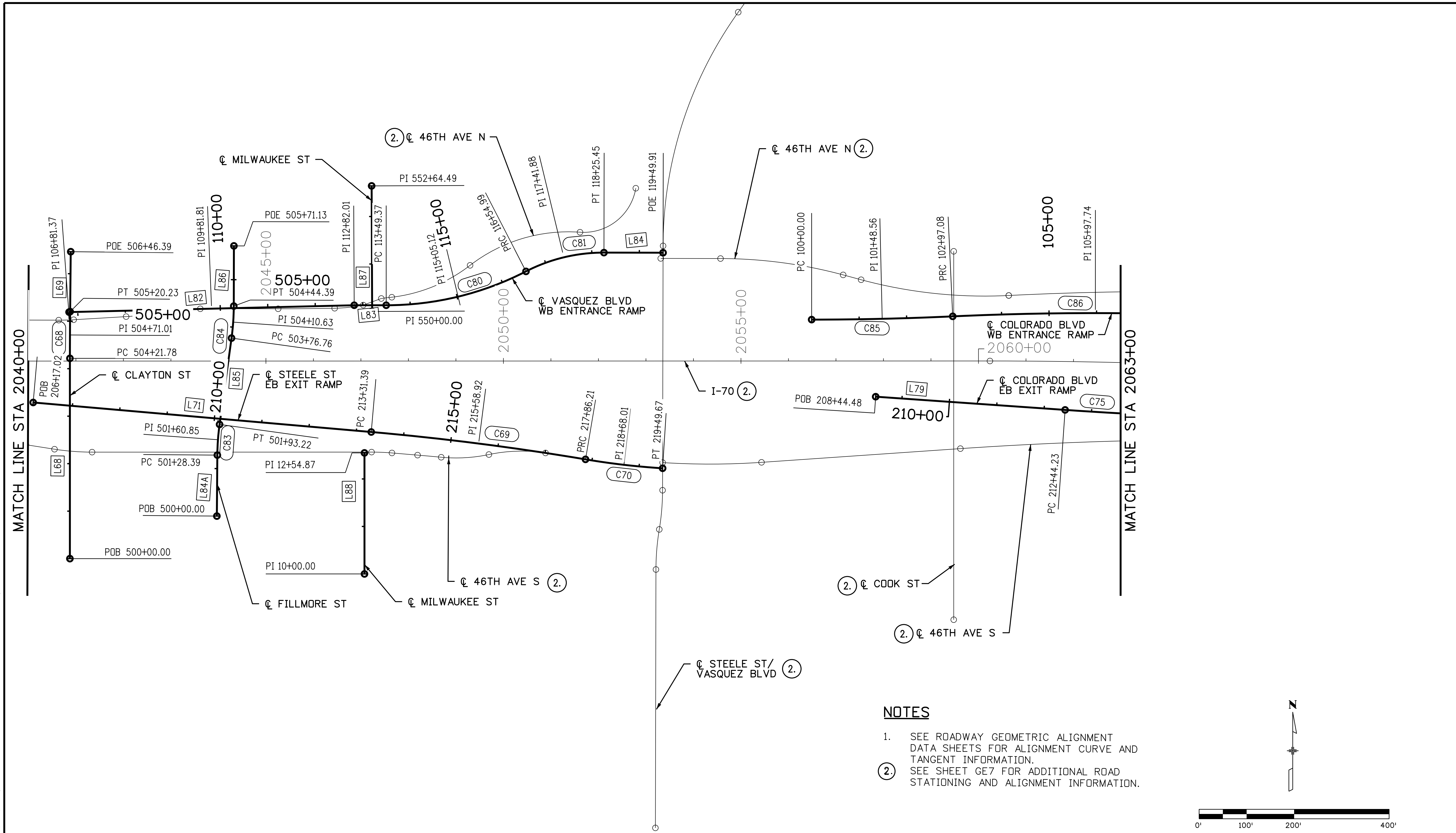

NOTES

1. SEE ROADWAY GEOMETRIC ALIGNMENT DATA SHEETS FOR ALIGNMENT CURVE AND TANGENT INFORMATION.
2. SEE SHEET GE7 FOR ADDITIONAL ROAD STATIONING AND ALIGNMENT INFORMATION.

Print Date: 5/19/2017		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		

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CENTRAL 70
ROADWAY GEOMETRIC PLAN
RAMPS - CROSS STREETS
STA 2040+00 TO STA 2063+00

Designer:		Structure Numbers	
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19631
Sheet Number 17

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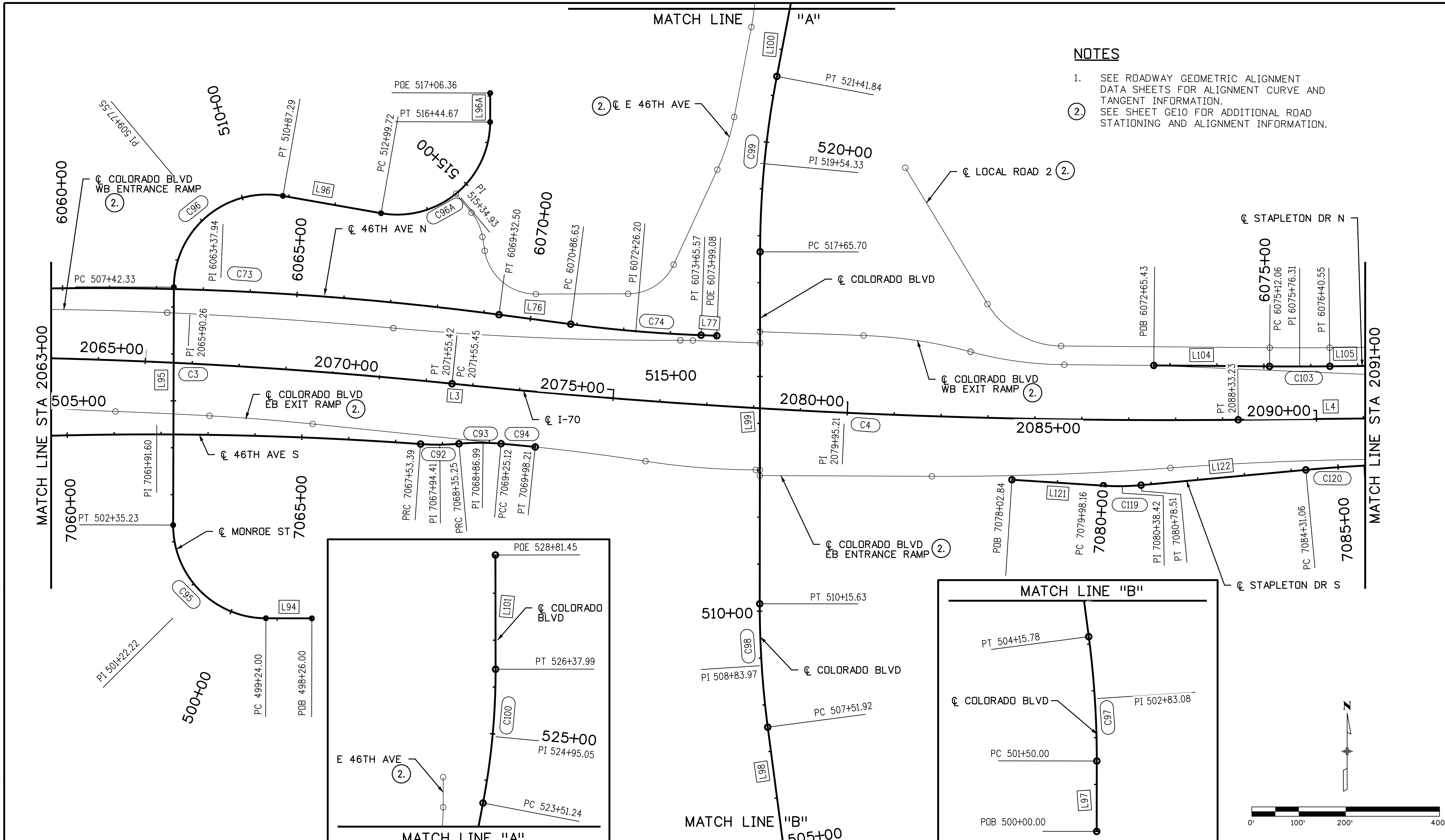

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File Name: See sheet edge for information		Date: / Comments / Init.	
Front Range Mobility Group	Horiz. Scale: As Noted		
	Vert. Scale: As Noted		
	Unit Information		
	Unit Leader		

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CENTRAL 70
ROADWAY GEOMETRIC PLAN
I-70 - STAPLETON DR - CROSS STREETS
STA 2063+00 TO STA 2091+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: GEOM Subset Sheets: GE9 of 29

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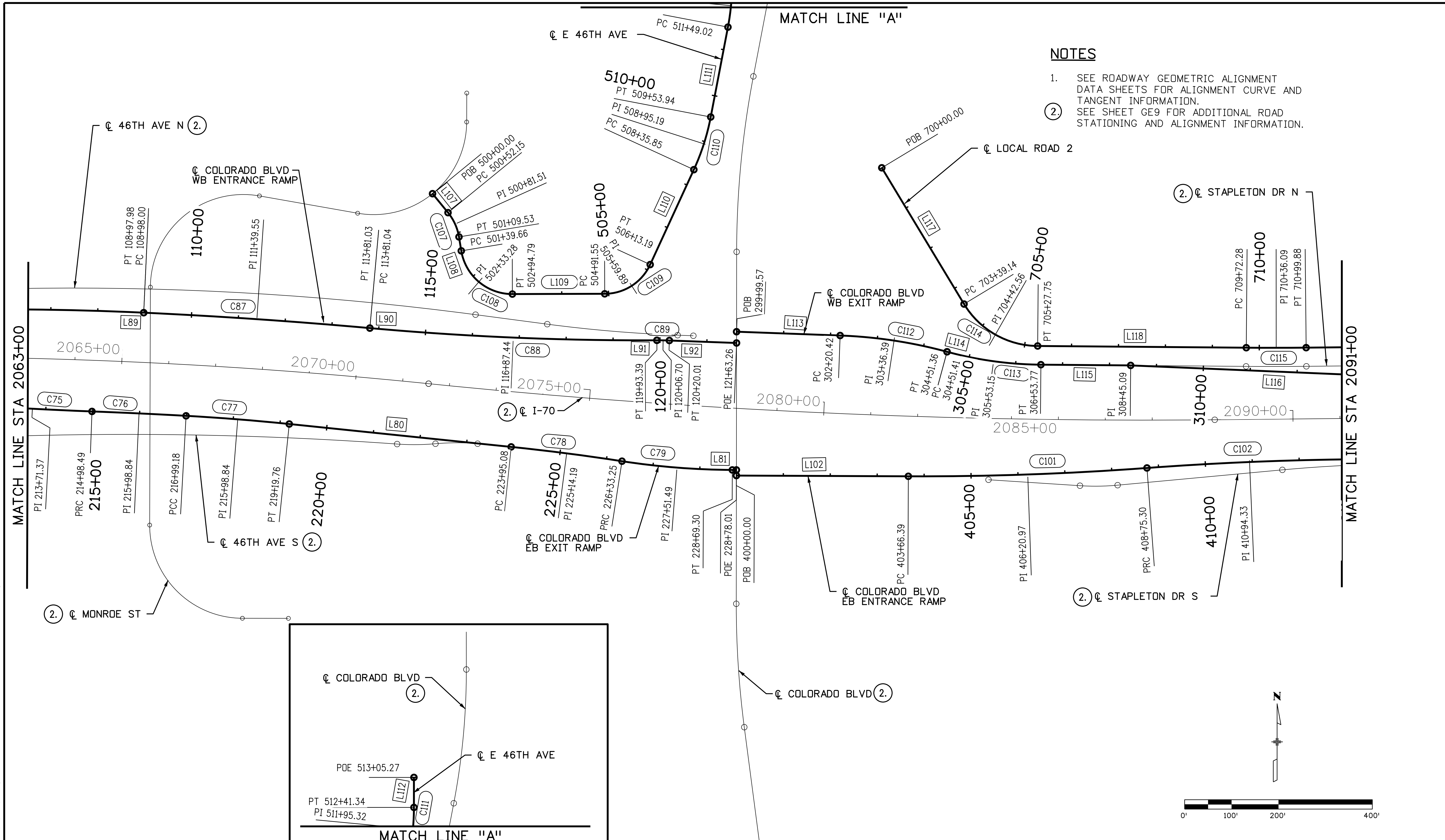
Sheet Number 18



NOTES

1. SEE ROADWAY GEOMETRIC ALIGNMENT DATA SHEETS FOR ALIGNMENT CURVE AND TANGENT INFORMATION.
2. SEE SHEET GE9 FOR ADDITIONAL ROAD STATIONING AND ALIGNMENT INFORMATION.

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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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Void:

CENTRAL 70
ROADWAY GEOMETRIC PLAN
RAMPS - CROSS STREETS
STA 2063+00 TO STA 2091+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: GEOM
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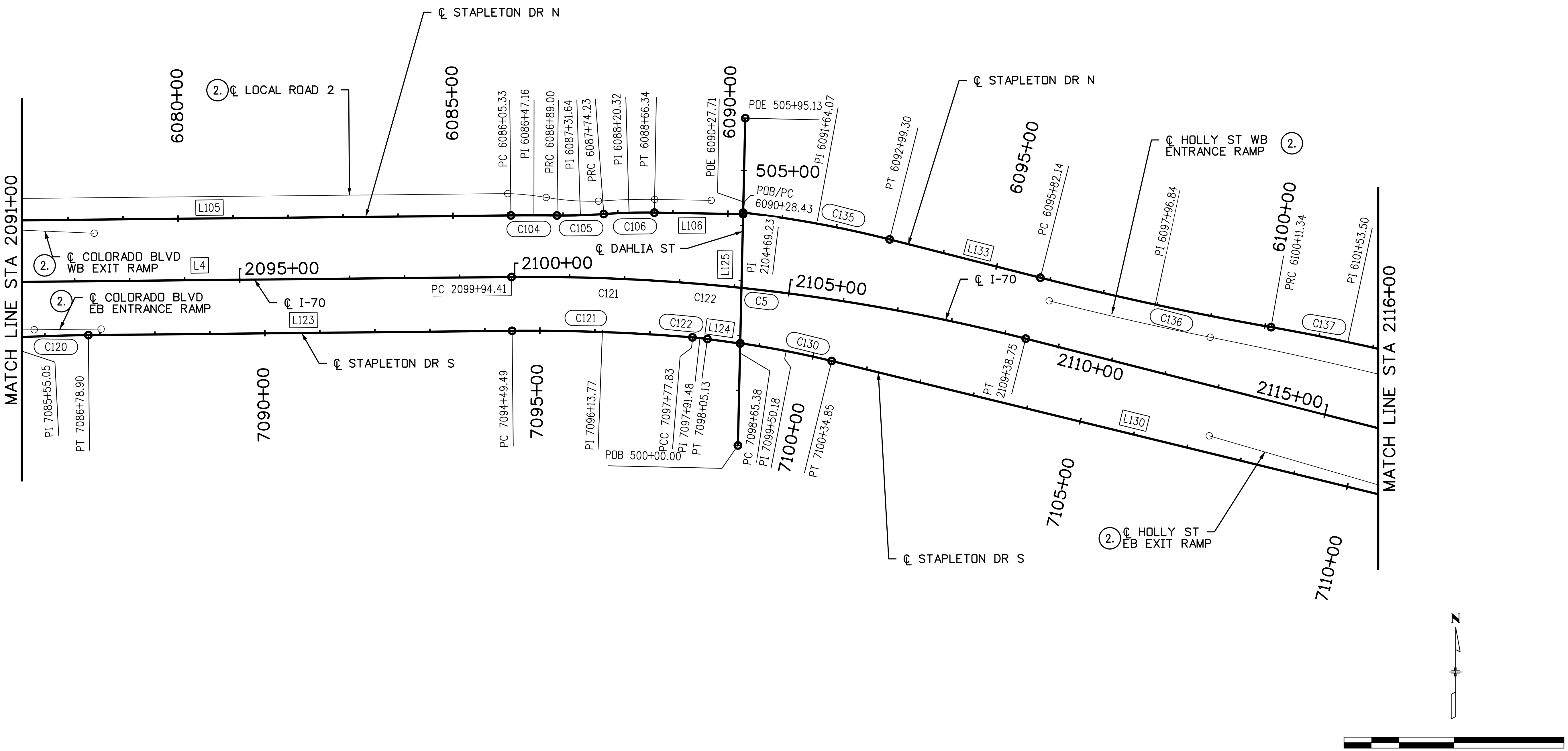
<u>NOTES</u>

1. SEE ROADWAY GEOMETRIC ALIGNMENT DATA SHEETS FOR ALIGNMENT CURVE AND TANGENT INFORMATION.
2. SEE SHEET GE12 FOR ADDITIONAL ROAD STATIONING AND ALIGNMENT INFORMATION.



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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:	Designer:	FBR 0704-234
Front Range Mobility Group	Horiz. Scale: As Noted					Revised:	Detailer:	19631
	Vert. Scale: As Noted					Void:	Structure Numbers	
	Unit Information				Region 1		Sheet Subset: GEOM	Sheet Number 20
	Unit Leader				KJS		Subset Sheets: GE11 of 29	

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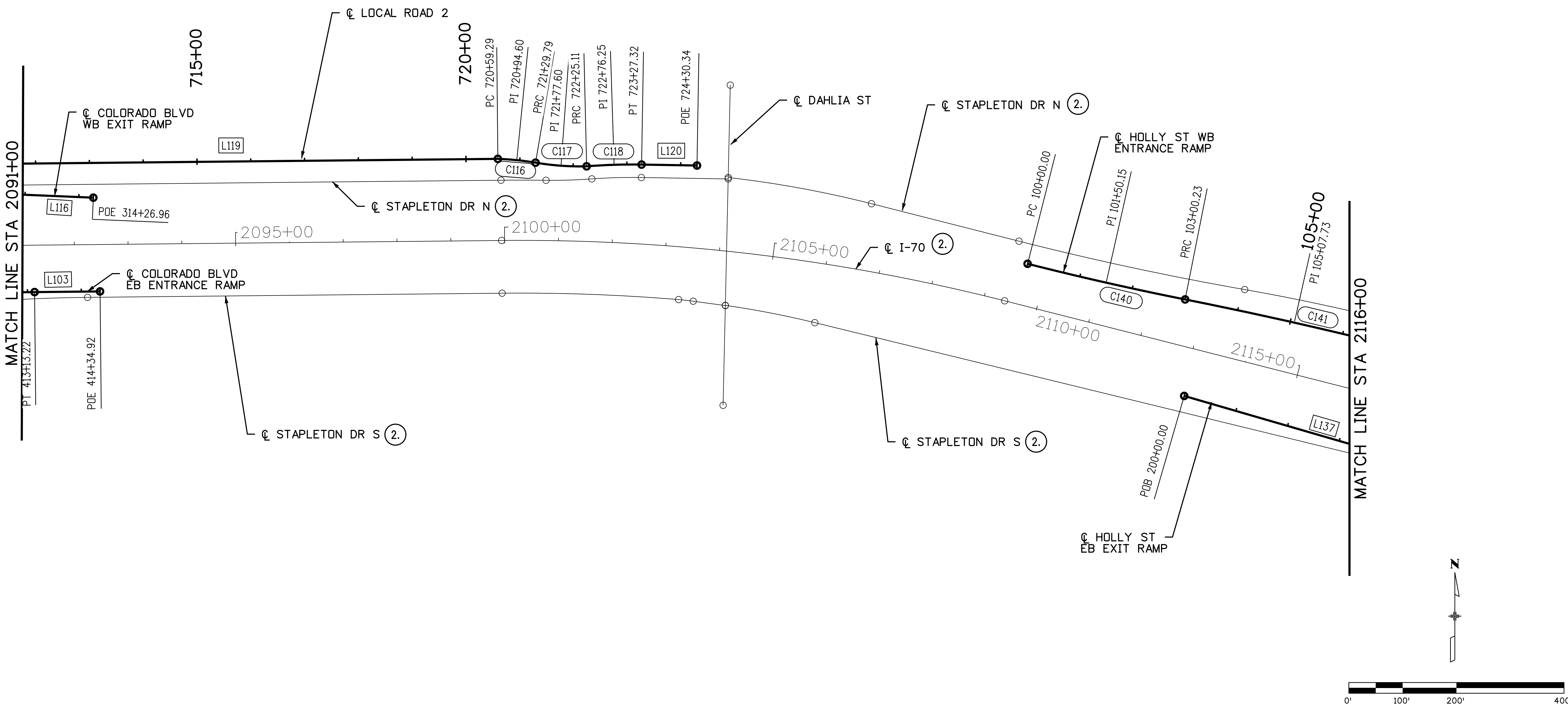
NOTES

1. SEE ROADWAY GEOMETRIC ALIGNMENT DATA SHEETS FOR ALIGNMENT CURVE AND TANGENT INFORMATION.
2. SEE SHEET GE11 FOR ADDITIONAL ROAD STATIONING AND ALIGNMENT INFORMATION.



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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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CENTRAL 70
ROADWAY GEOMETRIC PLAN
RAMPS - CROSS STREETS
STA 2091+00 TO STA 2116+00

Designer:
Detailer:
Sheet Subset: GEOM
Structure Numbers
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FBR 0704-234
19631
Sheet Number 21

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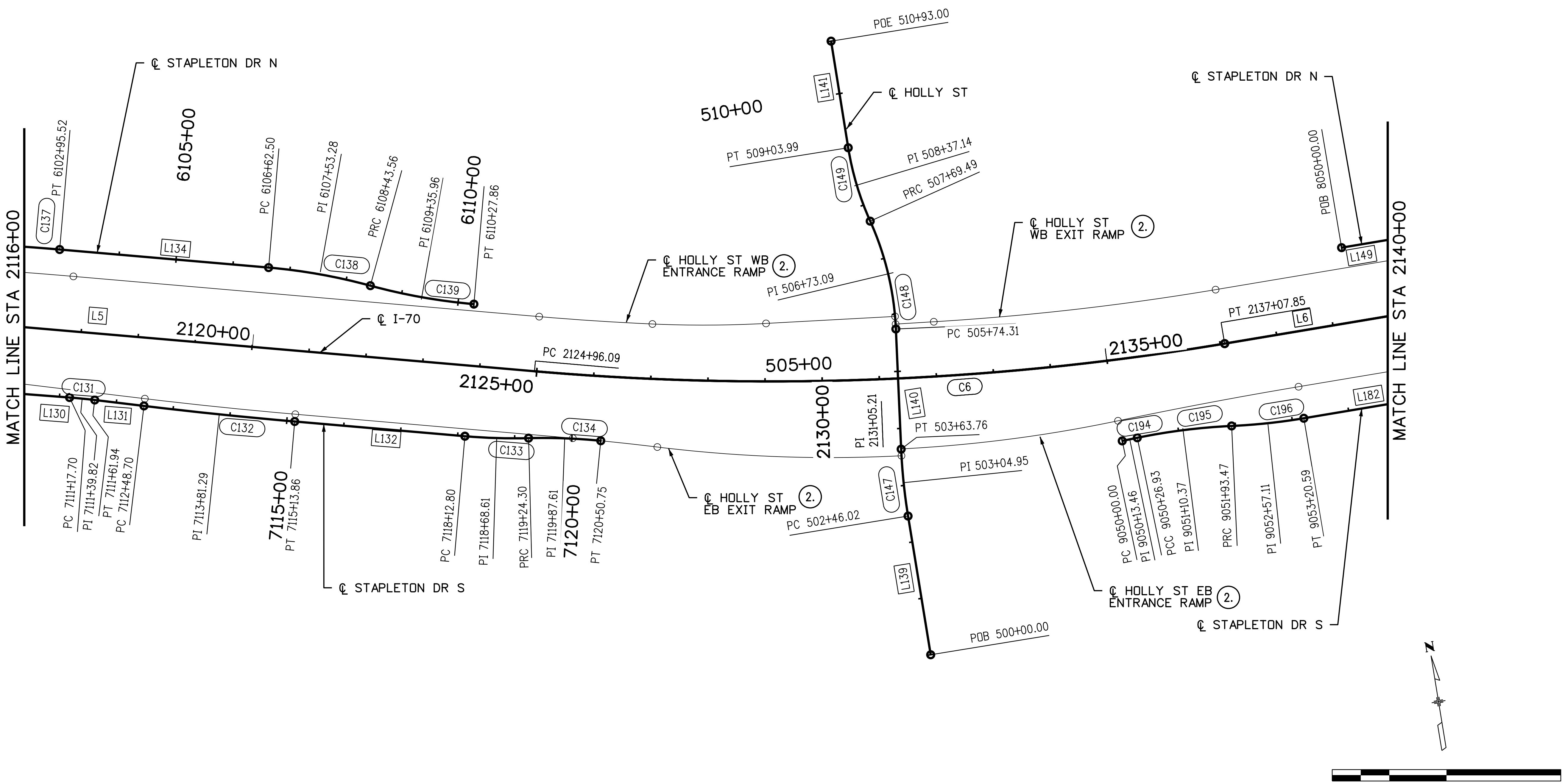
NOTES

1. SEE ROADWAY GEOMETRIC ALIGNMENT DATA SHEETS FOR ALIGNMENT CURVE AND TANGENT INFORMATION.
2. SEE SHEET GE14 FOR ADDITIONAL ROAD STATIONING AND ALIGNMENT INFORMATION.



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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:	Designer: / Structure Numbers	FBR 0704-234
Front Range Mobility Group	Horiz. Scale: As Noted					Revised:	Detailer:	19631
	Vert. Scale: As Noted				Region 1	Void:	Sheet Subset: GEOM / Subset Sheets: GE13 of 29	Sheet Number 22
	Unit Information				KJS			
	Unit Leader							

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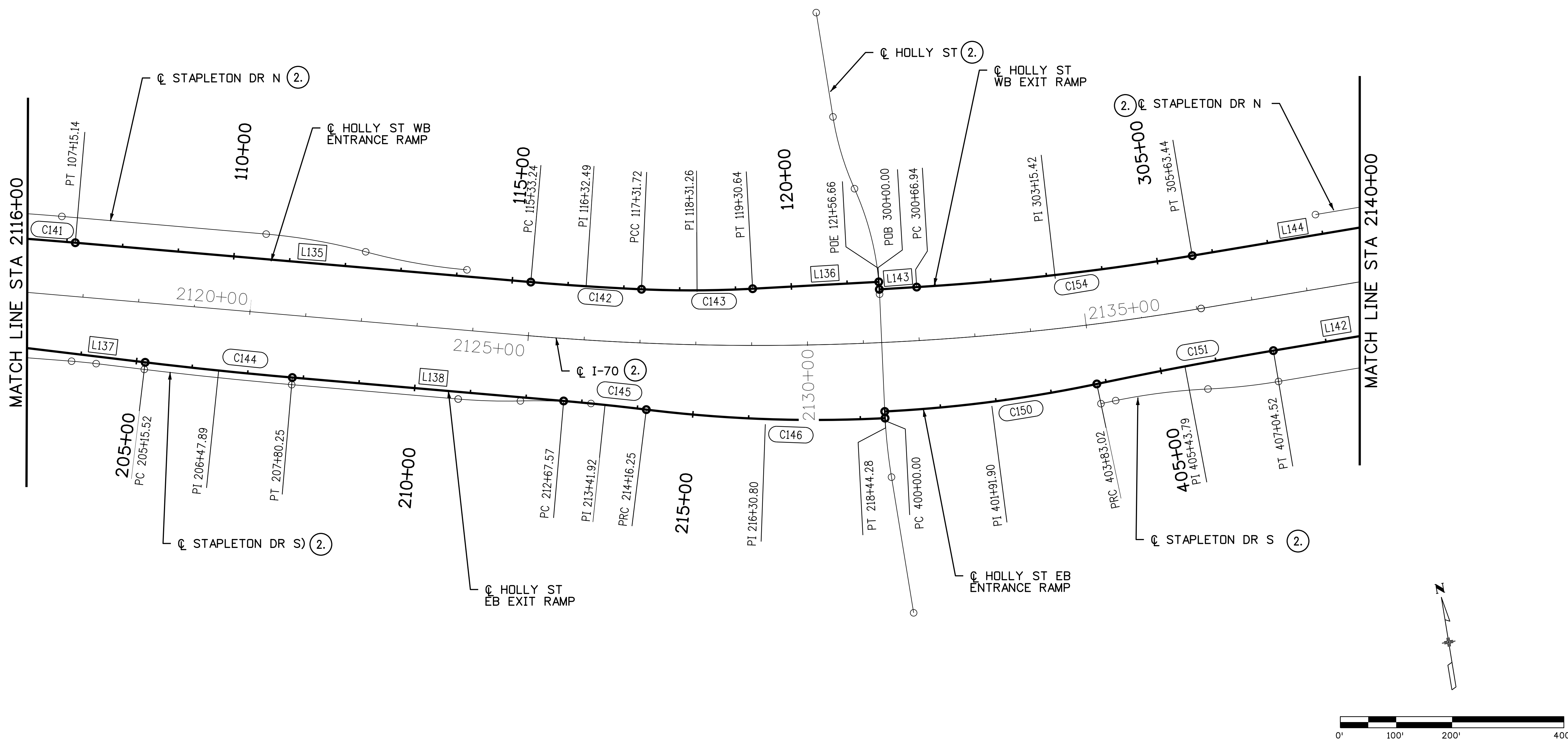
NOTES

1. SEE ROADWAY GEOMETRIC ALIGNMENT DATA SHEETS FOR ALIGNMENT CURVE AND TANGENT INFORMATION.
2. SEE SHEET GE13 FOR ADDITIONAL ROAD STATIONING AND ALIGNMENT INFORMATION.



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.

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CENTRAL 70
ROADWAY GEOMETRIC PLAN RAMPS
STA 2116+00 TO STA 2140+00

Designer:		Structure Numbers	
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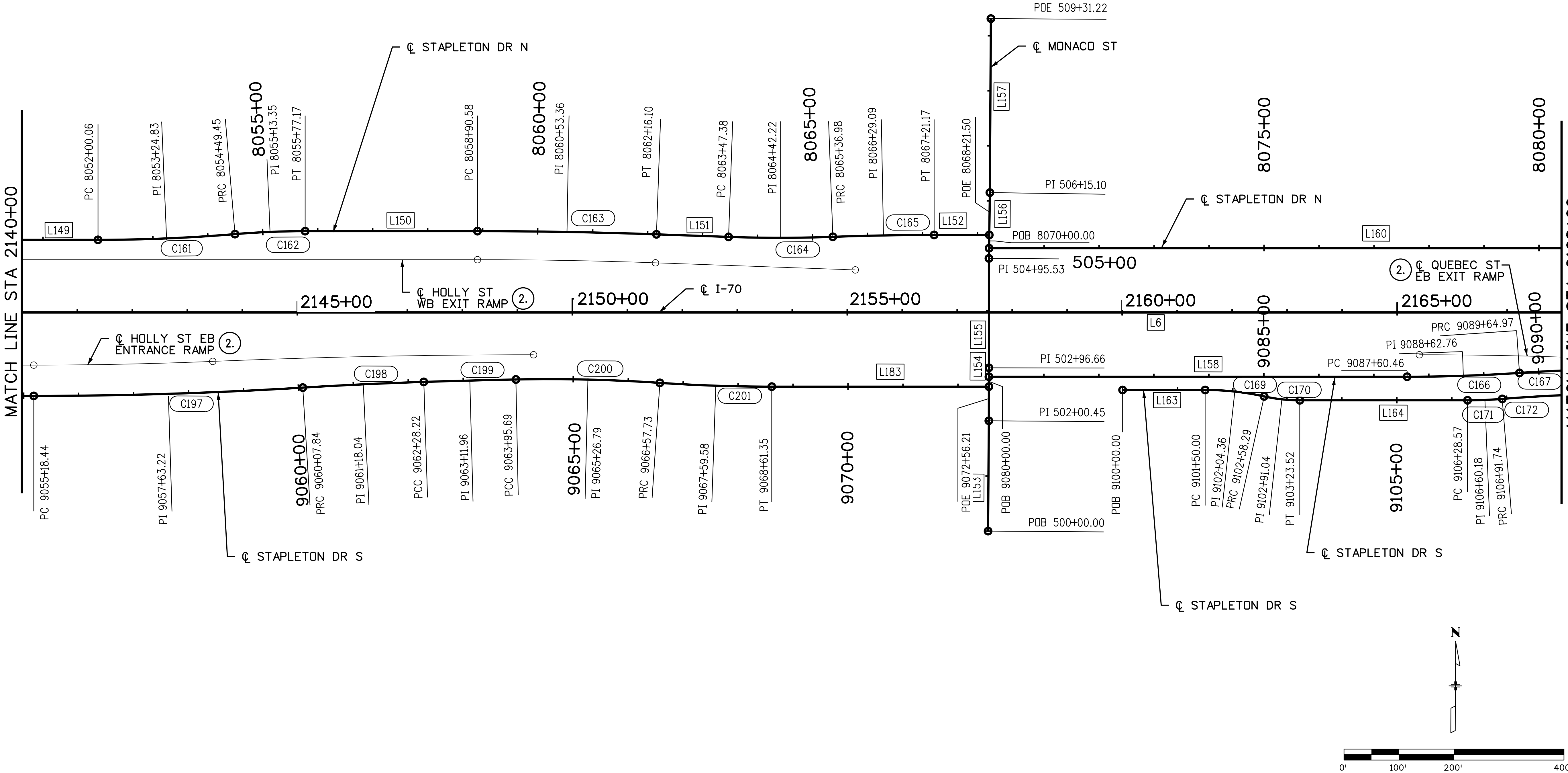
NOTES

1. SEE ROADWAY GEOMETRIC ALIGNMENT DATA SHEETS FOR ALIGNMENT CURVE AND TANGENT INFORMATION.
2. SEE SHEET GE16 FOR ADDITIONAL ROAD STATIONING AND ALIGNMENT INFORMATION.



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.

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CENTRAL 70
ROADWAY GEOMETRIC PLAN
I-70 - STAPLETON DR - CROSS STREETS
STA 2140+00 TO STA 2168+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	GEOM	Subset Sheets: GE15 of 29	

Project No./Code
FBR 0704-234
19631
Sheet Number 24

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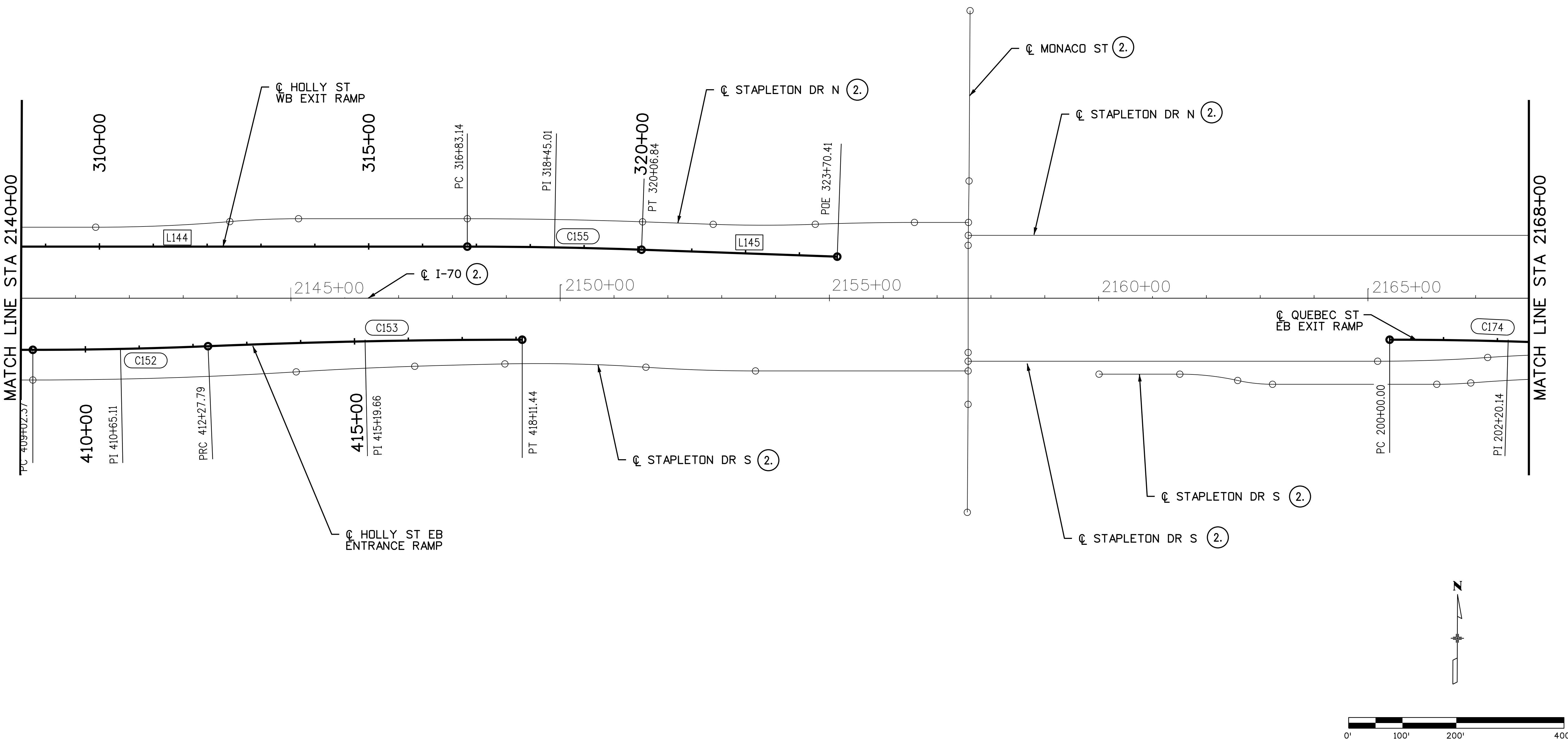
NOTES

1. SEE ROADWAY GEOMETRIC ALIGNMENT DATA SHEETS FOR ALIGNMENT CURVE AND TANGENT INFORMATION.
2. SEE SHEET GE15 FOR ADDITIONAL ROAD STATIONING AND ALIGNMENT INFORMATION.



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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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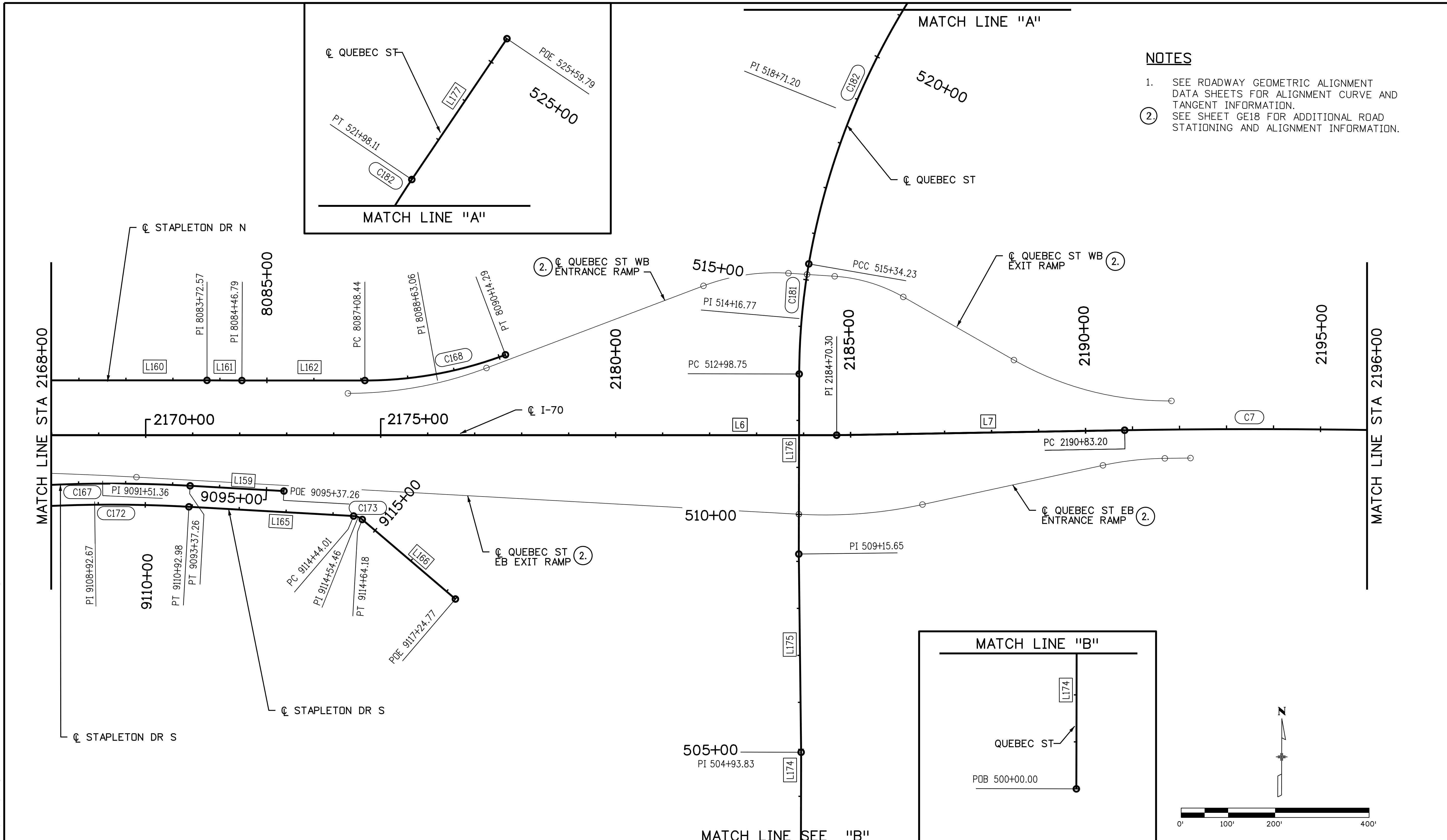
CENTRAL 70
ROADWAY GEOMETRIC PLAN
RAMPS
STA 2140+00 TO STA 2168+00

Designer:	Structure Numbers	
Detailer:		
Sheet Subset: GEOM	Subset Sheets: GE16 of 29	

Project No./Code
FBR 0704-234
19631
Sheet Number 25



NOTES

1. SEE ROADWAY GEOMETRIC ALIGNMENT DATA SHEETS FOR ALIGNMENT CURVE AND TANGENT INFORMATION.
2. SEE SHEET GE18 FOR ADDITIONAL ROAD STATIONING AND ALIGNMENT INFORMATION.

Print Date: 5/19/2017		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		

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PROPOSAL	CENTRAL 70 ROADWAY GEOMETRIC PLAN I-70 - STAPLETON DR - CROSS STREETS STA 2168+00 TO STA 2196+00		Project No./Code
No Revisions:	Designer:	Structure Numbers	FBR 0704-234
Revised:	Detailer:		19631
Void:	Sheet Subset: GEOM	Subset Sheets: GE17 of 29	Sheet Number 26

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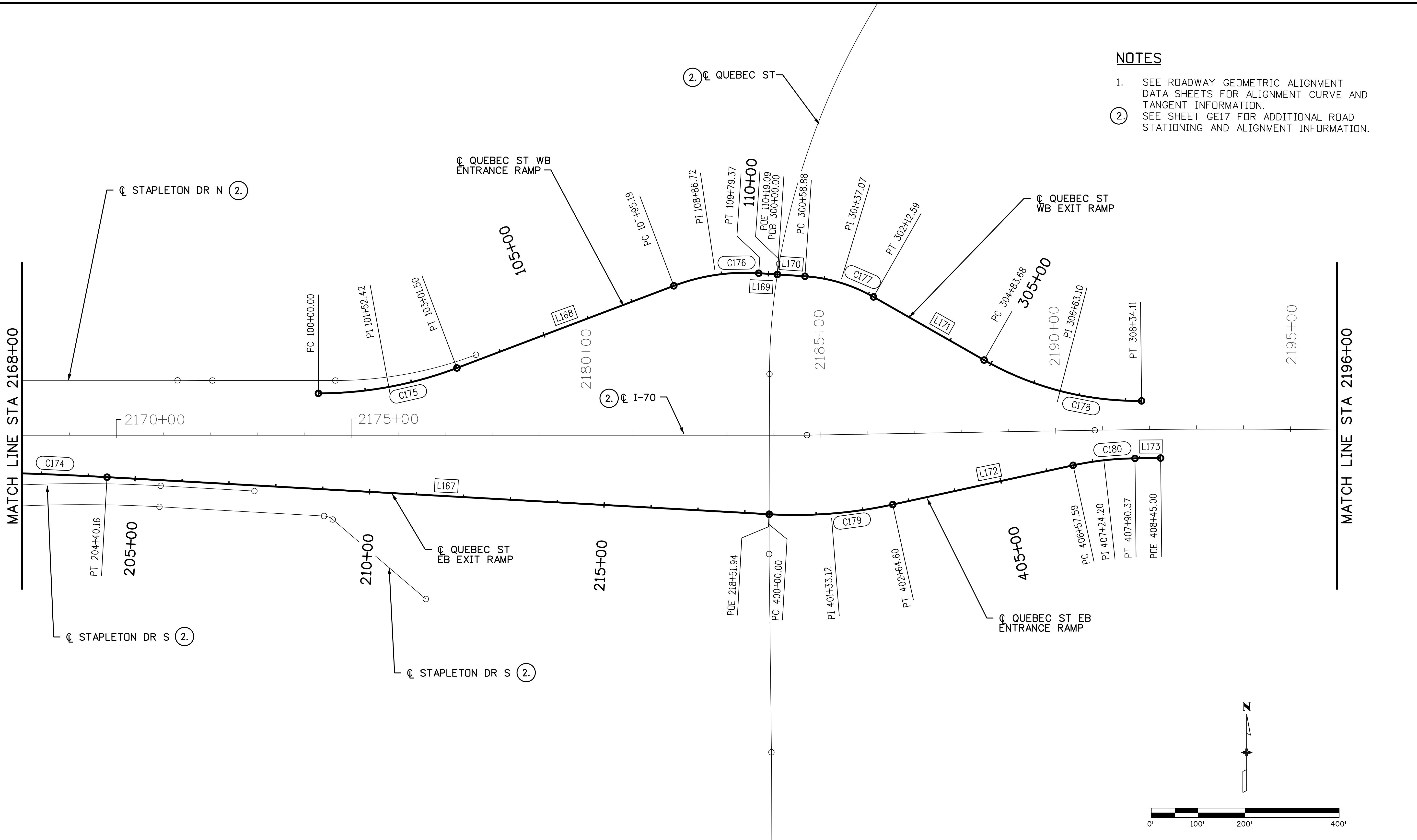
NOTES

1. SEE ROADWAY GEOMETRIC ALIGNMENT DATA SHEETS FOR ALIGNMENT CURVE AND TANGENT INFORMATION.
2. SEE SHEET GE17 FOR ADDITIONAL ROAD STATIONING AND ALIGNMENT INFORMATION.



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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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Region 1 KJS

PROPOSAL
No Revisions:
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CENTRAL 70
ROADWAY GEOMETRIC PLAN
RAMPS
STA 2168+00 TO STA 2196+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	GEOM	Subset Sheets: GE18	of 29

Project No./Code
FBR 0704-234
19631
Sheet Number 27

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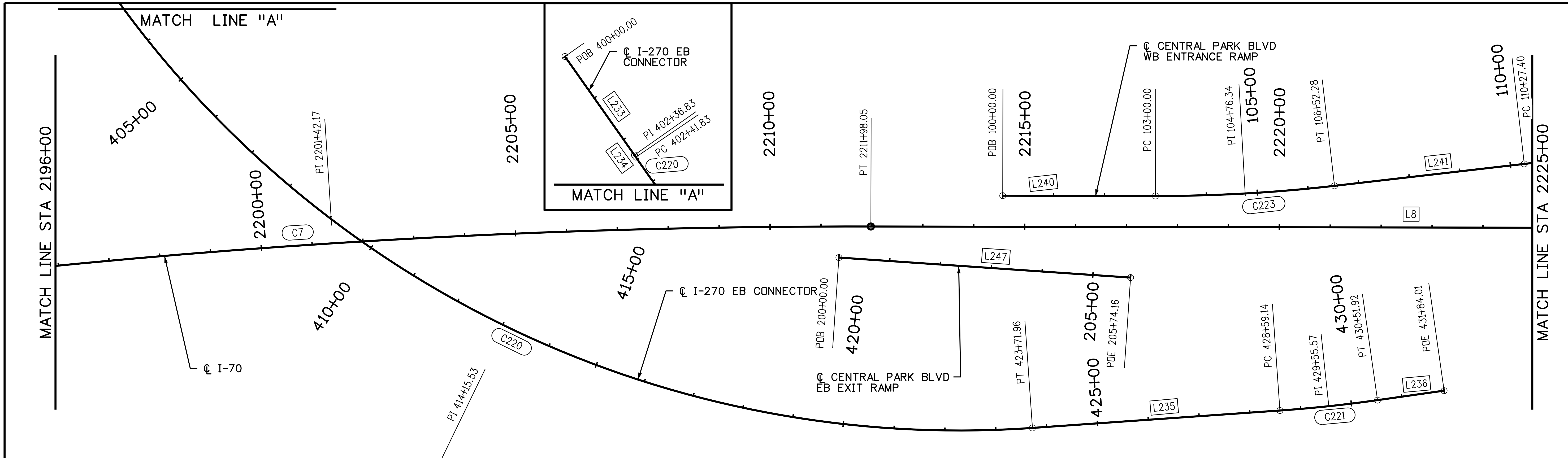

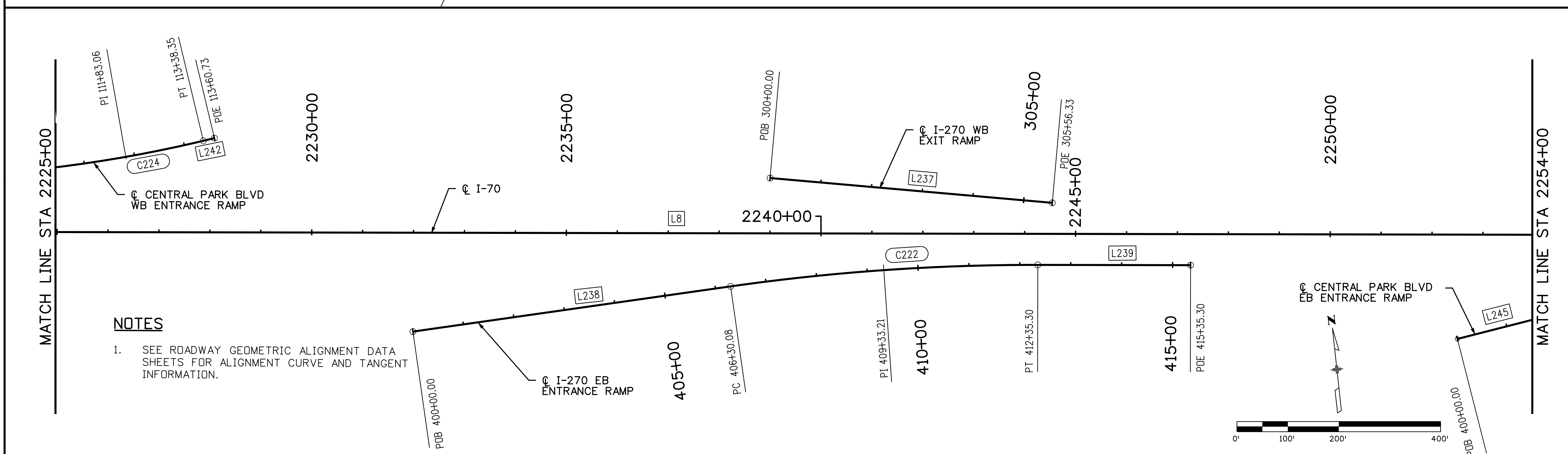

NOTES

1. SEE ROADWAY GEOMETRIC ALIGNMENT DATA SHEETS FOR ALIGNMENT CURVE AND TANGENT INFORMATION.

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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.

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Region 1 KJS

PROPOSAL
No Revisions:
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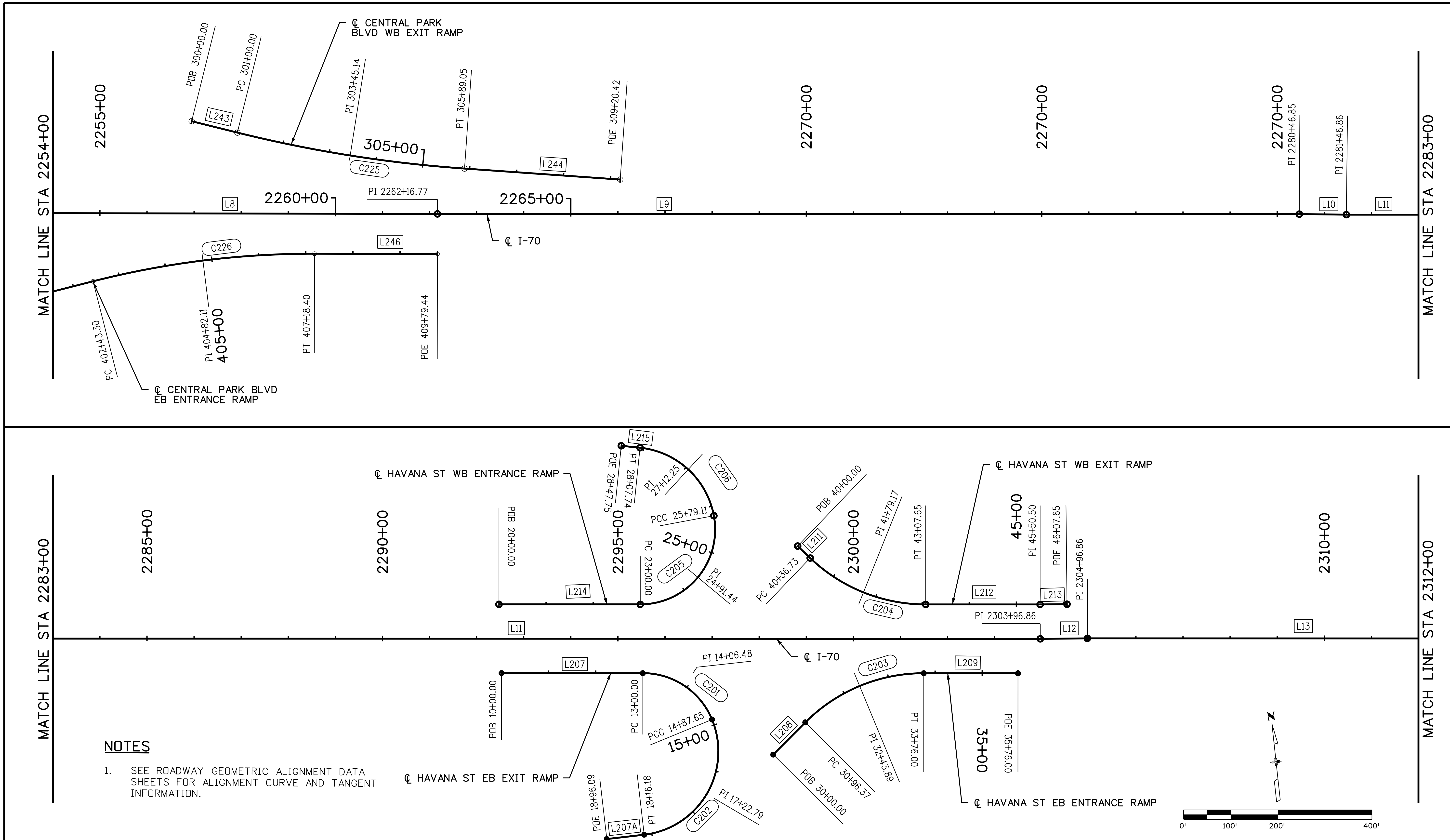
CENTRAL 70
ROADWAY GEOMETRIC PLAN
I-70 - RAMPS
STA 2196+00 TO STA 2254+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	GEOM	Subset Sheets: GE19	of 29

Project No./Code
FBR 0704-234
19631
Sheet Number 28



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1. SEE ROADWAY GEOMETRIC ALIGNMENT DATA SHEETS FOR ALIGNMENT CURVE AND TANGENT INFORMATION.

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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.

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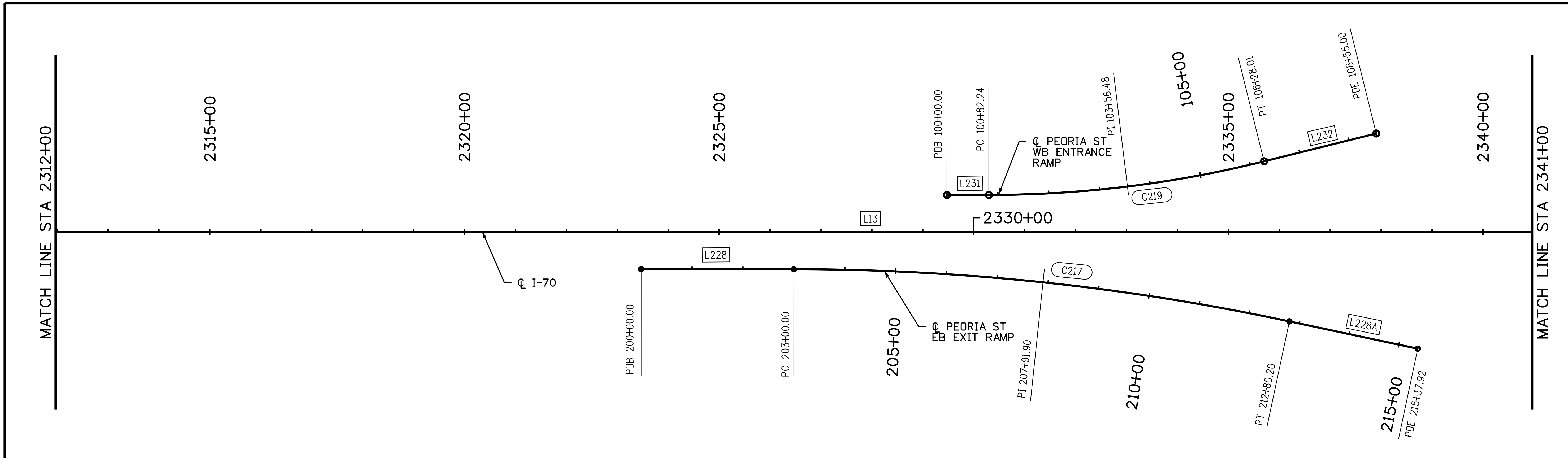
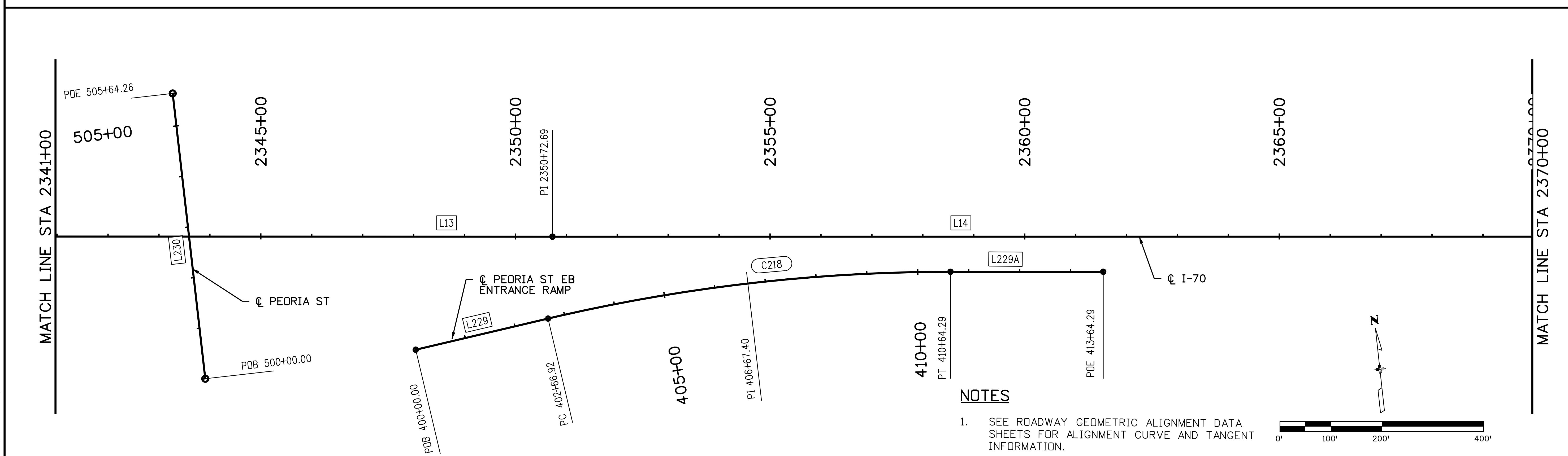
CENTRAL 70
ROADWAY GEOMETRIC PLAN
I-70 - RAMPS
STA 2254+00 TO STA 2312+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	GEOM	Subset Sheets: GE20	of 29

Project No./Code
FBR 0704-234
19631
Sheet Number 29





NOTES

1. SEE ROADWAY GEOMETRIC ALIGNMENT DATA SHEETS FOR ALIGNMENT CURVE AND TANGENT INFORMATION.

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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		
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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

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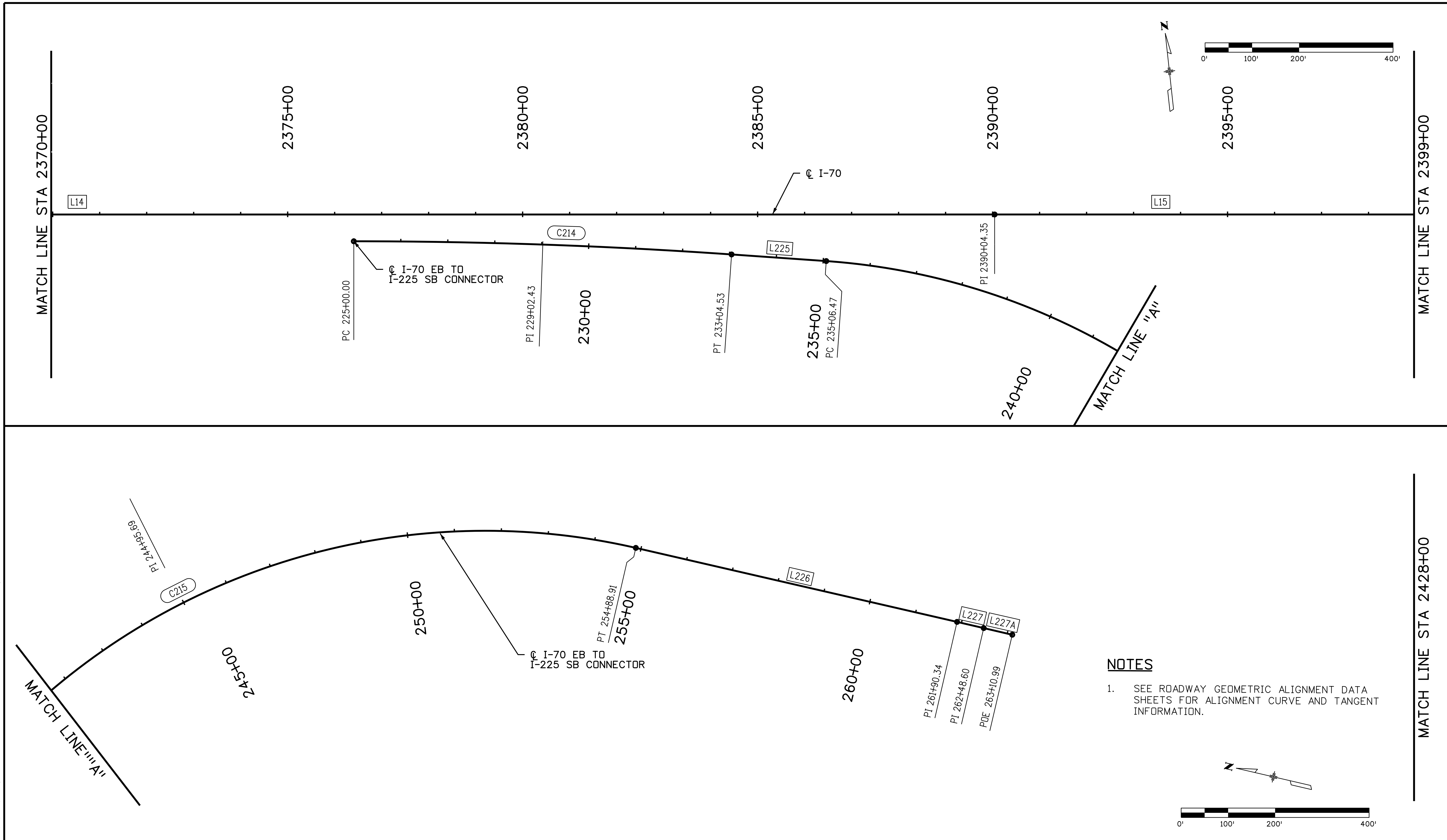
CENTRAL 70
ROADWAY GEOMETRIC PLAN
I-70 - RAMPS
STA 2312+00 TO STA 2370+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	GEOM	Subset Sheets: GE21	of 29

Project No./Code
FBR 0704-234
19631
Sheet Number 30



NOTES

1. SEE ROADWAY GEOMETRIC ALIGNMENT DATA SHEETS FOR ALIGNMENT CURVE AND TANGENT INFORMATION.

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.

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PROPOSAL
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Void:

CENTRAL 70
ROADWAY GEOMETRIC PLAN
I-70 - I-225 CONNECTOR
STA 2370+00 TO STA 2399+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: GEOM		Subset Sheets: GE22 of 29	

Project No./Code
FBR 0704-234
19631
Sheet Number 31

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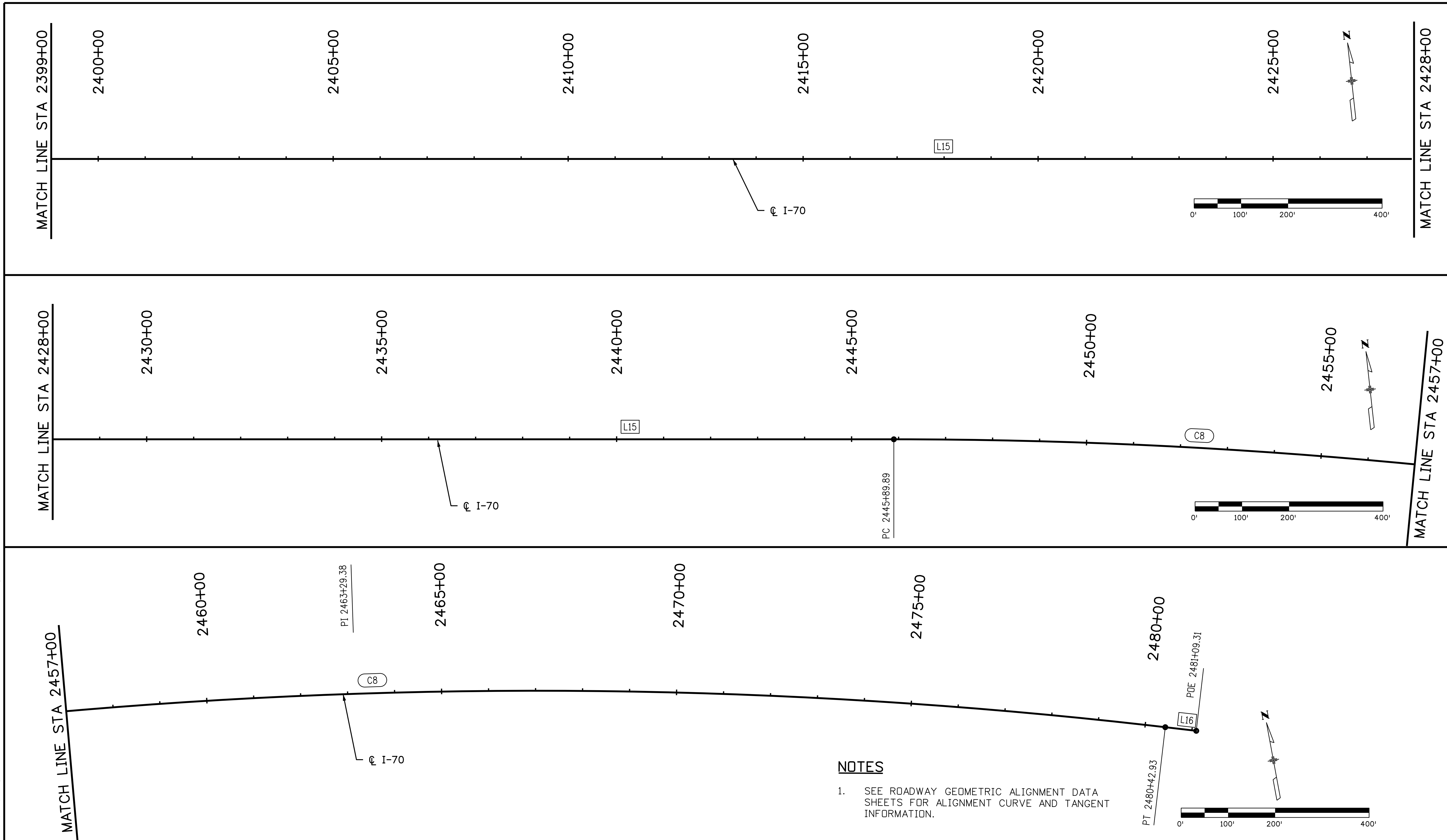

NOTES

1. SEE ROADWAY GEOMETRIC ALIGNMENT DATA SHEETS FOR ALIGNMENT CURVE AND TANGENT INFORMATION.

Print Date: 5/19/2017		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			

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PROPOSAL
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Revised:
Void:

CENTRAL 70
I-70
ROADWAY GEOMETRIC PLAN
STA 2399+00 TO STA 2481+09.31

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	GEOM	Subset Sheets: GE23 of 29	

Project No./Code
FBR 0704-234
19631
Sheet Number 32

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I-70

Line Table

Name	Length	Direction
L1	58.07	N 86°19'18" E
L2	2817.34	N 89°59'38" E
L3	0.03	S 84°10'00" E
L4	1161.18	N 89°25'29" E
L5	1557.34	S 75°45'05" E
L6	4762.44	N 89°47'03" E
L7	612.90	N 88°48'03" E
L8	5018.72	S 83°37'33" E
L9	1830.08	S 83°42'53" E
L10	100.01	S 83°05'08" E
L11	2250.00	S 83°42'58" E
L12	100.01	S 84°18'54" E
L13	4575.83	S 83°42'53" E
L14	3931.66	S 83°43'56" E
L15	5585.54	S 83°43'49" E
L16	66.38	S 66°36'03" E
L235	593.91	S 70°34'08" E
L236	619.09	S 89°54'23" E
L237	399.79	S 84°09'15" E
L238	2302.09	N 86°19'18" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C1	50000.00	1030.95	1030.93	515.49	2.66	2.66	0°06'53"	N 85°43'52" E
C2	25000.00	2117.75	2117.12	1059.51	22.42	22.44	0°13'45"	N 87°34'02" E
C3	11100.00	1131.31	1130.82	566.14	14.41	14.43	0°30'58"	S 87°05'11" E
C4	15000.00	1677.78	1676.90	839.77	23.45	23.49	0°22'55"	S 87°22'15" E
C5	3650.00	944.34	941.71	474.82	30.50	30.76	1°11'37"	S 83°09'48" E
C6	4800.00	1211.76	1208.55	609.12	38.19	38.49	1°11'37"	S 82°59'01" E
C7	16000.00	2114.86	2113.32	1058.97	34.93	35.01	0°21'29"	S 87°24'45" E
C8	11550.00	3453.04	3440.20	1739.50	128.80	130.25	0°29'46"	S 75°09'56" E
C220	5729.58	1933.75	1924.58	976.16	81.39	82.56	1°00'00"	S 80°14'15" E
C221	3820.00	383.50	383.34	191.91	4.81	4.82	1°30'00"	S 87°01'49" E
C222	5741.47	954.38	953.28	478.29	19.82	19.89	0°59'53"	S 88°54'58" E

Brighton Blvd EB Entrance Ramp

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C10	6480.00	617.31	617.08	308.89	7.35	7.36	0°53'03"	N 81°35'22" E
C11	2840.00	348.90	348.68	174.67	5.36	5.37	2°01'03"	N 82°22'47" E
C12	24912.83	8.89	8.89	4.45	0.00	0.00	0°13'48"	N 85°54'34" E

Brighton Blvd

Line Table

Name	Length	Direction
L18	402.01	N 44°30'33" E
L19	0.53	N 18°13'59" E
L20	201.60	N 8°46'31" E
L21	174.78	N 6°25'45" E
L22	242.97	N 0°12'48" W

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C13	400.00	183.44	181.84	93.36	10.47	10.75	14°19'26"	N 31°22'16" E
C14	510.00	84.19	84.09	42.19	1.74	1.74	11°14'04"	N 13°30'15" E
C15	3000.00	122.84	122.84	61.43	0.63	0.63	1°54'35"	N 7°36'08" E
C16	978.00	113.38	113.32	56.75	1.64	1.65	5°51'30"	N 3°06'28" E

Brighton Blvd WB Entrance Ramp

Line Table

Name	Length	Direction
L28	1140.80	N 85°48'56" E
L29	94.34	N 75°28'41" E
L30	158.19	N 89°53'22" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C23	1938.00	349.67	349.19	175.31	7.88	7.91	2°57'23"	N 80°38'48" E
C24	1039.00	261.34	260.65	131.36	8.21	8.27	5°30'52"	N 82°41'01" E

E 47th Ave

Line Table

Name	Length	Direction
L31	556.39	N 89°51'19" E
L32	69.92	N 89°20'49" E
L33	119.81	N 89°51'19" E
L57	375.87	S 89°53'23" E

46th Ave N

Line Table

Name	Length	Direction
L23	363.81	N 87°33'02" E
L24	491.42	N 87°20'37" E
L25	97.04	S 87°16'43" E
L26	44.21	S 79°28'42" E
L27	289.69	S 87°16'43" E
L28	341.15	S 89°51'56" E
L52	46.26	S 0°54'55" E
L53	128.13	S 89°51'42" E
L54	110.68	N 86°36'37" E
L55	163.94	N 89°59'38" E
L55A	40.43	N 69°54'47" E
L73	125.88	S 89°52'50" E
L74	39.15	S 74°54'57" E
L75	0.00	N 87°06'08" E
L76	154.12	S 82°27'03" E
L77	33.51	S 87°53'26" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C17	2012.00	141.26	141.23	70.66	1.24	1.24	2°50'52"	N 83°12'13" E
C18	1012.00	112.30	112.24	56.21	1.56	1.56	5°39'42"	N 84°22'17" E
C19	2000.00	112.10	112.09	56.07	0.79	0.79	2°51'53"	N 89°09'22" E
C20	2000.00	119.33	119.31	59.68	0.89	0.89	2°51'53"	N 89°03'10" E
C21	2000.00	187.72	187.65	93.93	2.20	2.20	2°51'53"	S 89°58'03" E
C22	1000.00	45.15	45.14	22.58	0.25	0.25	5°43'46"	S 88°34'20" E
C47	27.00	41.92	37.83	26.51	7.73	10.84	212°12'24"	S 45°23'18" E
C48	510.00	31.40	31.40	15.71	0.24	0.24	11°14'04"	N 88°22'28" E
C49	500.00	63.82	63.78	31.95	1.02	1.02	11°27'33"	N 82°57'13" E
C50	500.00	93.35	93.21	46.81	2.18	2.19	11°27'33"	N 84°38'43" E
C51	6417.21	118.90	118.90	59.45	0.28	0.28	0°53'34"	N 89°27'47" E
C52	333.00	60.66	60.58	30.42	1.38	1.39	17°12'21"	N 83°42'48" E
C52A	339.00	22.28	22.28	11.15	0.18	0.18	16°54'05"	N 83°07'30" E
C52B	333.00	180.10	177.91	92.31	12.10	12.56	17°12'21"	N 67°49'43" E
C52C	339.00	247.13	241.70	129.35	22.27	23.84	16°54'05"	N 73°13'09" E
C52D	111.00	164.15	149.60	101.23	28.99	39.23	51°37'04"	N 51°44'18" E
C71	1000.00	261.18	260.44	131.34	8.51	8.59	5°43'46"	S 82°23'54" E
C72	1000.00	313.84	312.56	158.22	12.29	12.44	5°43'46"	S 83°54'25" E
C73	6539.79	1192.44	1190.79	597.88	27.16	27.27	0°52'34"	S 87°40'28" E
C74	2938.00	278.94	278.83	139.57	3.31	3.31	1°57'01"	S 85°10'15" E

Brighton Blvd EB Exit Ramp

Line Table

Name	Length	Direction
L34	201.24	N 89°42'39" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C25	4100.00	247.45	247.41	123.76	1.87	1.87	1°23'51"	N 87°58'54" E

Brighton Blvd WB Exit Ramp

Line Table

Name	Length	Direction
L35	143.31	N 87°33'02" E
L36	301.59	N 89°11'53" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C26	4103.00	313.18	313.11	156.67	2.99	2.99	1°23'47"	N 87°07'48" E
C27	2024.00	166.35	166.30	83.22	1.71	1.71	2°49'51"	N 86°57'44" E
C28	1000.00	28.55	28.55	14.28	0.10	0.10	5°43'46"	N 85°25'32" E
C29	8000.00	182.48	182.48	91.24	0.52	0.52	0°42'58"	N 86°53'49" E
C30	6480.00	186.34	186.34	93.18	0.67	0.67	0°53'03"	N 88°22'27" E

Local Road 1

Line Table

Name	Length	Direction
L39	18.83	S 0°11'19" E
L40	389.05	N 87°33'02" E
L41	52.30	N 85°47'36" E
L42	12.43	N 84°16'13" E
L43	77.22	N 82°56'06" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C37	35.00	56.36	50.46	36.41	10.74	15.50	163°42'08"	S 46°19'08" E
C38	4964.71	152.25	152.25	76.13	0.58	0.58	1°09'15"	N 86°40'19" E
C39	952.71	22.20	22.20	11.10	0.06	0.06	6°00'50"	N 83°36'09" E
C40	1010.50	69.91	69.90	34.97	0.60	0.60	5°40'12"	N 84°55'02" E
C41	101.00	64.70	63.60	33.50	5.14	5.41	56°43'43"	N 68°32'49" E

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Unit Leader

Front Range Mobility Group

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Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
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CENTRAL 70
ROADWAY GEOMETRIC
ALIGNMENT DATA

Designer:
Detailer:
Structure Numbers
Sheet Subset: GEOM
Subset Sheets: GE24 of 29

Project No./Code
FBR 0704-234
19631
Sheet Number 33

46th Ave S

Line Table

Name	Length	Direction
L37	277.44	N 82°50'28" E
L38	623.53	N 83°47'34" E
L61	152.29	S 88°26'30" E
L62	60.72	S 81°05'18" E
L63	588.37	N 89°59'38" E
L64	54.12	S 85°10'48" E
L93	419.60	N 86°03'06" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C31	6492.00	176.11	176.10	88.06	0.60	0.60	0°52'57"	N 83°37'05" E
C32	4680.00	77.74	77.74	38.87	0.16	0.16	1°13'27"	N 83°19'01" E
C33	2000.00	95.86	95.85	47.94	0.57	0.57	2°51'53"	N 85°09'57" E
C34	24883.83	482.20	482.19	241.11	1.17	1.17	0°13'49"	N 87°05'39" E
C35	2000.00	404.03	403.34	202.70	10.19	10.25	2°51'53"	S 86°33'48" E
C36	1012.00	97.07	97.03	48.57	1.16	1.16	5°39'42"	S 83°31'26" E
C55	25118.96	194.84	194.84	97.42	0.19	0.19	0°13'41"	S 88°39'50" E
C56	10000.00	333.58	333.56	166.80	1.39	1.39	0°34'23"	S 89°50'30" E
C57	1985.00	36.46	36.45	18.23	0.08	0.08	2°53'11"	N 89°43'44" E
C58	33120.00	381.30	381.29	190.65	0.55	0.55	0°10'23"	N 89°55'31" E
C59	1300.00	211.38	211.15	105.92	4.29	4.31	4°24'27"	S 85°44'47" E
C60	510.00	79.38	79.30	39.77	1.54	1.55	11°14'04"	N 85°32'50" E
C61	510.00	42.96	42.94	21.49	0.45	0.45	11°14'04"	S 87°35'35" E
C62	4665.00	49.96	49.96	24.98	0.07	0.07	1°13'42"	S 84°52'24" E
C63	333.00	100.92	100.53	50.85	3.82	3.86	17°12'21"	N 86°45'05" E
C64	333.00	119.96	119.31	60.64	5.39	5.48	17°12'21"	N 88°23'22" E
C90	1568.00	208.36	208.21	104.33	3.46	3.47	3°39'15"	N 89°51'30" E
C91	8000.00	1125.43	1124.50	563.64	19.78	19.83	0°42'58"	S 89°55'06" E
C92	510.00	81.87	81.78	41.02	1.64	1.65	11°14'04"	N 89°30'47" E
C93	510.00	89.87	89.75	45.05	1.98	1.99	11°14'04"	N 89°57'45" E
C94	4680.00	73.09	73.09	36.54	0.14	0.14	1°13'27"	S 84°32'31" E

York St

Line Table

Name	Length	Direction
L44	401.90	N 0°13'27" E
L45	252.41	N 1°01'31" E
L46	142.65	N 3°17'17" E
L47	727.78	N 0°08'31" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C42	510.00	201.23	199.93	101.94	9.89	10.09	11°14'04"	N 11°31'41" E
C43	510.00	378.81	370.16	198.62	34.77	37.31	11°14'04"	N 1°33'10" E
C44	510.00	184.71	183.70	93.38	8.34	8.48	11°14'04"	N 9°21'01" W

Columbine St

Line Table

Name	Length	Direction
L48	254.01	N 0°03'21" W
L49	34.31	N 15°21'26" E
L50	260.80	N 0°14'12" W

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C45	336.00	90.39	90.11	45.47	3.03	3.06	17°03'08"	N 7°39'03" E
C46	364.00	99.07	98.76	49.84	3.37	3.40	15°44'26"	N 7°33'37" E

Thompson Ct

Line Table

Name	Length	Direction
L51	60.98	N 0°21'38" W

E 45th Ave

Line Table

Name	Length	Direction
L56	156.60	S 89°55'54" E

Josephine St

Line Table

Name	Length	Direction
L58	118.15	N 0°00'01" W
L59	202.72	N 0°05'31" E
L60	196.15	N 0°18'40" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C53	1000.00	165.36	165.17	82.87	3.42	3.43	5°43'46"	N 4°44'13" E
C54	1000.00	163.75	163.57	82.06	3.35	3.36	5°43'46"	N 4°46'59" E

Clayton St

Line Table

Name	Length	Direction
L68	421.78	N 0°00'25" E
L69	126.16	N 0°34'16" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C68	10000.00	98.45	98.45	49.22	0.12	0.12	0°34'23"	N 0°17'21" E

Steele St EB Exit Ramp

Line Table

Name	Length	Direction
L71	714.37	S 85°00'22" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C69	5700.00	454.82	454.70	227.53	4.54	4.54	1°00'19"	S 82°43'13" E
C70	1580.00	163.46	163.39	81.80	2.11	2.12	3°37'35"	S 83°23'53" E

E 48th Ave

Line Table

Name	Length	Direction
L72	517.42	S 89°50'38" E

Steele St / Vasquez Blvd

Line Table

Name	Length	Direction
L65	544.15	N 0°07'10" E
L66	514.59	N 0°07'10" E
L67	614.14	N 35°31'30" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C65	522.00	84.80	84.71	42.50	1.72	1.73	10°58'34"	N 4°46'25" E
C66	510.00	82.86	82.76	41.52	1.68	1.69	11°14'04"	N 4°46'25" E
C67	850.00	525.25	516.93	271.31	40.25	42.25	6°44'26"	N 17°49'20" E

Cook St

Line Table

Name	Length	Direction
L78	775.79	N 0°00'00" E

Colorado Blvd EB Exit Ramp

Line Table

Name	Length	Direction
L79	399.75	S 86°00'22" E
L80	475.32	S 84°06'38" E
L81	8.71	S 89°45'16" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C75	7870.00	254.26	254.25	127.14	1.03	1.03	0°43'41"	S 86°55'54" E
C76	10991.04	200.70	200.69	100.35	0.46	0.46	0°31'17"	S 87°20'03" E
C77	4680.00	220.58	220.56	110.31	1.30	1.30	1°13'27"	S 85°27'39" E
C78	4680.00	238.17	238.14	119.11	1.51	1.52	1°13'27"	S 82°39'09" E
C79	1580.00	236.05	235.83	118.24	4.41	4.42	3°37'35"	S 85°28'28" E

Vasquez Blvd WB Entrance Ramp

Line Table

Name	Length	Direction
L82	600.38	N 88°37'32" E
L83	67.36	N 89°59'38" E
L84	124.45	S 89°52'50" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C80	643.00	305.62	302.75	155.75	18.07	18.59	8°54'39"	N 76°22'39" E
C81	357.00	170.46	168.85	86.89	10.13	10.42	16°02'57"	N 76°26'26" E

Fillmore St

Line Table

Name	Length	Direction
L84A	128.39	N 0°27'15" E
L85	183.54	N 7°53'01" E
L86	126.74	N 0°08'04" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C83	500.00	64.83	64.79	32.46	1.05	1.05	11°27'33"	N 4°10'08" E
C84	500.00	67.62	67.57	33.86	1.14	1.15	11°27'33"	N 4°00'32" E

Milwaukee St

Line Table

Name	Length	Direction
L87	264.49	N 0°13'54" W
L88	254.87	N 0°00'22" W

Colorado Blvd WB Entrance Ramp

Line Table

Name	Length	Direction
L89	0.02	S 87°20'04" E
L90	0.02	S 84°51'52" E
L91	0.00	N 89°44'16" E
L92	143.25	S 87°53'26" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C85	6468.00	297.08	297.05	148.56	1.71	1.71	0°53'09"	N 88°40'41" E
C86	6492.00	600.90	600.69	300.66	6.95	6.96	0°52'57"	S 89°59'10" E
C87	11205.00	483.03	482.99	241.55	2.60	2.60	0°30'41"	S 86°05'58" E
C88	6500.00	612.35	612.12	306.40	7.21	7.22	0°52'53"	S 87°33'48" E
C89	643.00	26.61	26.61	13.31	0.14	0.14	8°54'39"	S 89°04'35" E

Monroe St

Line Table

Name	Length	Direction
L94	98.00	N 89°53'18" W
L95	507.10	N 0°10'28" E
L96	212.44	S 80°00'16" E
L95A	61.69	N 0°10'42" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C95	198.00	311.23	280.17	198.22	58.07	82.17	28°56'14"	N 44°51'25" W
C96	198.00	344.96	302.96	235.22	70.49	109.46	28°56'14"	N 50°05'06" E
C96A	198.00	344.94	302.95	235.20	70.49	109.45	28°56'14"	N 50°05'13" E

Colorado Blvd

Line Table

Name	Length	Direction
L97	150.00	N 0°05'38" E
L98	336.14	N 7°29'33" W
L99	750.07	N 0°03'45" E
L100	209.40	N 10°50'17" E
L101	243.46	N 0°05'35" W

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C97	2007.25	265.78	265.58	133.08	4.40	4.41	2°51'16"	N 3°41'58" W
C98	2000.00	263.72	263.53	132.05	4.35	4.35	2°51'53"	N 3°42'54" W
C99	2000.00	376.14	375.59	188.63	8.84	8.88	2°51'53"	N 5°27'01" E
C100	1503.00	286.75	286.31	143.81	6.83	6.86	3°48'44"	N 5°22'21" E

Colorado Blvd EB Entrance Ramp

Line Table

Name	Length	Direction
L102	366.39	S 89°45'16" E
L103	121.70	N 89°25'29" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C101	6480.00	508.91	508.78	254.59	5.00	5.00	0°53'03"	N 87°59'44" E
C102	6820.00	437.92	437.85	219.04	3.51	3.52	0°50'24"	N 87°35'07" E

Stapleton Dr N

Line Table

Name	Length	Direction
L104	246.63	S 89°31'46" E
L105	964.77	N 89°25'29" E
L106	161.37	S 89°01'51" E
L133	282.83	S 75°45'05" E
L134	366.98	S 75°45'05" E
L149	200.06	N 89°47'03" E
L150	313.41	N 89°47'03" E
L151	131.28	S 88°11'04" E
L152	100.33	N 89°47'03" E
L160	1372.57	N 89°47'03" E
L161	74.21	S 89°57'29" E
L162	261.66	N 89°47'03" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C103	7039.79	128.49	128.49	64.25	0.29	0.29	0°48'50"	N 89°56'52" E
C104	3761.96	83.67	83.67	41.84	0.23	0.23	1°31'23"	S 89°56'17" E
C105	1000.00	85.24	85.21	42.64	0.91	0.91	5°43'46"	N 88°15'26" E
C106	1024.00	92.11	92.08	46.09	1.04	1.04	5°35'43"	N 88°23'32" E
C135	2000.00	270.87	270.67	135.64	4.58	4.59	2°51'53"	S 79°37'53" E
C136	5712.00	429.20	429.10	214.70	4.03	4.03	1°00'11"	S 77°54'14" E
C137	3782.00	284.18	284.12	142.16	2.67	2.67	1°30'54"	S 77°54'14" E
C138	1006.00	181.06	180.82	90.78	4.07	4.09	5°41'43"	S 70°35'43" E
C139	1024.00	184.30	184.05	92.40	4.14	4.16	5°35'43"	S 70°35'43" E
C161	2976.00	249.39	249.32	124.77	2.61	2.61	1°55'31"	N 87°23'01" E
C162	1524.00	127.71	127.68	63.89	1.34	1.34	3°45'34"	N 87°23'01" E
C163	9181.79	325.53	325.51	162.78	1.44	1.44	0°37'26"	S 89°12'00" E
C164	2626.00	189.60	189.56	94.84	1.71	1.71	2°10'55"	N 89°44'50" E
C165	5012.00	184.18	184.17	92.10	0.85	0.85	1°08'35"	N 88°43'53" E
C168	845.00	305.84	304.17	154.61	13.80	14.03	6°46'50"	N 79°24'56" E

E 46th Ave

Line Table

Name	Length	Direction
L107	52.15	S 39°14'56" E
L108	30.13	S 9°21'36" E
L109	196.76	N 89°50'09" E
L110	222.67	N 24°42'09" E
L111	195.09	N 10°50'17" E
L112	63.93	N 0°00'00" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C107	110.00	57.38	56.73	29.36	3.72	3.85	52°05'13"	S 24°18'16" E
C108	110.00	155.13	142.59	93.62	26.23	34.45	52°05'13"	S 49°45'44" E
C109	107.00	121.64	115.19	68.34	16.82	19.96	53°32'51"	N 57°16'09" E
C110	488.00	118.09	117.80	59.33	3.57	3.59	11°44'27"	N 17°46'13" E
C111	488.00	92.31	92.17	46.29	2.18	2.19	11°44'27"	N 5°25'09" E

Colorado Blvd WB Exit Ramp

Line Table

Name	Length	Direction
L113	220.85	S 87°53'26" E
L114	0.04	S 74°48'56" E
L115	191.32	S 89°31'46" E
L116	581.87	S 87°34'31" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C112	1012.00	230.94	230.44	115.98	6.58	6.62	5°39'42"	S 81°21'11" E
C113	788.00	202.36	201.81	101.74	6.49	6.54	7°16'16"	S 82°10'21" E

Local Road 2

Line Table

Name	Length	Direction
L117	339.14	S 31°06'56" E
L118	444.54	S 89°31'46" E
L119	959.41	N 89°25'34" E
L120	103.02	S 89°01'51" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C114	185.00	188.61	180.55	103.42	23.52	26.95	30°58'14"	S 60°19'21" E
C115	7000.00	127.60	127.60	63.80	0.29	0.29	0°49'07"	N 89°56'54" E
C116	522.00	70.51	70.45	35.31	1.19	1.19	10°58'34"	S 84°15'50" E
C117	498.00	95.32	95.17	47.80	2.28	2.29	11°30'19"	S 85°52'39" E
C118	1048.00	102.21	102.17	51.14	1.25	1.25	5°28'02"	N 88°10'31" E

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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
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Region 1

CDOT CO

KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY GEOMETRIC
ALIGNMENT DATA

Designer:
Detailer:
Structure Numbers
Sheet Subset: GEOM
Subset Sheets: GE26 of 29

Project No./Code
FBR 0704-234
19631
Sheet Number 35

Stapleton Dr S

Line Table

Name	Length	Direction
L121	195.32	S 86°16'54" E
L122	352.55	N 84°41'29" E
L123	770.59	N 89°25'29" E
L124	60.24	S 82°12'40" E
L130	1082.85	S 76°17'58" E
L131	86.76	S 73°49'27" E
L132	298.94	S 75°45'05" E
L182	197.85	N 89°47'03" E
L183	394.87	N 89°47'03" E
L158	760.46	N 89°47'03" E
L159	200.00	S 87°00'41" E
L163	150.00	N 89°47'03" E
L164	305.05	N 89°47'03" E
L165	351.02	S 87°00'41" E
L166	260.59	S 49°43'20" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C119	510.00	80.35	80.27	40.26	1.58	1.59	11°14'04"	N 89°12'17" E
C120	3000.00	247.84	247.77	123.99	2.56	2.56	1°54'35"	N 87°03'29" E
C121	3552.04	328.34	328.22	164.29	3.79	3.80	1°36'47"	S 87°55'37" E
C122	510.00	27.31	27.30	13.66	0.18	0.18	11°14'04"	S 83°44'42" E
C130	1776.00	169.47	169.40	84.80	2.02	2.02	3°13'34"	S 79°01'59" E
C131	1024.00	44.24	44.24	22.12	0.24	0.24	5°35'43"	S 75°03'42" E
C132	7882.79	265.16	265.15	132.59	1.11	1.12	0°43'37"	S 74°47'16" E
C133	1000.00	111.50	111.45	55.81	1.55	1.56	5°43'46"	S 78°56'45" E
C134	1024.00	126.45	126.37	63.30	1.95	1.95	5°35'43"	S 78°36'09" E
C194	7858.00	26.93	26.93	13.46	0.01	0.01	0°43'45"	N 87°32'56" E
C195	1057.00	166.55	166.37	83.45	3.28	3.29	5°25'14"	S 87°50'20" E
C196	1057.00	127.12	127.04	63.64	1.91	1.91	5°25'14"	S 86°46'14" E
C197	7926.00	489.40	489.32	244.78	3.78	3.78	0°43'22"	N 88°00'55" E
C198	7482.00	220.39	220.38	110.20	0.81	0.81	0°45'57"	N 87°05'25" E
C199	14061.00	167.47	167.47	83.74	0.25	0.25	0°24'27"	N 88°16'31" E
C200	2982.00	262.03	261.95	131.10	2.88	2.88	1°55'17"	S 88°51'58" E
C201	3017.00	203.62	203.58	101.85	1.72	1.72	1°53'57"	S 88°16'56" E
C166	3000.00	204.51	204.47	102.29	1.74	1.74	1°54'35"	N 87°49'53" E
C167	3000.00	372.29	372.05	186.39	5.77	5.78	1°54'35"	N 89°26'01" E
C169	498.00	108.29	108.08	54.36	2.94	2.96	11°30'19"	S 83°59'11" E
C170	300.00	65.23	65.11	32.75	1.77	1.78	19°05'55"	S 83°59'11" E
C171	791.15	63.17	63.15	31.60	0.63	0.63	7°14'31"	N 87°29'49" E
C172	2955.21	401.24	400.93	200.93	6.81	6.82	1°56'20"	N 89°05'57" E
C173	31.00	20.18	19.82	10.46	1.63	1.72	184°49'30"	S 68°22'00" E

Dahlia St

Line Table

Name	Length	Direction
L125	595.13	N 1°17'14" E

Holly St WB Entrance Ramp

Line Table

Name	Length	Direction
L135	818.09	S 75°45'05" E
L136	226.02	S 83°48'00" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C140	5712.00	300.23	300.19	150.15	1.97	1.97	1°00'11"	S 77°15'26" E
C141	7894.00	414.92	414.87	207.51	2.73	2.73	0°43'33"	S 77°15'26" E
C142	4704.04	198.49	198.47	99.26	1.05	1.05	1°13'05"	S 76°57'37" E
C143	2024.00	198.92	198.84	99.54	2.44	2.45	2°49'51"	S 80°59'04" E

Holly St EB Exit Ramp

Line Table

Name	Length	Direction
L137	515.52	S 73°49'27" E
L138	487.33	S 75°45'05" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C144	7870.00	264.73	264.72	132.38	1.11	1.11	0°43'41"	S 74°47'16" E
C145	4098.00	148.68	148.67	74.35	0.67	0.67	1°23'53"	S 74°42'43" E
C146	2467.50	428.03	427.49	214.55	9.28	9.31	2°19'19"	S 78°38'32" E

Holly St

Line Table

Name	Length	Direction
L139	246.02	N 0°02'40" E
L140	210.56	N 6°47'26" E
L141	189.00	N 0°11'09" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C147	1000.00	117.74	117.67	58.94	1.73	1.74	5°43'46"	N 3°25'03" E
C148	515.00	195.18	194.01	98.78	9.22	9.39	11°07'31"	N 4°04'01" W
C149	510.00	134.50	134.11	67.64	4.43	4.47	11°14'04"	N 7°22'09" W

Holly St EB Entrance Ramp

Line Table

Name	Length	Direction
L142	197.85	N 89°47'03" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C150	2455.50	383.02	382.63	191.90	7.46	7.49	2°20'00"	S 88°04'50" E
C151	7894.00	321.50	321.48	160.77	1.64	1.64	0°43'33"	N 88°37'03" E
C152	7870.00	325.42	325.40	162.73	1.68	1.68	0°43'41"	N 88°35'59" E
C153	14115.00	583.65	583.61	291.86	3.02	3.02	0°24'21"	N 88°35'59" E

Holly St WB Exit Ramp

Line Table

Name	Length	Direction
L143	66.94	S 84°10'07" E
L144	1119.70	N 89°47'03" E
L145	363.57	S 88°11'04" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C154	4704.21	496.50	496.27	248.48	6.55	6.56	1°13'05"	S 87°11'32" E
C155	9130.00	323.69	323.67	161.86	1.43	1.43	0°37'39"	S 89°12'00" E

Monaco St

Line Table

Name	Length	Direction
L153	200.45	N 0°11'15" E
L154	96.21	N 0°08'02" W
L155	198.87	N 0°12'40" W
L156	119.57	N 0°35'50" E
L157	316.12	N 0°07'29" E

Quebec St EB Exit Ramp

Line Table

Name	Length	Direction
L167	1411.78	S 87°00'41" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C174	7870.00	440.16	440.10	220.14	3.08	3.08	0°43'41"	S 88°36'49" E

Quebec St WB Entrance Ramp

Line Table

Name	Length	Direction
L168	493.69	N 69°02'48" E
L169	39.72	S 86°24'44" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C175	833.00	301.50	299.85	152.42	13.60	13.83	6°52'42"	N 79°24'56" E
C176	430.00	184.18	182.77	93.52	9.82	10.05	13°19'29"	N 81°19'02" E

Quebec St WB Exit Ramp

Line Table

Name	Length	Direction
L170	58.88	S 86°24'44" E
L171	271.08	S 60°30'35" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C177	340.00	153.71	152.40	78.19	8.65	8.88	16°51'06"	S 73°27'40" E
C178	662.00	350.44	346.36	179.43	23.05	23.89	8°39'18"	S 75°40'29" E

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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
ROADWAY GEOMETRIC ALIGNMENT DATA

Designer:
Detailer:
Structure Numbers
Sheet Subset: GEOM
Subset Sheets: GE27 of 29

Project No./Code
FBR 0704-234
19631

Quebec St EB Entrance Ramp

Line Table

Name	Length	Direction
L172	392.98	N 77°31'52" E
L173	54.63	N 89°08'46" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C179	976.00	264.60	263.79	133.12	8.95	9.04	5°52'14"	N 85°17'52" E
C180	655.00	132.78	132.55	66.62	3.36	3.38	8°44'51"	N 83°20'19" E

Quebec St

Line Table

Name	Length	Direction
L174	493.83	N 0°04'53" W
L175	421.83	N 0°53'47" W
L176	383.09	N 0°04'53" W
L177	361.68	N 33°49'29" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C181	1393.00	235.48	235.20	118.02	4.97	4.99	4°06'47"	N 4°45'41" E
C182	1570.47	663.88	658.95	336.98	34.95	35.75	3°38'54"	N 21°42'52" E

I-270 EB Connector

Line Table

Name	Length	Direction
L233	236.83	S 28°54'56" E
L234	5.00	S 27°55'56" E
L235	487.18	S 87°45'34" E
L236	132.09	N 88°09'53" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C220	2040.00	2130.13	2034.67	1173.70	271.77	313.54	2°48'31"	S 57°50'45" E
C221	2710.00	192.77	192.73	96.43	1.71	1.72	2°06'51"	S 89°47'50" E

I-270 WB Exit Ramp

Line Table

Name	Length	Direction
L237	556.33	S 78°42'22" E

I-270 EB Entrance Ramp

Line Table

Name	Length	Direction
L238	630.08	N 88°09'53" E
L239	300.00	S 83°37'33" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C222	4224.00	605.22	604.71	303.13	10.84	10.86	1°21'23"	S 87°43'50" E

Central Park Blvd WB Entrance Ramp

Line Table

Name	Length	Direction
L240	300.00	S 83°37'33" E
L241	375.12	N 89°40'47" E
L242	22.37	N 82°50'25" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C223	3015.00	352.28	352.08	176.34	5.14	5.15	1°54'01"	S 86°58'23" E
C224	2605.00	310.95	310.77	155.66	4.64	4.65	2°11'58"	N 86°15'36" E

Central Park Blvd WB Exit Ramp

Line Table

Name	Length	Direction
L243	100.00	S 69°46'19" E
L244	331.37	S 79°41'27" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C225	2825.00	489.05	488.44	245.14	10.58	10.62	2°01'41"	S 74°43'53" E

Central Park Blvd EB Entrance Ramp

Line Table

Name	Length	Direction
L245	243.3	N 81°58'16" E
L246	261.03	S 83°37'33" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C226	1890	475.11	473.86	238.81	14.91	15.03	3°01'53"	N 89°10'22" E

Central Park Blvd EB Exit Ramp

Line Table

Name	Length	Direction
L247	574.16	S 79°47'55" E

Havana St EB Exit Ramp

Line Table

Name	Length	Direction
L207	300.00	S 83°42'58" E
L207A	79.91	S 89°39'11" W

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C201	159.00	187.65	176.95	106.48	26.89	32.36	36°02'06"	S 49°54'23" E
C202	178.00	328.53	283.85	235.14	70.57	116.92	32°11'19"	S 36°46'41" W

Havana St EB Entrance Ramp

Line Table

Name	Length	Direction
L208	96.37	N 51°09'10" E
L209	200.00	S 83°42'58" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C203	355.00	279.63	272.46	147.52	27.18	29.43	16°08'23"	N 73°43'06" E

Havana St WB Exit Ramp

Line Table

Name	Length	Direction
L211	36.73	S 39°59'28" E
L212	242.85	S 83°42'58" E
L213	57.15	S 84°18'54" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C204	355.00	270.92	264.39	142.44	25.53	27.51	16°08'23"	S 61°51'13" E

Havana St WB Entrance Ramp

Line Table

Name	Length	Direction
L214	300.00	S 83°42'58" E
L215	40.01	N 77°53'10" W

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C205	159.00	279.11	244.63	191.44	57.41	89.85	36°02'06"	N 45°59'44" E
C206	178.00	228.63	213.24	133.15	35.46	44.29	32°11'19"	N 41°05'21" W

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I-70 EB TO I-225 SB Connector

Line Table

Name	Length	Direction
L225	201.94	S 79°43'56" E
L226	701.43	S 0°04'44" E
L227	58.26	S 0°00'34" E
L227A	62.39	S 0°06'00" W

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C214	11524.00	804.53	804.36	402.43	7.02	7.02	0°29'50"	S 81°43'56" E
C215	1426.00	1982.44	1826.61	1189.22	330.85	430.80	4°01'05"	S 39°54'20" E

Peoria St EB Exit Ramp

Line Table

Name	Length	Direction
L228	300	S 83°42'53" E
L228A	257.72	S 71°42'52" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C217	4680	980.2	978.41	491.9	25.64	25.78	1°13'27"	S 77°42'53" E

Peoria St EB Entrance Ramp

Line Table

Name	Length	Direction
L229	266.92	N 83°00'09" E
L229A	300.00	S 83°43'56" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C218	3444.00	797.37	795.59	400.48	23.05	23.21	1°39'49"	N 89°38'06" E

Peoria St

Line Table

Name	Length	Direction
L230	564.26	N 0°14'41" W

Peoria St WB Entrance Ramp

Line Table

Name	Length	Direction
L231	82.24	S 83°42'53" E
L232	226.99	N 82°19'31" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C219	2240.00	545.77	544.42	274.25	16.60	16.73	2°33'28"	N 89°18'19" E

UPRR EB Sidewalk

Line Table

Name	Length	Direction
L240	277.44	N 82°50'28" E
L241	546.29	N 83°47'34" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C223	4656.21	77.35	77.34	38.67	0.16	0.16	1°13'50"	N 83°19'01" E
C224	1000.00	42.74	42.73	21.37	0.23	0.23	5°43'46"	N 85°01'02" E
C225	24855.54	317.45	317.45	158.73	0.51	0.51	0°13'50"	N 86°36'26" E
C226	50.00	15.03	14.97	7.57	0.56	0.57	114°35'30"	N 78°21'48" E
C227	50.00	15.09	15.03	7.60	0.57	0.57	114°35'30"	N 78°23'51" E
C228	24860.04	263.71	263.71	131.86	0.35	0.35	0°13'50"	N 87°20'44" E
C229	1976.21	399.22	398.55	200.29	10.07	10.12	2°53'57"	S 86°33'48" E

UPRR WB Sidewalk

Line Table

Name	Length	Direction
L242	39.08	N 87°33'02" E
L243	97.93	N 85°21'51" E
L244	210.43	N 87°20'37" E

Curve Table

Name	Radius	Arc Length	Chord Length	Tangent Length	Middle Ordinate	External Distance	Degree of Curvature	Chord Direction
C230	2020.79	88.60	88.60	44.31	0.49	0.49	2°50'07"	N 88°48'23" E
C231	1690.60	138.63	138.59	69.36	1.42	1.42	3°23'21"	N 87°42'48" E
C232	1005.00	34.72	34.72	17.36	0.15	0.15	5°42'04"	N 86°21'14" E
C233	995.00	63.85	63.84	31.94	0.51	0.51	5°45'30"	N 89°10'55" E
C234	1005.00	59.56	59.55	29.79	0.44	0.44	5°42'04"	N 89°19'21" E
C235	2023.50	179.99	179.93	90.05	2.00	2.00	2°49'53"	S 89°49'37" E

NOTE: THE ROADWAY PLAN AND PROFILE SHEETS ARE IN THE FOLLOWING PLAN SET ORDER:

1. I-70 MAINLINE.
2. PARALLEL STREETS TO I-70 (WEST TO EAST).
3. CROSSING STREETS TO I-70, AND ENTRANCE AND EXIT RAMPS (WEST TO EAST).

ROADWAY PLAN SHEET INDEX

SHEET NO.	SHEET DESCRIPTION
RPL1	ROADWAY PLAN & PROFILE - SHEET INDEX
RPL2	ROADWAY PLAN - I-70 MAINLINE - STA 1000+00 TO STA 1004+00
RPL3	ROADWAY PLAN - I-70 MAINLINE - STA 1004+00 TO STA 1017+00
RPL4	ROADWAY PLAN - I-70 MAINLINE - STA 1017+00 TO STA 1031+00
RPL5	ROADWAY PLAN - I-70 MAINLINE - STA 1031+00 TO STA 1045+00
RPL6	ROADWAY PLAN - I-70 MAINLINE - STA 1045+00 TO STA 1059+00
RPL7	ROADWAY PLAN - I-70 MAINLINE - STA 1059+00 TO STA 2002+00
RPL8	ROADWAY PLAN - I-70 MAINLINE - STA 2002+00 TO STA 2016+00
RPL9	ROADWAY PLAN - I-70 MAINLINE - STA 2016+00 TO STA 2030+00
RPL10	ROADWAY PLAN - I-70 MAINLINE - STA 2030+00 TO STA 2044+00
RPL11	ROADWAY PLAN - I-70 MAINLINE - STA 2044+00 TO STA 2058+00
RPL12	ROADWAY PLAN - I-70 MAINLINE - STA 2058+00 TO STA 2072+00
RPL13	ROADWAY PLAN - I-70 MAINLINE - STA 2072+00 TO STA 2086+00
RPL14	ROADWAY PLAN - I-70 MAINLINE - STA 2086+00 TO STA 2100+00
RPL15	ROADWAY PLAN - I-70 MAINLINE - STA 2100+00 TO STA 2114+00
RPL16	ROADWAY PLAN - I-70 MAINLINE - STA 2114+00 TO STA 2128+00
RPL17	ROADWAY PLAN - I-70 MAINLINE - STA 2128+00 TO STA 2142+00
RPL18	ROADWAY PLAN - I-70 MAINLINE - STA 2142+00 TO STA 2156+00
RPL19	ROADWAY PLAN - I-70 MAINLINE - STA 2156+00 TO STA 2170+00
RPL20	ROADWAY PLAN - I-70 MAINLINE - STA 2170+00 TO STA 2182+00
RPL21	ROADWAY PLAN - I-70 MAINLINE - STA 2182+00 TO STA 2196+00
RPL22	ROADWAY PLAN - I-70 MAINLINE - STA 2196+00 TO STA 2210+00
RPL23	ROADWAY PLAN - I-70 MAINLINE - STA 2210+00 TO STA 2224+00
RPL24	ROADWAY PLAN - I-70 MAINLINE - STA 2224+00 TO STA 2238+00
RPL25	ROADWAY PLAN - I-70 MAINLINE - STA 2238+00 TO STA 2252+00
RPL26	ROADWAY PLAN - I-70 MAINLINE - STA 2252+00 TO STA 2266+00
RPL27	ROADWAY PLAN - I-70 MAINLINE - STA 2266+00 TO STA 2280+00
RPL28	ROADWAY PLAN - I-70 MAINLINE - STA 2280+00 TO STA 2294+00
RPL29	ROADWAY PLAN - I-70 MAINLINE - STA 2294+00 TO STA 2308+00
RPL30	ROADWAY PLAN - I-70 MAINLINE - STA 2308+00 TO STA 2322+00
RPL31	ROADWAY PLAN - I-70 MAINLINE - STA 2322+00 TO STA 2336+00
RPL32	ROADWAY PLAN - I-70 MAINLINE - STA 2336+00 TO STA 2350+00
RPL33	ROADWAY PLAN - I-70 MAINLINE - STA 2350+00 TO STA 2364+00
RPL34	ROADWAY PLAN - I-70 MAINLINE - STA 2364+00 TO STA 2378+00
RPL35	ROADWAY PLAN - I-70 MAINLINE - STA 2378+00 TO STA 2392+00
RPL36	ROADWAY PLAN - I-70 MAINLINE - STA 2392+00 TO STA 2406+00
RPL37	ROADWAY PLAN - I-70 MAINLINE - STA 2406+00 TO STA 2420+00
RPL38	ROADWAY PLAN - I-70 MAINLINE - STA 2420+00 TO STA 2434+00
RPL39	ROADWAY PLAN - I-70 MAINLINE - STA 2434+00 TO STA 2448+00
RPL40	ROADWAY PLAN - I-70 MAINLINE - STA 2448+00 TO STA 2462+00
RPL41	ROADWAY PLAN - I-70 MAINLINE - STA 2462+00 TO STA 2475+00
RPL42	ROADWAY PLAN - I-70 MAINLINE - STA 2475+00 TO STA 2481+45.97
RPL43	ROADWAY PLAN - 46TH AVE S - STA 6998+50.40 TO STA 7010+00
RPL44	ROADWAY PLAN - 46TH AVE S - STA 7010+00 TO STA 7025+00
RPL45	ROADWAY PLAN - 46th AVE S - STA 7025+00 TO STA 7039+00
RPL46	ROADWAY PLAN - 46th AVE S - STA 7039+00 TO STA 7046+06.22
RPL47	ROADWAY PLAN - 46th AVE S - STA 7050+00 TO STA 7062+00
RPL48	ROADWAY PLAN - 46th AVE S - STA 7062+00 TO STA 7069+98.21
RPL49	ROADWAY PLAN - 46th AVE N - STA 6000+00 TO STA 6010+00
RPL50	ROADWAY PLAN - 46TH AVE N - STA 6010+00 TO STA 6023+45.17
RPL51	ROADWAY PLAN - 46TH AVE N - STA 6025+00 TO STA 6040+13.17
RPL52	ROADWAY PLAN - 46TH AVE N - STA 6050+00 TO STA 6064+00
RPL53	ROADWAY PLAN - 46TH AVE N - STA 6064+00 TO STA 6073+99.08
RPL54	ROADWAY PLAN - STAPLETON DR N - STA 6072+65.43 TO STA 6085+00
RPL55	ROADWAY PLAN - STAPLETON DR N - STA 6085+00 TO STA 6099+00
RPL56	ROADWAY PLAN - STAPLETON DR N - STA 6099+00 TO STA 6110+27.86
RPL57	ROADWAY PLAN - STAPLETON DR N - STA 8050+00 TO STA 8061+00
RPL58	ROADWAY PLAN - STAPLETON DR N - STA 8061+00 TO STA 8077+00
RPL59	ROADWAY PLAN - STAPLETON DR N - STA 8077+00 TO STA 8090+14.29
RPL60	ROADWAY PLAN - STAPLETON DR S - STA 7078+02.84 TO STA 7089+00
RPL61	ROADWAY PLAN - STAPLETON DR S - STA 7089+00 TO STA 7103+00
RPL62	ROADWAY PLAN - STAPLETON DR S - STA 7103+00 TO STA 7115+00
RPL63	ROADWAY PLAN - STAPLETON DR S - STA 7115+00 TO STA 7120+50.75
RPL64	ROADWAY PLAN - STAPLETON DR S - STA 9050+00 TO STA 9064+00
RPL65	ROADWAY PLAN - STAPLETON DR S - STA 9064+00 TO STA 9072+56.21
RPL66	ROADWAY PLAN - STAPLETON DR S - STA 9080+00 TO STA 9090+00
RPL67	ROADWAY PLAN - STAPLETON DR S - STA 9090+00 TO STA 9117+36.27
RPL68	ROADWAY PLAN - BRIGHTON BLVD - STA 498+68.52 TO STA 513+94.26
RPL69	ROADWAY PLAN - BRIGHTON BLVD WB ENTRANCE RAMP - STA 100+00 TO STA 110+00
RPL70	ROADWAY PLAN - BRIGHTON BLVD WB ENTRANCE RAMP - STA 110+00 TO STA STA 120+04.34
RPL71	ROADWAY PLAN - BRIGHTON BLVD EB EXIT RAMP - STA 200+00 TO STA 204+48.69
RPL72	ROADWAY PLAN - BRIGHTON BLVD WB EXIT RAMP - STA 300+00 TO STA 310+00
RPL73	ROADWAY PLAN - BRIGHTON BLVD WB EXIT RAMP - STA 310+00 TO STA 313+21.80
RPL74	ROADWAY PLAN - BRIGHTON BLVD EB ENTRANCE RAMP - STA 400+00.00 TO STA 409+75.10
RPL75	ROADWAY PLAN - E 47TH AVE - STA 8000+00 TO STA 8007+46.13
RPL76	ROADWAY PLAN - LOCAL ROAD 1 - STA 7000+00 TO STA 7009+15.26
RPL77	ROADWAY PLAN - UPRR WB SIDEWALK PLAN - STA 600+00 TO STA 609+12.79
RPL78	ROADWAY PLAN - UPRR EB SIDEWALK PLAN - STA 700+24.61 TO STA 709+00
RPL79	ROADWAY PLAN - UPRR EB SIDEWALK PLAN - STA 709+00 TO STA 719+78.91
RPL80	ROADWAY PLAN - YORK STREET - STA 500+00 TO STA 513+00
RPL81	ROADWAY PLAN - YORK STREET - STA 513+00 TO STA 522+89.49
RPL82	ROADWAY PLAN - JOSEPHINE STREET - STA 500+00 TO STA 508+46.14
RPL83	ROADWAY PLAN - COLUMBINE STREET - STA 500+00 TO STA 507+38.57
RPL84	ROADWAY PLAN - CLAYTON STREET - STA 500+00 TO STA 506+46.39
RPL85	ROADWAY PLAN - FILLMORE STREET AND - MILWAUKEE STREET
RPL86	ROADWAY PLAN - STEELE ST/VASQUEZ BLVD - STA 500+00 TO STA 512+00
RPL87	ROADWAY PLAN - STEELE ST/VASQUEZ BLVD - STA 512+00 TO STA 523+65.79
RPL88	ROADWAY PLAN - VASQUEZ BLVD WB ENTRANCE RAMP - STA 106+81.63 TO STA 119+49.91
RPL89	ROADWAY PLAN - STEELE ST EB EXIT RAMP - STA 206+17.02 TO STA 219+49.67
RPL90	ROADWAY PLAN - COOK STREET - STA 500+00 TO STA 507+75.79
RPL91	ROADWAY PLAN - MONROE STREET - STA 498+26.00 TO STA 516+50.44
RPL92	ROADWAY PLAN - E 46TH AVENUE - STA 500+00.00 TO STA 513+05.27
RPL93	ROADWAY PLAN - COLORADO BLVD - STA 500+00 TO STA 514+00
RPL94	ROADWAY PLAN - COLORADO BLVD - STA 514+00 TO STA 528+81.45
RPL95	ROADWAY PLAN - COLORADO BLVD WB ENTRANCE RAMP - STA 100+00 TO STA 112+00
RPL96	ROADWAY PLAN - COLORADO BLVD WB ENTRANCE RAMP - STA 112+00 TO STA 121+63.26
RPL97	ROADWAY PLAN - COLORADO BLVD EB EXIT RAMP - STA 208+44.48 TO STA 218+00
RPL98	ROADWAY PLAN - COLORADO BLVD EB EXIT RAMP - STA 218+00 TO STA 228+78.01
RPL99	ROADWAY PLAN - COLORADO BLVD WB EXIT RAMP - STA 299+99.57 TO STA 314+26.96
RPL100	ROADWAY PLAN - COLORADO BLVD EB ENTRANCE RAMP - STA 400+00 TO STA 414+34.92
RPL101	ROADWAY PLAN - LOCAL ROAD 2 - STA 700+00 TO STA 713+00
RPL102	ROADWAY PLAN - LOCAL ROAD 2 - STA 713+00 TO STA 724+30.34
RPL103	ROADWAY PLAN - DAHLIA STREET - STA 500+00 TO STA 505+95.13
RPL104	ROADWAY PLAN - HOLLY STREET - STA 500+00 TO STA 510+93.00
RPL105	ROADWAY PLAN - HOLLY STREET WB ENTRANCE RAMP - STA 100+00 TO STA 111+00
RPL106	ROADWAY PLAN - HOLLY STREET WB ENTRANCE RAMP - STA 111+00 TO STA 121+56.66
RPL107	ROADWAY PLAN - HOLLY STREET EB EXIT RAMP - STA 200+00 TO STA 210+00
RPL108	ROADWAY PLAN - HOLLY STREET EB EXIT RAMP - STA 210+00 TO STA 218+44.28
RPL109	ROADWAY PLAN - HOLLY STREET WB EXIT RAMP - STA 300+00 TO STA 312+00
RPL110	ROADWAY PLAN - HOLLY STREET WB EXIT RAMP - STA 312+00 TO STA 323+70.41
RPL111	ROADWAY PLAN - HOLLY ST EB ENTRANCE RAMP - STA 400+00 TO STA 410+00
RPL112	ROADWAY PLAN - HOLLY ST EB ENTRANCE RAMP - STA 410+00 TO STA 418+11.44
RPL113	ROADWAY PLAN - MONACO STREET - STA 500+00 TO STA 509+31.22
RPL114	ROADWAY PLAN - QUEBEC STREET - STA 500+00 TO STA 513+00
RPL115	ROADWAY PLAN - QUEBEC STREET - STA 513+00 TO STA 525+59.79
RPL116	ROADWAY PLAN - QUEBEC STREET WB ENTRANCE RAMP - STA 100+00 TO STA 110+19.09
RPL117	ROADWAY PLAN - QUEBEC STREET EB EXIT RAMP - STA 200+00 TO STA 210+00
RPL118	ROADWAY PLAN - QUEBEC STREET EB EXIT RAMP - STA 210+00 TO STA 218+51.94
RPL119	ROADWAY PLAN - QUEBEC STREET WB EXIT RAMP - STA 300+00 TO STA 308+34.11
RPL120	ROADWAY PLAN - QUEBEC STREET EB ENTRANCE RAMP - STA 400+00 TO STA 408+45.00
RPL121	ROADWAY PLAN - I-270 EB CONNECTOR - STA 400+00 TO STA 414+00
RPL122	ROADWAY PLAN - I-270 EB CONNECTOR - STA 414+00 TO STA 428+00
RPL123	ROADWAY PLAN - I-270 EB CONNECTOR - STA 428+00 TO STA 431+84.01
RPL124	ROADWAY PLAN - CENTRAL PARK BLVD WB ENT RAMP - STA 100+00 TO STA 113+60.73
RPL125	ROADWAY PLAN - CENTRAL PARK BLVD EB EXIT RAMP - STA 200+00 TO STA 205+74.16
RPL126	ROADWAY PLAN - I-270 EB TO I-70 EB ENT RAMP - STA 400+00 TO STA 410+00
RPL127	ROADWAY PLAN - I-270 EB TO I-70 EB ENT RAMP - STA 410+00 TO STA 415+35.30
RPL128	ROADWAY PLAN - I-70 WB EXIT RAMP TO I-270 WB - STA 300+00 TO STA 305+56.33
RPL129	ROADWAY PLAN - CENTRAL PARK BLVD EB ENT RAMP - STA 400+00 TO STA 409+79.44
RPL130	ROADWAY PLAN - CENTRAL PARK BLVD WB EXIT RAMP - STA 300+00 TO STA 309+20.42
RPL131	ROADWAY PLAN - HAVANA ST WB ENTRANCE RAMP - STA 20+00 TO STA 28+47.75
RPL132	ROADWAY PLAN - HAVANA ST EB EXIT RAMP - STA 10+00 TO STA 18+03.94
RPL133	ROADWAY PLAN - HAVANA ST WB EXIT RAMP - STA 40+00 TO STA 46+07.65
RPL134	ROADWAY PLAN - HAVANA ST EB ENTRANCE RAMP - STA 30+00 TO STA 36+59.06
RPL135	ROADWAY PLAN - PEORIA STREET - STA 500+00 TO STA 505+64.26
RPL136	ROADWAY PLAN - PEORIA STREET WB ENTRANCE RAMP - STA 100+00 TO STA 108+55.00
RPL137	ROADWAY PLAN - PEORIA STREET EB EXIT RAMP - STA 200+00 TO STA 211+80.20
RPL138	ROADWAY PLAN - PEORIA STREET EB ENTRANCE RAMP - STA 400+00 TO STA 410+80.46
RPL139	ROADWAY PLAN - I-70 EB TO I-225 SB CONNECTOR - STA 225+00 TO STA 234+00
RPL140	ROADWAY PLAN - I-70 EB TO I-225 SB CONNECTOR - STA 234+00 TO STA 247+00
RPL141	ROADWAY PLAN - I-70 EB TO I-225 SB CONNECTOR - STA 247+00 TO STA 258+00
RPL142	ROADWAY PLAN - I-70 EB TO I-225 SB CONNECTOR - STA 258+00 TO STA 264+50

ROADWAY PROFILE SHEET INDEX

SHEET NO.	SHEET DESCRIPTION
RPR1	ROADWAY PROFILE - I-70 MAINLINE - STA 1000+00 TO STA 1004+00
RPR2	ROADWAY PROFILE - I-70 MAINLINE - STA 1004+00 TO STA 1018+00
RPR3	ROADWAY PROFILE - I-70 MAINLINE - STA 1018+00 TO STA 1032+00
RPR4	ROADWAY PROFILE - I-70 MAINLINE - STA 1032+00 TO STA 1046+00
RPR5	ROADWAY PROFILE - I-70 MAINLINE - STA 1046+00 TO STA 1060+00
RPR6	ROADWAY PROFILE - I-70 MAINLINE - STA 1060+00 TO STA 2002+00
RPR7	ROADWAY PROFILE - I-70 MAINLINE - STA 2002+00 TO STA 2016+00
RPR8	ROADWAY PROFILE - I-70 MAINLINE - STA 2016+00 TO STA 2030+00
RPR9	ROADWAY PROFILE - I-70 MAINLINE - STA 2030+00 TO STA 2044+00
RPR10	ROADWAY PROFILE - I-70 MAINLINE - STA 2044+00 TO STA 2058+00
RPR11	ROADWAY PROFILE - I-70 MAINLINE - STA 2058+00 TO STA 2072+00
RPR12	ROADWAY PROFILE - I-70 MAINLINE - STA 2072+00 TO STA 2086+00
RPR13	ROADWAY PROFILE - I-70 MAINLINE - STA 2086+00 TO STA 2100+00
RPR14	ROADWAY PROFILE - I-70 MAINLINE - STA 2100+00 TO STA 2114+00
RPR15	ROADWAY PROFILE - I-70 MAINLINE - STA 2114+00 TO STA 2128+00
RPR16	ROADWAY PROFILE - I-70 MAINLINE - STA 2128+00 TO STA 2142+00
RPR17	ROADWAY PROFILE - I-70 MAINLINE - STA 2142+00 TO STA 2156+00
RPR18	ROADWAY PROFILE - I-70 MAINLINE - STA 2156+00 TO STA 2170+00
RPR19	ROADWAY PROFILE - I-70 MAINLINE - STA 2170+00 TO STA 2184+00
RPR20	ROADWAY PROFILE - I-70 MAINLINE - STA 2184+00 TO STA 2198+00
RPR21	ROADWAY PROFILE - I-70 MAINLINE - STA 2198+00 TO STA 2212+00
RPR22	ROADWAY PROFILE - I-70 MAINLINE - STA 2212+00 TO STA 2226+00
RPR23	ROADWAY PROFILE - I-70 MAINLINE - STA 2226+00 TO STA 2240+00
RPR24	ROADWAY PROFILE - I-70 MAINLINE - STA 2240+00 TO STA 2254+00
RPR25	ROADWAY PROFILE - I-70 MAINLINE - STA 2254+00 TO STA 2268+00
RPR26	ROADWAY PROFILE - I-70 MAINLINE - STA 2268+00 TO STA 2282+00
RPR27	ROADWAY PROFILE - I-70 MAINLINE - STA 2282+00 TO STA 2296+00
RPR28	ROADWAY PROFILE - I-70 MAINLINE - STA 2296+00 TO STA 2310+00
RPR29	ROADWAY PROFILE - I-70 MAINLINE - STA 2310+00 TO STA 2324+00
RPR30	ROADWAY PROFILE - I-70 MAINLINE - STA 2324+00 TO STA 2338+00
RPR31	ROADWAY PROFILE - I-70 MAINLINE - STA 2338+00 TO STA 2352+00
RPR32	ROADWAY PROFILE - I-70 MAINLINE - STA 2352+00 TO STA 2366+00
RPR33	ROADWAY PROFILE - I-70 MAINLINE - STA 2366+00 TO STA 2380+00
RPR34	ROADWAY PROFILE - I-70 MAINLINE - STA 2380+00 TO STA 2394+00
RPR35	ROADWAY PROFILE - I-70 MAINLINE - STA 2394+00 TO STA 2408+00
RPR36	ROADWAY PROFILE - I-70 MAINLINE - STA 2408+00 TO STA 2422+00
RPR37	ROADWAY PROFILE - I-70 MAINLINE - STA 2422+00 TO STA 2436+00
RPR38	ROADWAY PROFILE - I-70 MAINLINE - STA 2436+00 TO STA 2447+50
RPR39	ROADWAY PROFILE - 46TH AVE S - STA 7004+03.82 TO STA 7010+00
RPR40	ROADWAY PROFILE - 46TH AVE S - STA 7010+00 TO STA 7020+32.87
RPR41	ROADWAY PROFILE - 46TH AVE S - STA 7022+00 TO STA 7036+00
RPR42	ROADWAY PROFILE - 46TH AVE S - STA 7036+00 TO STA 7045+31.07
RPR43	ROADWAY PROFILE - 46TH AVE S - STA 7050+00 TO STA 7062+00
RPR44	ROADWAY PROFILE - 46TH AVE S - STA 7062+00 TO STA 7068+32.50
RPR45	ROADWAY PROFILE - 46TH AVE N - STA 6000+00 TO STA 6010+00
RPR46	ROADWAY PROFILE - 46TH AVE N - STA 6010+00 TO STA 6023+03.66
RPR47	ROADWAY PROFILE - 46TH AVE N - STA 6025+00 TO STA 6033+00
RPR48	ROADWAY PROFILE - 46TH AVE N - STA 6033+00 TO STA 6040+11.55
RPR49	ROADWAY PROFILE - 46TH AVE N - STA 6050+00 TO STA 6064+00
RPR50	ROADWAY PROFILE - 46TH AVE N - STA 6064+00 TO STA 6073+99.08
RPR51	ROADWAY PROFILE - 46TH AVE N - STA 6072+65 TO STA 6080+00
RPR52	ROADWAY PROFILE - 46TH AVE N - STA 6080+00 TO STA 6090+28
RPR53	ROADWAY PROFILE - STAPLETON DR N - STA 6090+55.54 TO STA 6101+00
RPR54	ROADWAY PROFILE - STAPLETON DR N - STA 6101+00 TO STA 6106+62.50
RPR55	ROADWAY PROFILE - STAPLETON DR N - STA 8050+00 TO STA 8059+00
RPR56	ROADWAY PROFILE - STAPLETON DR N - STA 8059+00 TO STA 8067+58.35
RPR57	ROADWAY PROFILE - STAPLETON DR N - STA 8070+55.74 TO STA 8078+00
RPR58	ROADWAY PROFILE - STAPLETON DR N - STA 8078+00 TO STA 8086+72.34
RPR59	ROADWAY PROFILE - 46TH AVE S COLORADO TO DAHLIA - STA 7078+00 TO STA 7089+00
RPR60	ROADWAY PROFILE - 46TH AVE S COLORADO TO DAHLIA - STA 7089+00 TO STA 7099+00
RPR61	ROADWAY PROFILE - STAPLETON DR S - STA 7098+00 TO STA 7110+00
RPR62	ROADWAY PROFILE - STAPLETON DR S - STA 7110+00 TO STA 7118+12.80
RPR63	ROADWAY PROFILE - STAPLETON DR S - STA 9050+00 TO STA 9064+00
RPR64	ROADWAY PROFILE - STAPLETON DR S - STA 9064+00 TO STA 9071+99.91
RPR65	ROADWAY PROFILE - STAPLETON DR S - STA 9080+00 TO STA 9093+37.47
RPR66	ROADWAY PROFILE - STAPLETON DR S - STA 9102+00 TO STA 9116+00
RPR67	ROADWAY PROFILE - BRIGHTON BLVD
RPR68	ROADWAY PROFILE - BRIGHTON BLVD WB ENTRANCE RAMP
RPR69	ROADWAY PROFILE - BRIGHTON BLVD EB EXIT RAMP
RPR70	ROADWAY PROFILE - BRIGHTON BLVD WB EXIT RAMP
RPR71	ROADWAY PROFILE - BRIGHTON BLVD EB ENTRANCE RAMP
RPR72	ROADWAY PROFILE - E 47TH AVE
RPR73	ROADWAY PROFILE - LOCAL RD 1
RPR74	ROADWAY PROFILE - UPRR WB SIDEWALK
RPR75	ROADWAY PROFILE - UPRR EB SIDEWALK
RPR76	ROADWAY PROFILE - YORK ST - STA 500+00 TO STA 513+00
RPR77	ROADWAY PROFILE - YORK ST - STA 513+00 TO STA 523+00
RPR78	ROADWAY PROFILE - JOSEPHINE ST
RPR79	ROADWAY PROFILE - COLUMBINE ST
RPR80	ROADWAY PROFILE - CLAYTON ST
RPR81	ROADWAY PROFILE - FILLMORE ST
RPR82	ROADWAY PROFILE - MILWAUKEE ST
RPR83	ROADWAY PROFILE - STEELE ST - VASQUEZ BLVD - STA 500+00 TO STA 512+00
RPR84	ROADWAY PROFILE - STEELE ST - VASQUEZ BLVD - STA 512+00 TO STA 524+00
RPR85	ROADWAY PROFILE - VASQUEZ BLVD WB ENTRANCE RAMP
RPR86	ROADWAY PROFILE - STEELE ST EB EXIT RAMP
RPR87	ROADWAY PROFILE - COOK ST
RPR88	ROADWAY PROFILE - MONROE ST - STA 500+00 TO STA 506+00
RPR89	ROADWAY PROFILE - MONROE ST - STA 506+00 TO STA 517+00
RPR90	ROADWAY PROFILE - COLORADO BLVD - STA 501+00 TO STA 515+00
RPR91	ROADWAY PROFILE - COLORADO BLVD - STA 515+00 TO STA 528+00
RPR92	ROADWAY PROFILE - COLORADO BLVD WB ENTRANCE RAMP
RPR93	ROADWAY PROFILE - COLORADO BLVD EB EXIT RAMP
RPR94	ROADWAY PROFILE - COLORADO BLVD WB EXIT RAMP
RPR95	ROADWAY PROFILE - COLORADO BLVD EB ENTRANCE RAMP - STA 400+00 TO STA 409+00
RPR96	ROADWAY PROFILE - COLORADO BLVD EB ENTRANCE RAMP - STA 409+00 TO STA 415+00
RPR97	ROADWAY PROFILE - LOCAL RD 2 - STA 700+00 TO STA 710+00
RPR98	ROADWAY PROFILE - LOCAL RD 2 - STA 710+00 TO STA 724+00
RPR99	ROADWAY PROFILE - DAHLIA ST
RPR100	ROADWAY PROFILE - HOLLY ST
RPR101	ROADWAY PROFILE - HOLLY WB ENTRANCE RAMP - STA 100+00 TO STA 111+00
RPR102	ROADWAY PROFILE - HOLLY WB ENTRANCE RAMP - STA 111+00 TO STA 122+00
RPR103	ROADWAY PROFILE - HOLLY EB EXIT RAMP - STA 200+00 TO STA 211+00
RPR104	ROADWAY PROFILE - HOLLY EB EXIT RAMP - STA 211+00 TO STA 219+00
RPR105	ROADWAY PROFILE - HOLLY WB EXIT RAMP - STA 300+00 TO STA 312+00
RPR106	ROADWAY PROFILE - HOLLY WB EXITRAMP - STA 312+00 TO STA 324+00
RPR107	ROADWAY PROFILE - HOLLY EB ENTRANCE RAMP
RPR108	ROADWAY PROFILE - MONACO ST
RPR109	ROADWAY PROFILE - E 46TH AVE
RPR110	ROADWAY PROFILE - QUEBEC ST - STA 500+00 TO STA 513+00
RPR111	ROADWAY PROFILE - QUEBEC ST - STA 513+00 TO STA 526+00
RPR112	ROADWAY PROFILE - QUEBEC WB ENTRANCE RAMP
RPR113	ROADWAY PROFILE - QUEBEC EB EXIT RAMP
RPR114	ROADWAY PROFILE - QUEBEC WB EXIT RAMP
RPR115	ROADWAY PROFILE - QUEBEC EB ENTRANCE RAMP
RPR116	ROADWAY PROFILE - I-270 EB CONNECTOR - STA 400+00 TO STA 414+00
RPR117	ROADWAY PROFILE - I-270 EB CONNECTOR - STA 414+00 TO STA 428+00
RPR118	ROADWAY PROFILE - I-270 EB CONNECTOR - STA 428+00 TO STA 432+00
RPR119	ROADWAY PROFILE - CENTRAL PARK BLVD - WB ENTRANCE RAMP
RPR120	ROADWAY PROFILE - CENTRAL PARK BLVD - EB EXIT RAMP
RPR121	ROADWAY PROFILE - I-270 EB ENTRANCE RAMP
RPR122	ROADWAY PROFILE - I-270 WB EXIT RAMP
RPR123	ROADWAY PROFILE - CENTRAL PARK BLVD - WB ENTRANCE RAMP
RPR124	ROADWAY PROFILE - CENTRAL PARK BLVD - EB ENTRANCE RAMP
RPR125	ROADWAY PROFILE - HAVANA STREET - WB ENTRANCE RAMP
RPR126	ROADWAY PROFILE - HAVANA STREET - EB EXIT RAMP
RPR129	ROADWAY PROFILE - HAVANA STREET - WB EXIT RAMP
RPR128	ROADWAY PROFILE - HAVANA STREET - EB ENTRANCE RAMP
RPR129	ROADWAY PROFILE - PEORIA ST
RPR130	ROADWAY PROFILE - PEORIA WB ENTRANCE RAMP
RPR131	ROADWAY PROFILE - PEORIA EB EXIT RAMP
RPR132	ROADWAY PROFILE - PEORIA EB ENTRANCE RAMP
RPR133	ROADWAY PROFILE - I-70 EB TO I-225 SB CONNECTOR - STA 225+00 TO STA 234+00
RPR134	ROADWAY PROFILE - I-70 EB TO I-225 SB CONNECTOR - STA 234+00 TO STA 247+00
RPR135	ROADWAY PROFILE - I-70 EB TO I-225 SB CONNECTOR - STA 247+00 TO STA 258+00
RPR136	ROADWAY PROFILE - I-70 EB TO I-225 SB CONNECTOR - STA 258+00 TO STA 265+00

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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

CDOT CO

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 PLAN & PROFILE SHEET INDEX

Designer:

Detailer:

Structure Numbers

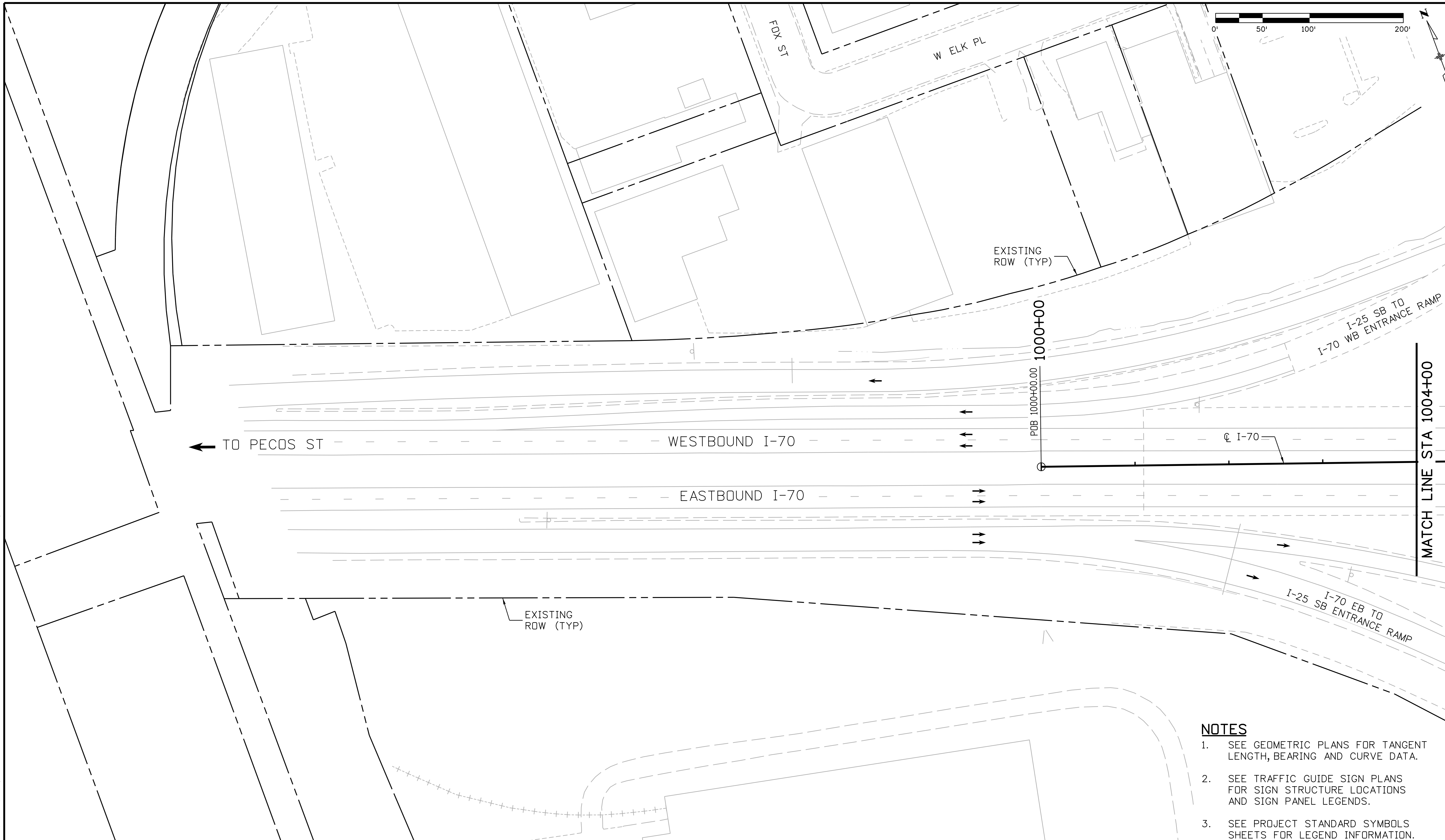
Sheet Subset: ROAD PLAN | Subset Sheets: RPL1 of 142

Project No./Code

FBR 0704-234

19631

Sheet Number 39



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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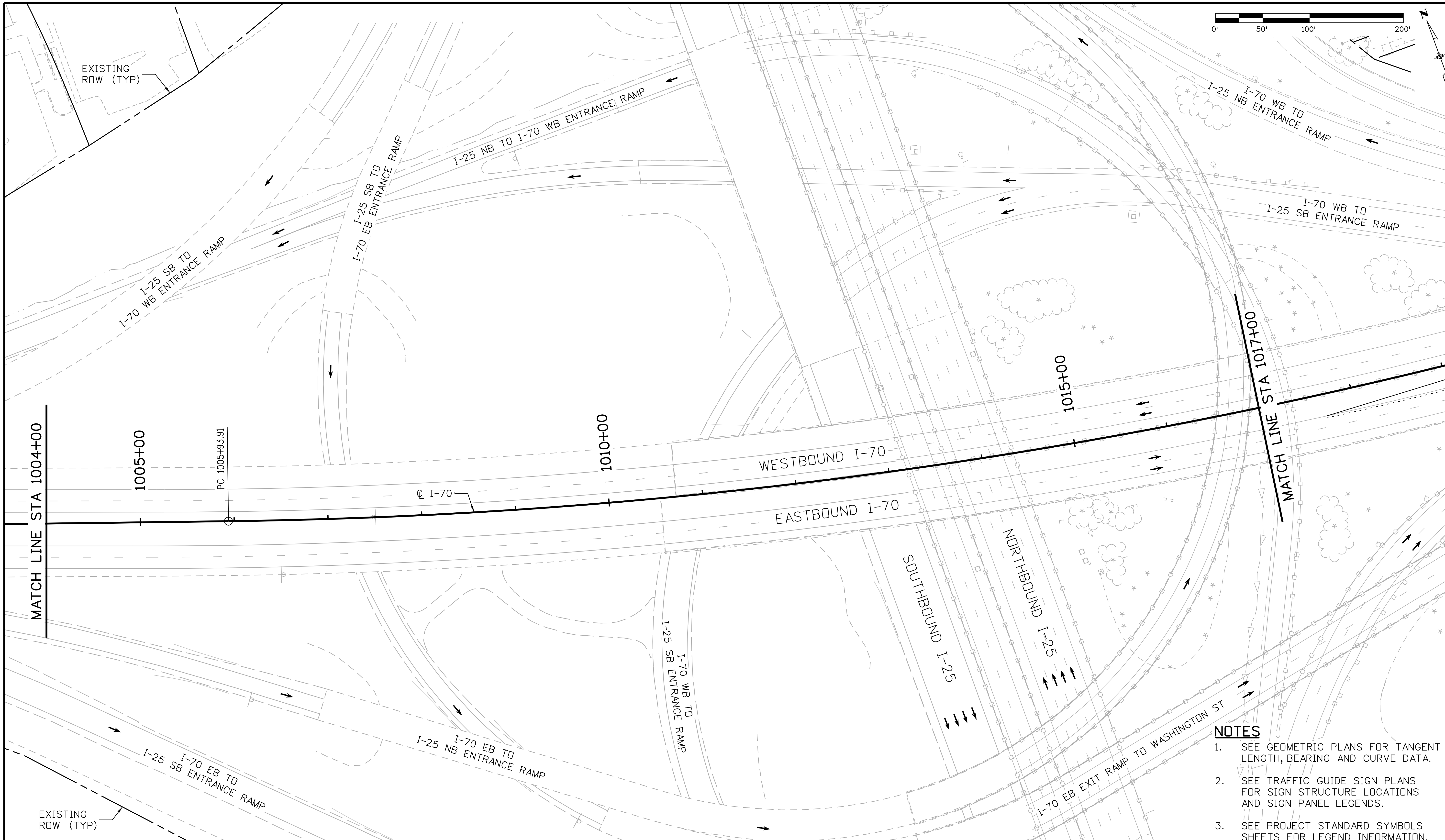
Print Date: 5/19/2017		Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 ROADWAY PLAN I-70 MAINLINE STA 1000+00 TO STA 1004+00	Project No./Code
File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	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: ROAD PLAN / Subset Sheets: RPL2 of 142	Sheet Number 40
	Unit Leader							



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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
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PROPOSAL
No Revisions:
Revised:
Void:

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

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL3 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 41

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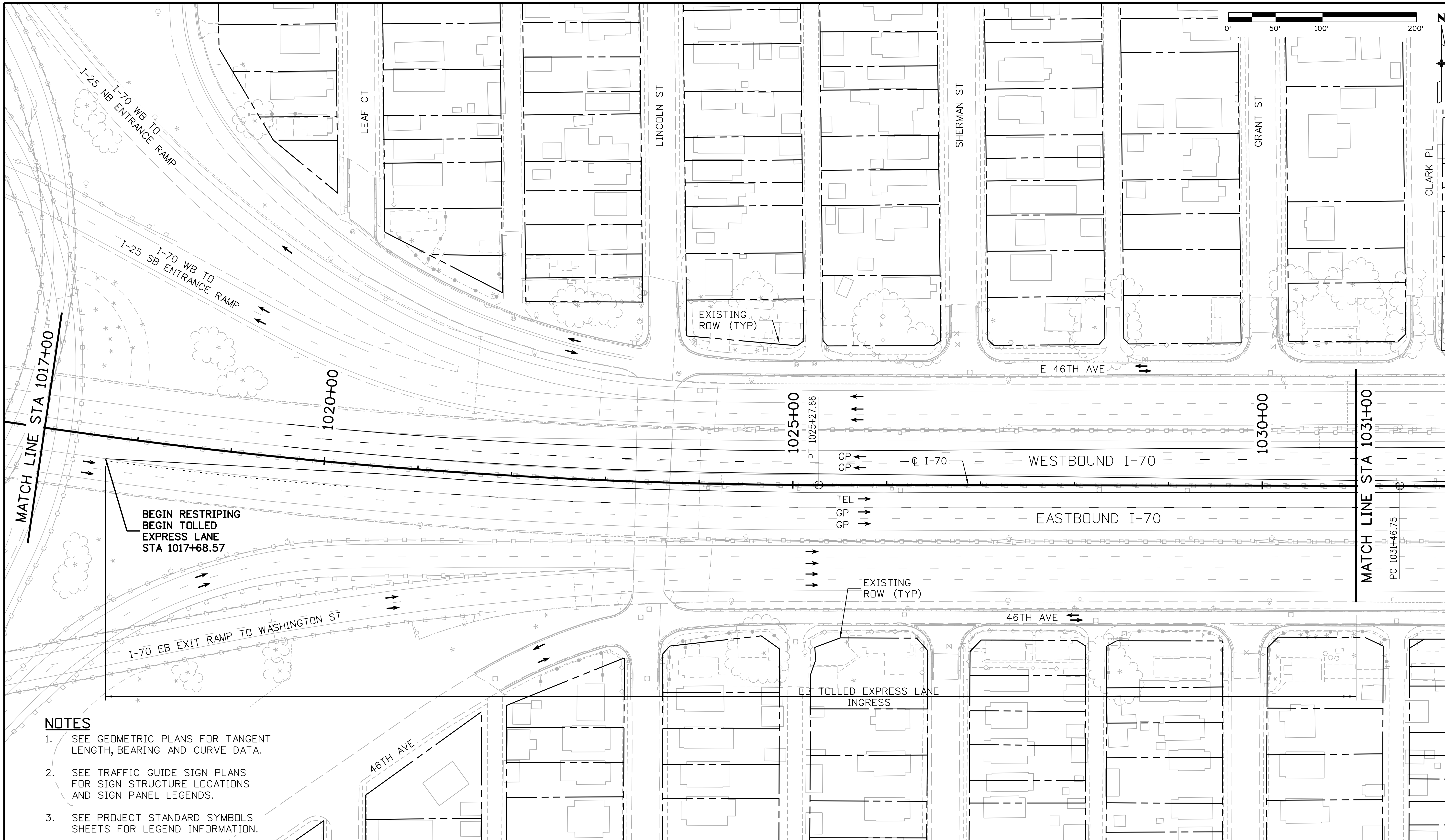

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

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Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

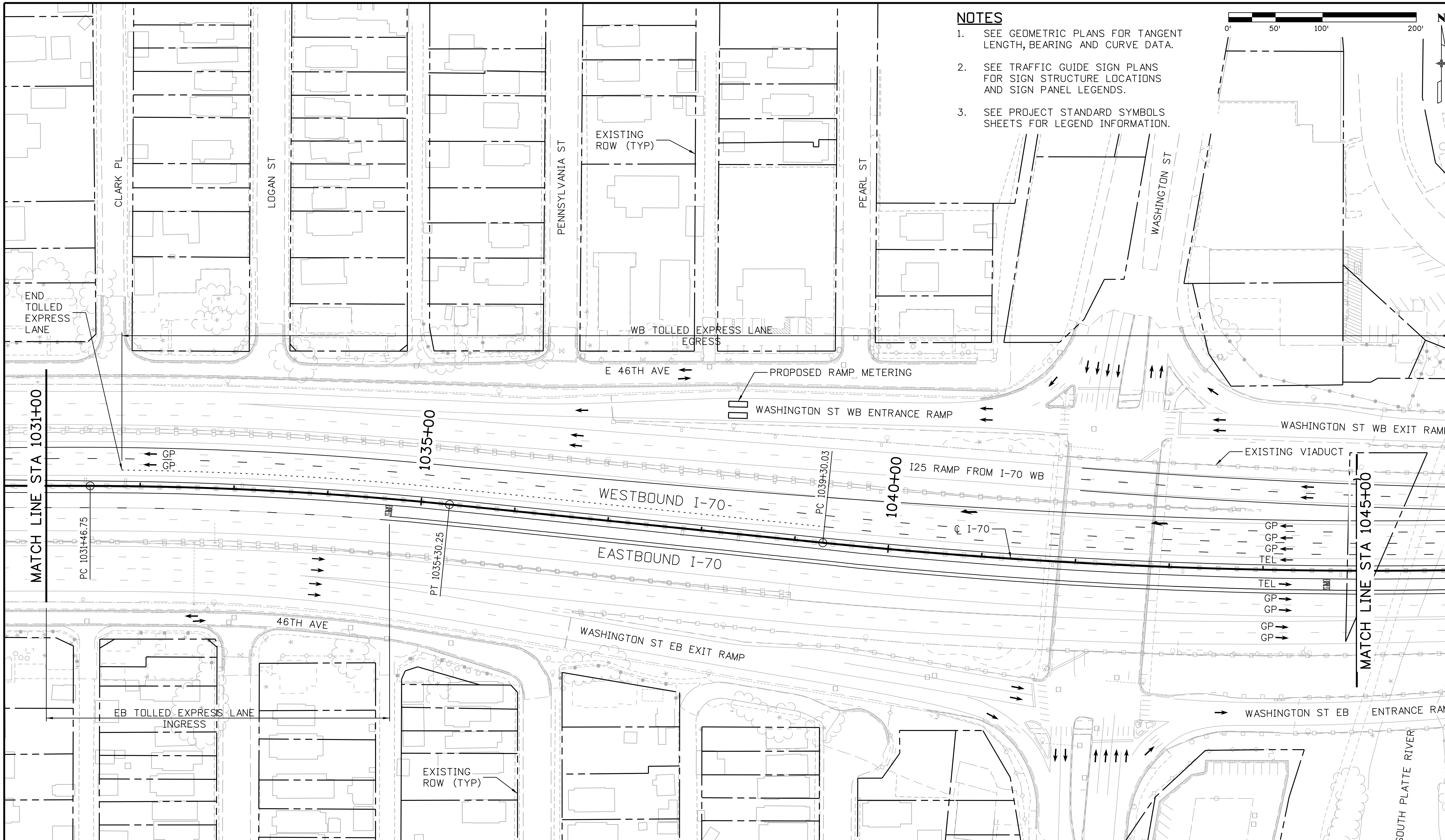
CENTRAL 70
ROADWAY PLAN
I-70 MAINLINE
STA 1017+00 TO STA 1031+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PLAN	Subset Sheets: RPL4	of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 42

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.



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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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Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

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

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL5 of 142

Project No./Code
FBR 0704-234
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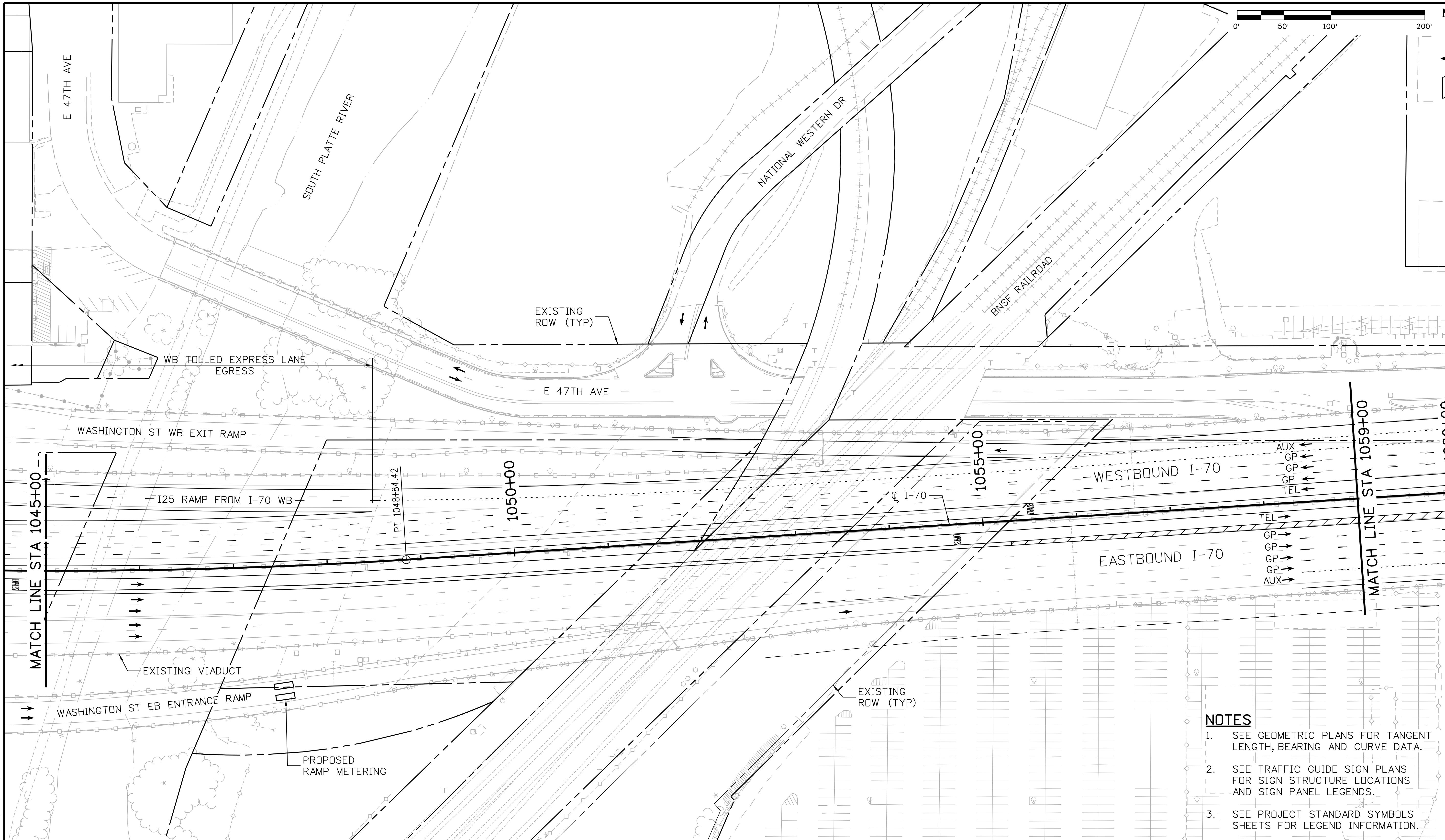

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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PROPOSAL
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Revised:
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CENTRAL 70
ROADWAY PLAN
I-70 MAINLINE
STA 1045+00 TO STA 1059+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL6 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 44

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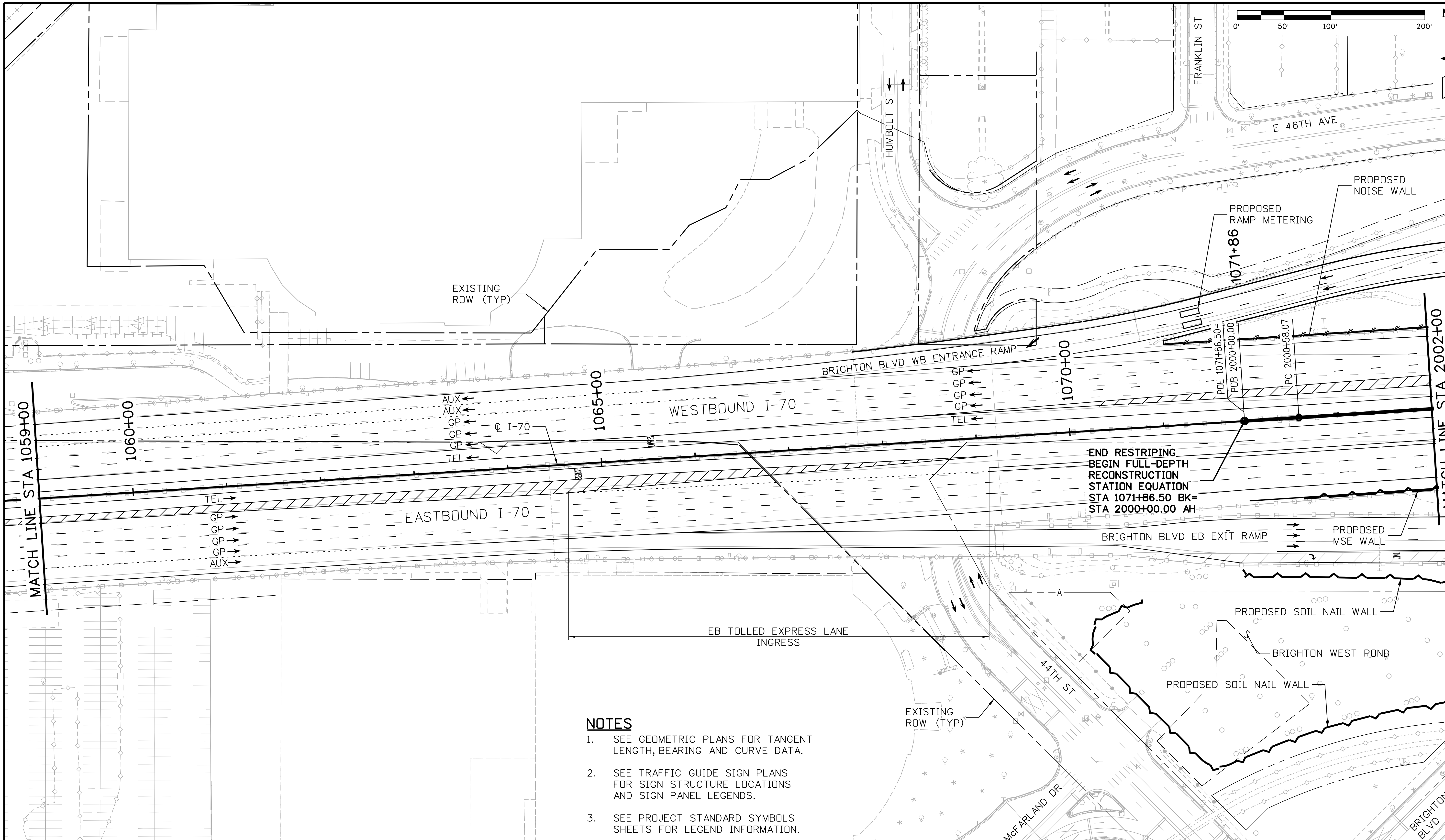

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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Print Date: 5/24/2017			
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.

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

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL7 of 142

Project No./Code
FBR 0704-234
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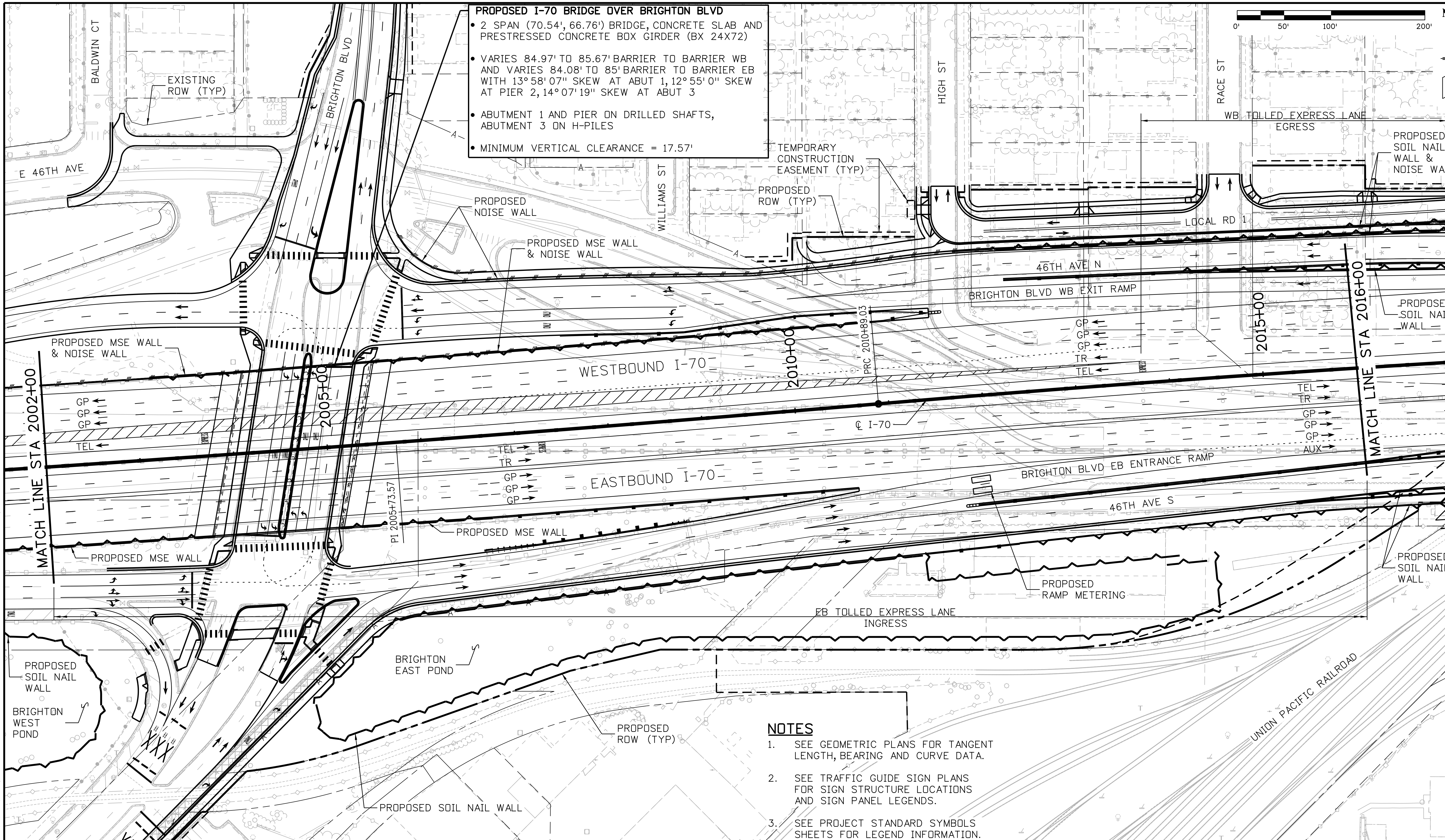
Sheet Number 45



PROPOSED I-70 BRIDGE OVER BRIGHTON BLVD

- 2 SPAN (70.54', 66.76') BRIDGE, CONCRETE SLAB AND PRESTRESSED CONCRETE BOX GIRDER (BX 24X72)
- VARIES 84.97' TO 85.67' BARRIER TO BARRIER WB AND VARIES 84.08' TO 85' BARRIER TO BARRIER EB WITH 13° 58' 07" SKEW AT ABUT 1, 12° 55' 0" SKEW AT PIER 2, 14° 07' 19" SKEW AT ABUT 3
- ABUTMENT 1 AND PIER ON DRILLED SHAFTS, ABUTMENT 3 ON H-PILES
- MINIMUM VERTICAL CLEARANCE = 17.57'

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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Print Date: 5/24/2017
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

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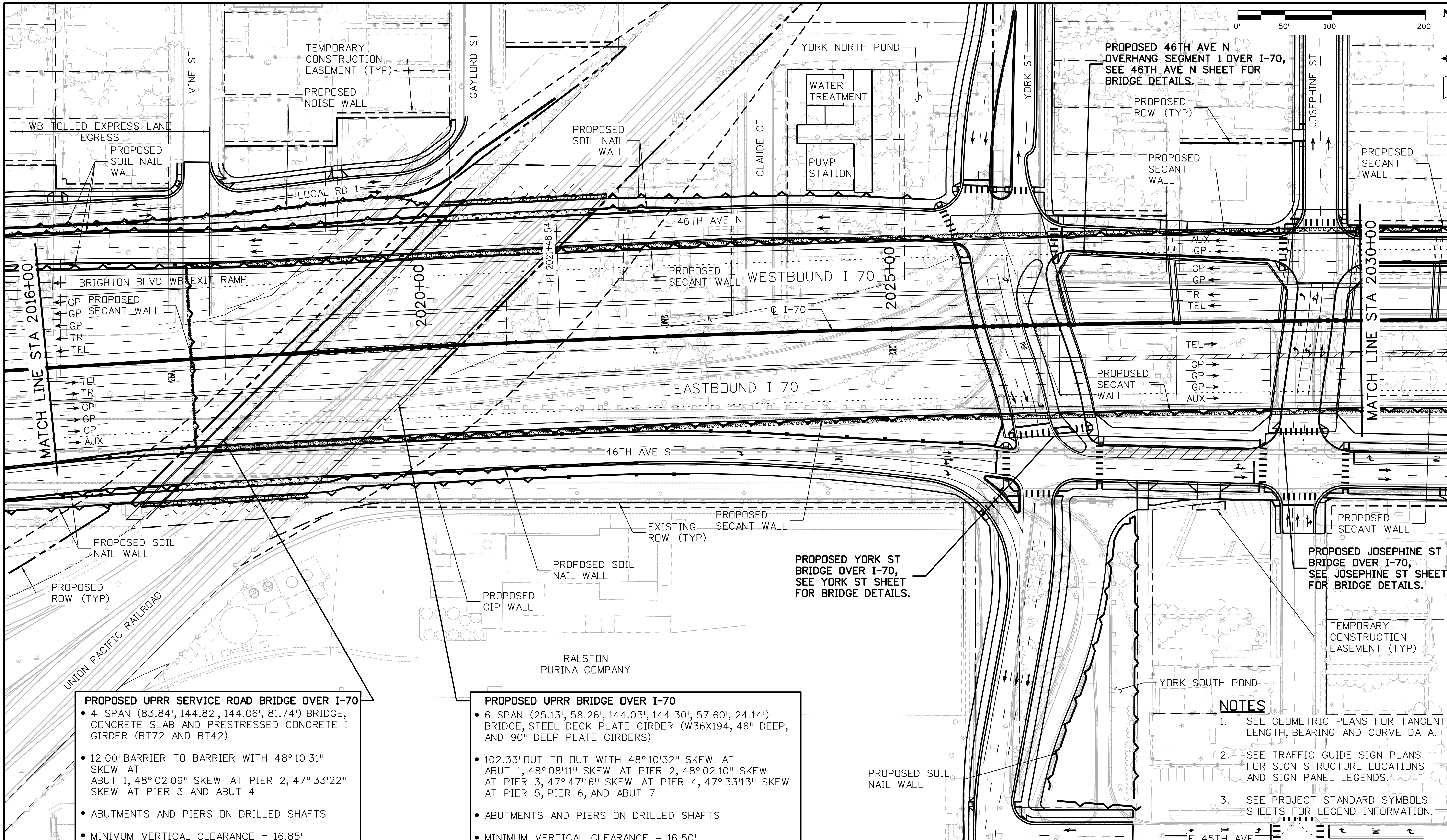
Void:

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

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL8 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 46



PROPOSED UPRR SERVICE ROAD BRIDGE OVER I-70

- 4 SPAN (83.84', 144.82', 144.06', 81.74') BRIDGE, CONCRETE SLAB AND PRESTRESSED CONCRETE I GIRDER (BT72 AND BT42)
- 12.00' BARRIER TO BARRIER WITH 48°10'31" SKEW AT ABUT 1, 48°02'09" SKEW AT PIER 2, 47°33'22" SKEW AT PIER 3 AND ABUT 4
- ABUTMENTS AND PIERS ON DRILLED SHAFTS
- MINIMUM VERTICAL CLEARANCE = 16.85'

PROPOSED UPRR BRIDGE OVER I-70

- 6 SPAN (25.13', 58.26', 144.03', 144.30', 57.60', 24.14') BRIDGE, STEEL DECK PLATE GIRDER (W36X194, 46" DEEP, AND 90" DEEP PLATE GIRDERS)
- 102.33' OUT TO OUT WITH 48°10'32" SKEW AT ABUT 1, 48°08'11" SKEW AT PIER 2, 48°02'10" SKEW AT PIER 3, 47°47'16" SKEW AT PIER 4, 47°33'13" SKEW AT PIER 5, PIER 6, AND ABUT 7
- ABUTMENTS AND PIERS ON DRILLED SHAFTS
- MINIMUM VERTICAL CLEARANCE = 16.50'

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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Print Date: 5/24/2017			
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.

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Region 1 KJS

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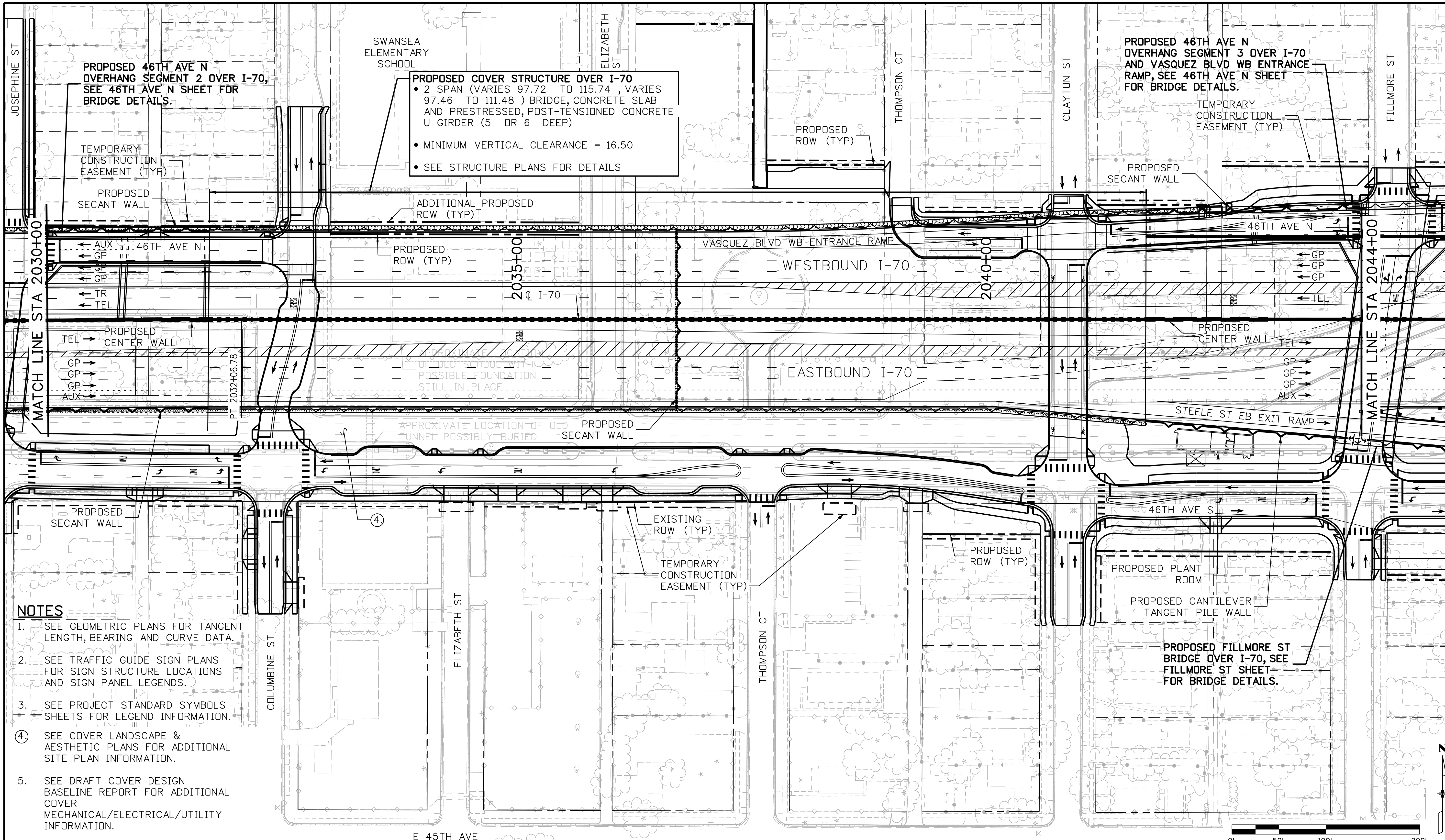
CENTRAL 70
ROADWAY PLAN
I-70 MAINLINE
STA 2016+00 TO STA 2030+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PLAN		Subset Sheets: RPL9 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 47



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.
4. SEE COVER LANDSCAPE & AESTHETIC PLANS FOR ADDITIONAL SITE PLAN INFORMATION.
5. SEE DRAFT COVER DESIGN BASELINE REPORT FOR ADDITIONAL COVER MECHANICAL/ELECTRICAL/UTILITY INFORMATION.

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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.

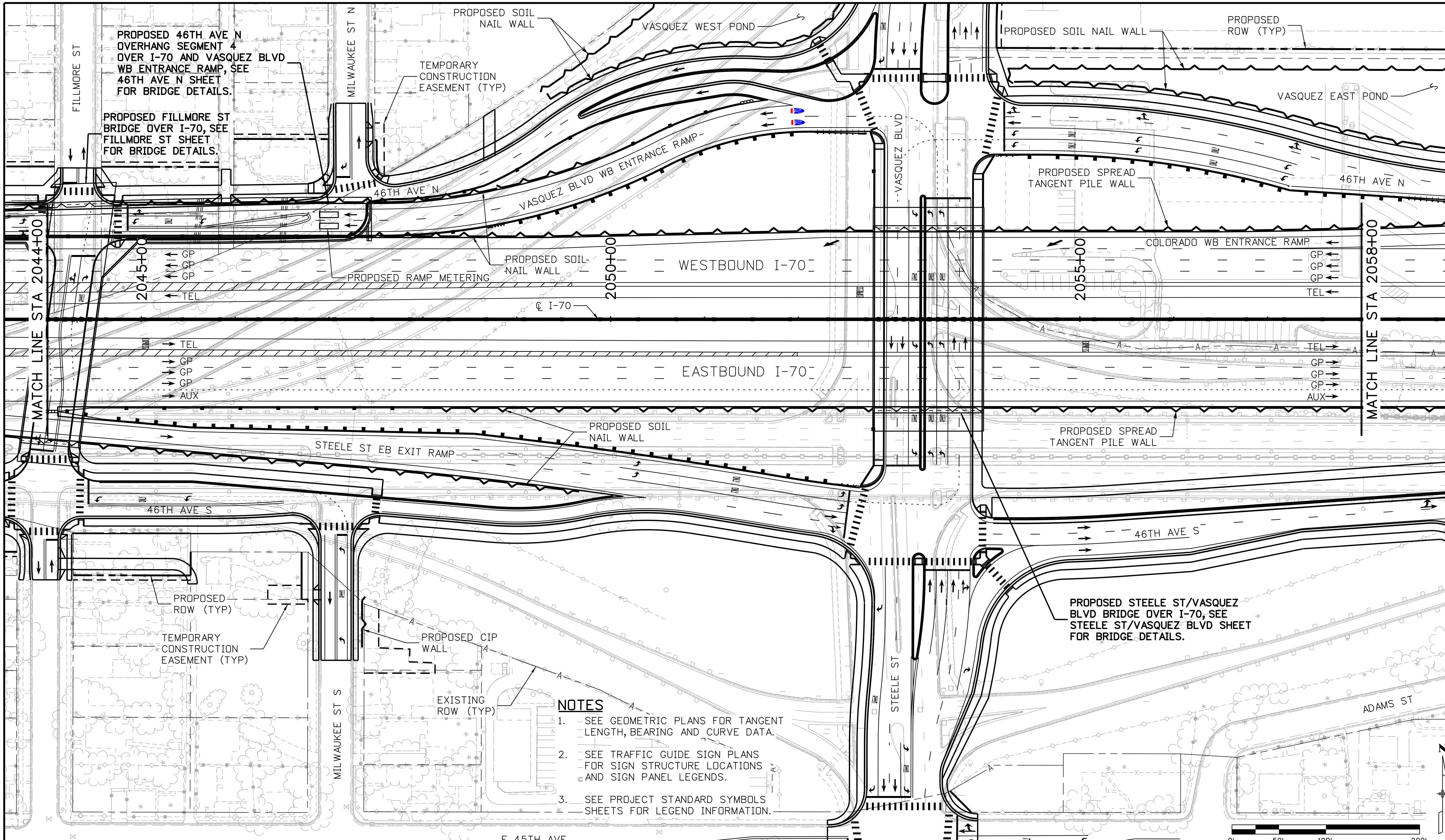
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL	
No Revisions:	
Revised:	
Void:	

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

Designer:	Structure Numbers
Detailer:	
Sheet Subset: ROAD PLAN	Subset Sheets: RPL10 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 48



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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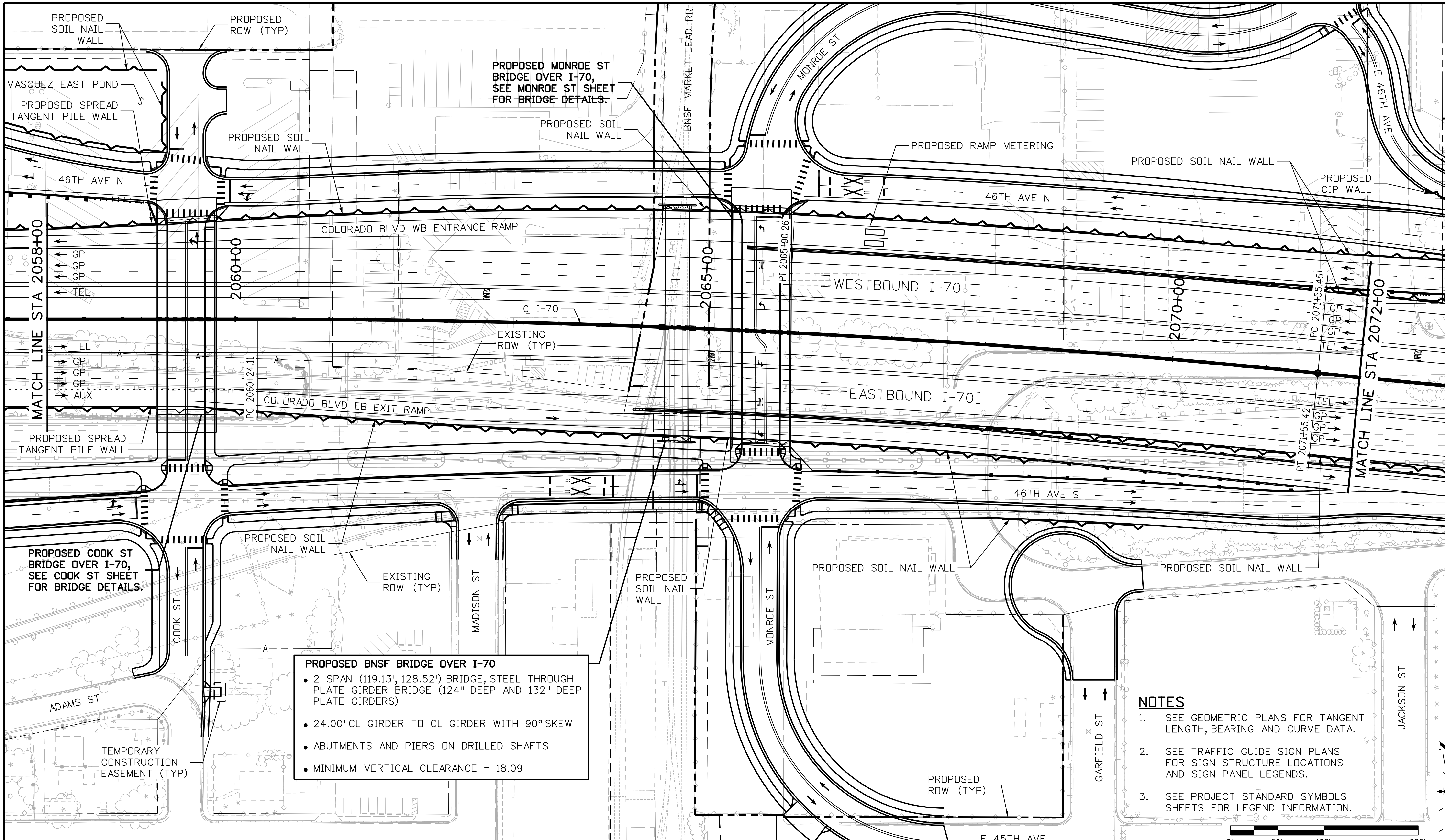
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

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

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL11 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 49



PROPOSED BNSF BRIDGE OVER I-70

- 2 SPAN (119.13', 128.52') BRIDGE, STEEL THROUGH PLATE GIRDER BRIDGE (124" DEEP AND 132" DEEP PLATE GIRDERS)
- 24.00' CL GIRDER TO CL GIRDER WITH 90° SKEW
- ABUTMENTS AND PIERS ON DRILLED SHAFTS
- MINIMUM VERTICAL CLEARANCE = 18.09'

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

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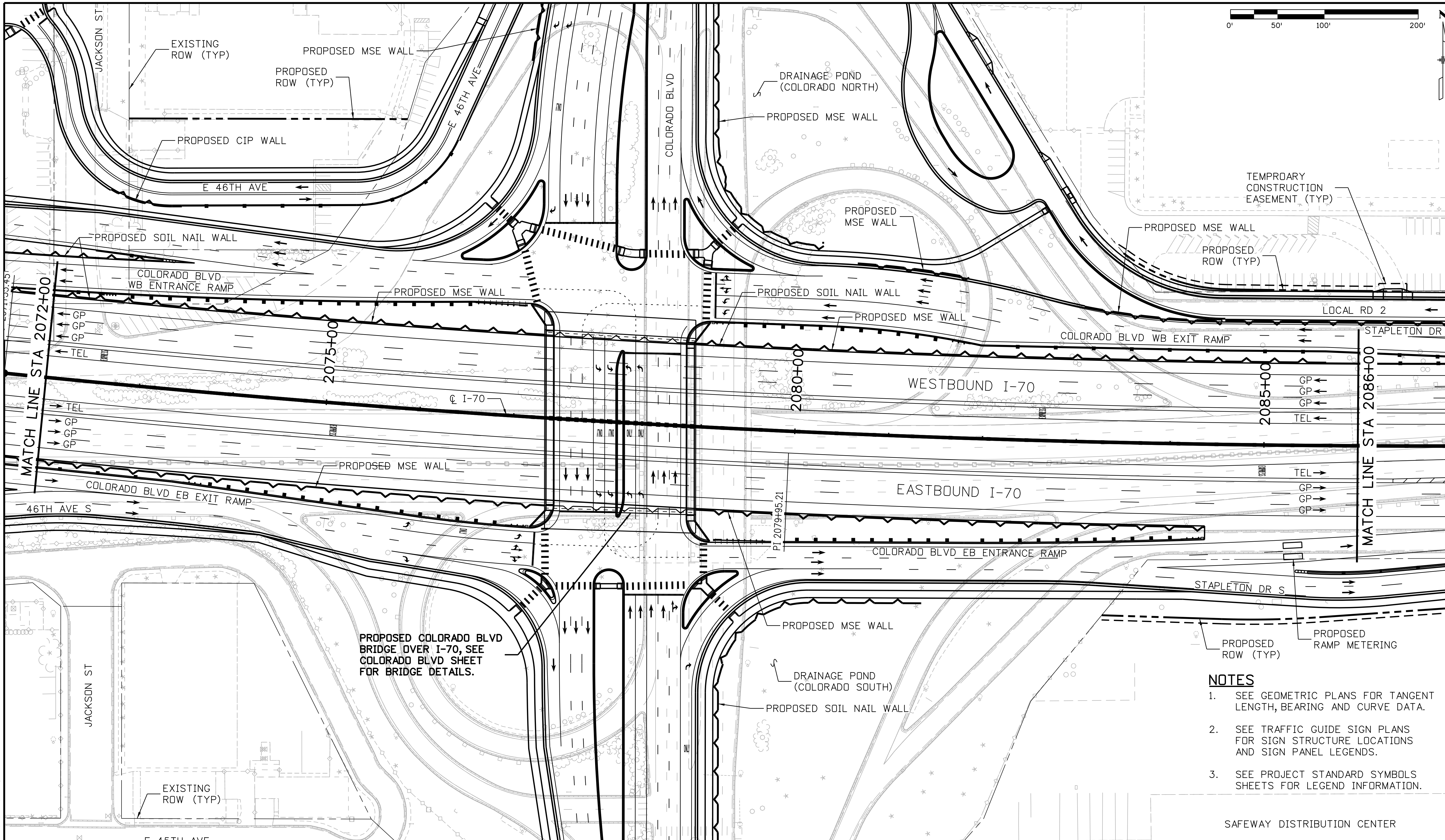
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

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

Designer:	Structure Numbers
Detailer:	
Sheet Subset: ROAD PLAN	Subset Sheets: RPL12 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 50



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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Print Date: 5/24/2017			
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
CDOT
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Phone: 303-757-9934 FAX: 303-757-9907
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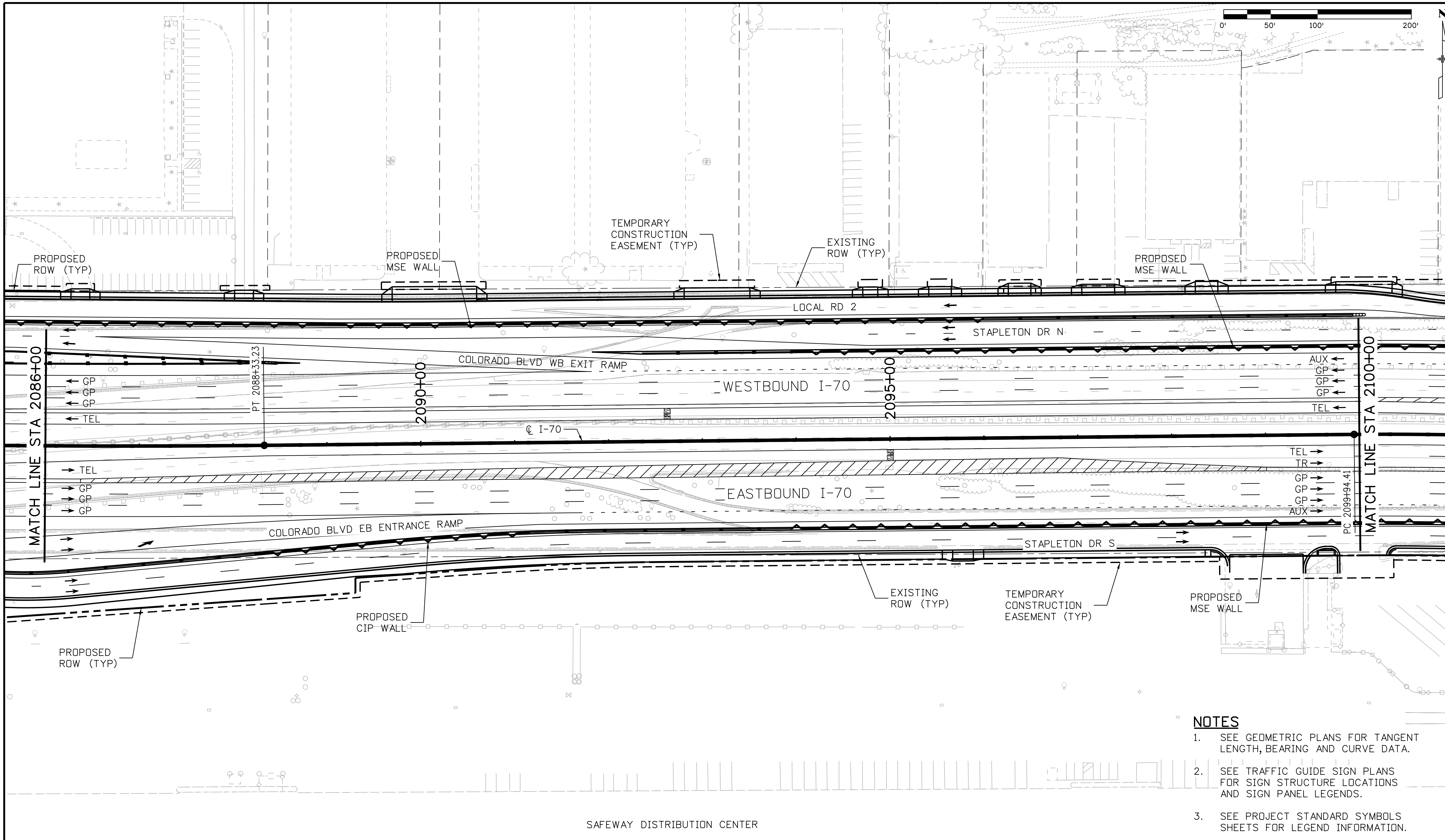
PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
I-70 MAINLINE
STA 2072+00 TO STA 2086+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PLAN		Subset Sheets: RPL13 of 142	

Project No./Code	
FBR 0704-234	
19631	
Sheet Number	51



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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
CDOT
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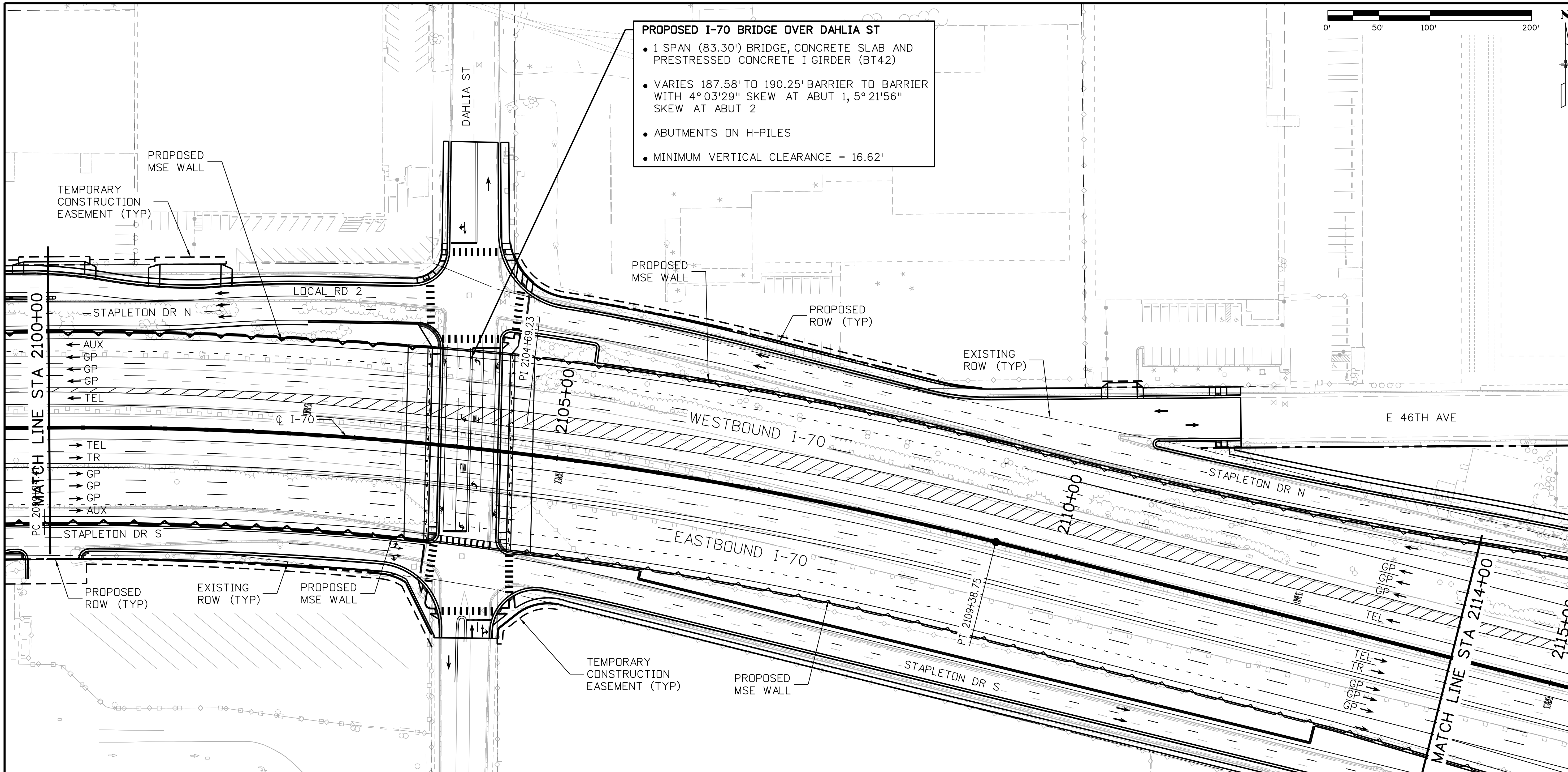
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
I-70 MAINLINE
STA 2086+00 TO STA 2100+00
Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL14 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 52



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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
CDOT
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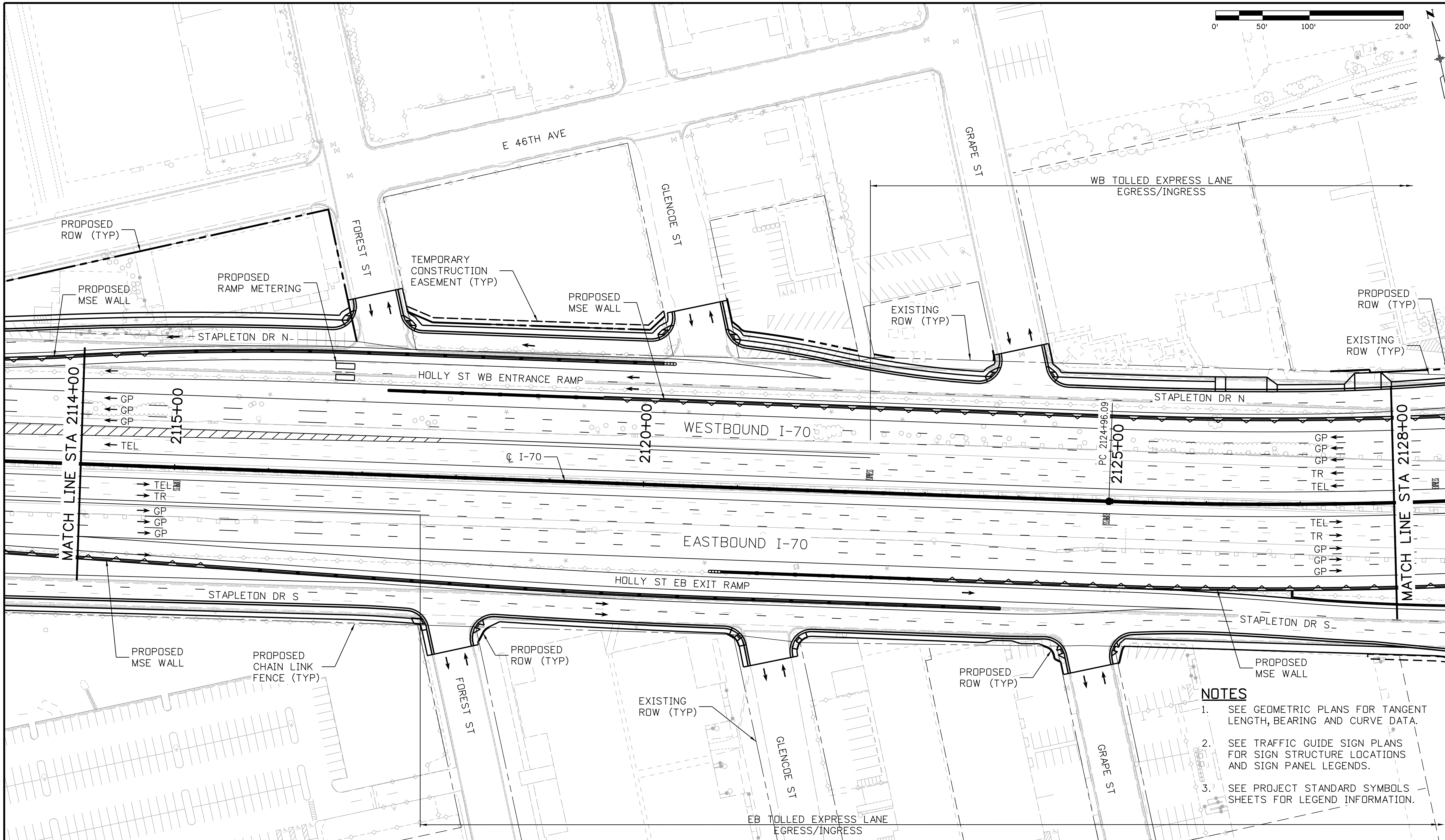
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
I-70 MAINLINE
STA 2100+00 TO STA 2114+00
Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL15 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 53



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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
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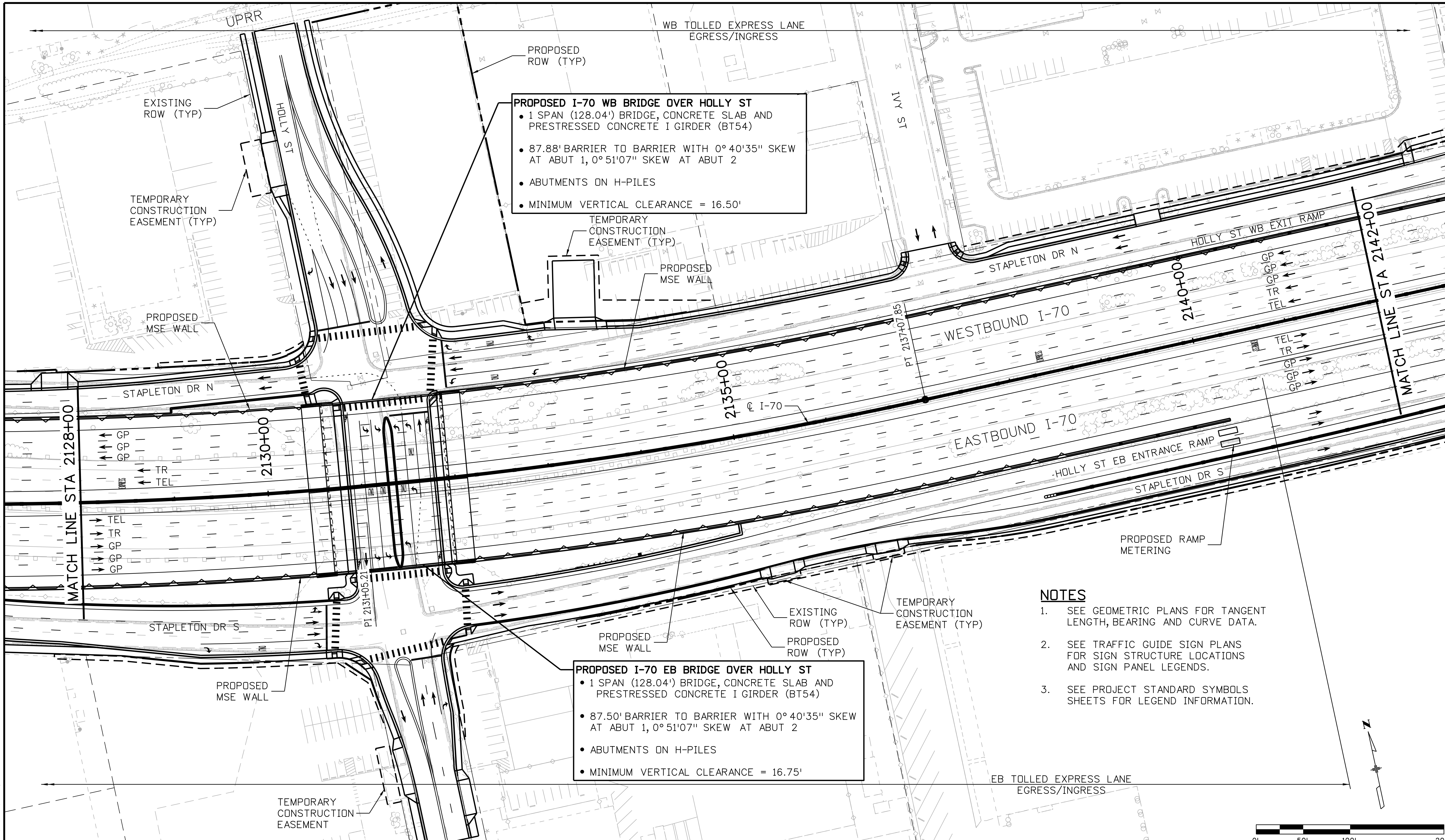
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

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

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL16 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 54



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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		

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Region 1 KJS

PROPOSAL	CENTRAL 70 ROADWAY 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:	
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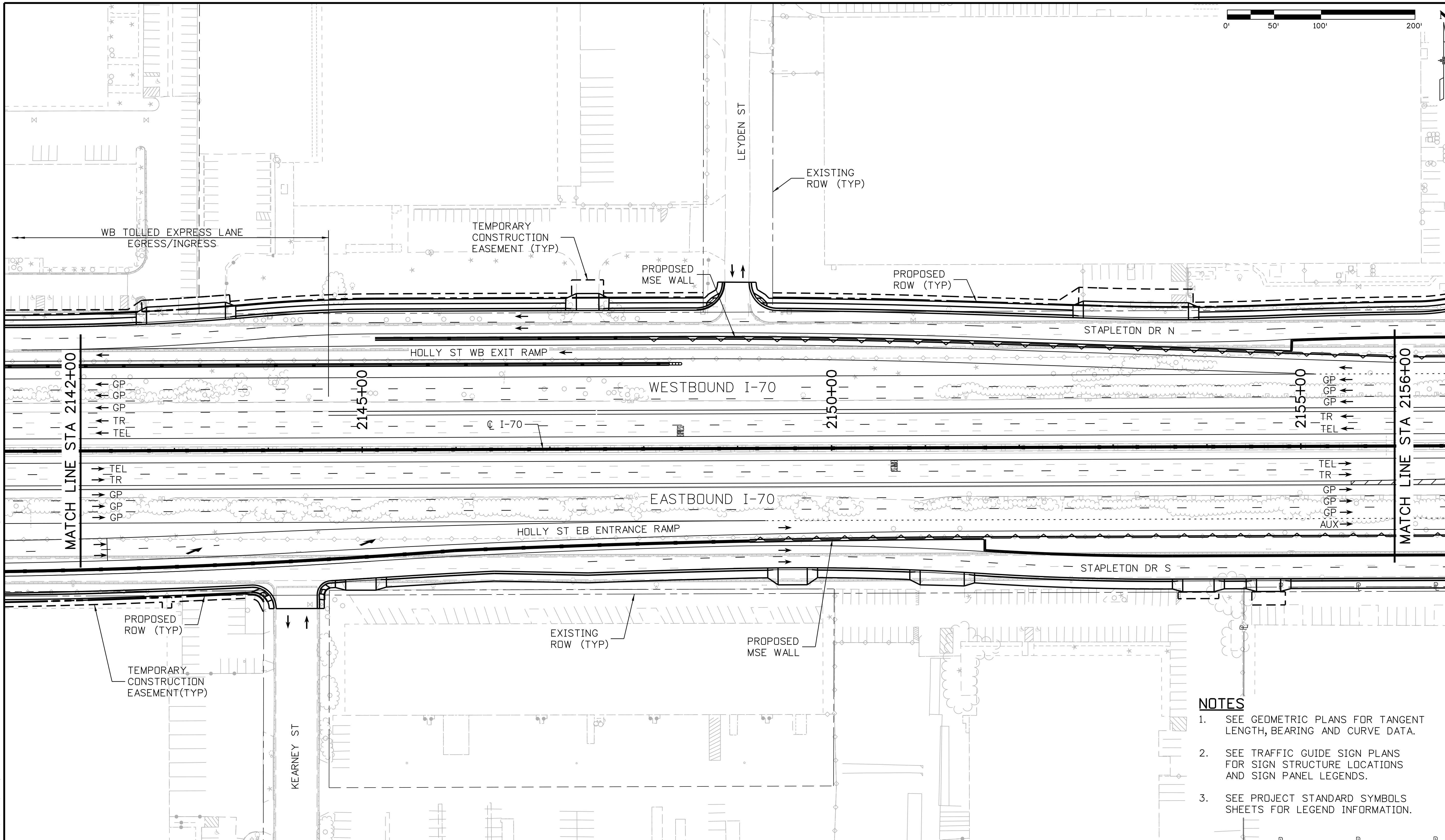

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

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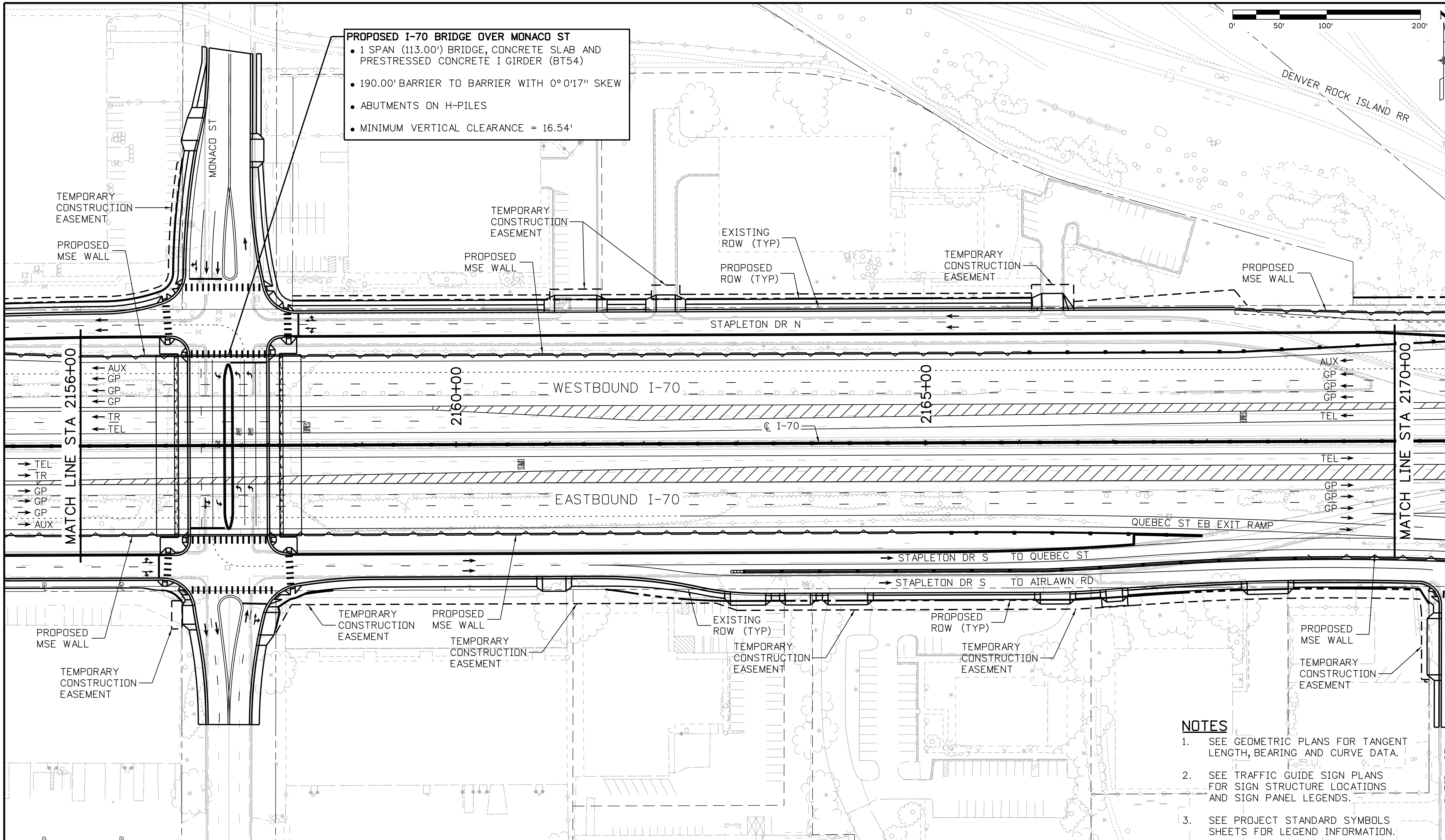
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

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

Designer:	Structure Numbers
Detailer:	
Sheet Subset: ROAD PLAN	Subset Sheets: RPL18 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 56



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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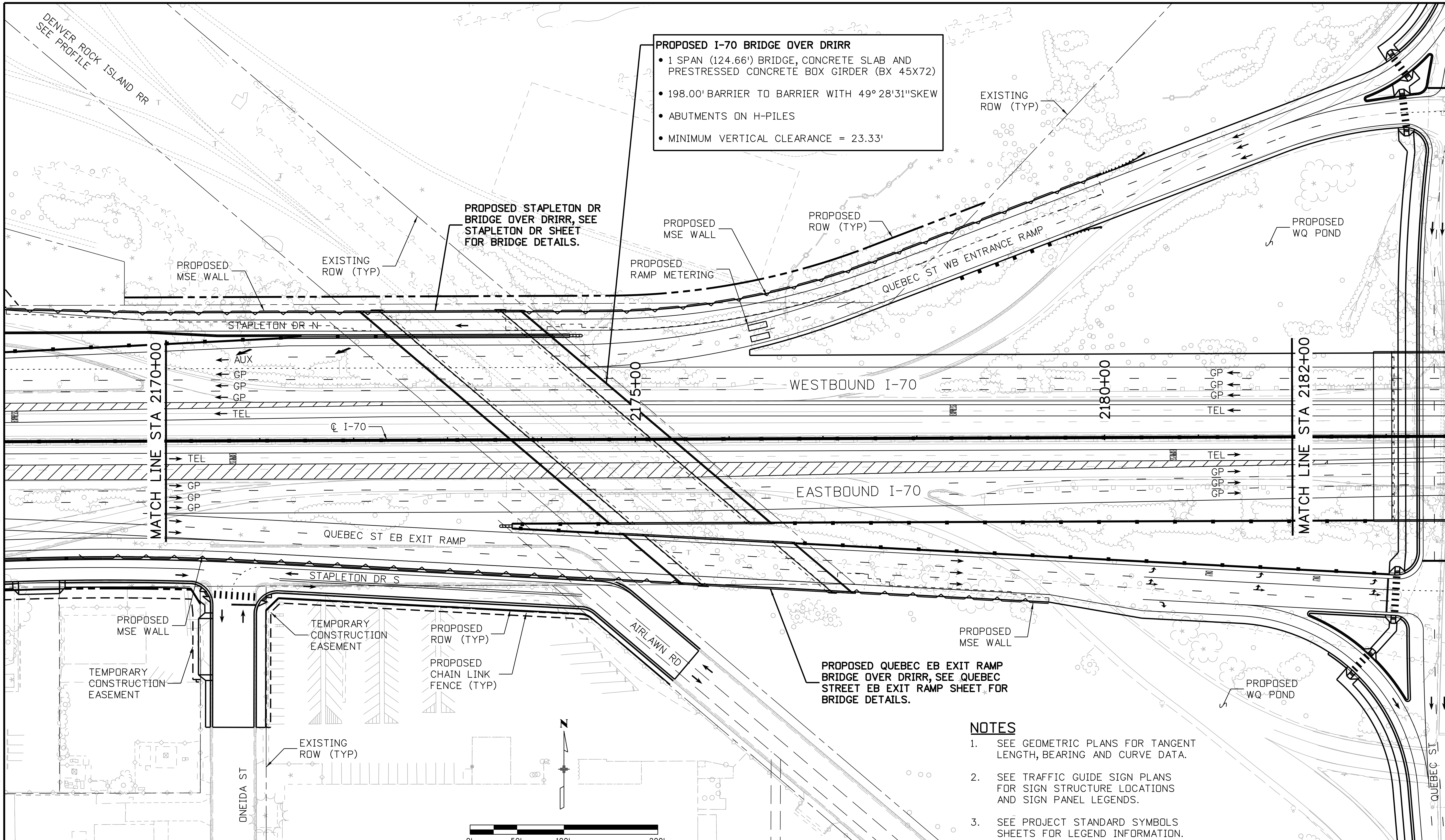
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

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

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL19 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 57



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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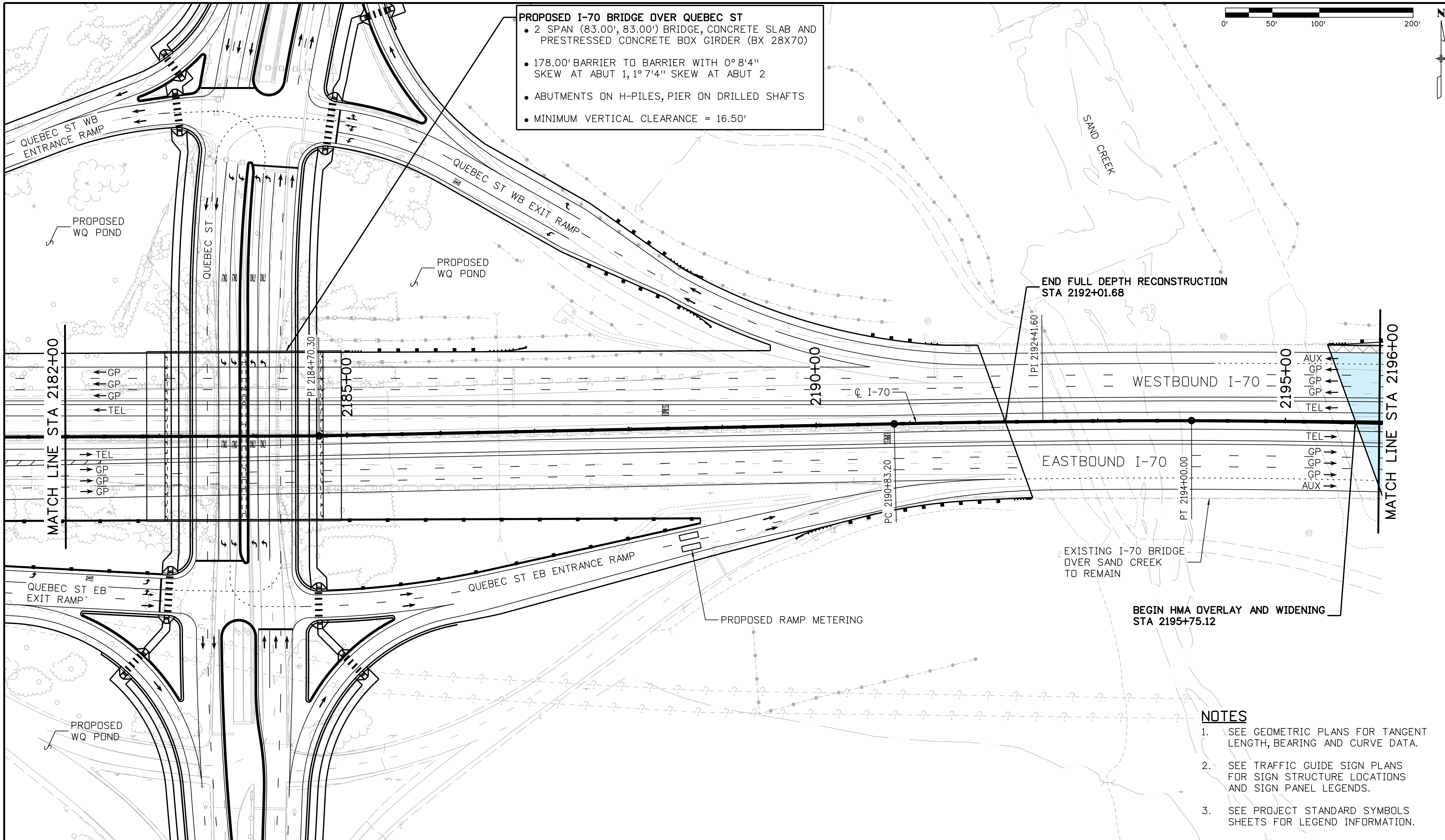
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
I-70 MAINLINE
STA 2170+00 TO STA 2182+00
Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL20 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 58



Print Date: 5/19/2017		Sheet Revisions	Colorado Department of Transportation	PROPOSAL	CENTRAL 70 ROADWAY PLAN I-70 MAINLINE STA 2182+00 TO STA 2196+00
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:	Project No./Code: FBR 0704-234
Front Range Mobility Group	Horiz. Scale: As Noted			Revised:	19631
	Vert. Scale: As Noted			Void:	Designer: / Detailer: / Structure Numbers
	Unit Information		Region 1	KJS	Sheet Subset: ROAD PLAN / Subset Sheets: RPL21 of 142
	Unit Leader				Sheet Number 59

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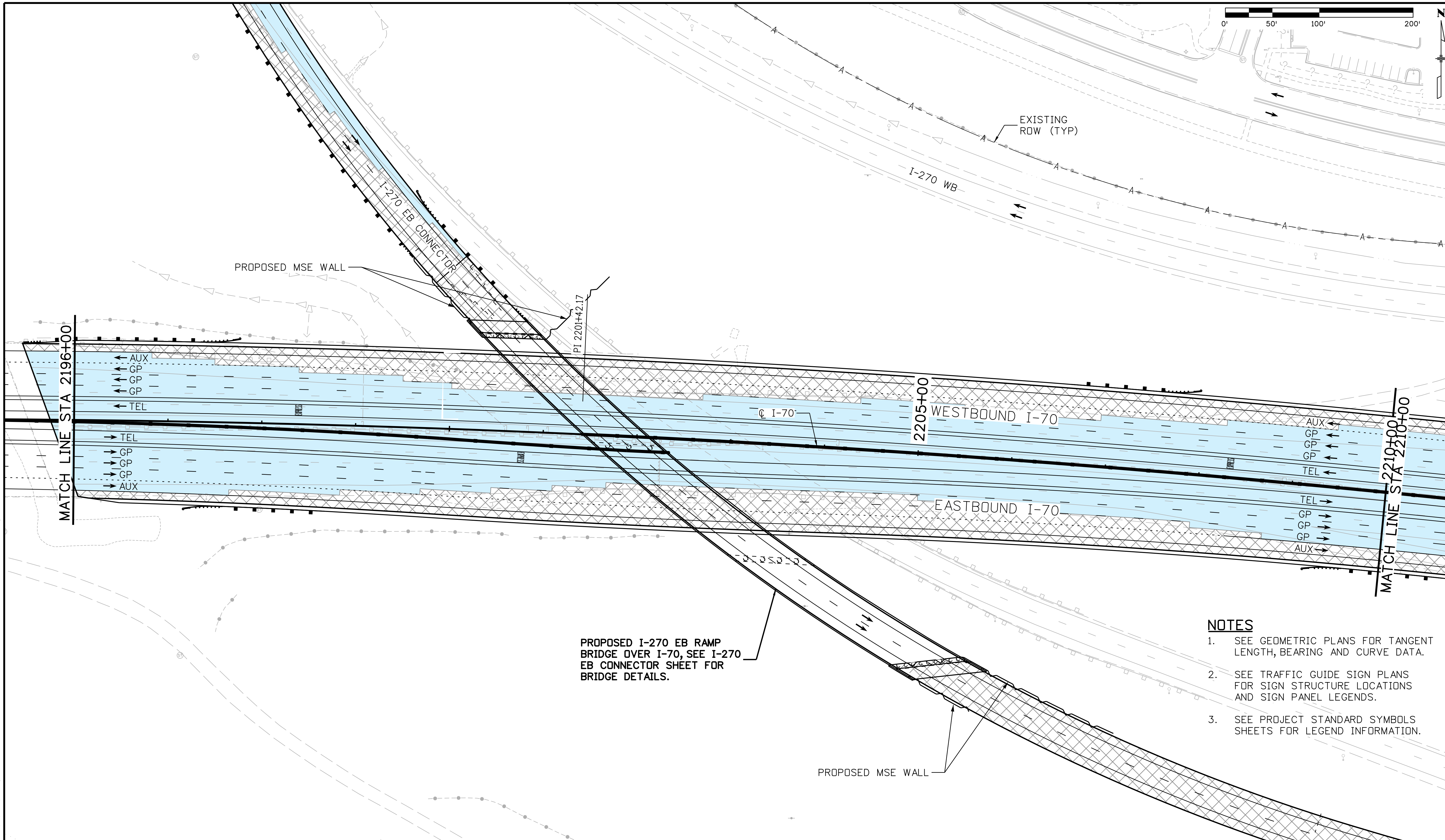

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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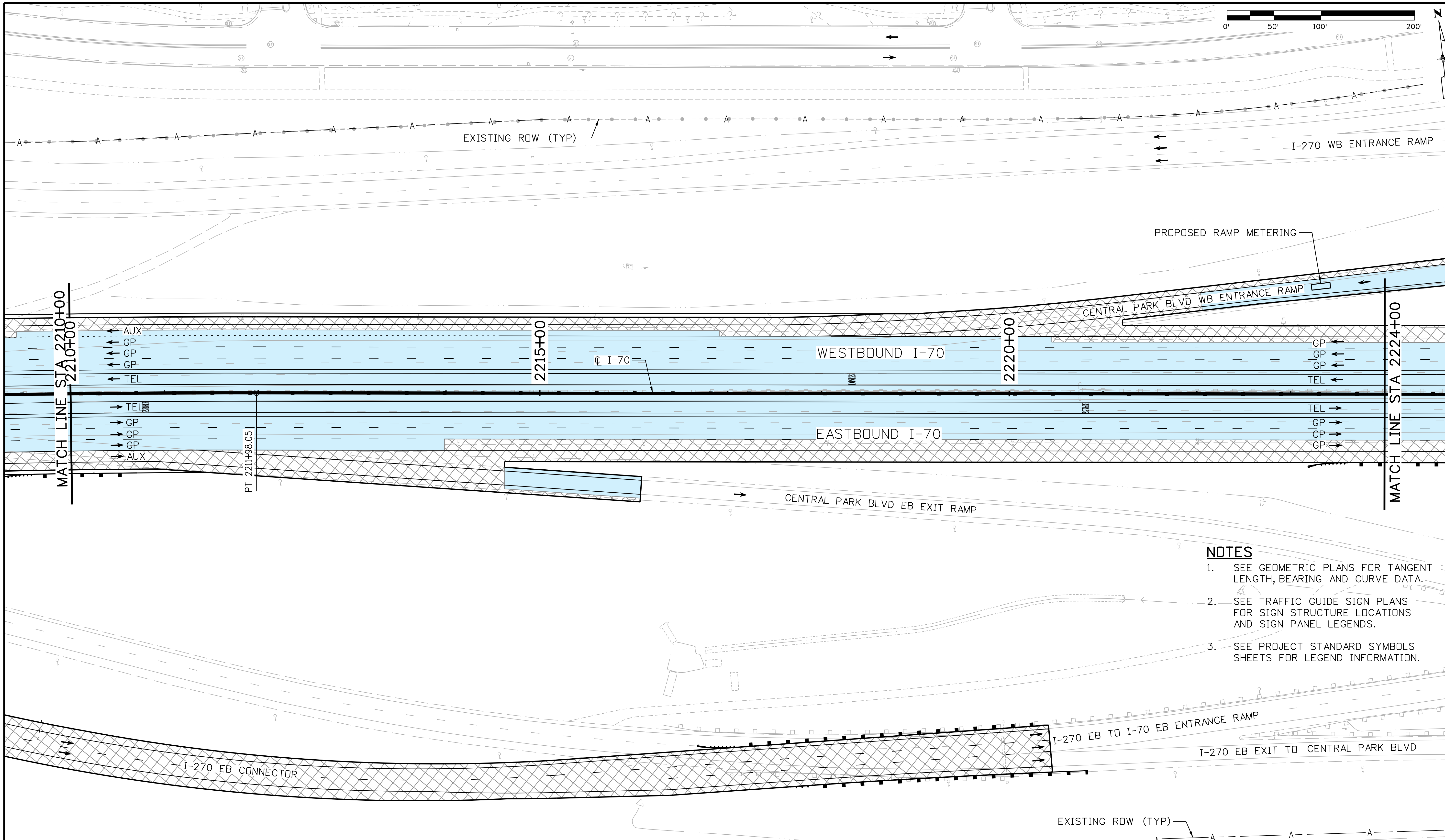
Print Date: 5/19/2017		Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 ROADWAY PLAN I-70 MAINLINE STA 2196+00 TO STA 2210+00		Project No./Code
File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 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: ROAD PLAN	Subset Sheets: RPL22 of 142	Sheet Number 60
	Unit Leader								



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

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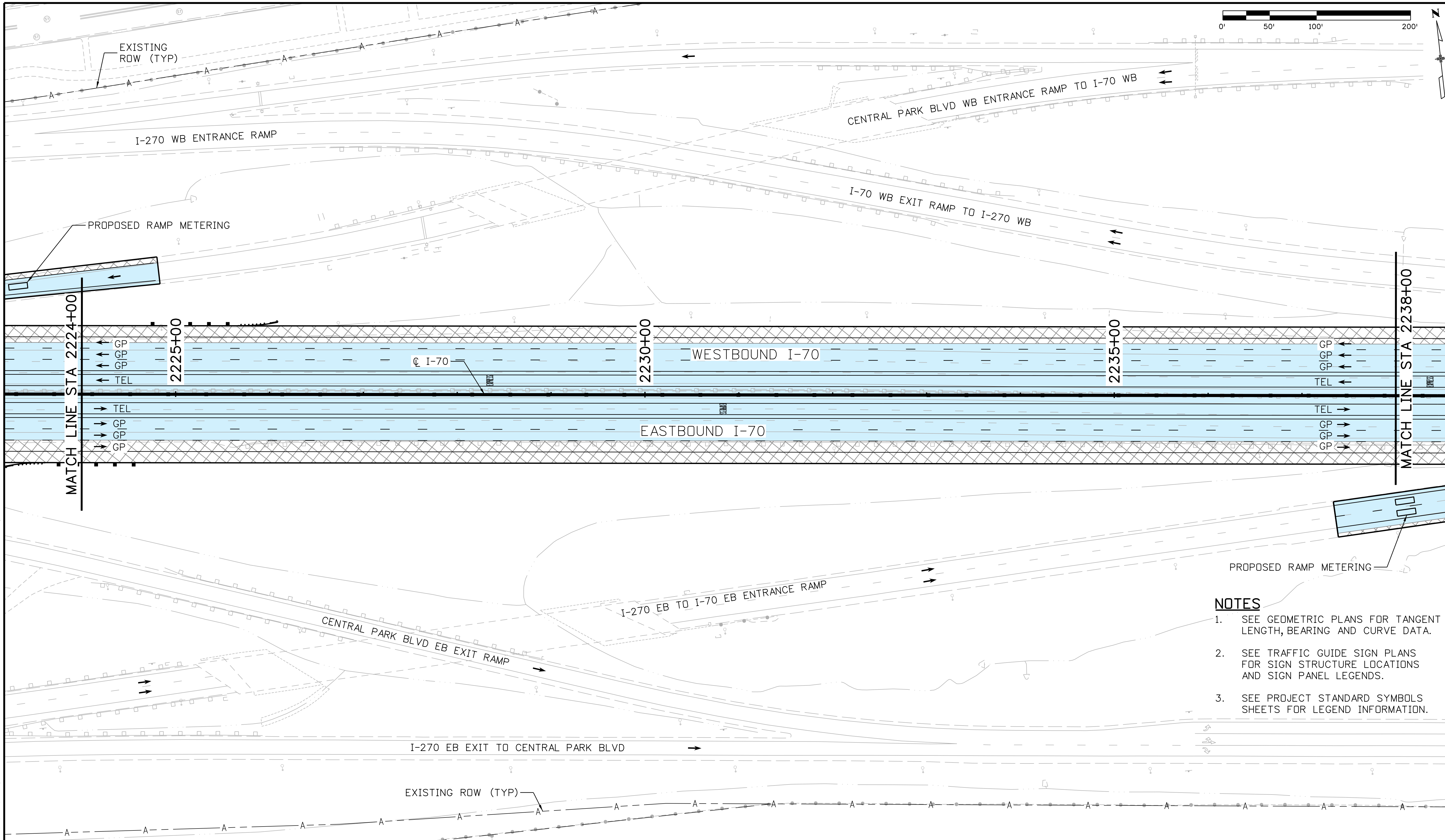
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

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

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL23 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 61



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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
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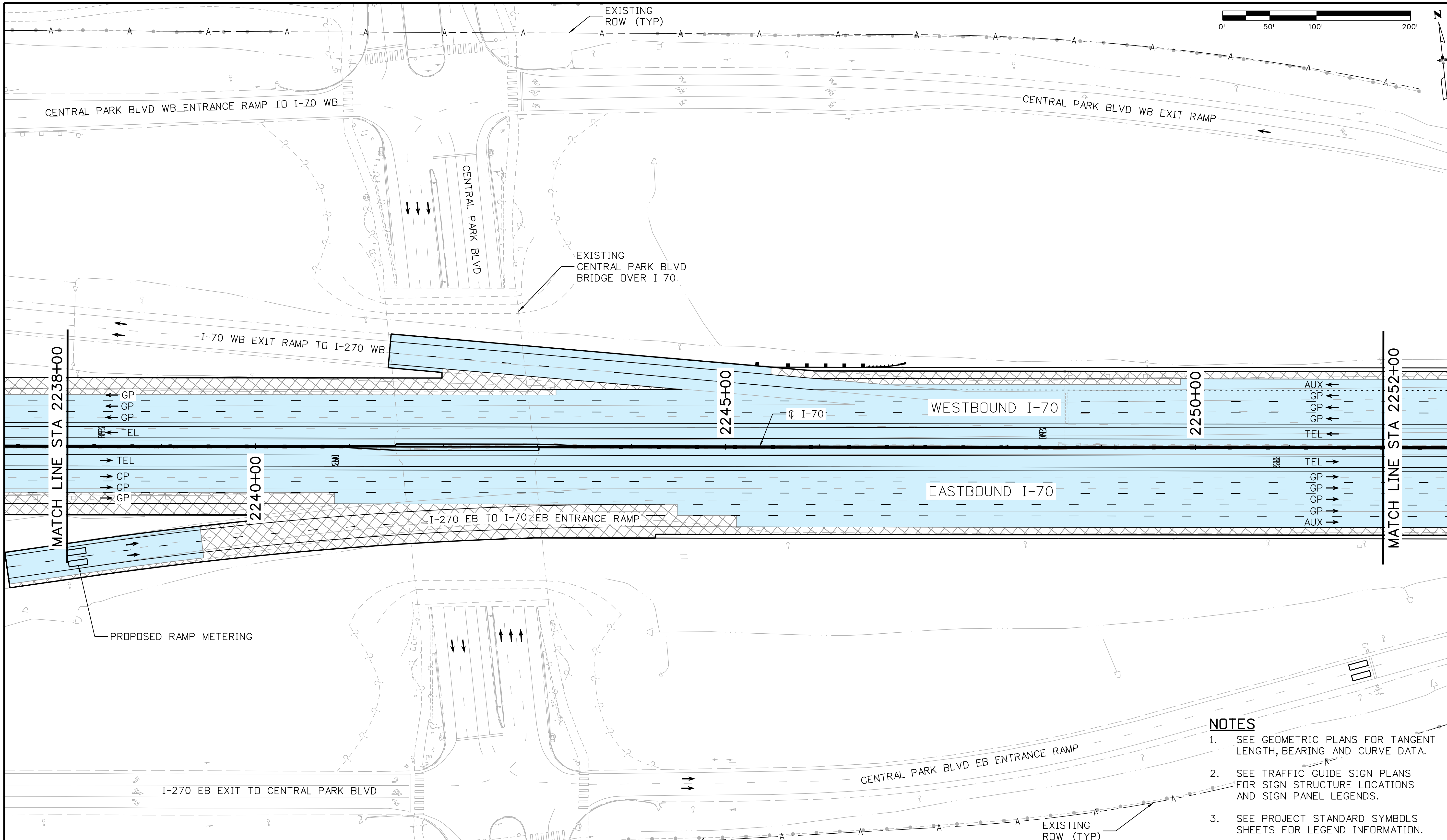
KJS

PROPOSAL
No Revisions:
Revised:
Void:

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

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL24 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 62



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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
CDOT
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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
ROADWAY PLAN
I-70 MAINLINE
STA 2238+00 TO STA 2252+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL25 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 63

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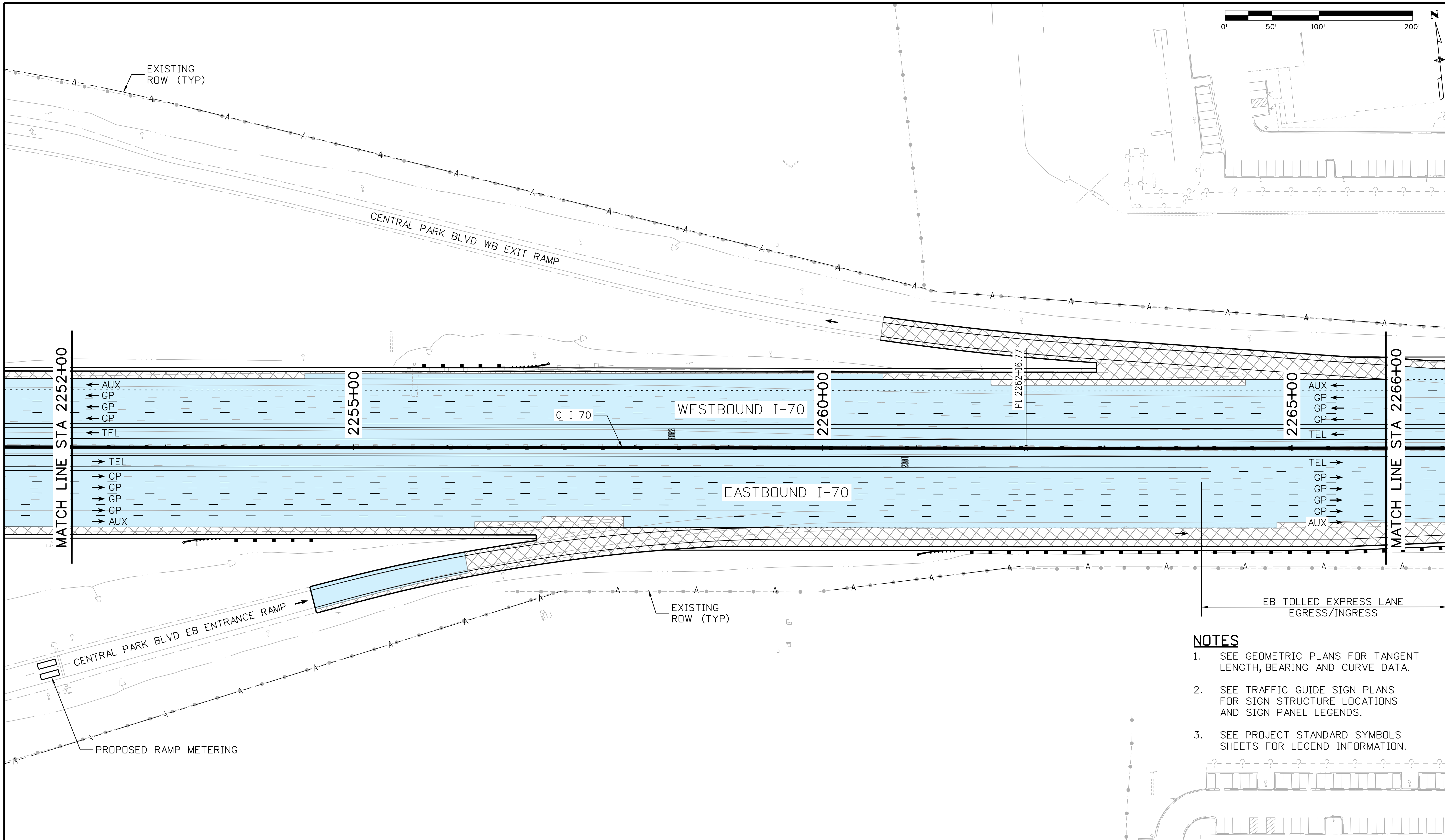

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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

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
ROADWAY PLAN
I-70 MAINLINE
STA 2252+00 TO STA 2266+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PLAN		Subset Sheets: RPL26 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 64

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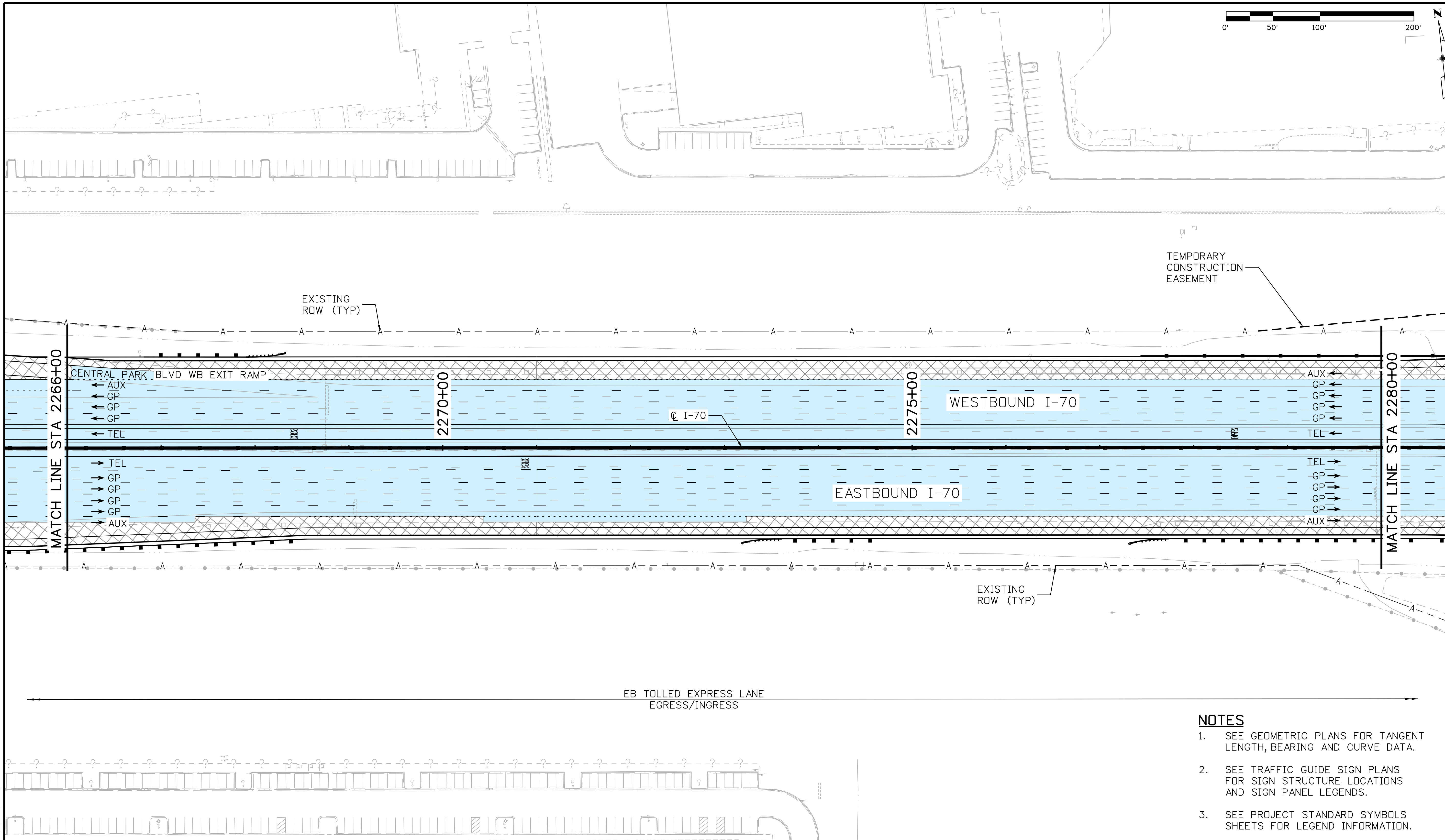

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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Print Date: 5/24/2017			
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.

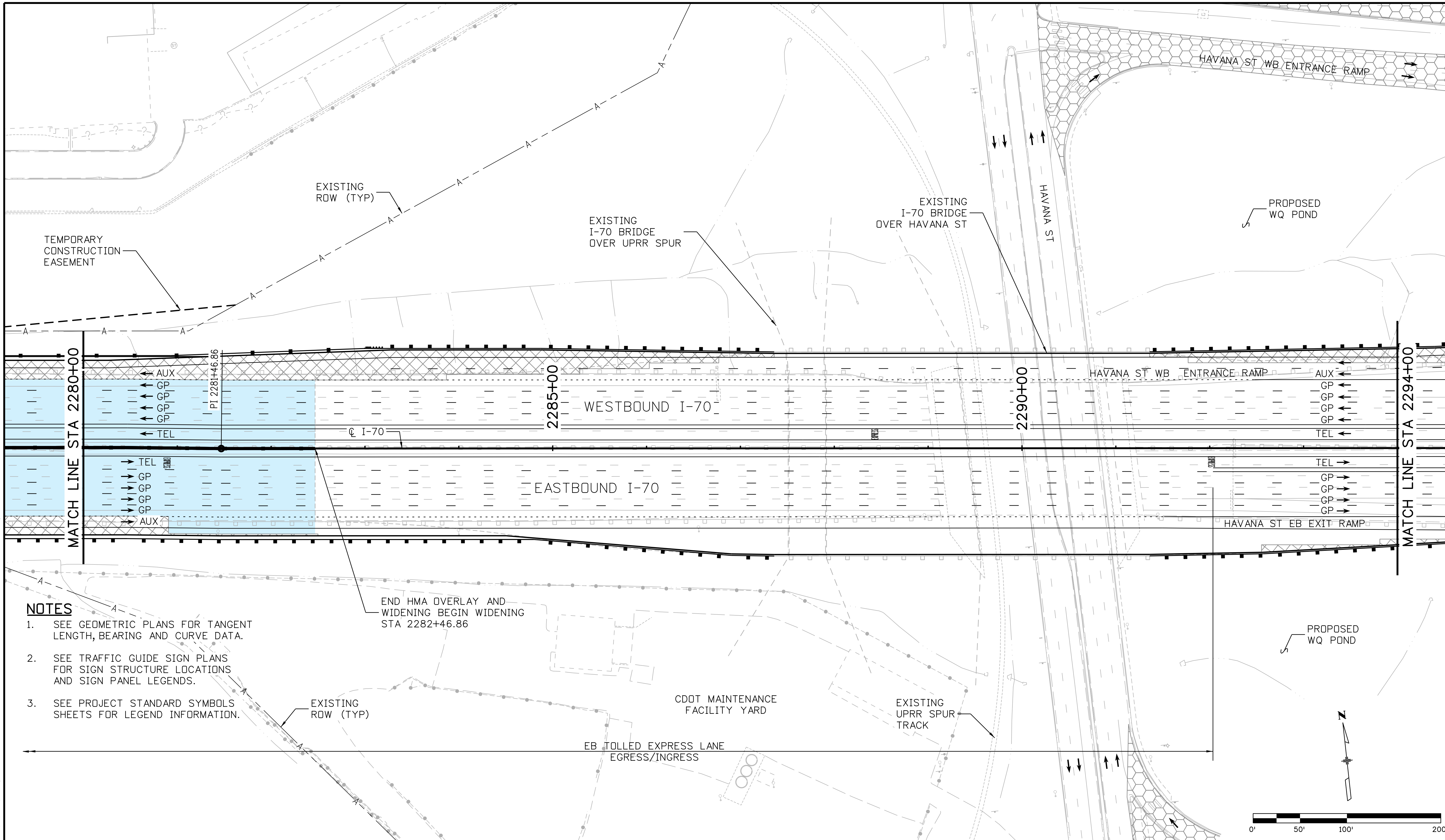
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

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

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PLAN	Subset Sheets: RPL27 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 65



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

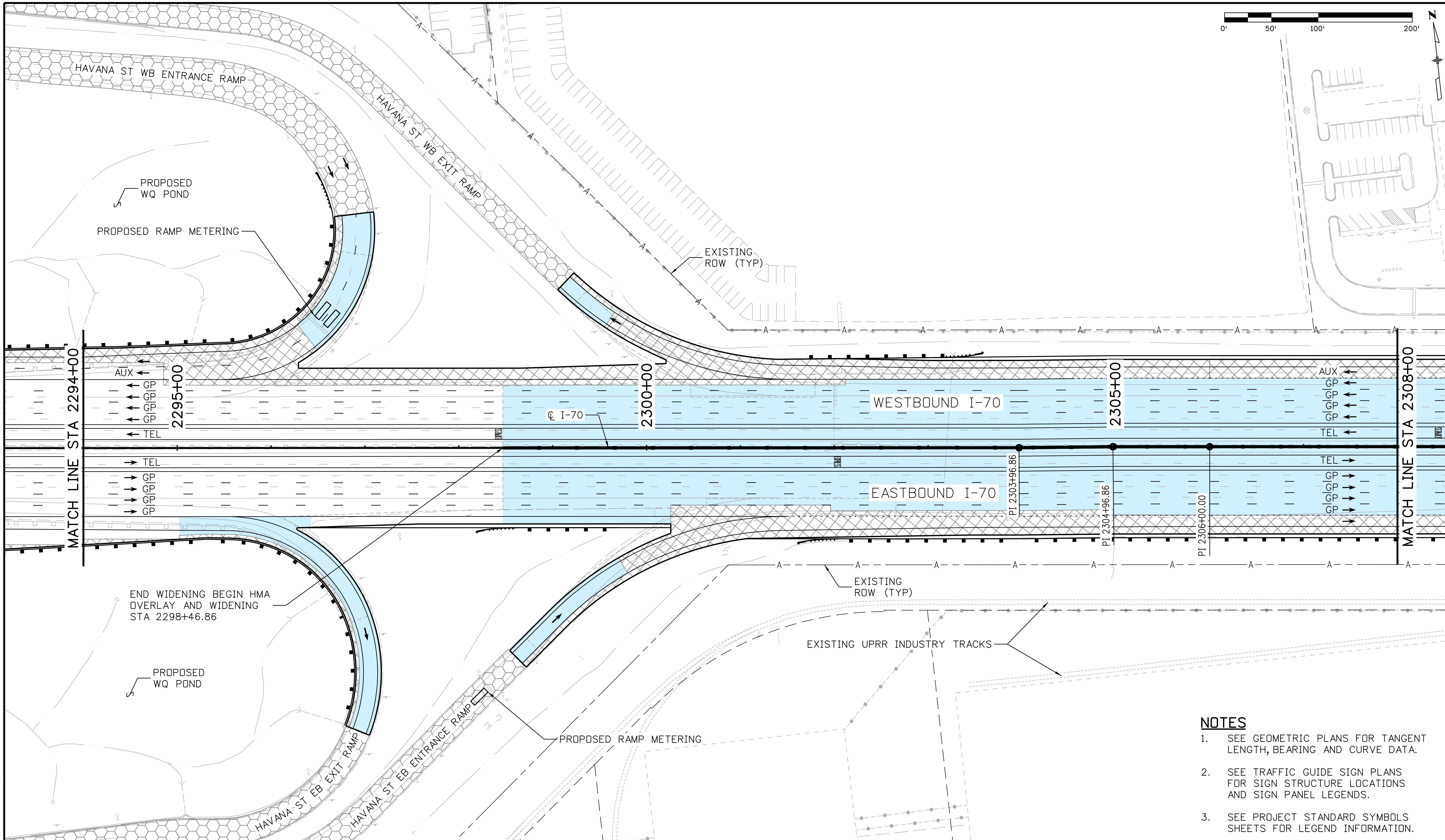
Colorado Department of Transportation
CDOT
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

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

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PLAN	Subset Sheets: RPL28 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 66



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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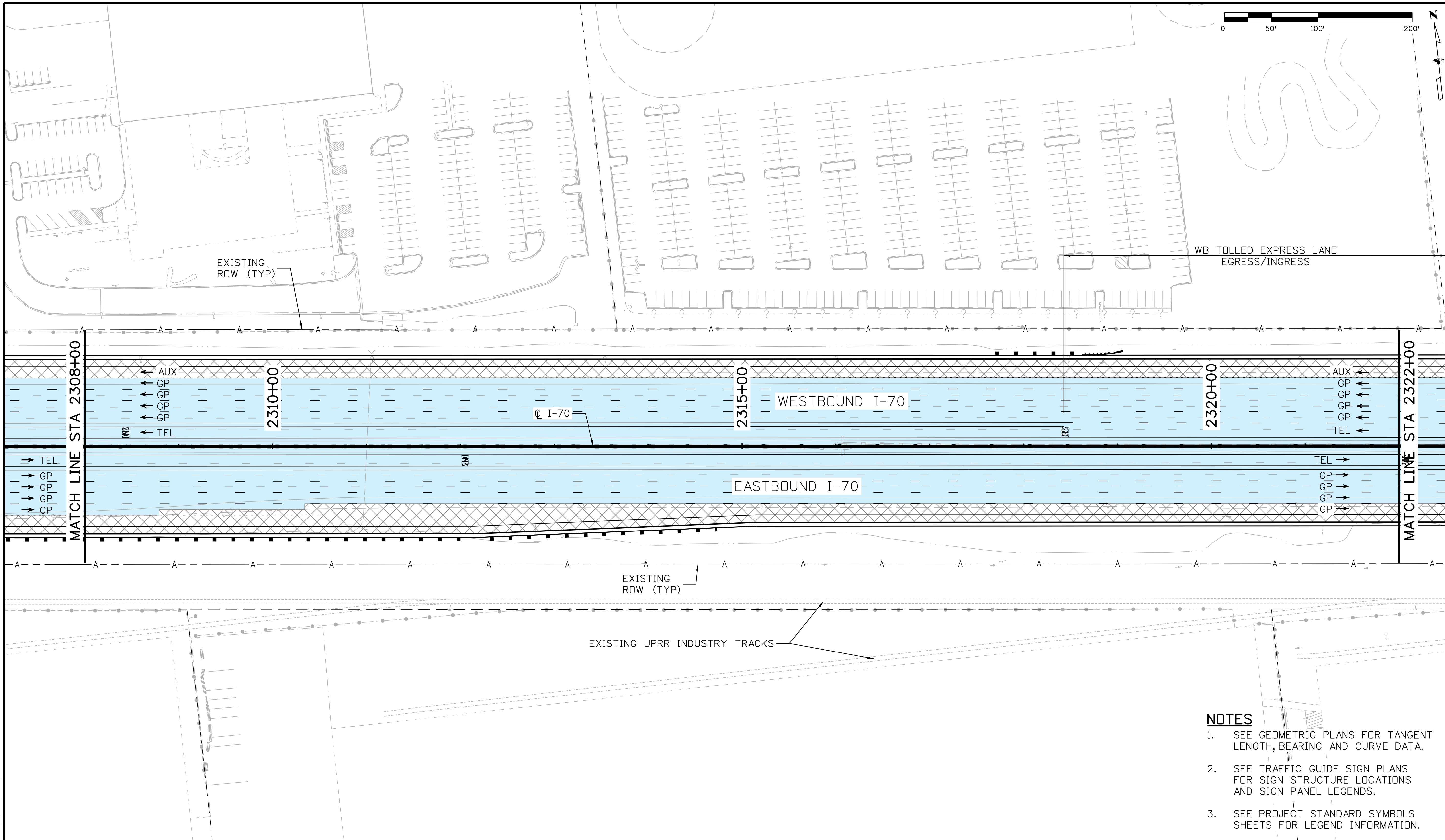
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

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

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL29 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 67



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

Print Date: 5/19/2017		Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 ROADWAY PLAN I-70 MAINLINE STA 2308+00 TO STA 2322+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:	Designer: / Structure Numbers	FBR 0704-234
Front Range Mobility Group	Horiz. Scale: As Noted					Revised:	Detailer:	19631
	Vert. Scale: As Noted				Region 1	Void:	Sheet Subset: ROAD PLAN	Subset Sheets: RPL30 of 142	Sheet Number 68
	Unit Information				KJS			
	Unit Leader							

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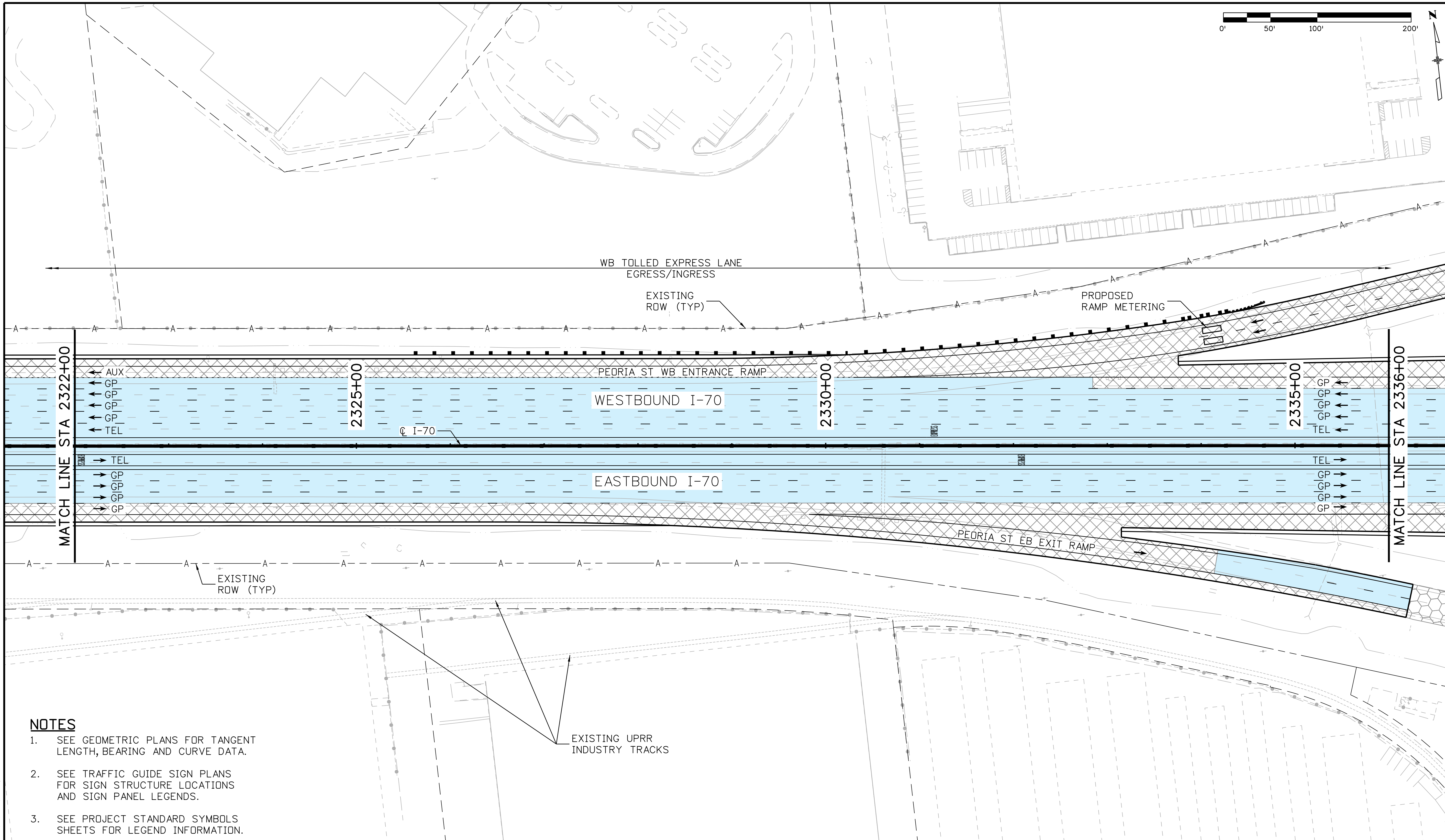

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

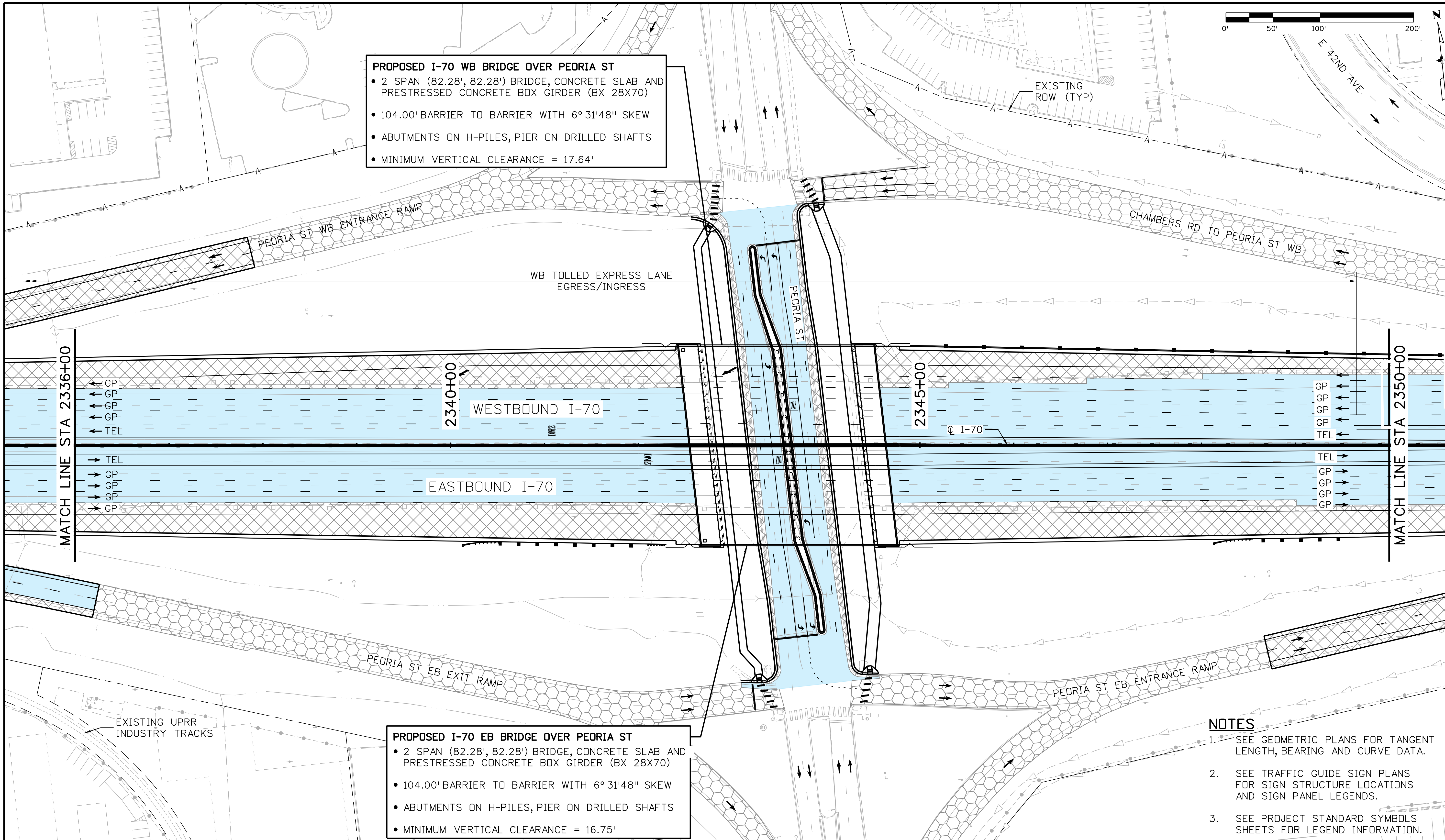
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

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

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL31 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 69



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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.

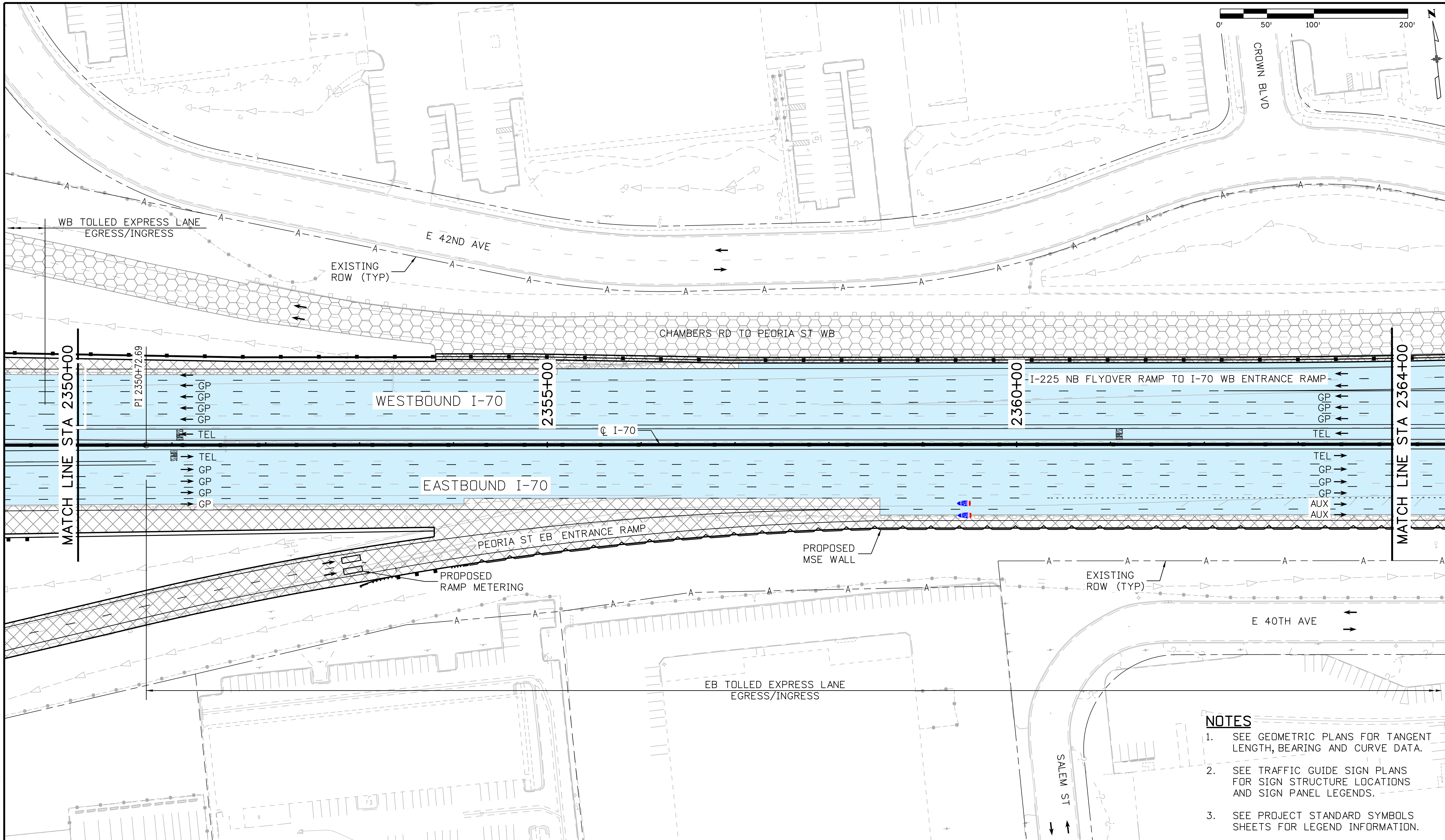
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

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

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL32 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 70



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 Vert. Scale: As Noted Unit Information Unit Leader		Region 1 KJS

PROPOSAL	CENTRAL 70 ROADWAY PLAN I-70 MAINLINE STA 2350+00 TO STA 2364+00	Project No./Code
No Revisions:	Designer: / Structure Numbers	FBR 0704-234
Revised:	Detailer:	19631
Void:	Sheet Subset: ROAD PLAN / Subset Sheets: RPL33 of 142	Sheet Number 71

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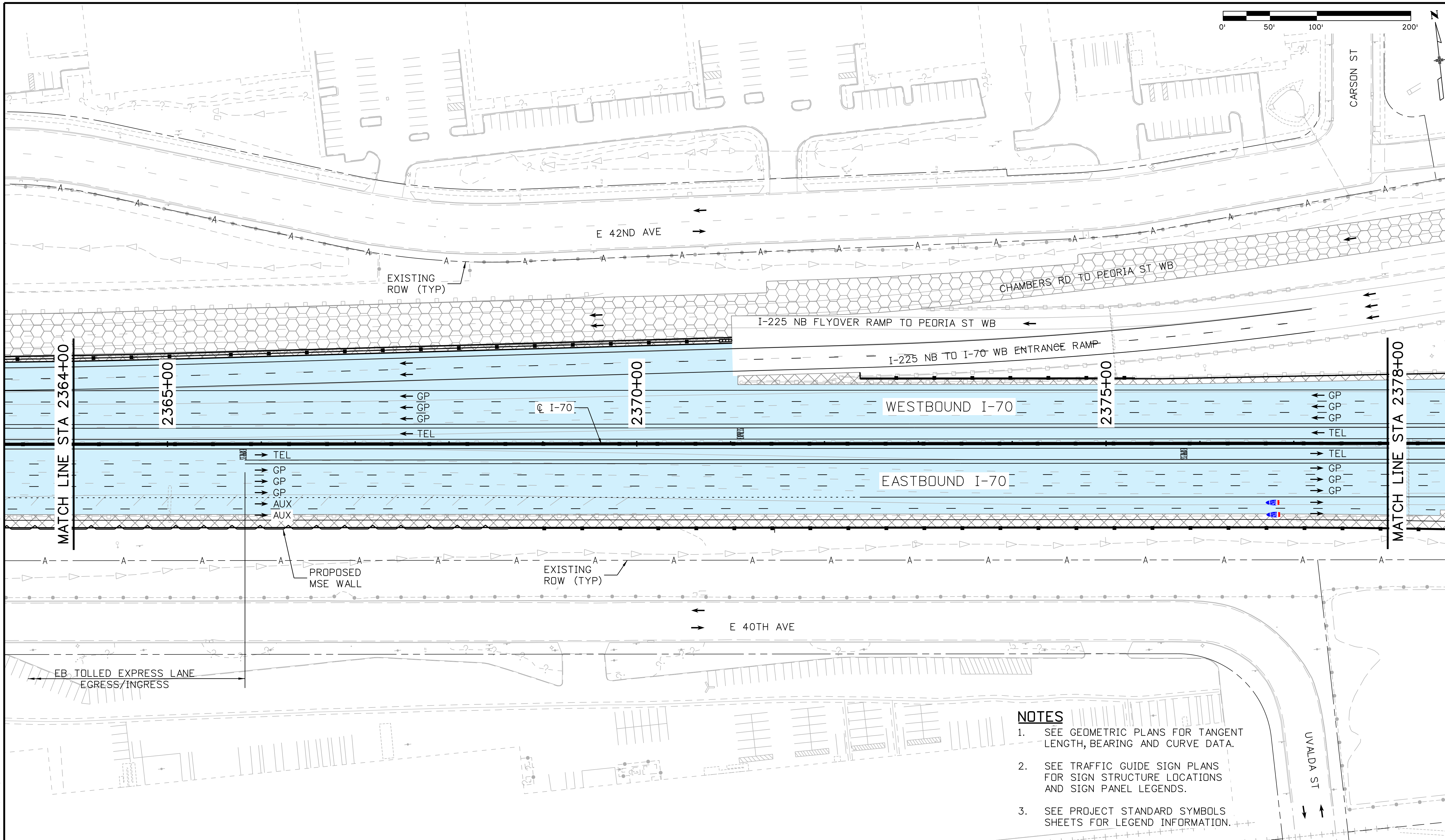

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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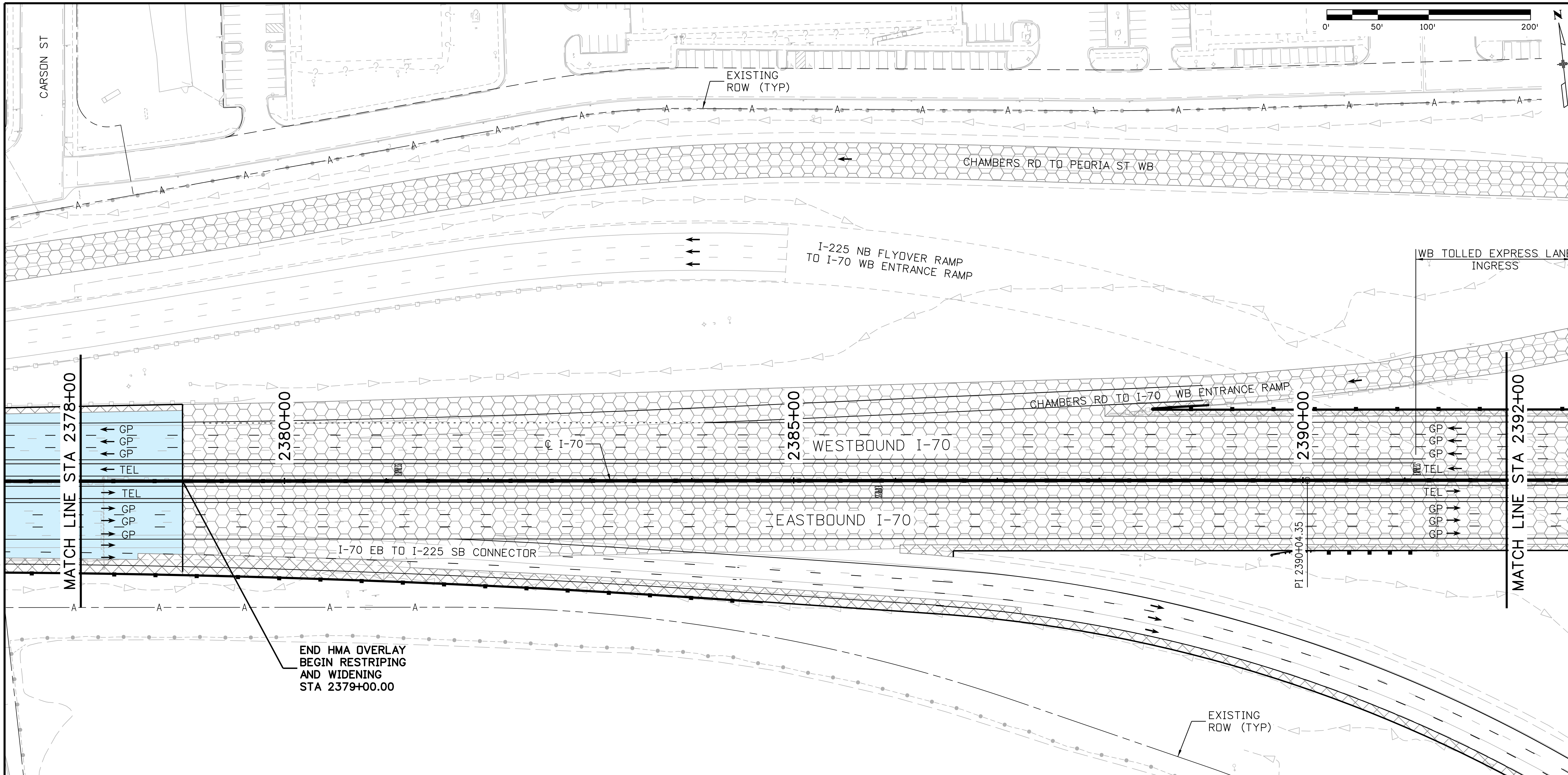
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

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

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PLAN		Subset Sheets: RPL34 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 72



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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
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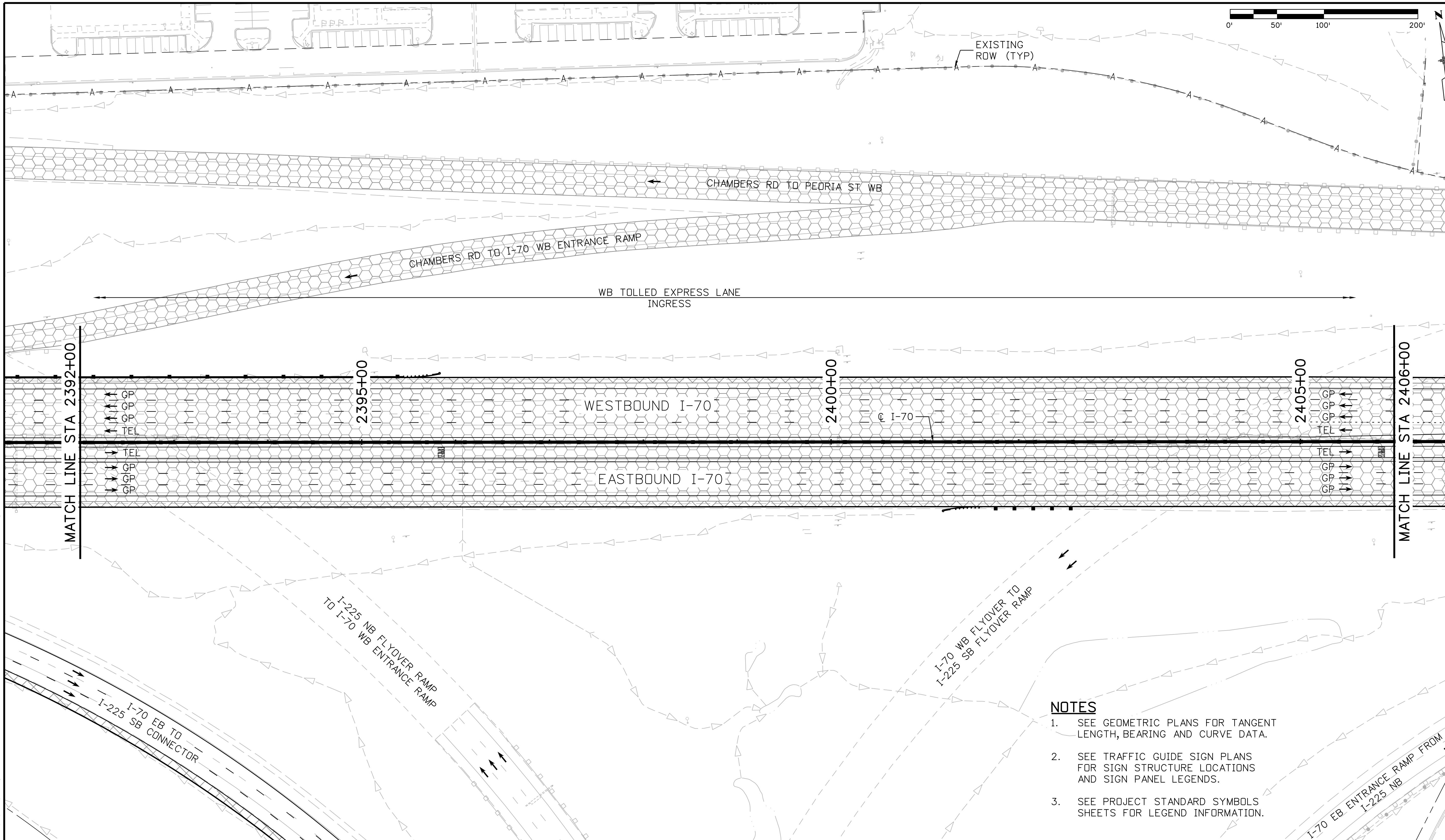
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

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

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL35 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 73



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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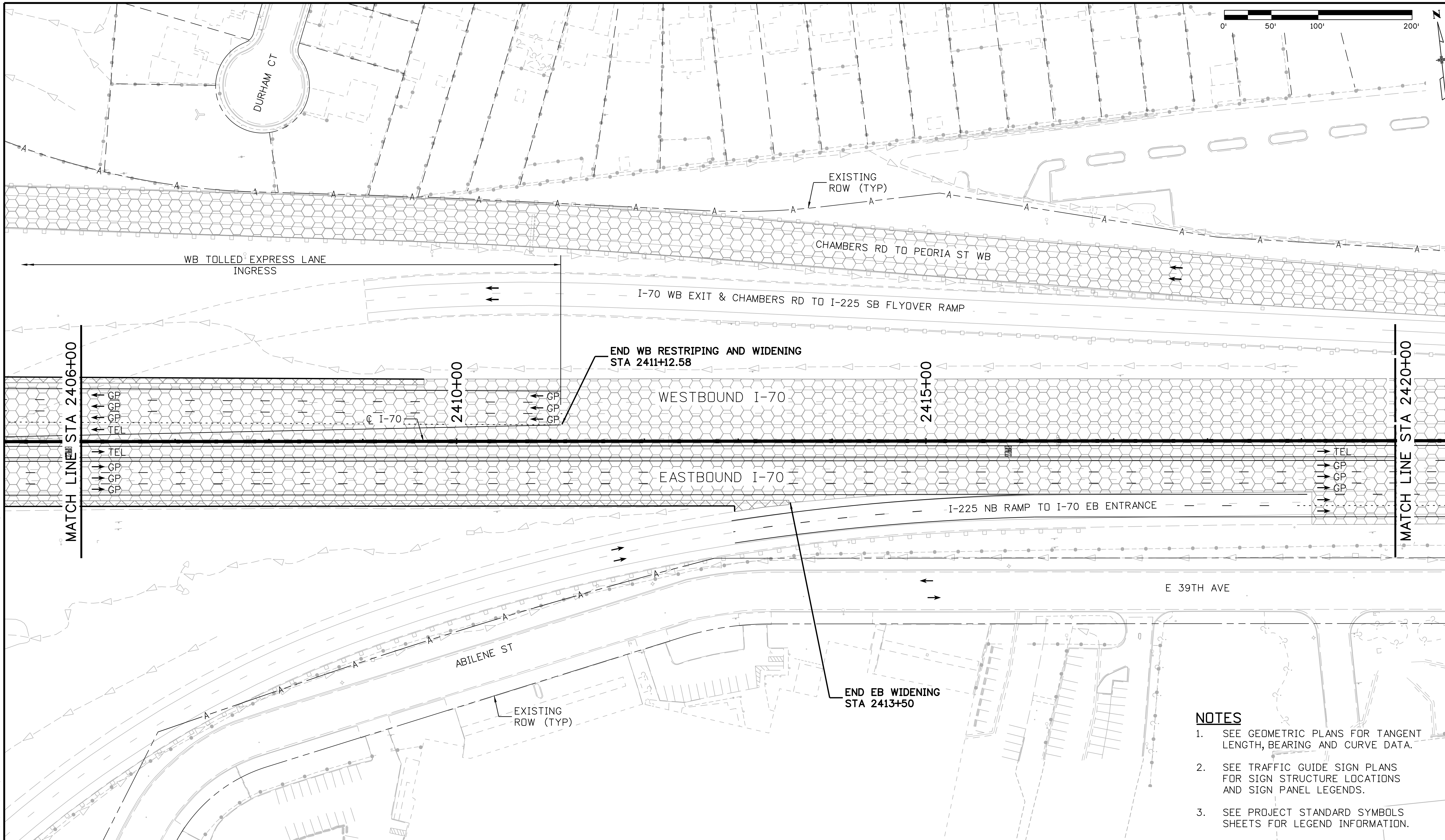
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

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

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL36 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 74



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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Print Date: 5/19/2017		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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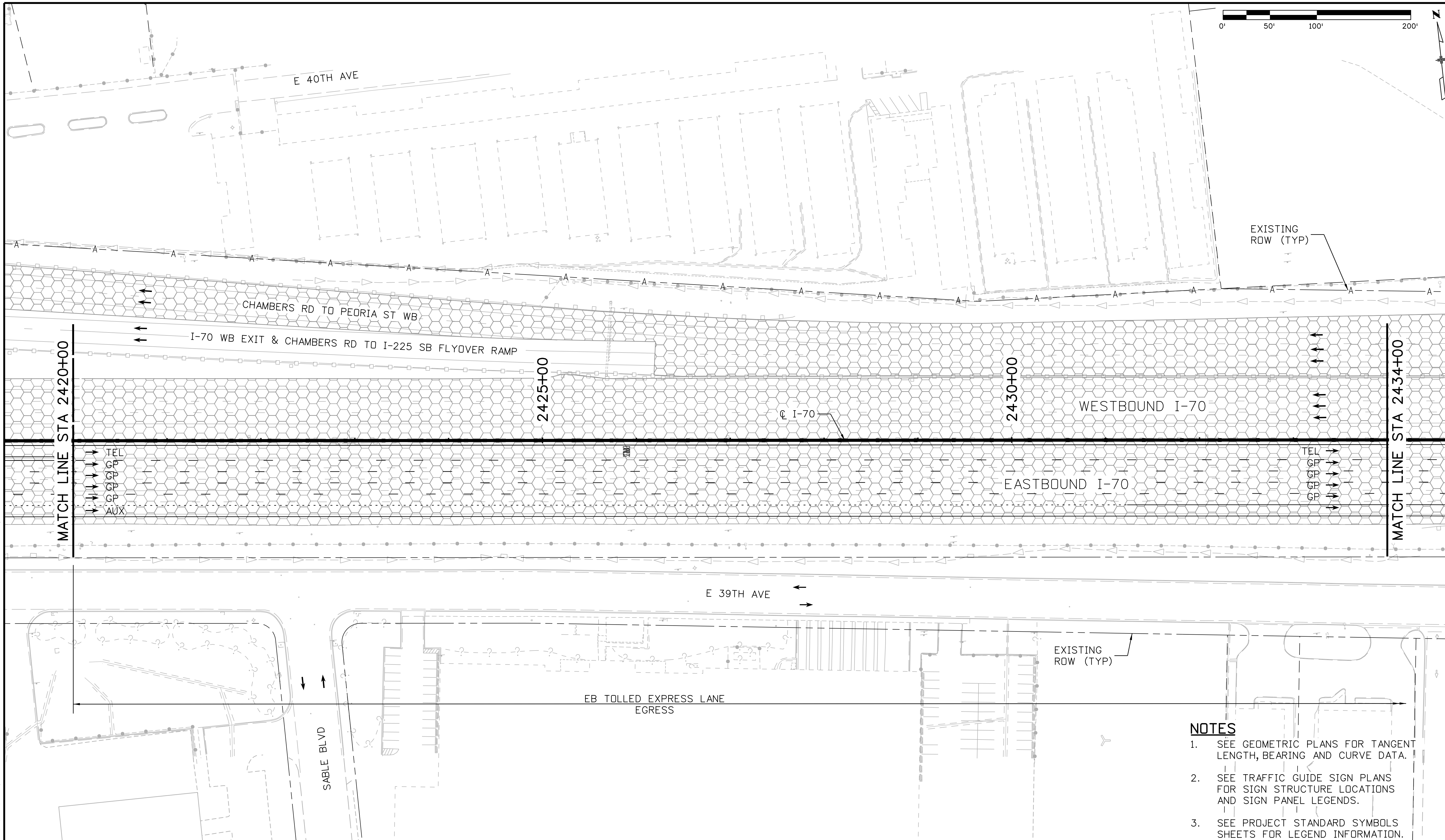
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

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

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PLAN		Subset Sheets: RPL37 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 75



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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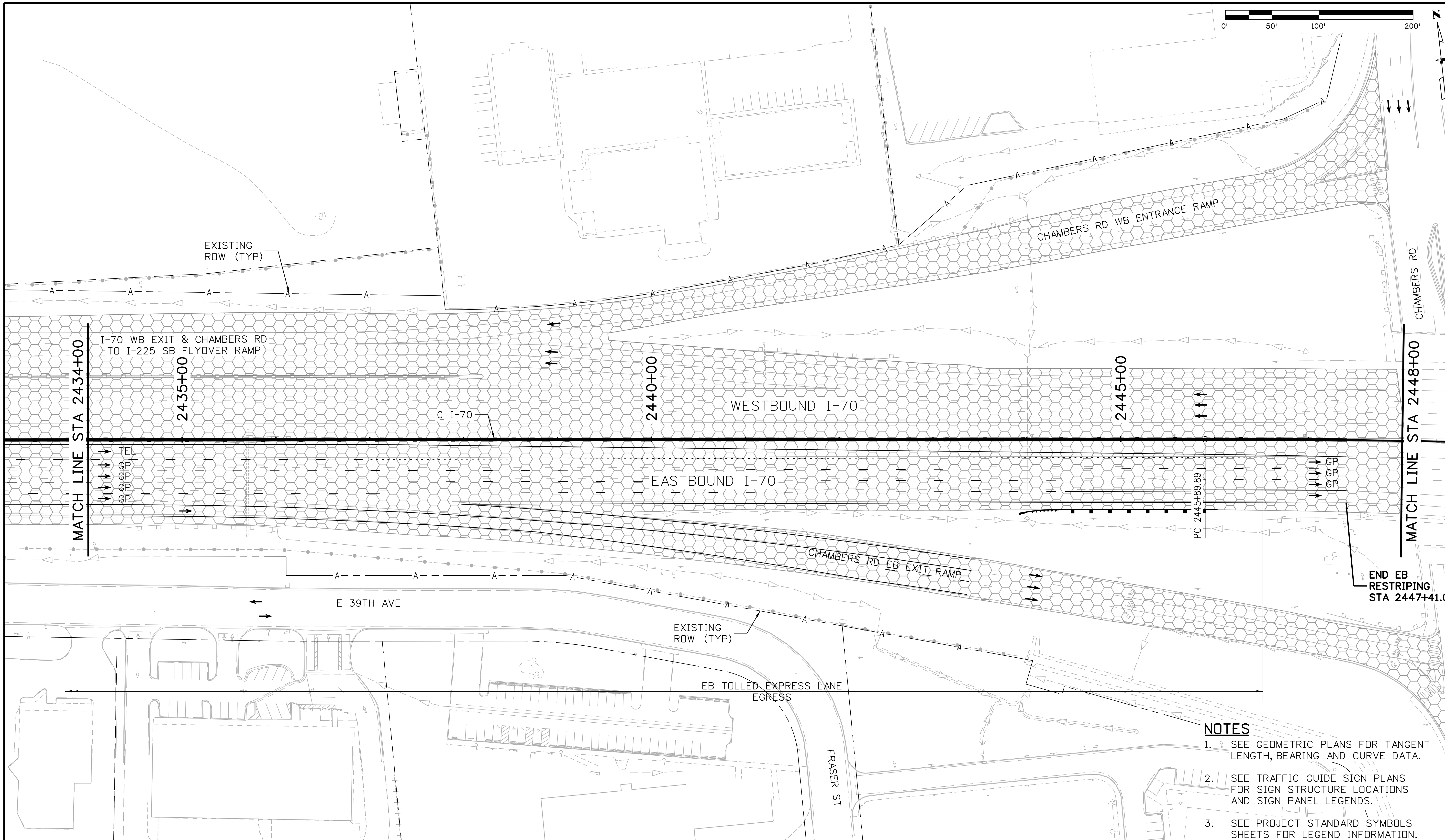
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

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

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL38 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 76



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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
CDOT
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Denver, CO 80222
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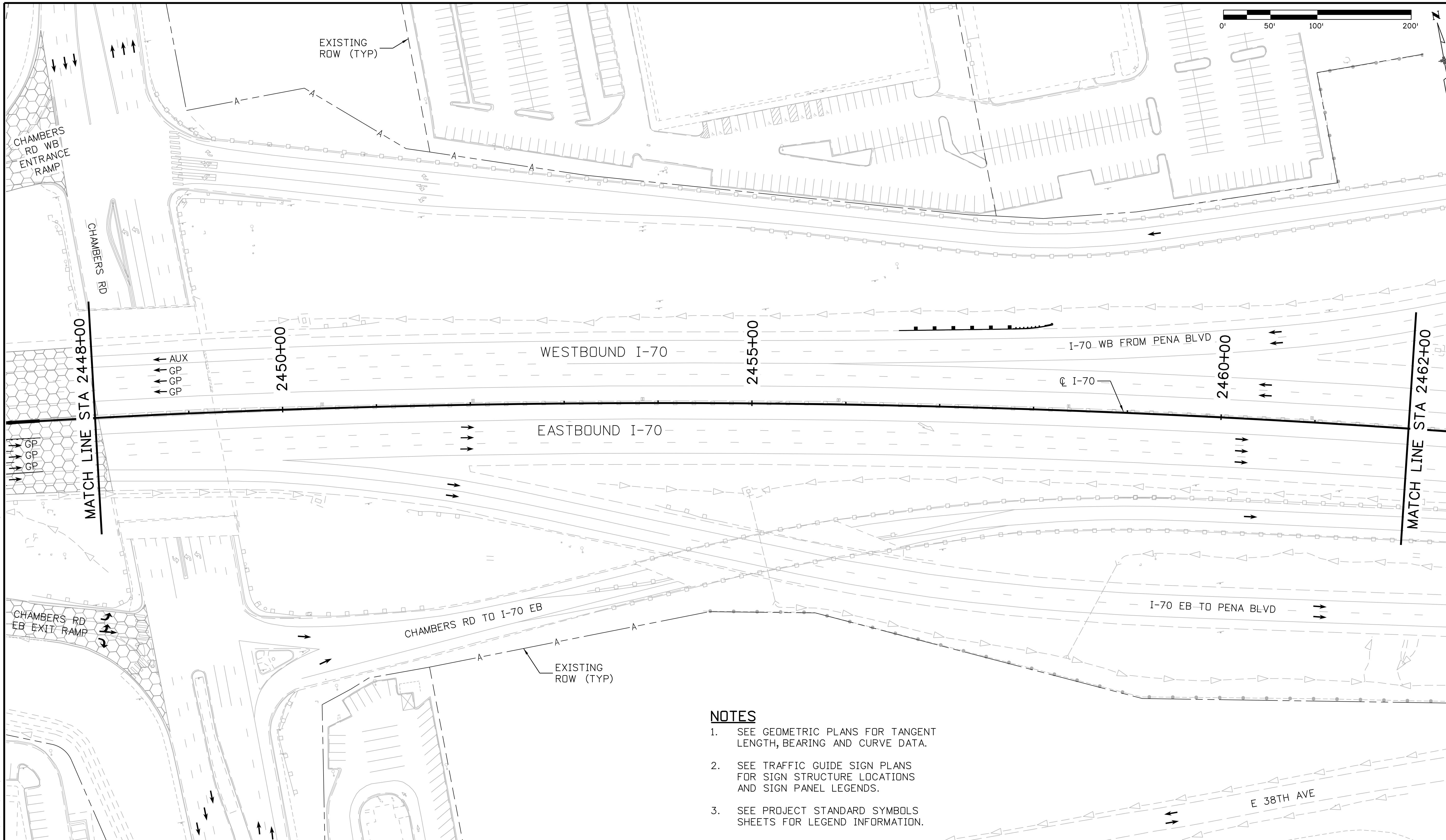
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

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

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PLAN		Subset Sheets: RPL39 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 77



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

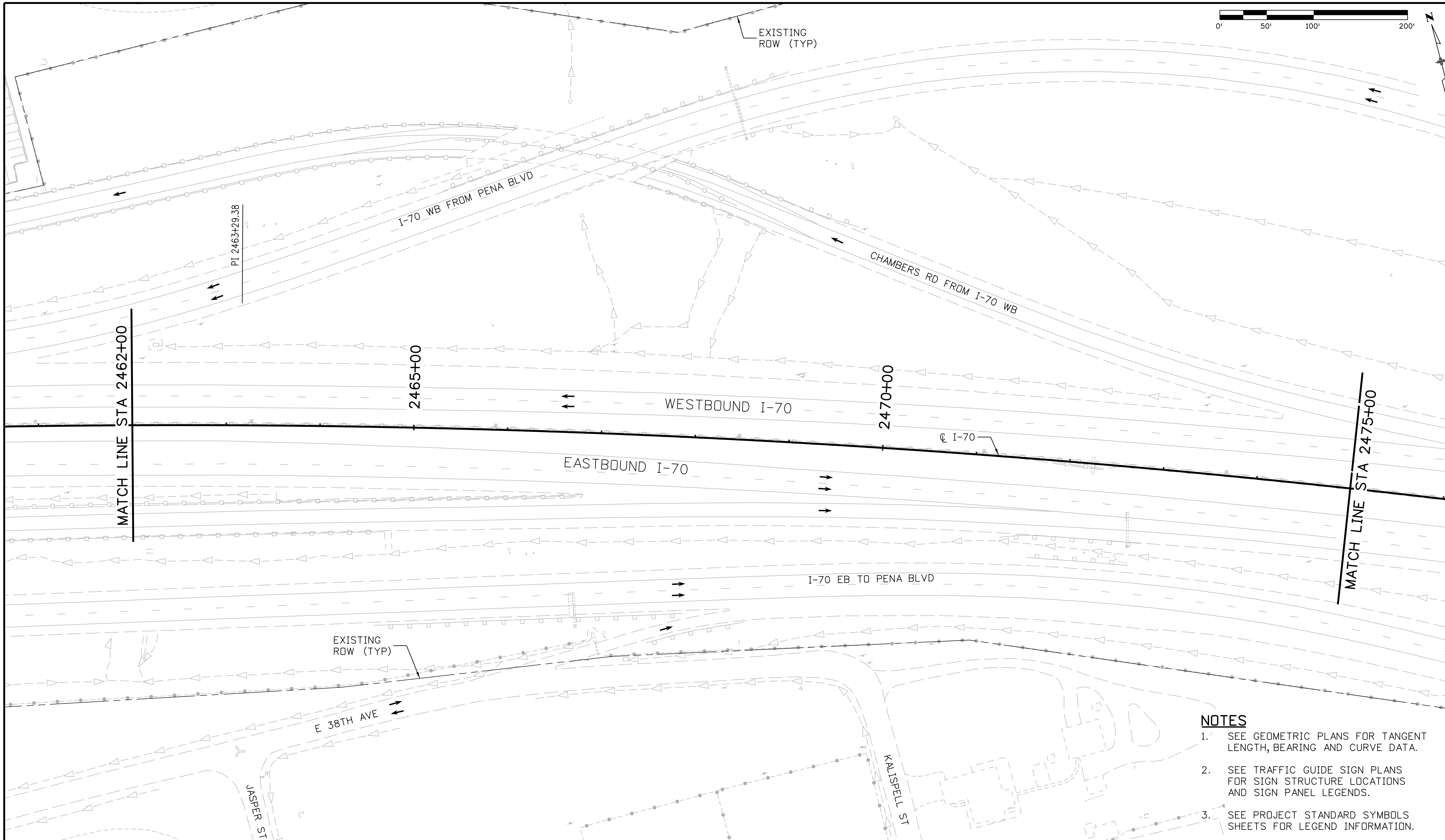
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
I-70 MAINLINE
STA 2448+00 TO STA 2462+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL40 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 78



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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
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Denver, CO 80222
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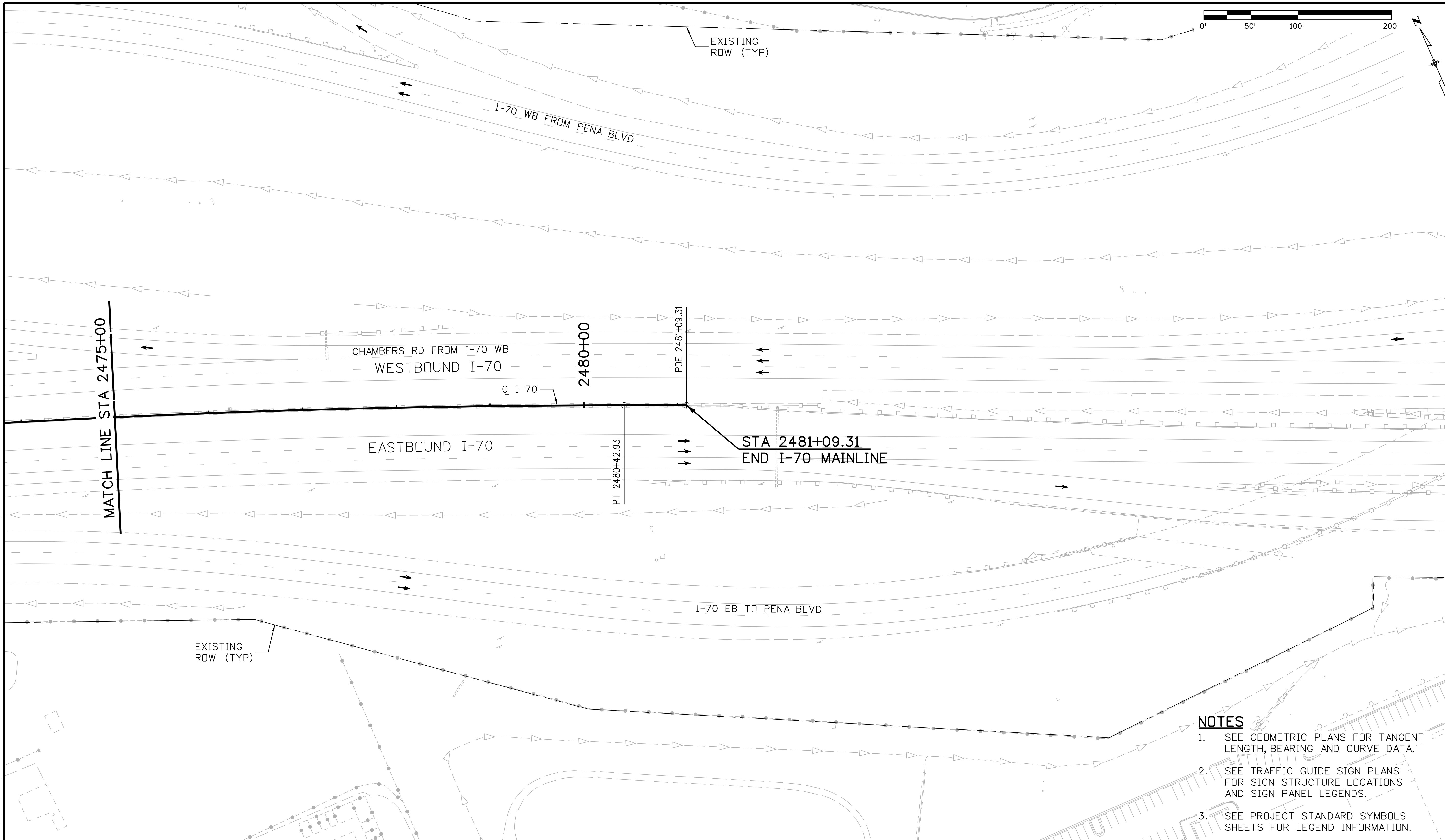
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

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

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL41 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 79



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

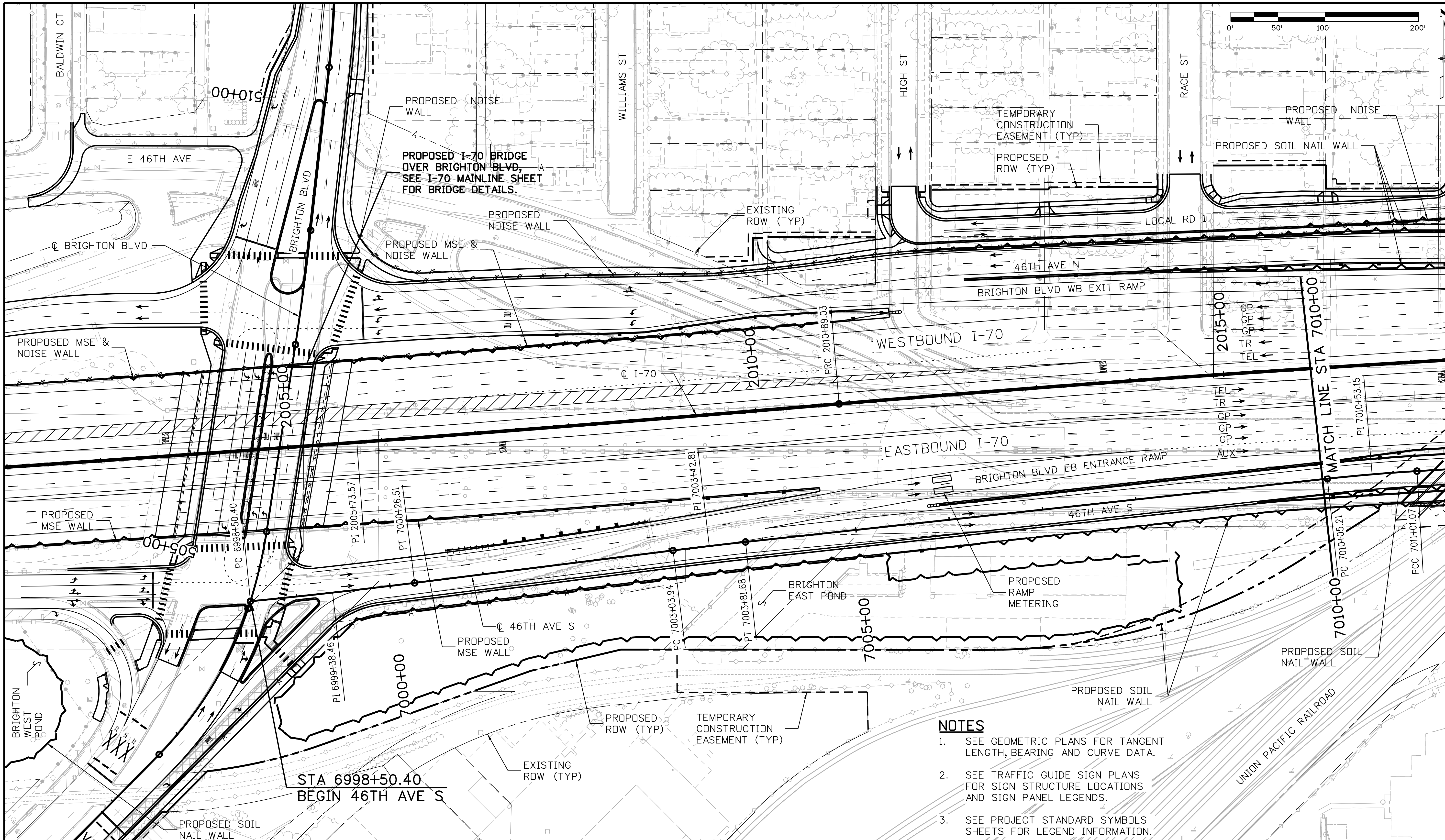
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

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

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PLAN	Subset Sheets:	RPL42 of 142

Project No./Code	
FBR 0704-234	
19631	
Sheet Number	80



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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Print Date: 5/24/2017			
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.

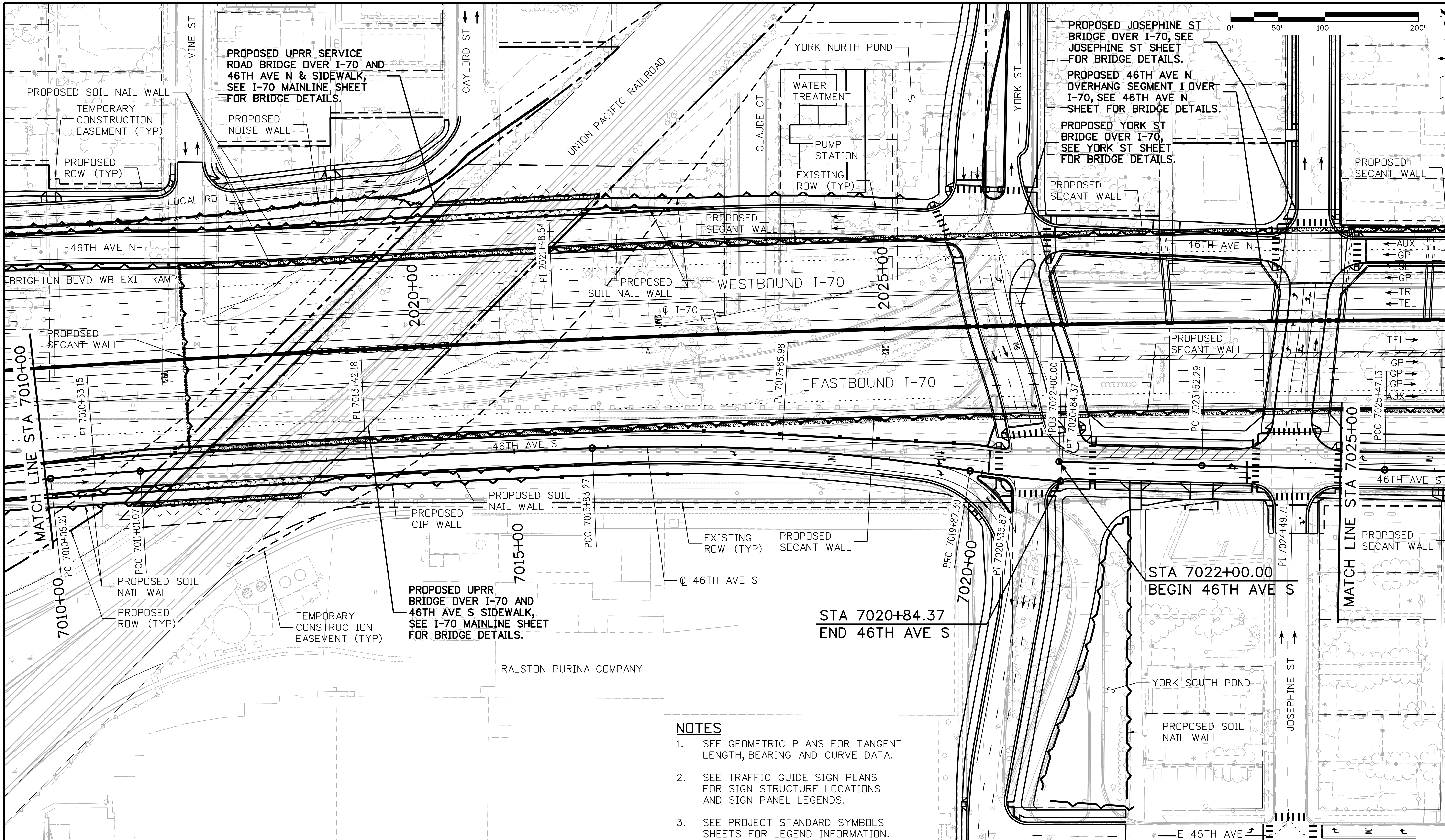
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL	
No Revisions:	
Revised:	
Void:	

CENTRAL 70
ROADWAY PLAN
46TH AVE S
STA 6998+50.40 TO STA 7010+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PLAN		Subset Sheets: RPL43 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 81



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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Print Date: 5/24/2017		
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.

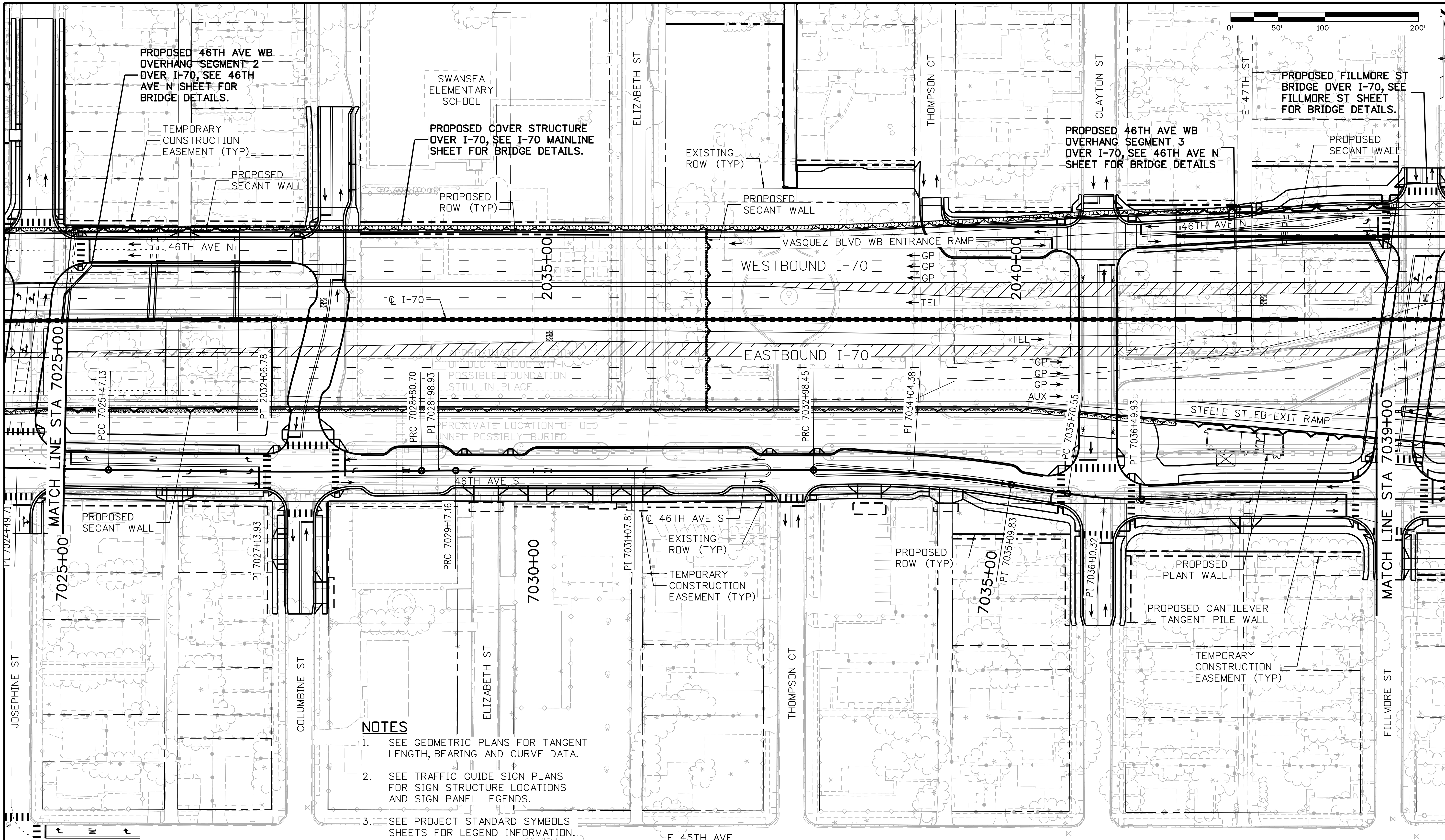
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
46TH AVE S
STA 7010+00 TO STA 7025+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PLAN		Subset Sheets: RPL44 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 82



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

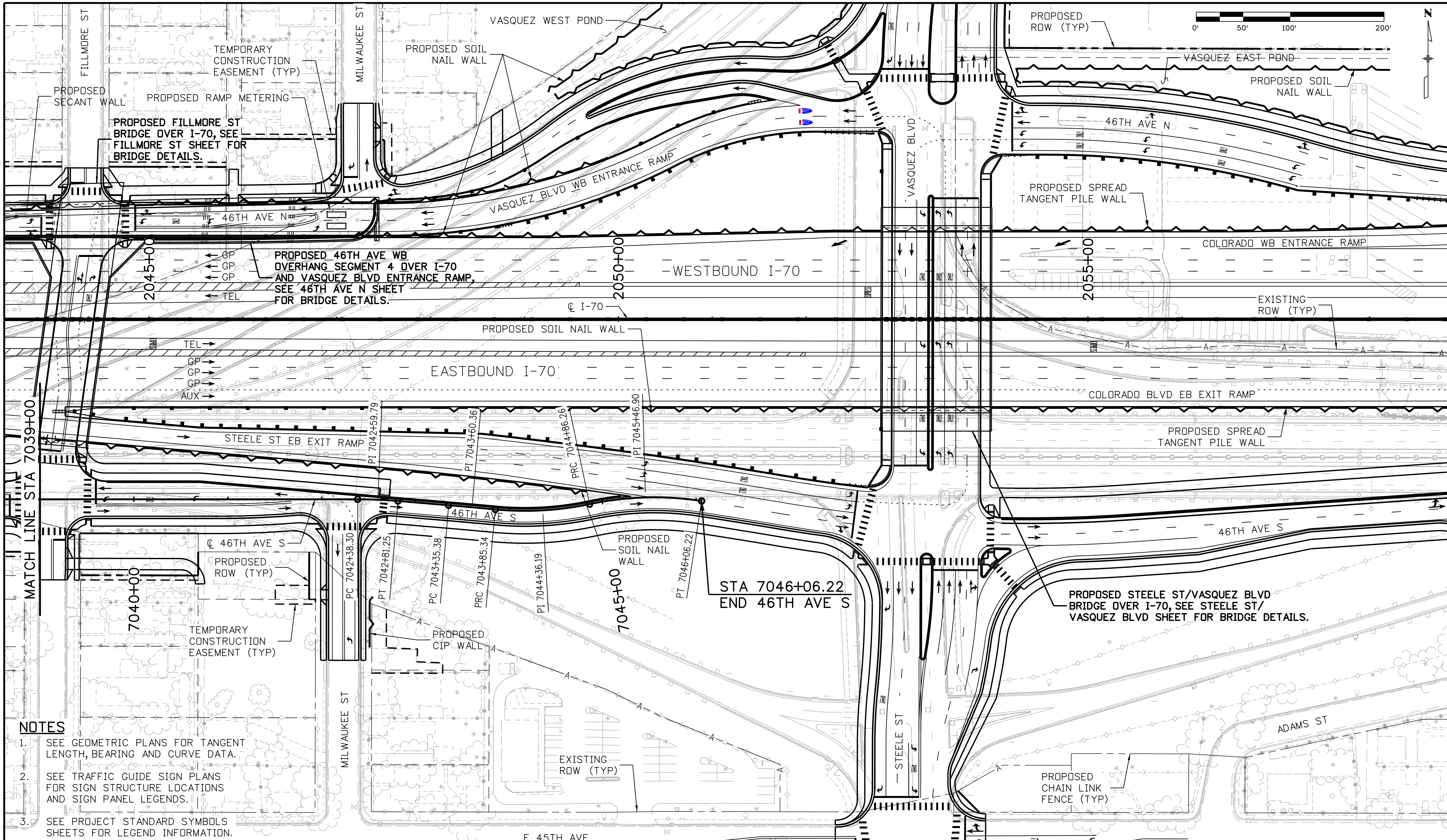
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
46th AVE S
STA 7025+00 TO STA 7039+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PLAN	Subset Sheets: RPL45 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 83



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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

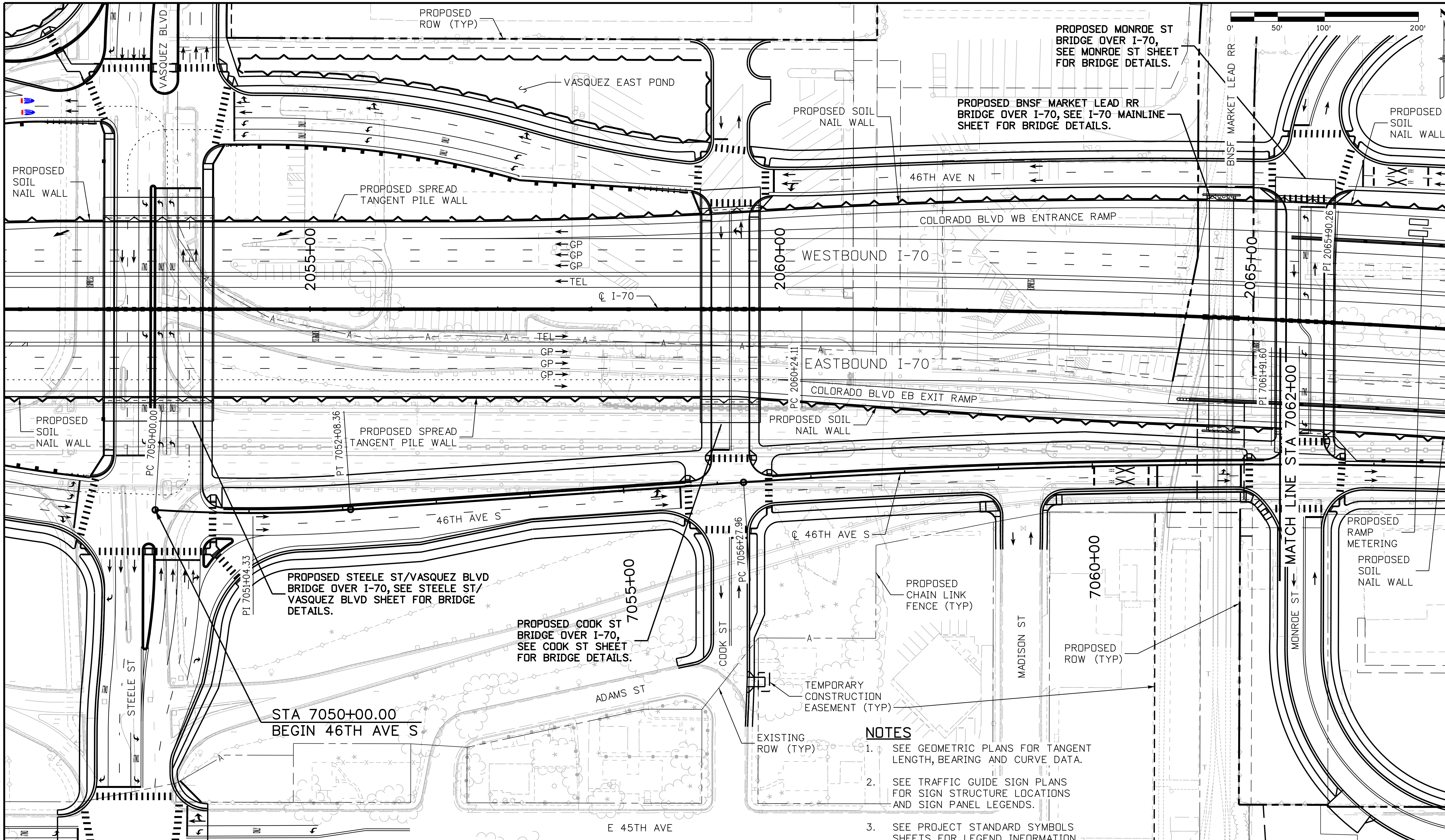
Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
CDOT
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 PLAN
46th AVE S
STA 7039+00 TO STA 7046+06.22
Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL46 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 84



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

Print Date: 5/19/2017	Sheet Revisions	Colorado Department of Transportation	PROPOSAL	CENTRAL 70 ROADWAY PLAN 46th AVE S STA 7050+00 TO STA 7062+00
File Name: See sheet edge for information	Date: / Comments / Init.	2000 South Holly Street, Denver, CO 80222	No Revisions:	Project No./Code: FBR 0704-234
Horiz. Scale: As Noted		Phone: 303-757-9934 FAX: 303-757-9907	Revised:	19631
Vert. Scale: As Noted		Region 1	Void:	Designer: / Detailer: / Structure Numbers
Unit Information		KJS		Sheet Subset: ROAD PLAN / Subset Sheets: RPL47 of 142
Unit Leader				Sheet Number 85

Front Range Mobility Group

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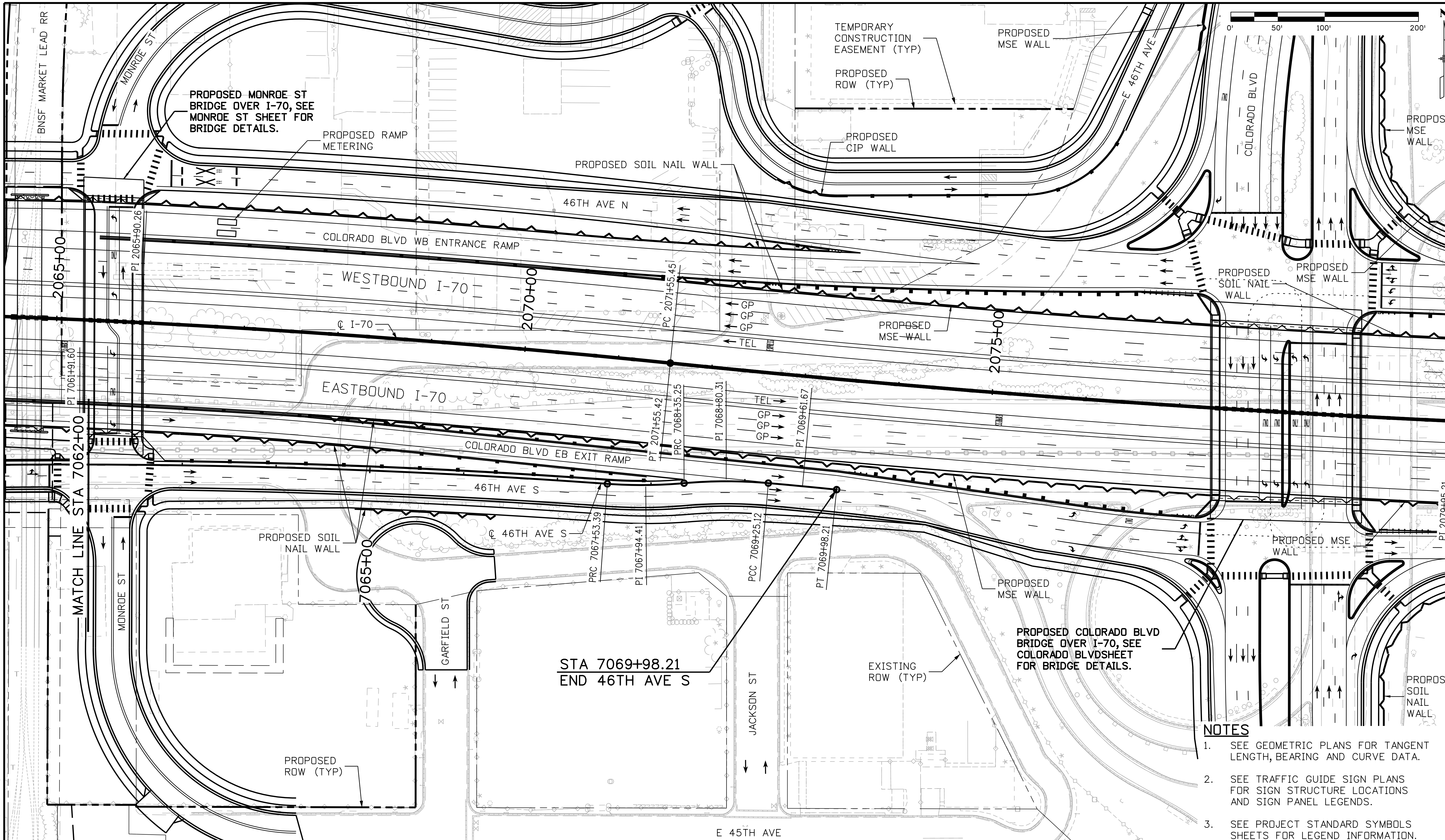

NOTES
1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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Print Date: 5/24/2017		
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.

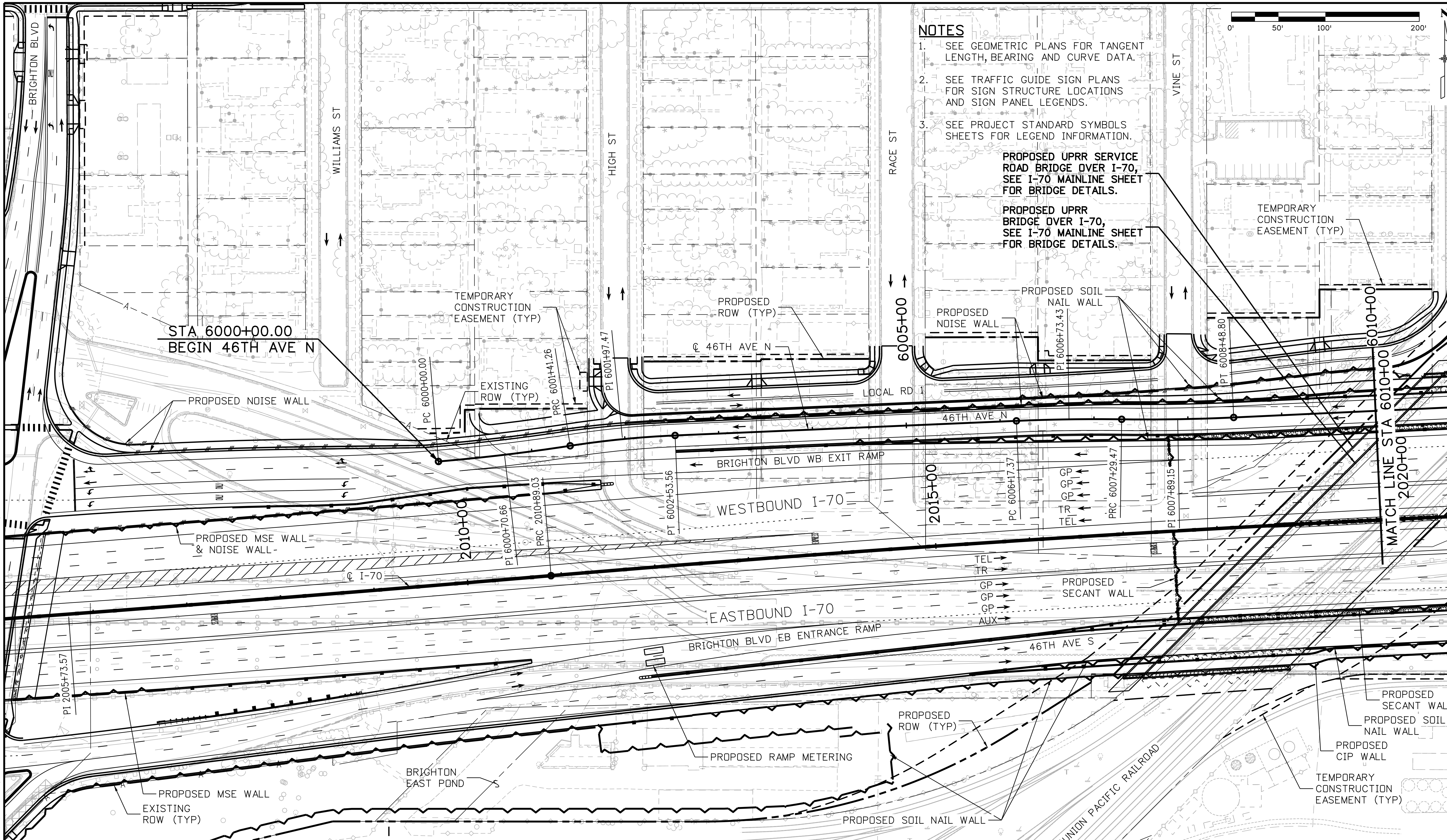
Colorado Department of Transportation
CDOT
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
46th AVE S
STA 7062+00 TO STA 7069+98.21

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PLAN		Subset Sheets: RPL48 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 86



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.

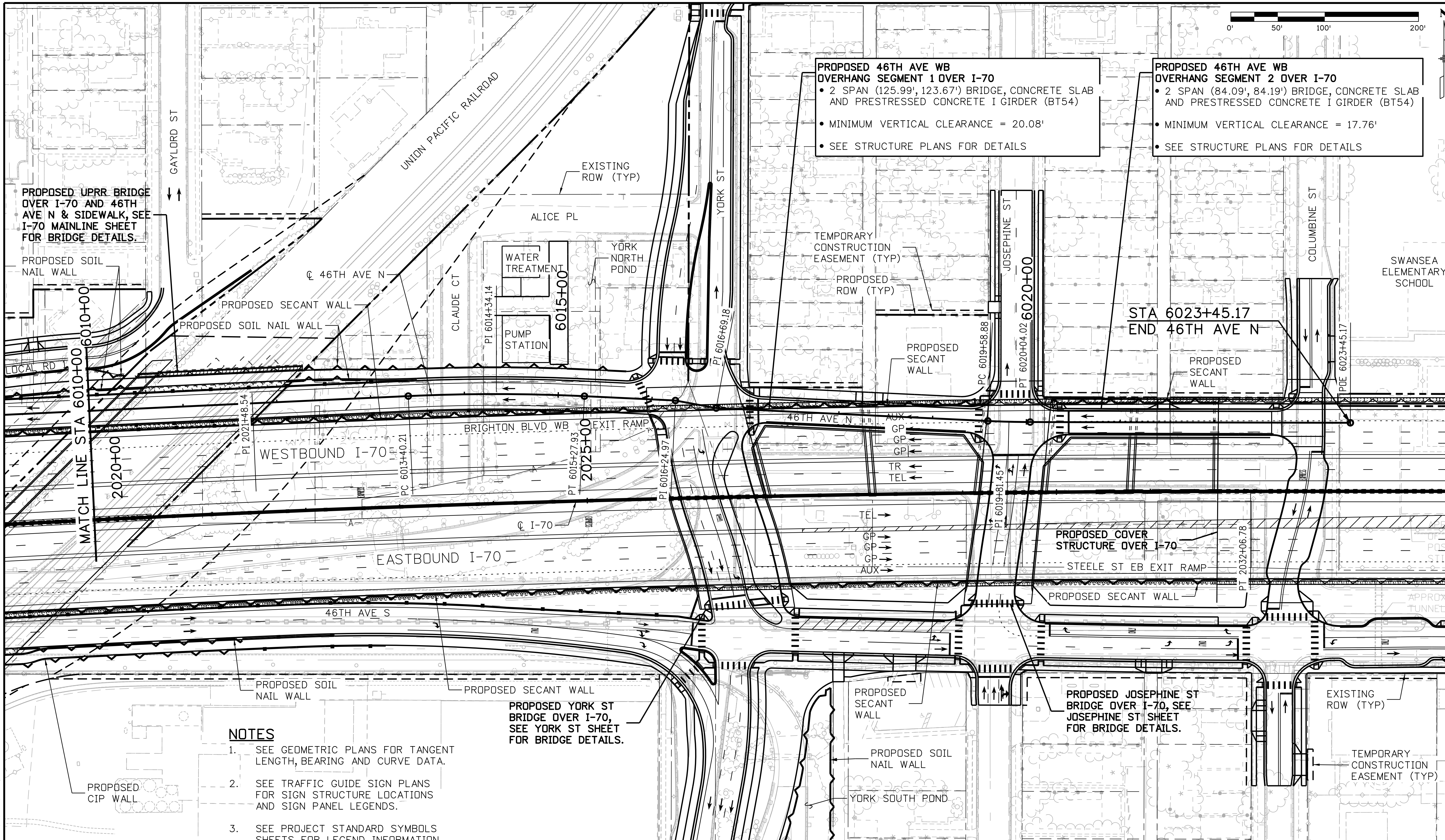
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
46th AVE N
STA 6000+00 TO STA 6010+00

Designer:	Structure Numbers
Detailer:	
Sheet Subset: ROAD PLAN	Subset Sheets: RPL49 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 87



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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Print Date: 5/24/2017
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.

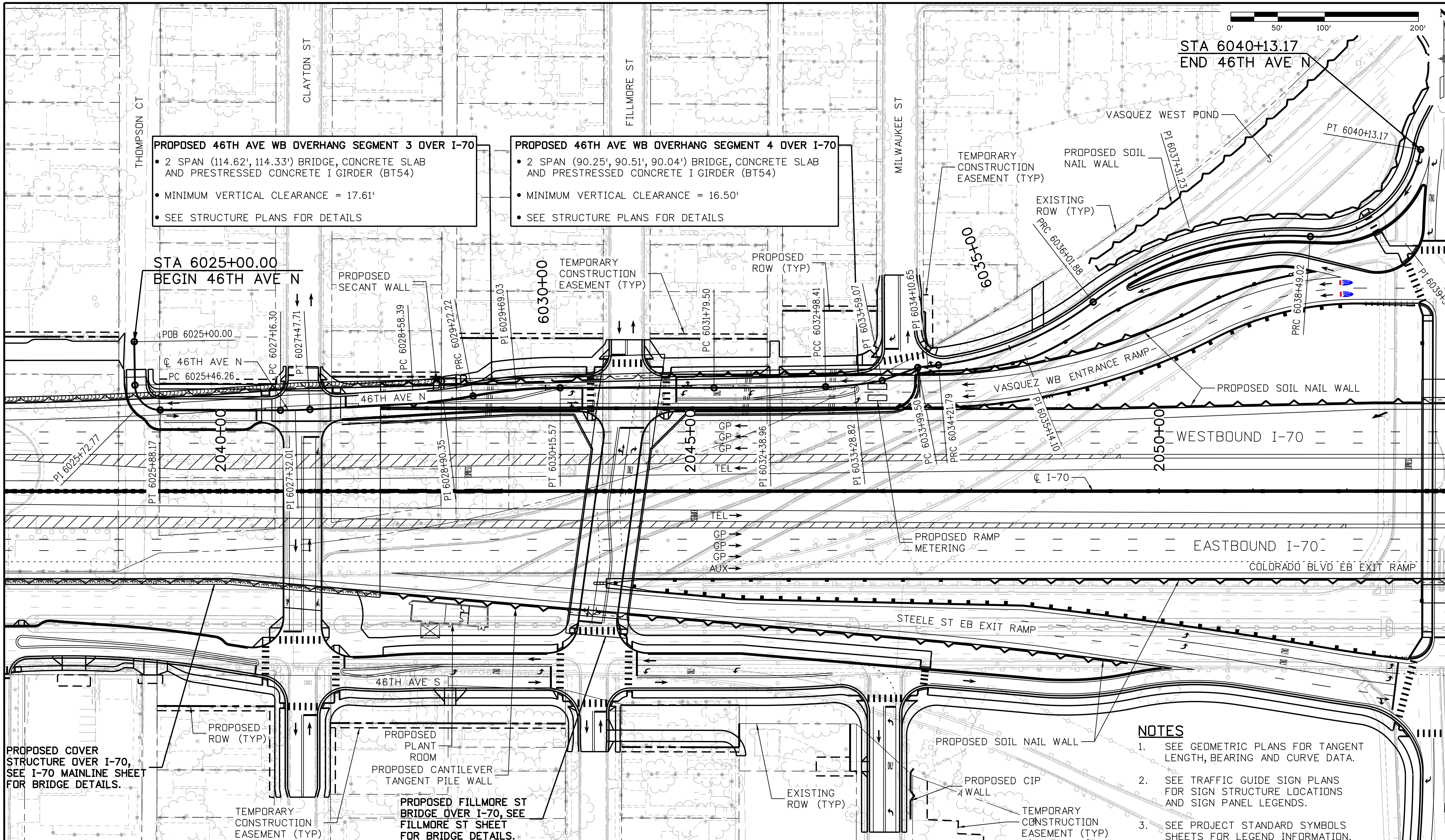
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
46TH AVE N
STA 6010+00 TO STA 6023+45.17

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL50 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 88



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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

PROPOSAL
No Revisions:
Revised:
Void:

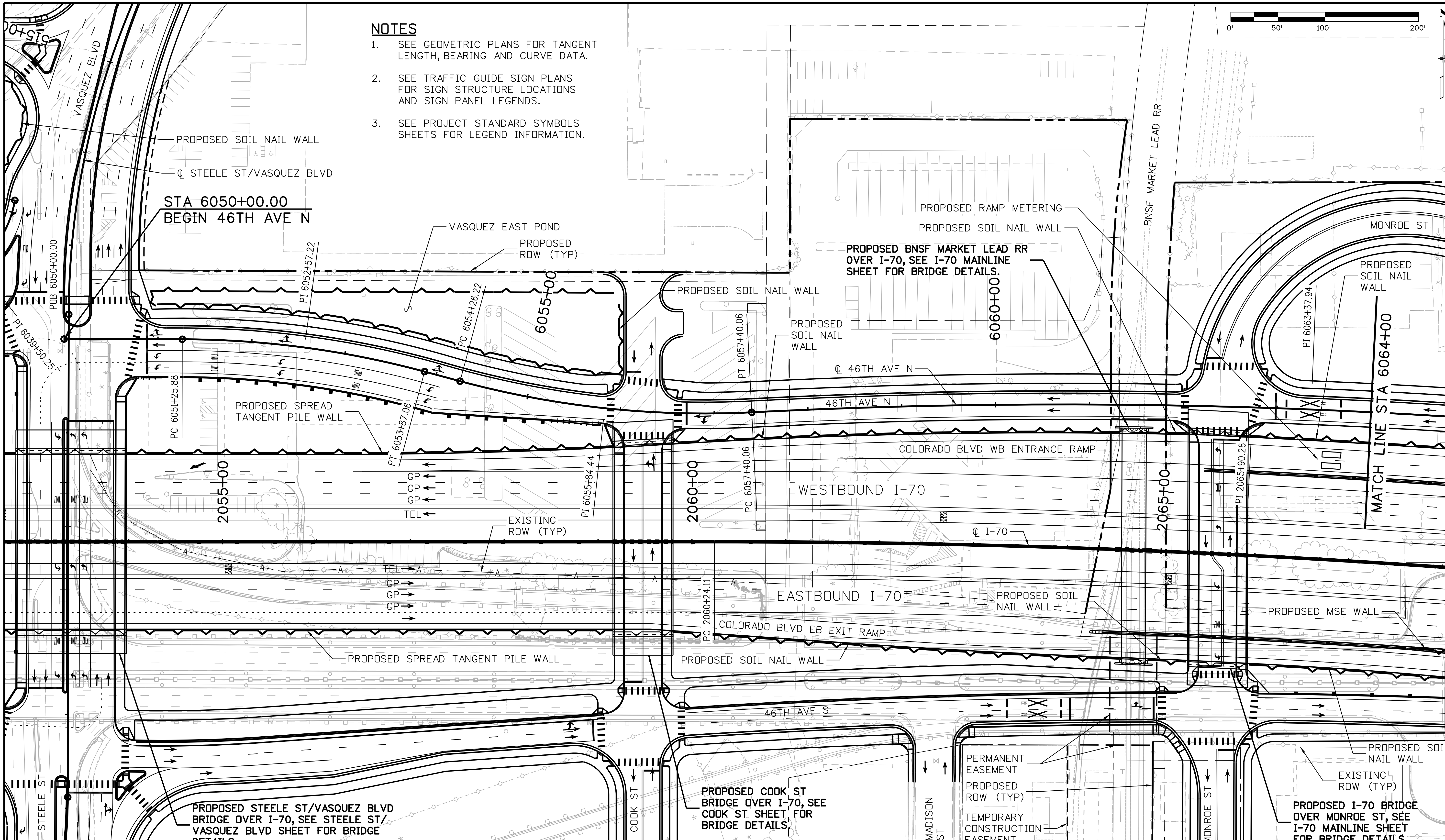
CENTRAL 70
ROADWAY PLAN
46TH AVE N
STA 6025+00 TO STA 6040+13.17

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PLAN		Subset Sheets: RPL51 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 89

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.



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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:

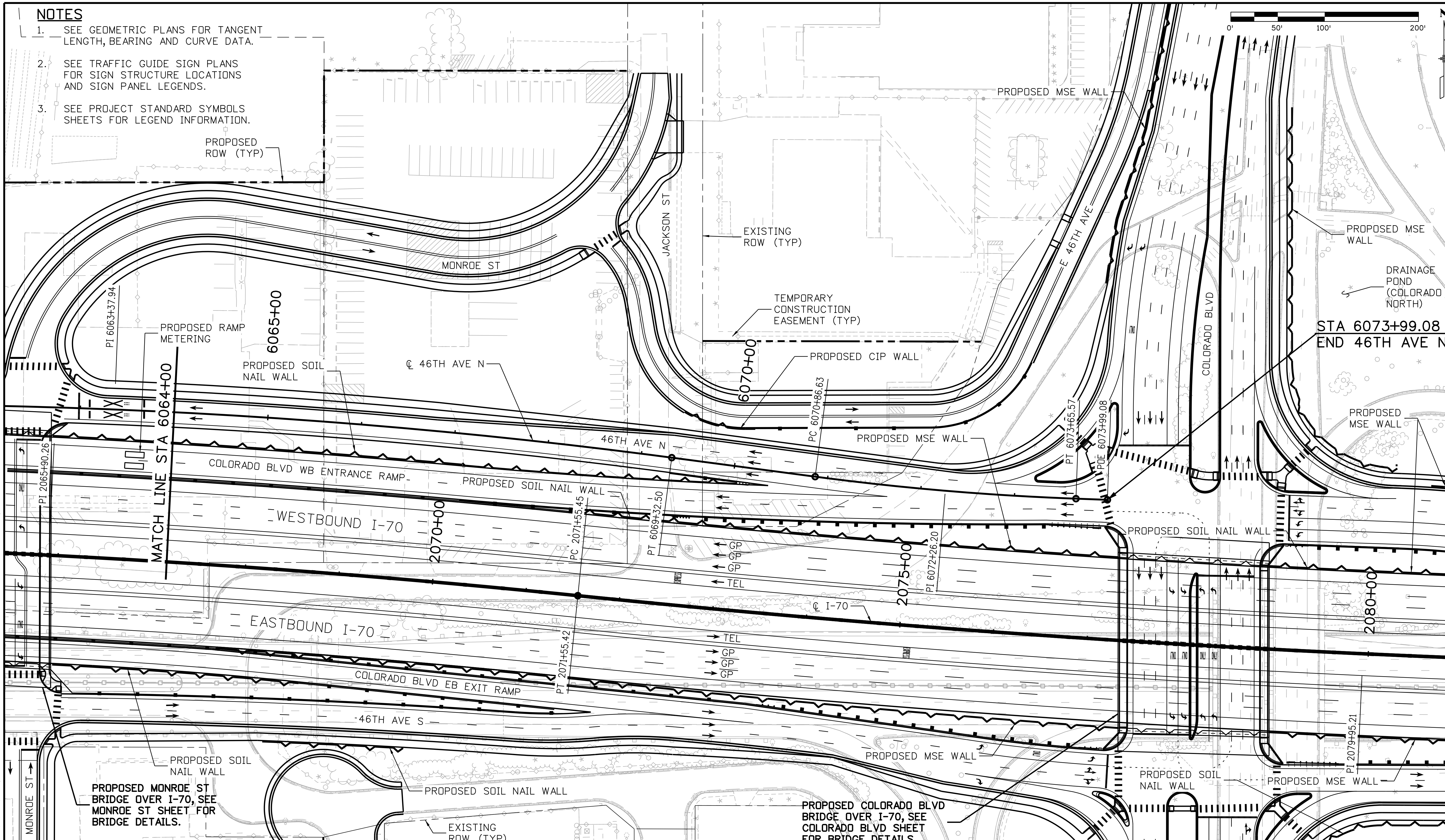
CENTRAL 70
ROADWAY PLAN
46TH AVE N
STA 6050+00 TO STA 6064+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PLAN		Subset Sheets: RPL52 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 90

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.



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Print Date: 5/24/2017			
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.

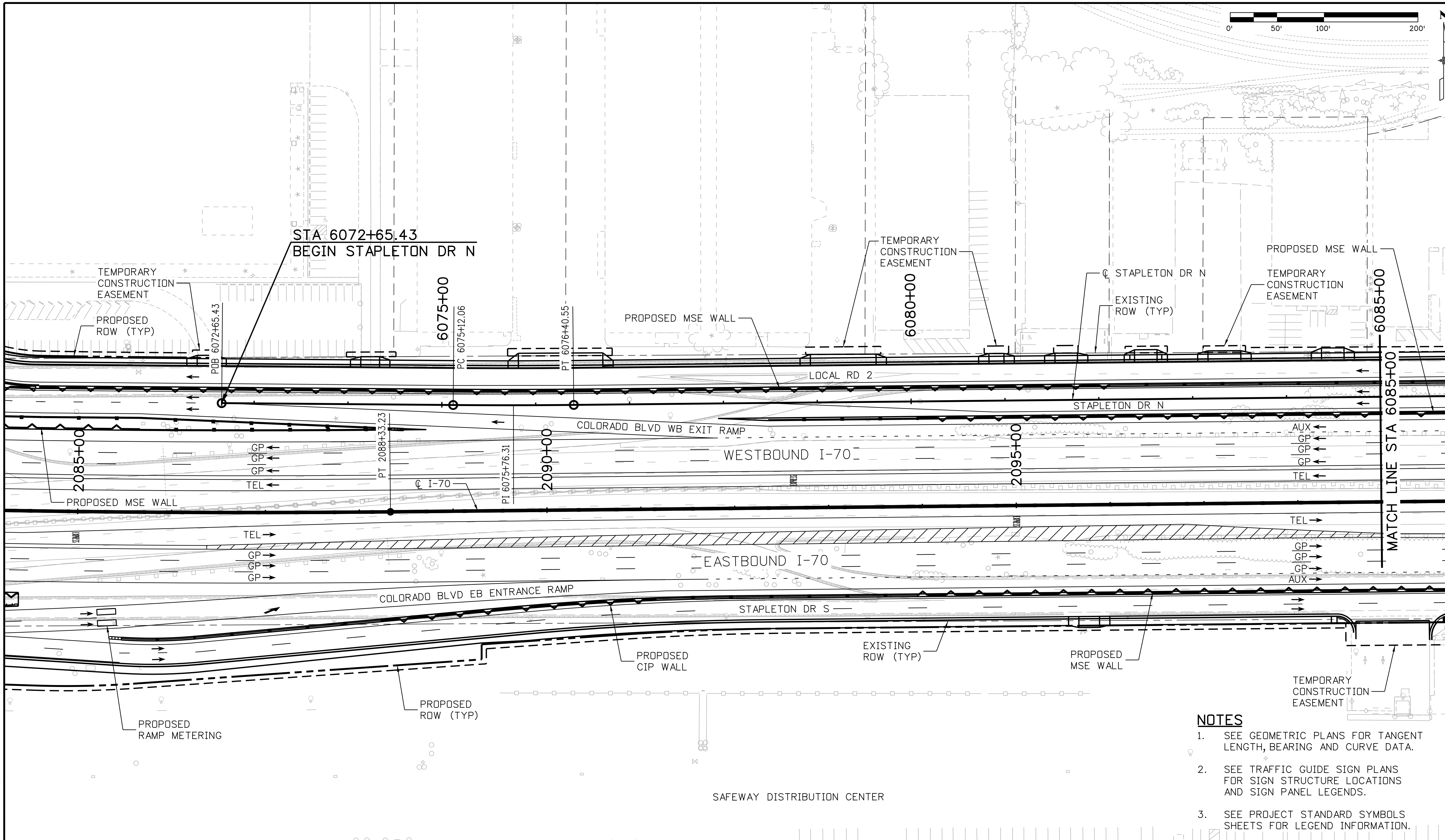
Colorado Department of Transportation
CDOT
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
46TH AVE N
STA 6064+00 TO STA 6073+99.08

Designer:	Structure Numbers	
Detailer:		
Sheet Subset: ROAD PLAN	Subset Sheets: RPL53 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 91



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

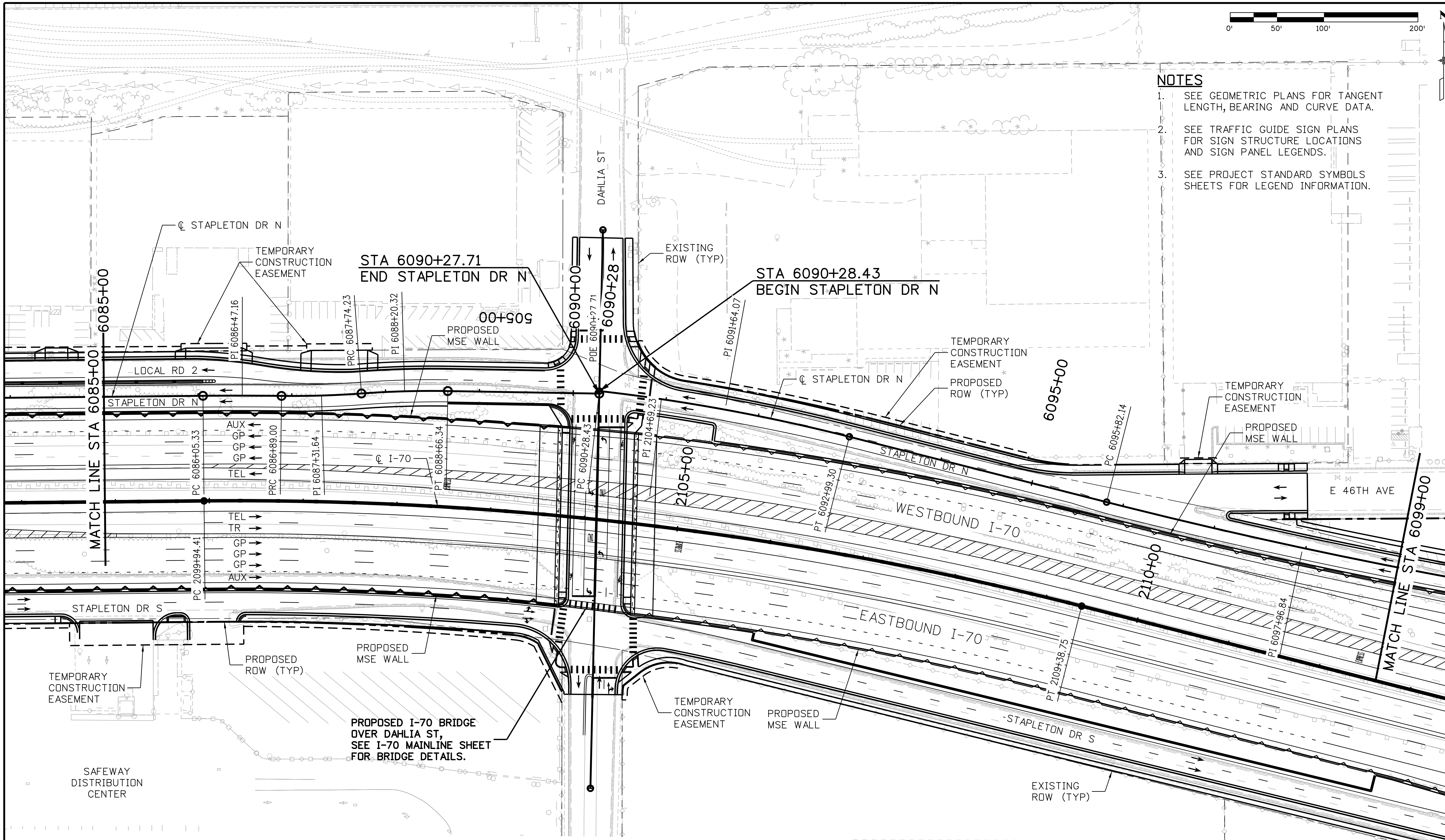
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
STAPLETON DR N
STA 6072+65.43 TO STA 6085+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL54 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 92



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

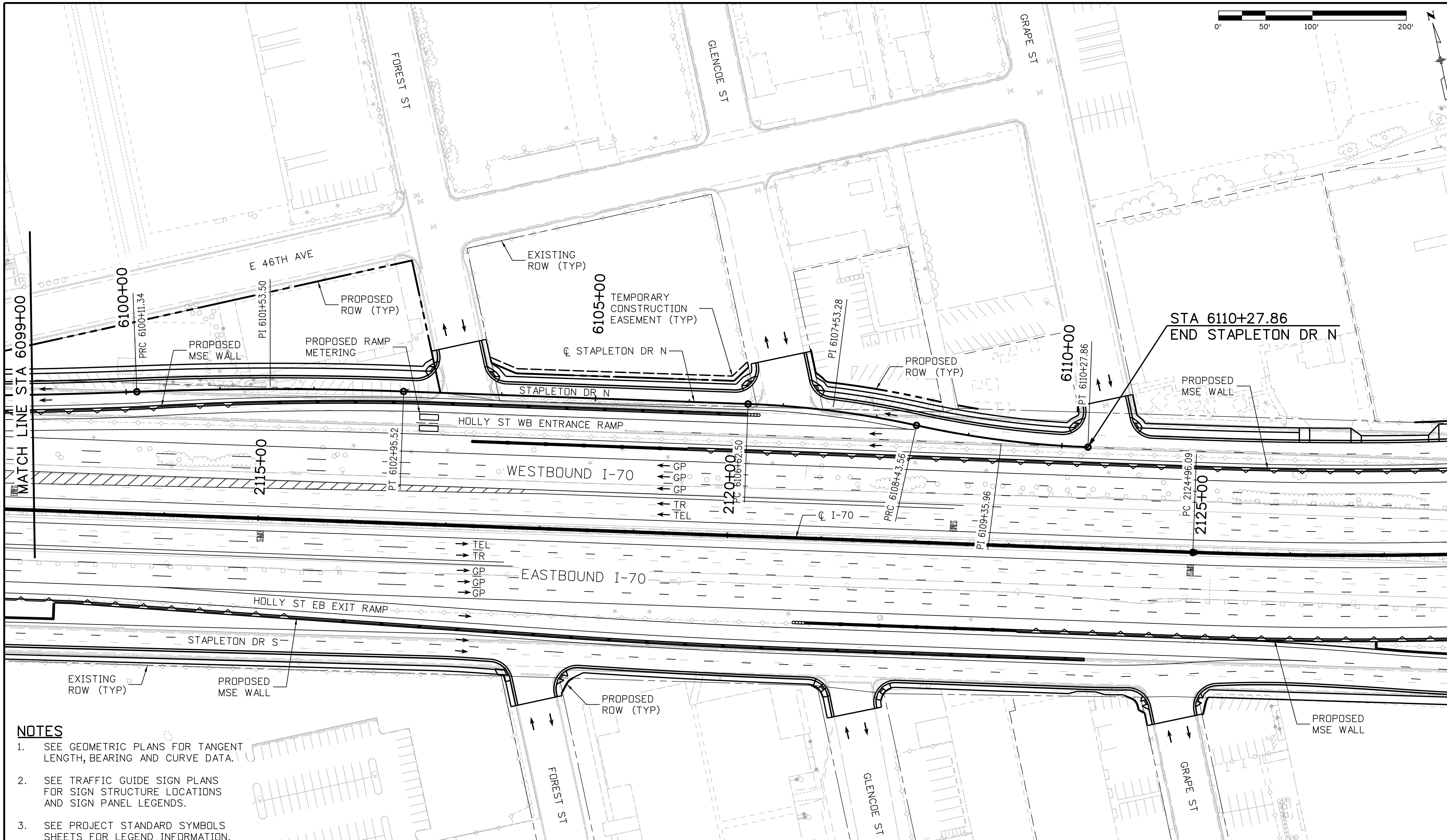
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
STAPLETON DR N
STA 6085+00 TO STA 6099+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PLAN	Subset Sheets: RPL55 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 93



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

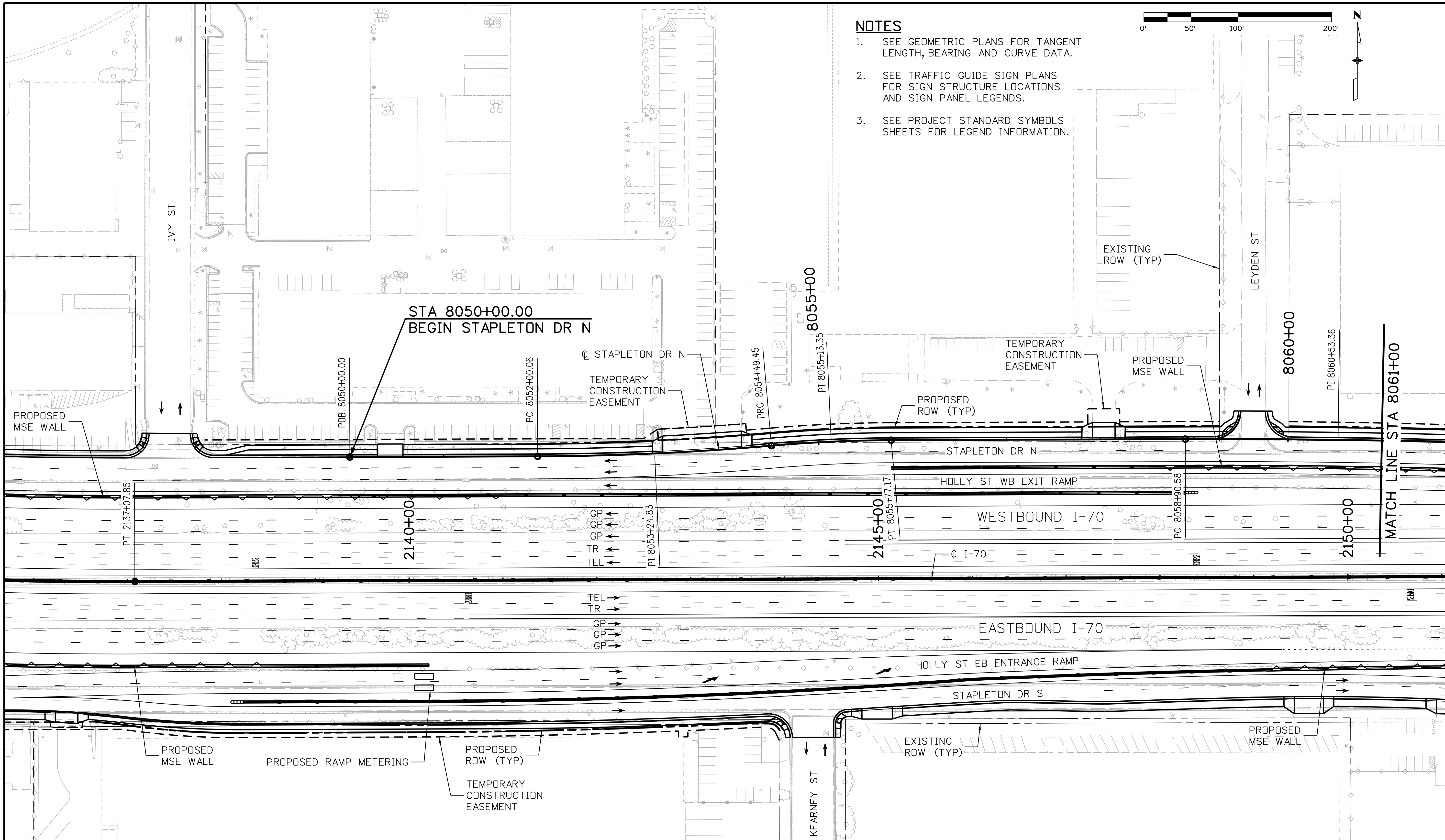
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
STAPLETON DR N
STA 6099+00 TO STA 6110+27.86

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL56 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 94



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

PROPOSAL
No Revisions:
Revised:
Void:

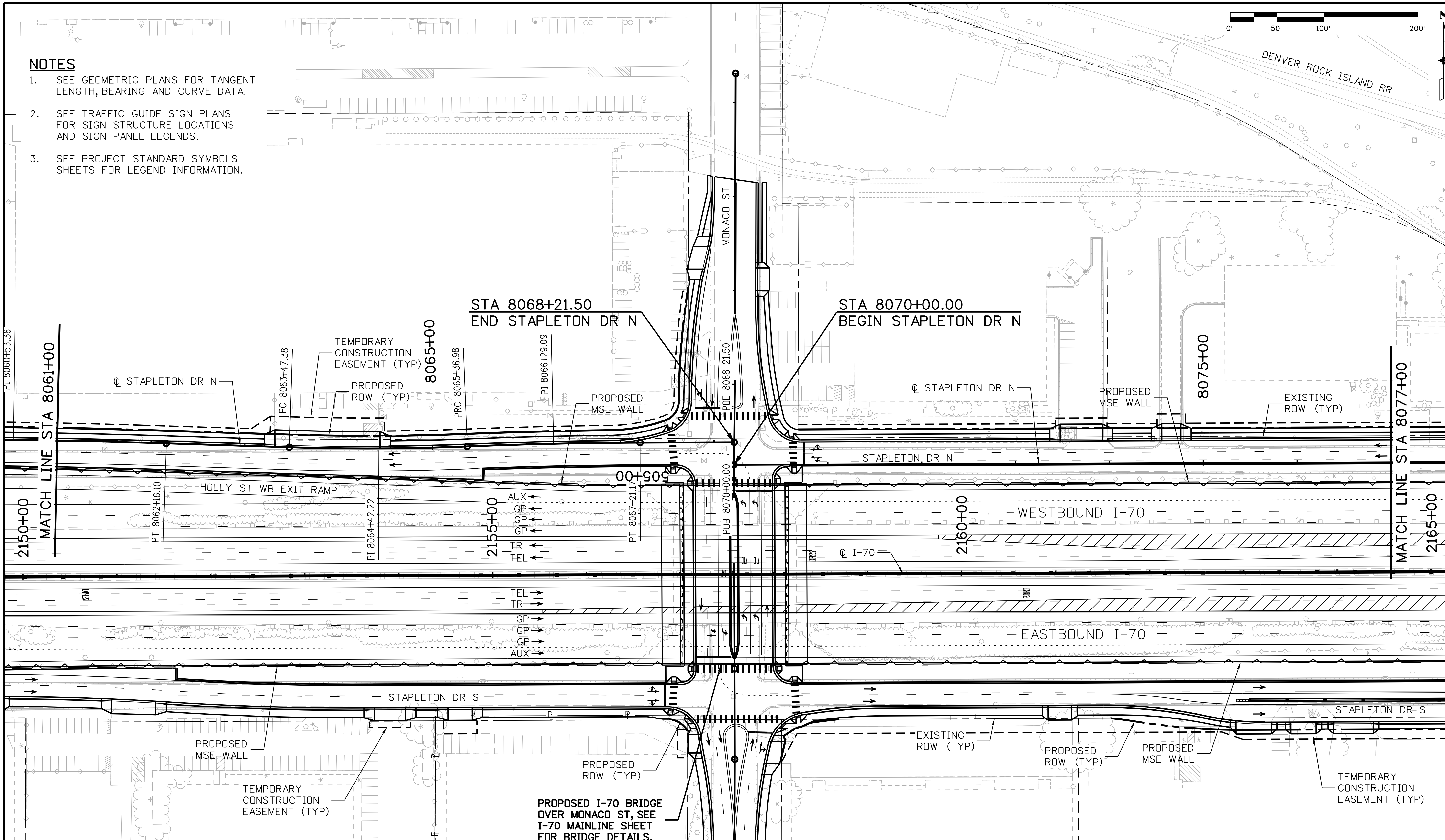
CENTRAL 70
ROADWAY PLAN
STAPLETON DR N
STA 8050+00 TO STA 8061+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PLAN	Subset Sheets: RPL57 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 95

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.



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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 PLAN
STAPLETON DR N
STA 8061+00 TO STA 8077+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PLAN	Subset Sheets: RPL58 of 142	

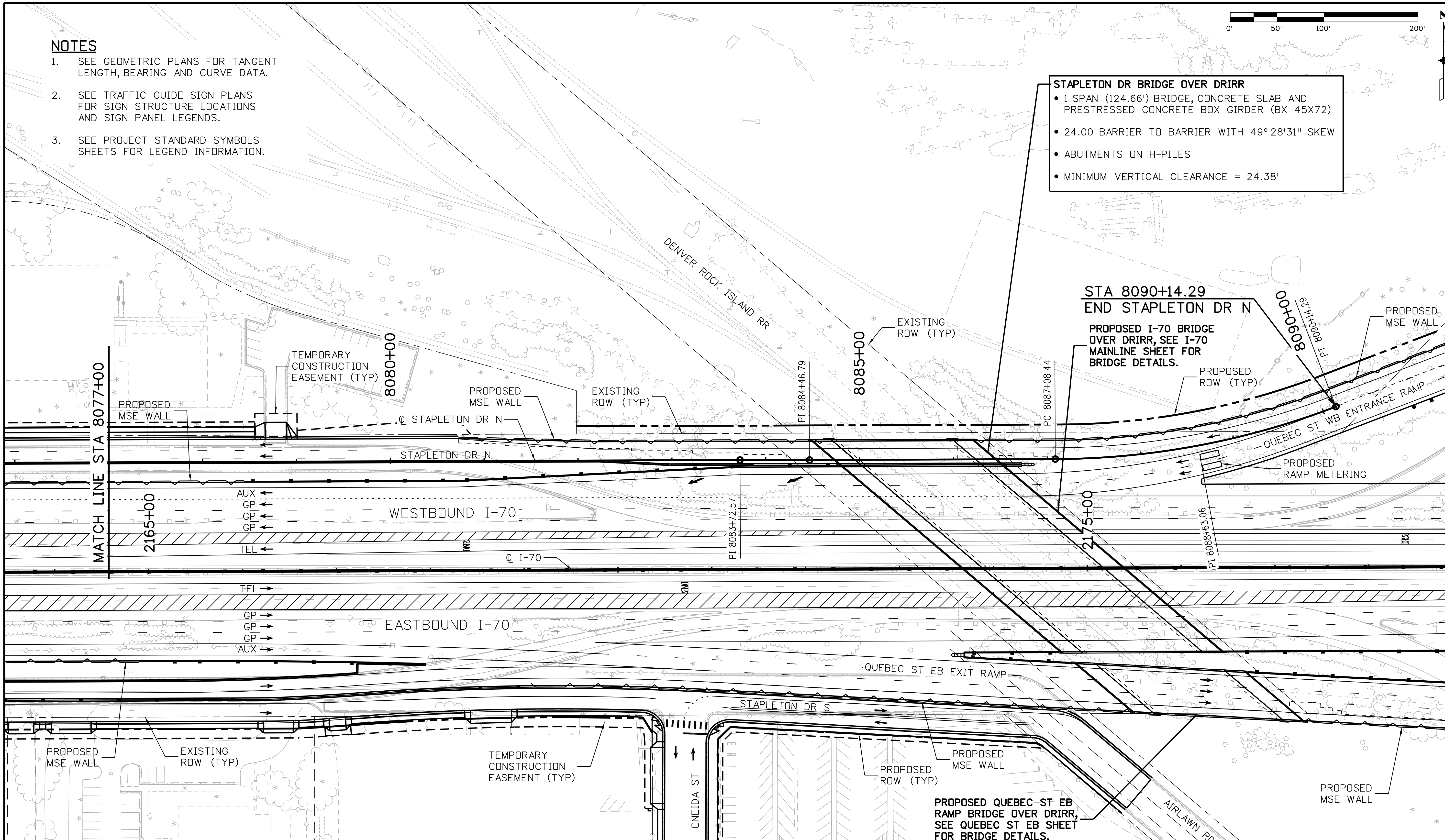
Project No./Code
FBR 0704-234
19631
Sheet Number 96

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

STAPLETON DR BRIDGE OVER DRIRR

- 1 SPAN (124.66') BRIDGE, CONCRETE SLAB AND PRESTRESSED CONCRETE BOX GIRDER (BX 45X72)
- 24.00' BARRIER TO BARRIER WITH 49° 28'31" SKEW
- ABUTMENTS ON H-PILES
- MINIMUM VERTICAL CLEARANCE = 24.38'



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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.

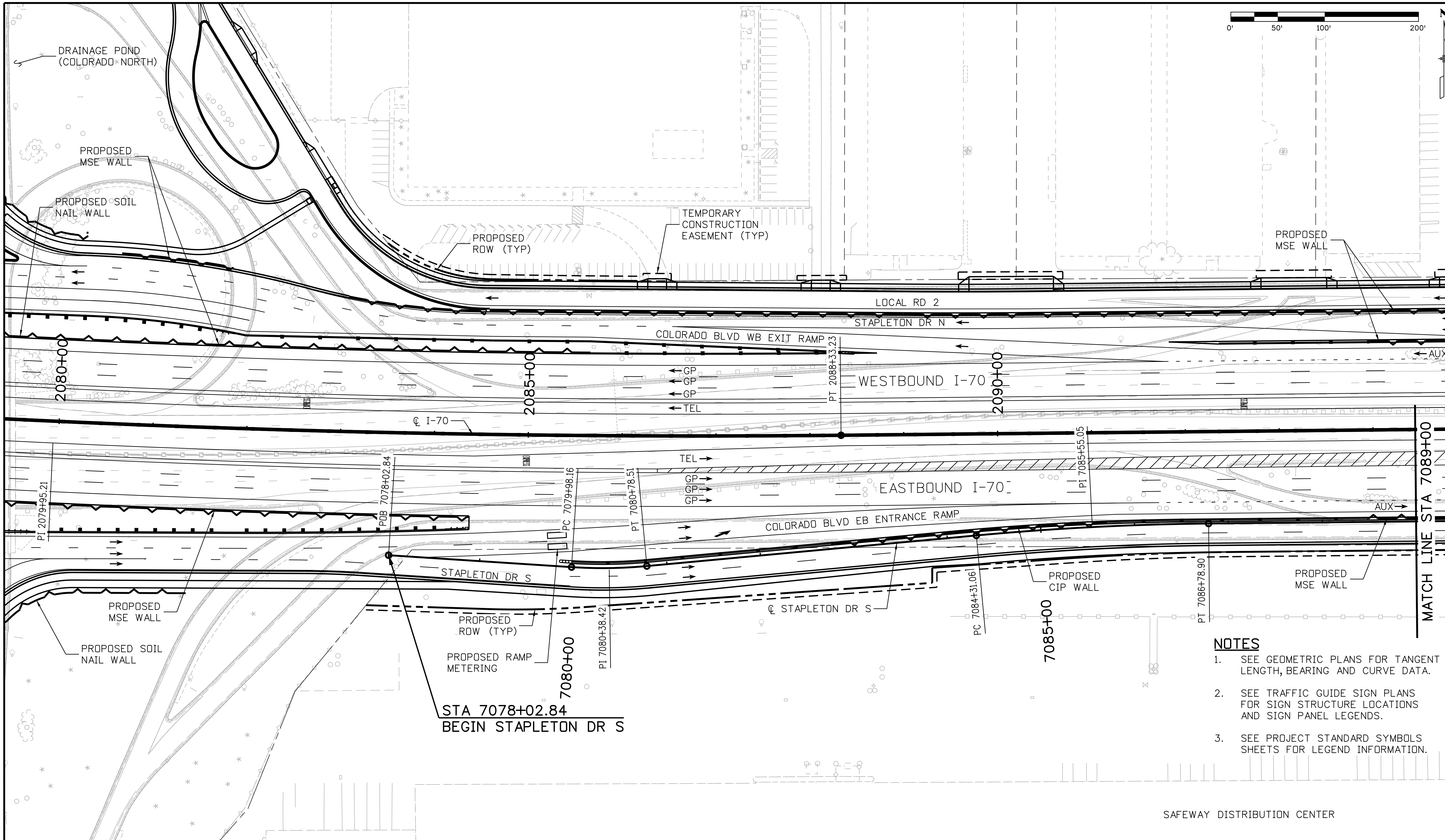
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
STAPLETON DR N
STA 8077+00 TO STA 8090+14.29

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PLAN	Subset Sheets: RPL59 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 97



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

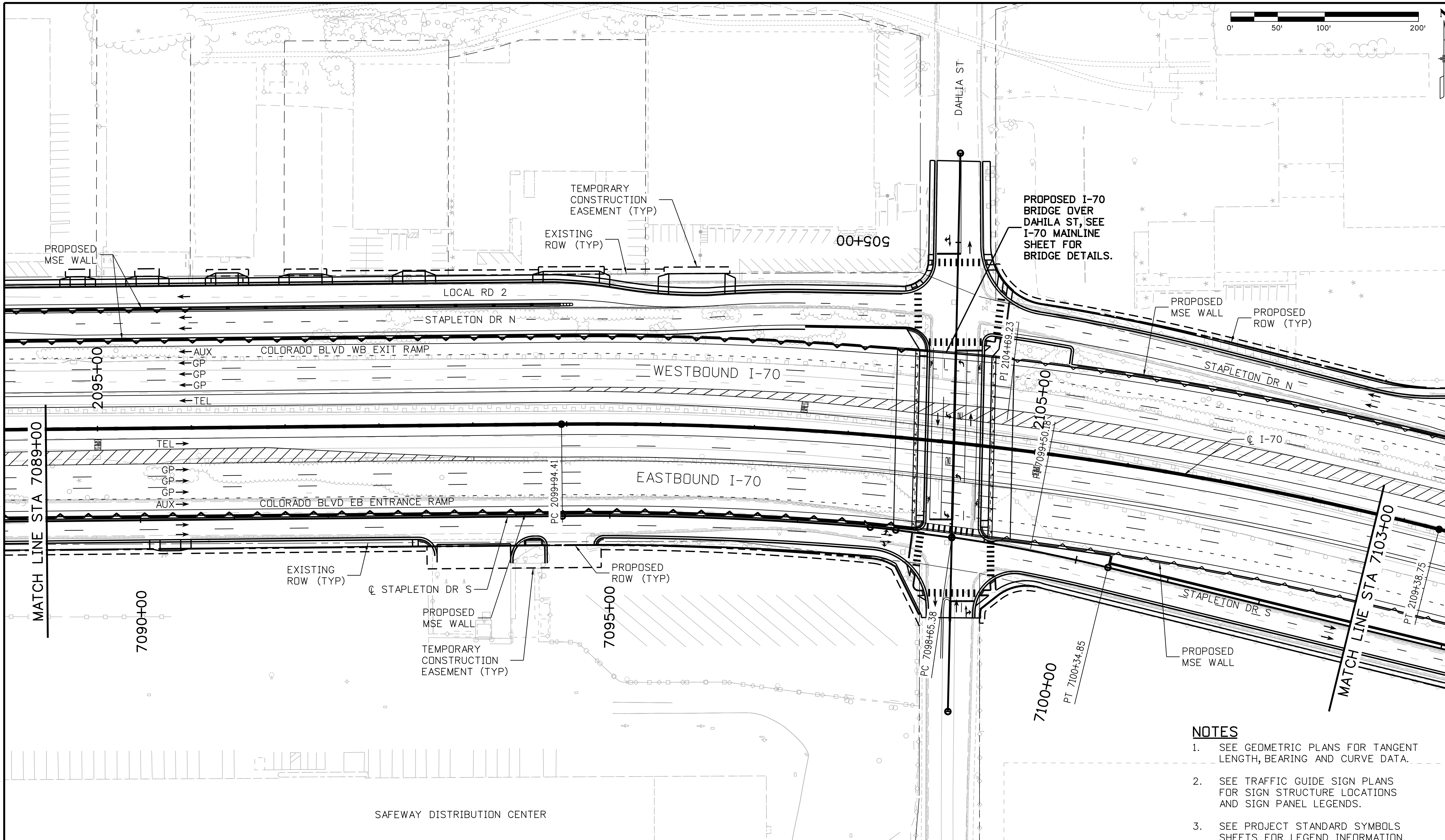
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
STAPLETON DR S
STA 7078+02.84 TO STA 7089+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PLAN	Subset Sheets: RPL60 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 98



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

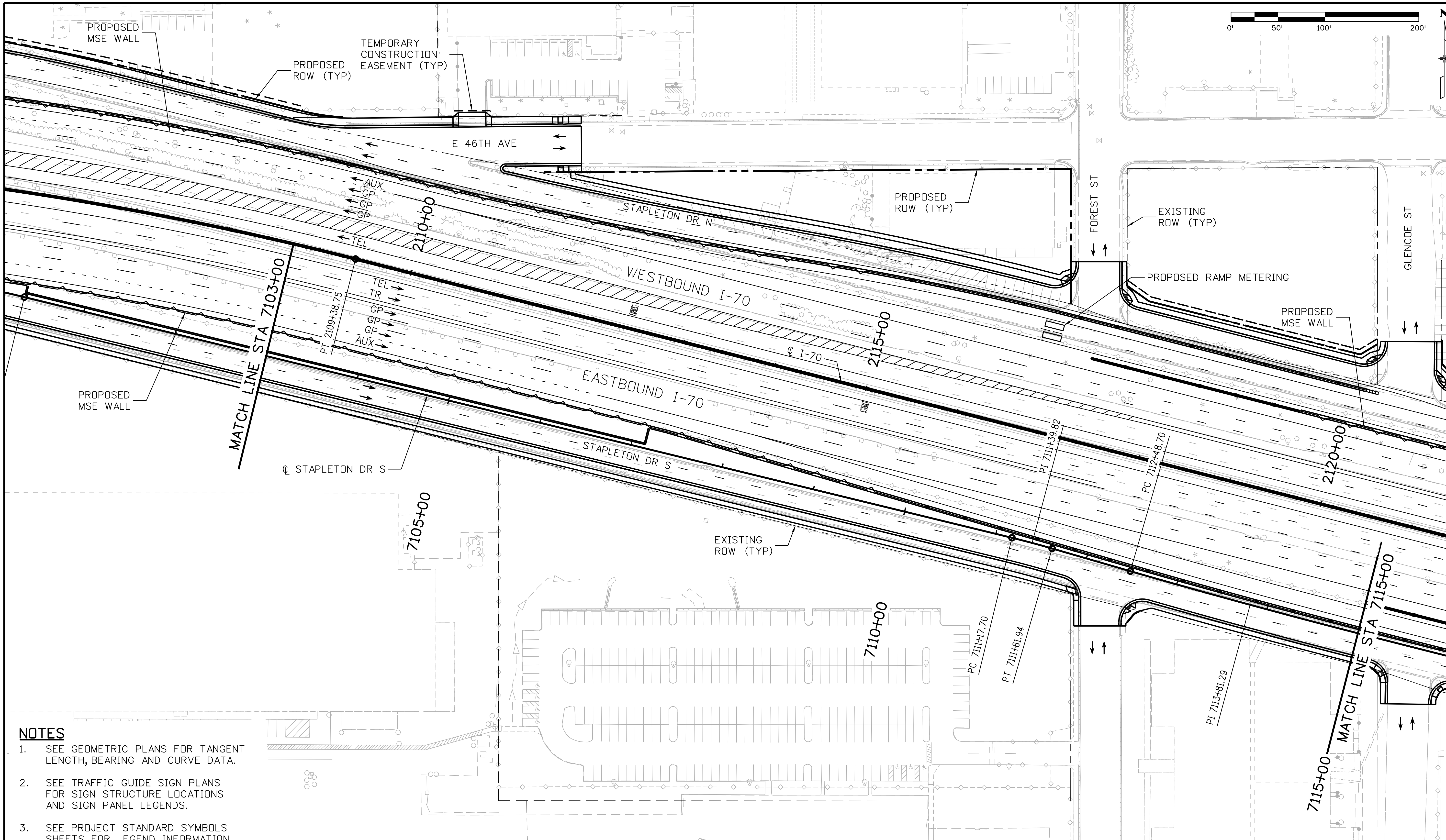
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
STAPLETON DR S
STA 7089+00 TO STA 7103+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL61 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 99



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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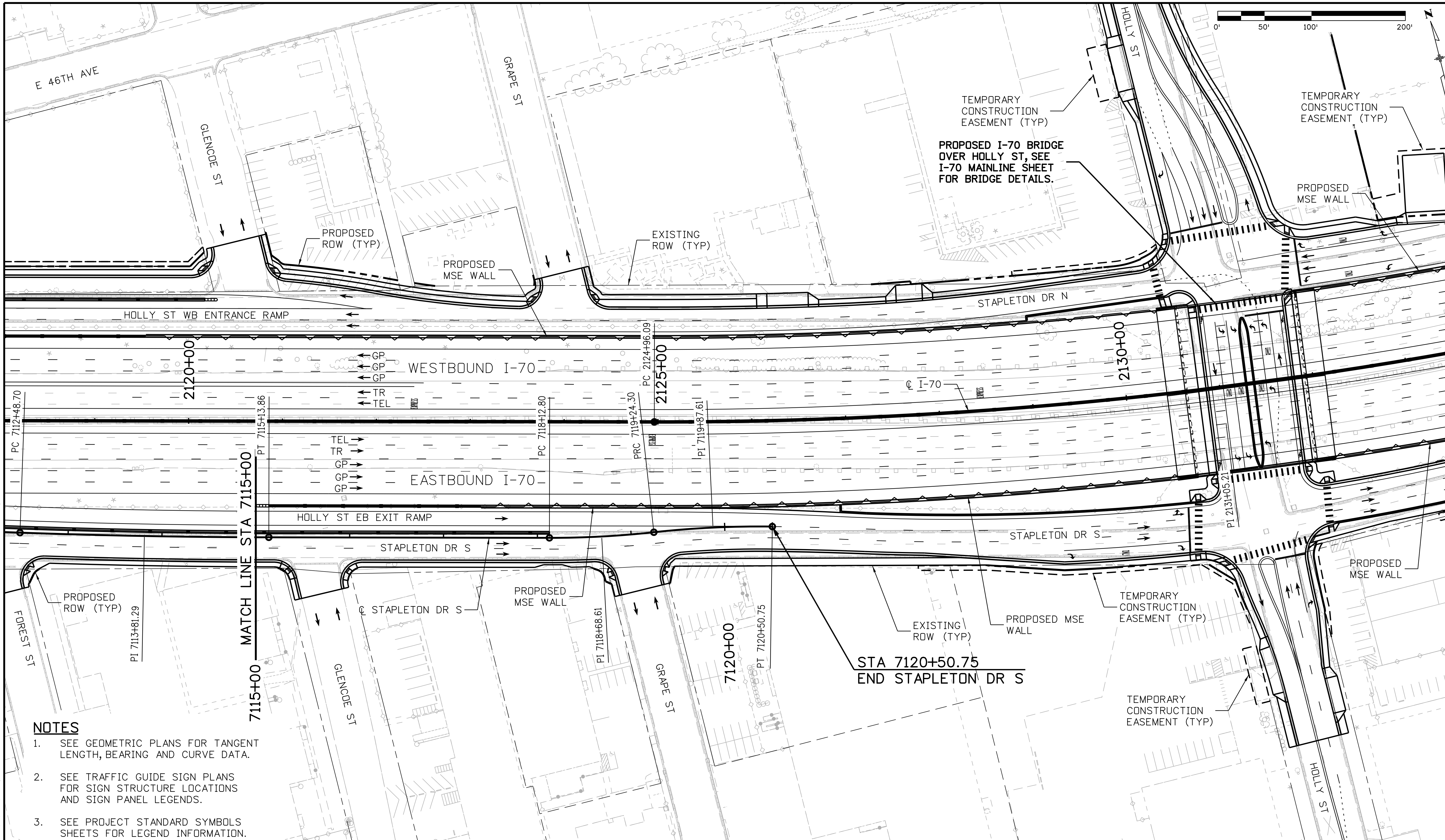
Print Date: 5/19/2017		Sheet Revisions		
File Name: See sheet edge for information		Date:	Comments	Init.
Front Range Mobility Group	Horiz. Scale: As Noted			
	Vert. Scale: As Noted			
	Unit Information			
	Unit Leader			

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

PROPOSAL	CENTRAL 70 ROADWAY PLAN STAPLETON DR S STA 7103+00 TO STA 7115+00		Project No./Code
No Revisions:			FBR 0704-234
Revised:	Designer:	Structure Numbers	19631
	Detailer:		
Void:	Sheet Subset: ROAD PLAN	Subset Sheets: RPL62 of 142	Sheet Number 100



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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
CDOT CO
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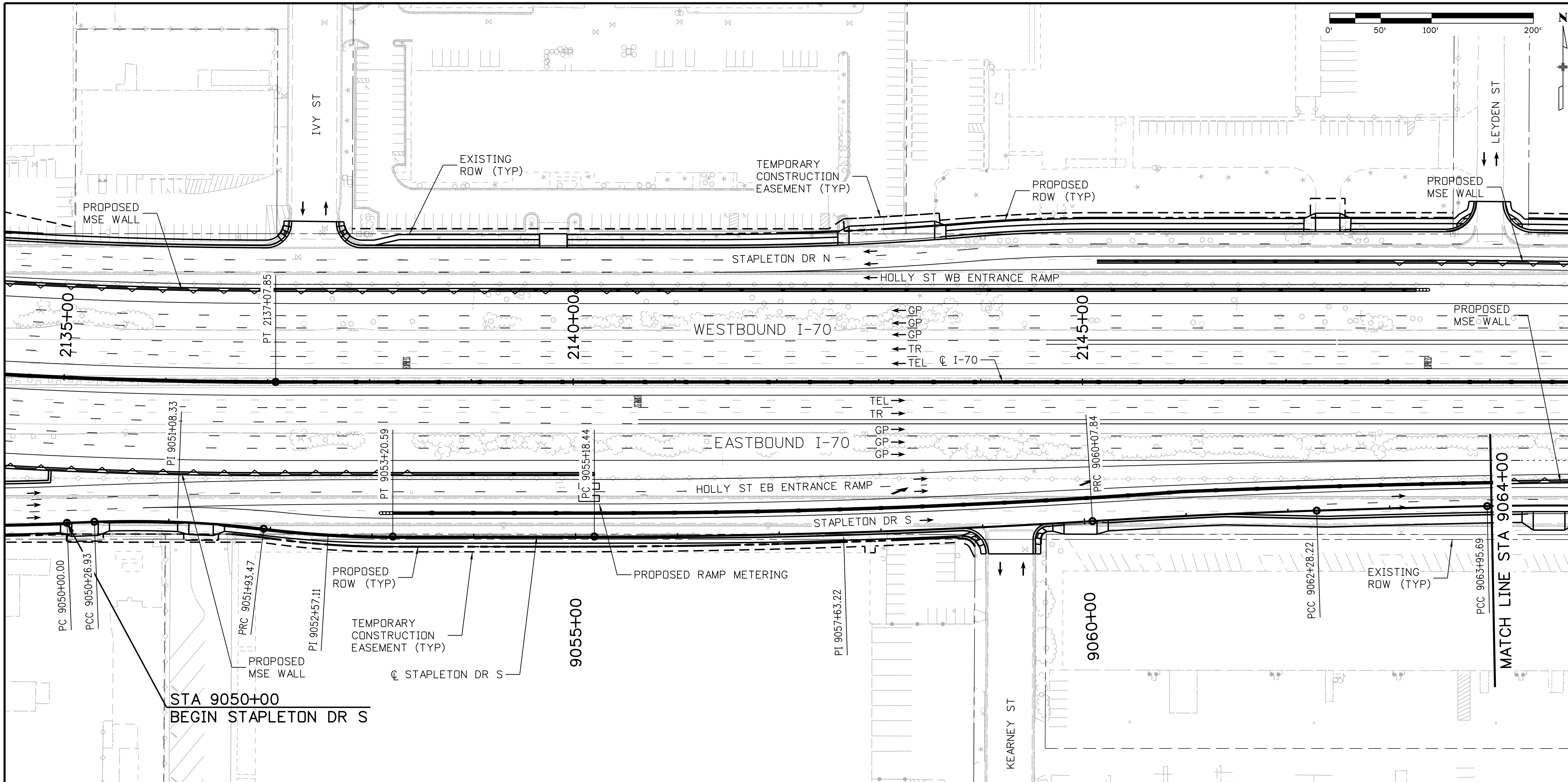
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
STAPLETON DR S
STA 7115+00 TO STA 7120+50.75

Designer:	Structure Numbers
Detailer:	
Sheet Subset: ROAD PLAN	Subset Sheets: RPL63 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 101



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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Print Date: 5/19/2017		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			

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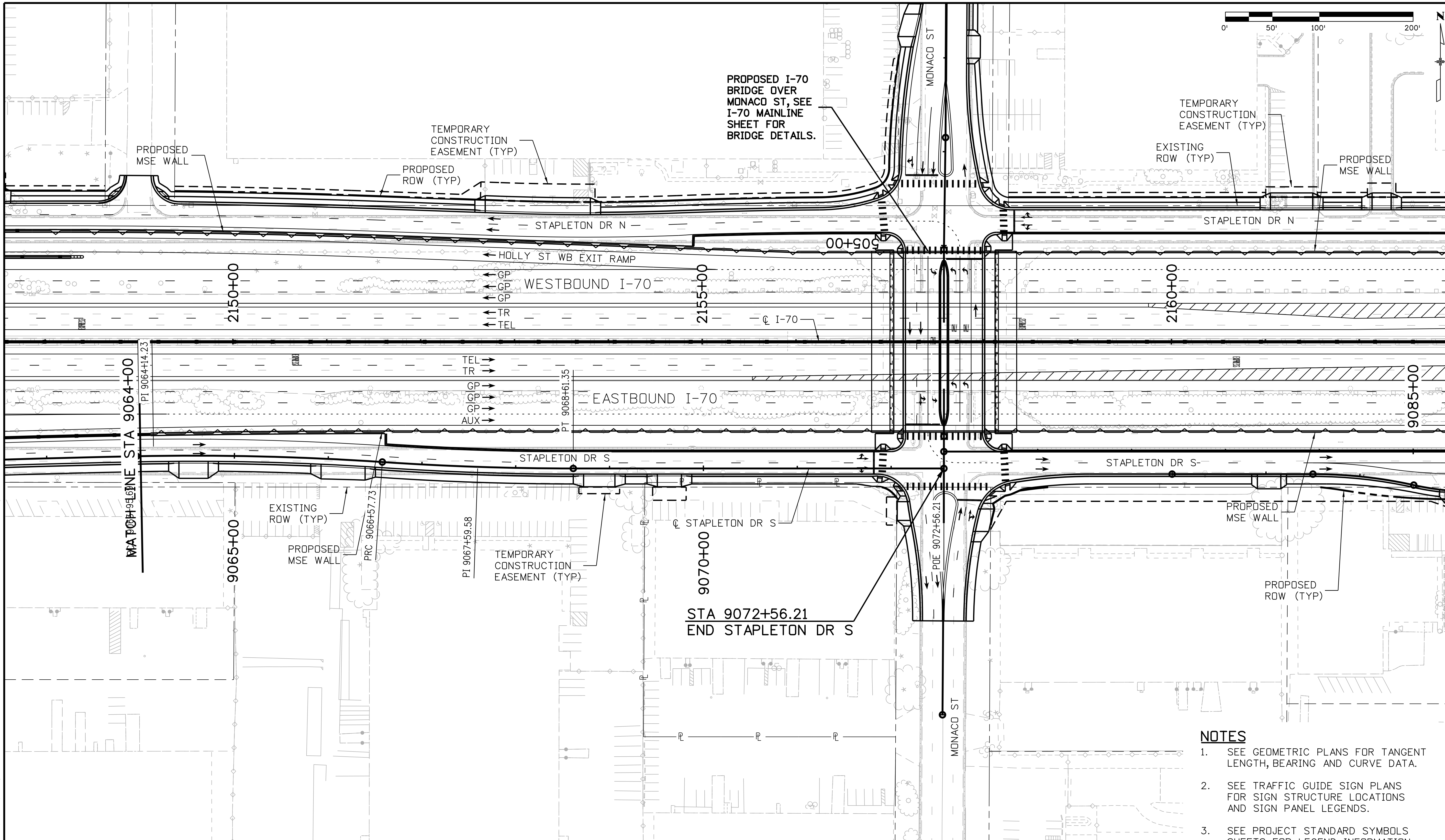
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
STAPLETON DR S
STA 9050+00 TO STA 9064+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PLAN		Subset Sheets: RPL64 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 102



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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
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Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
STAPLETON DR S
STA 9064+00 TO STA 9072+56.21

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
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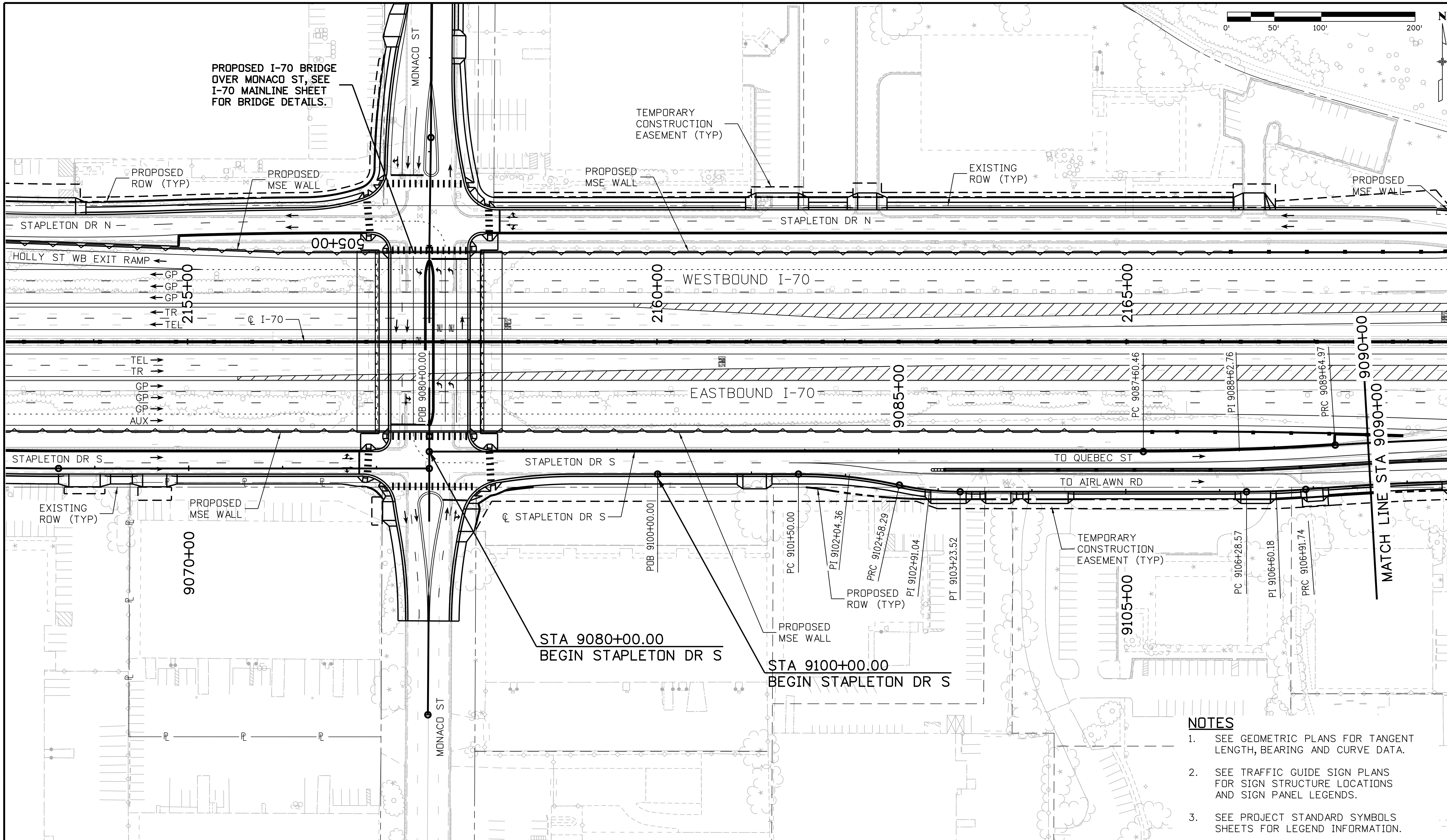
Project No./Code
FBR 0704-234
19631
Sheet Number 103



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

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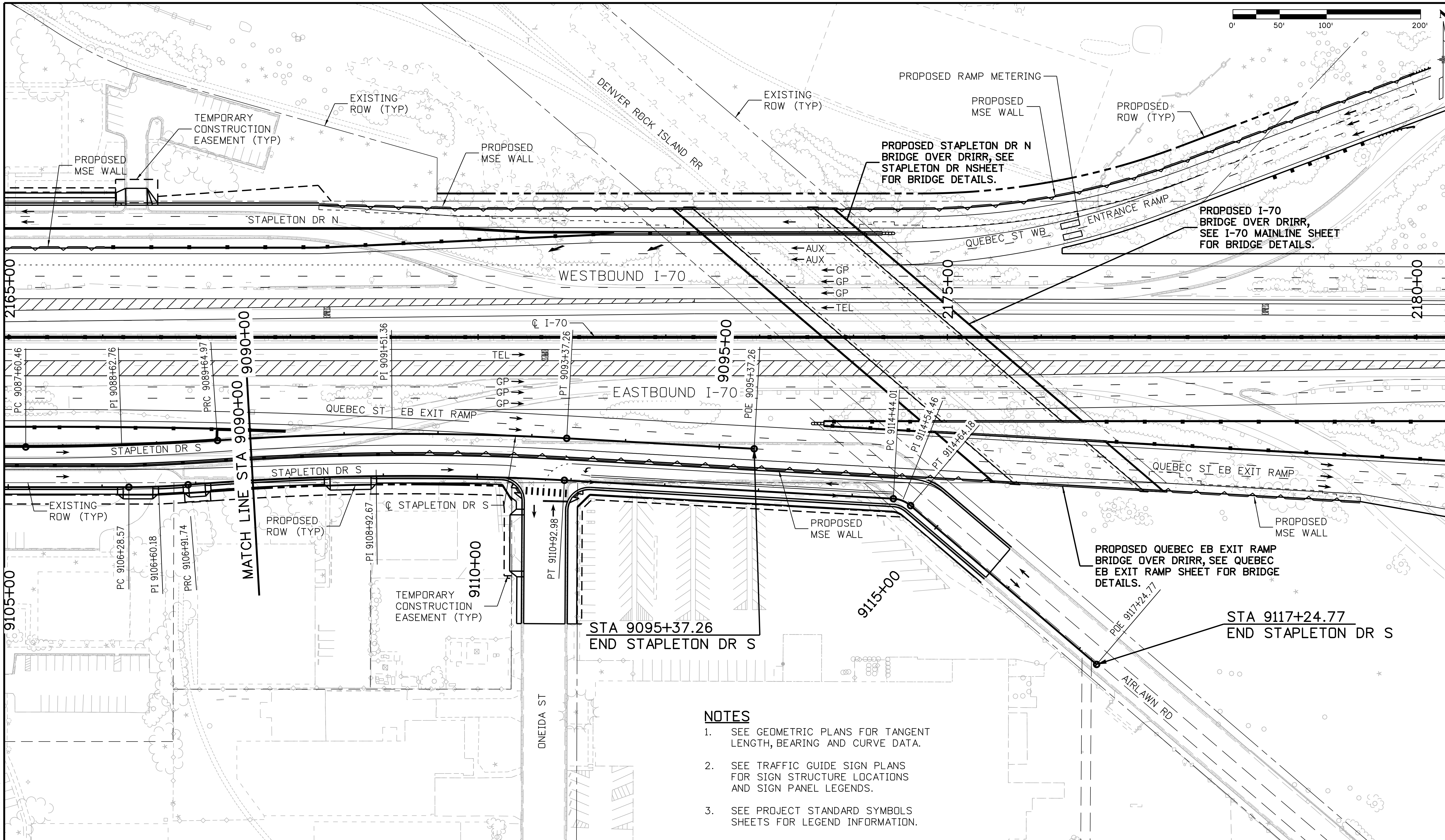
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
STAPLETON DR S
STA 9080+00 TO STA 9090+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL66 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 104



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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
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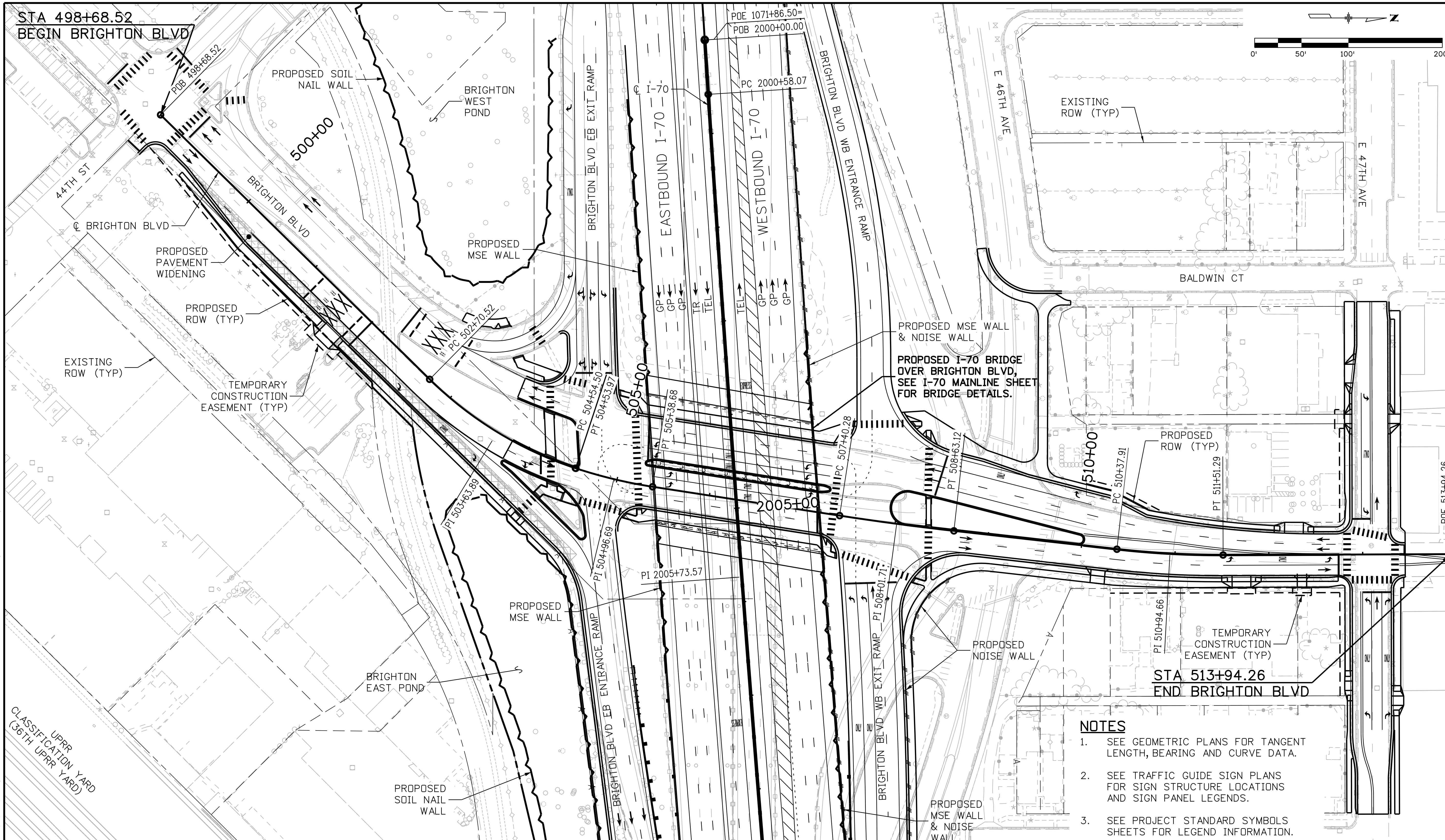
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
STAPLETON DR S
STA 9090+00 TO STA 9095+37.26

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL67 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 105



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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Print Date: 5/24/2017		
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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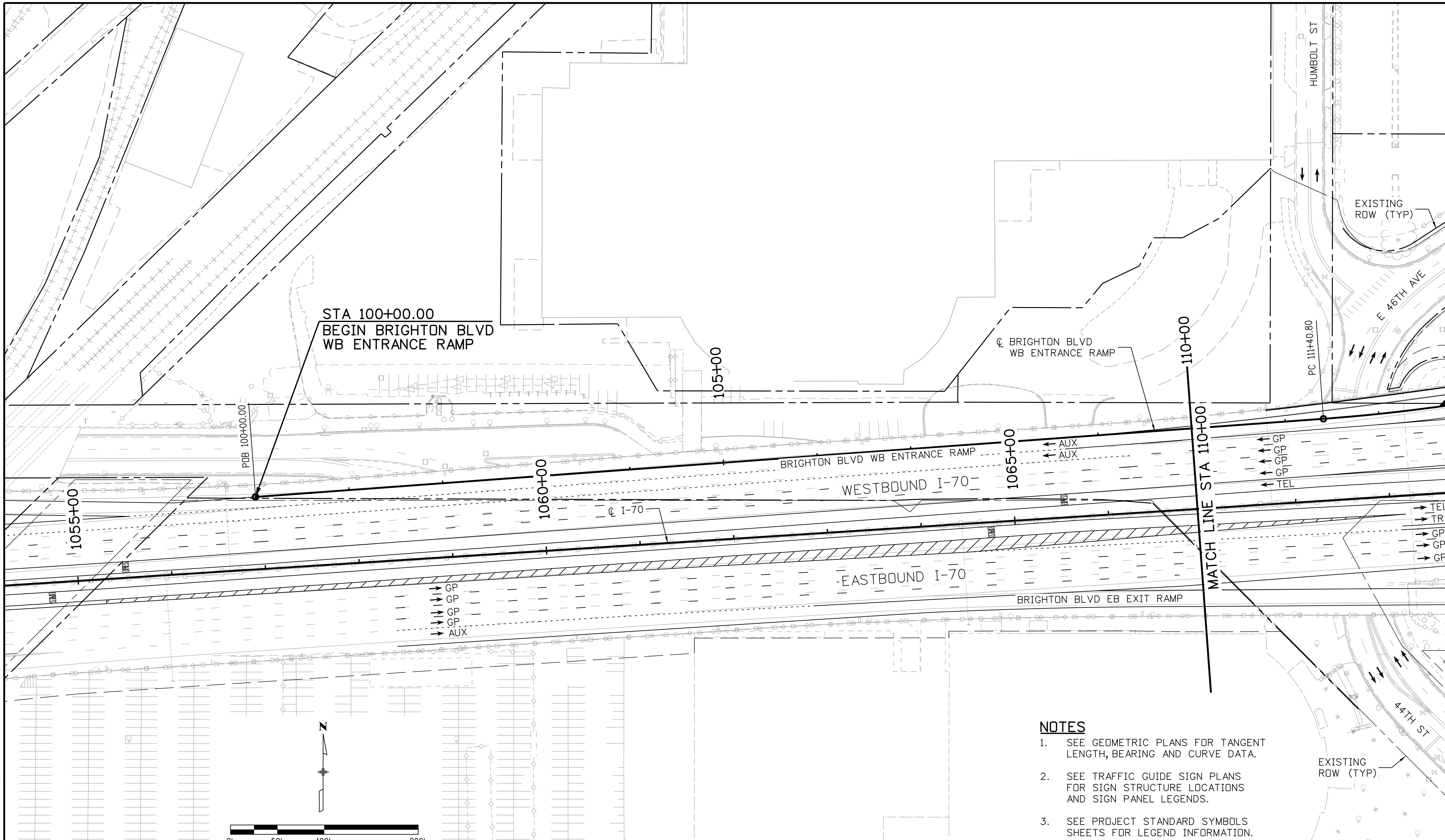
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
BRIGHTON BLVD
STA 498+68.52 TO STA 513+94.26

Designer:	Structure Numbers
Detailer:	
Sheet Subset: ROAD PLAN	Subset Sheets: RPL68 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 106



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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
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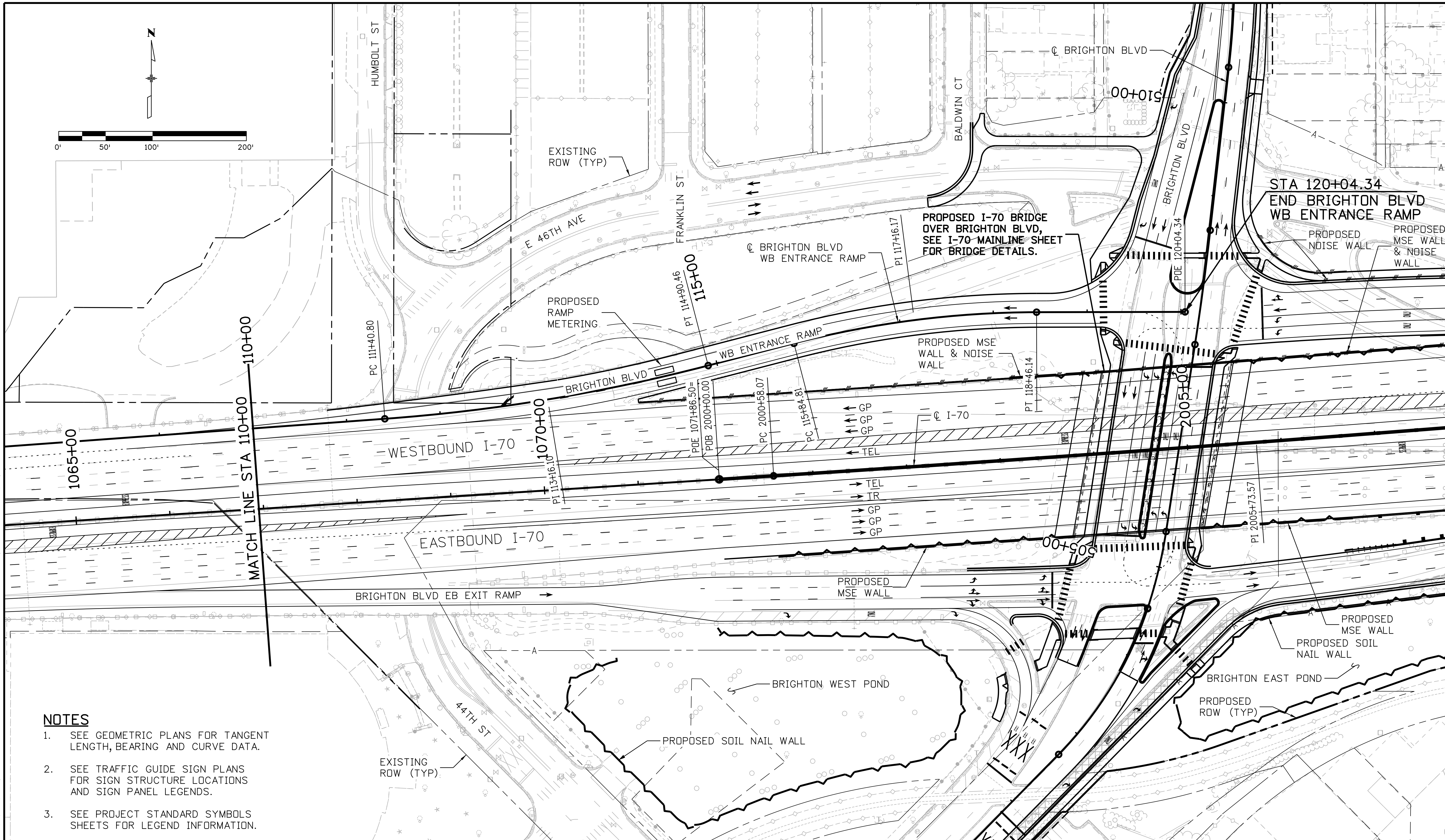
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
BRIGHTON BLVD WB ENTRANCE RAMP
STA 100+00 TO STA 110+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PLAN	Subset Sheets: RPL69 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 107



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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			

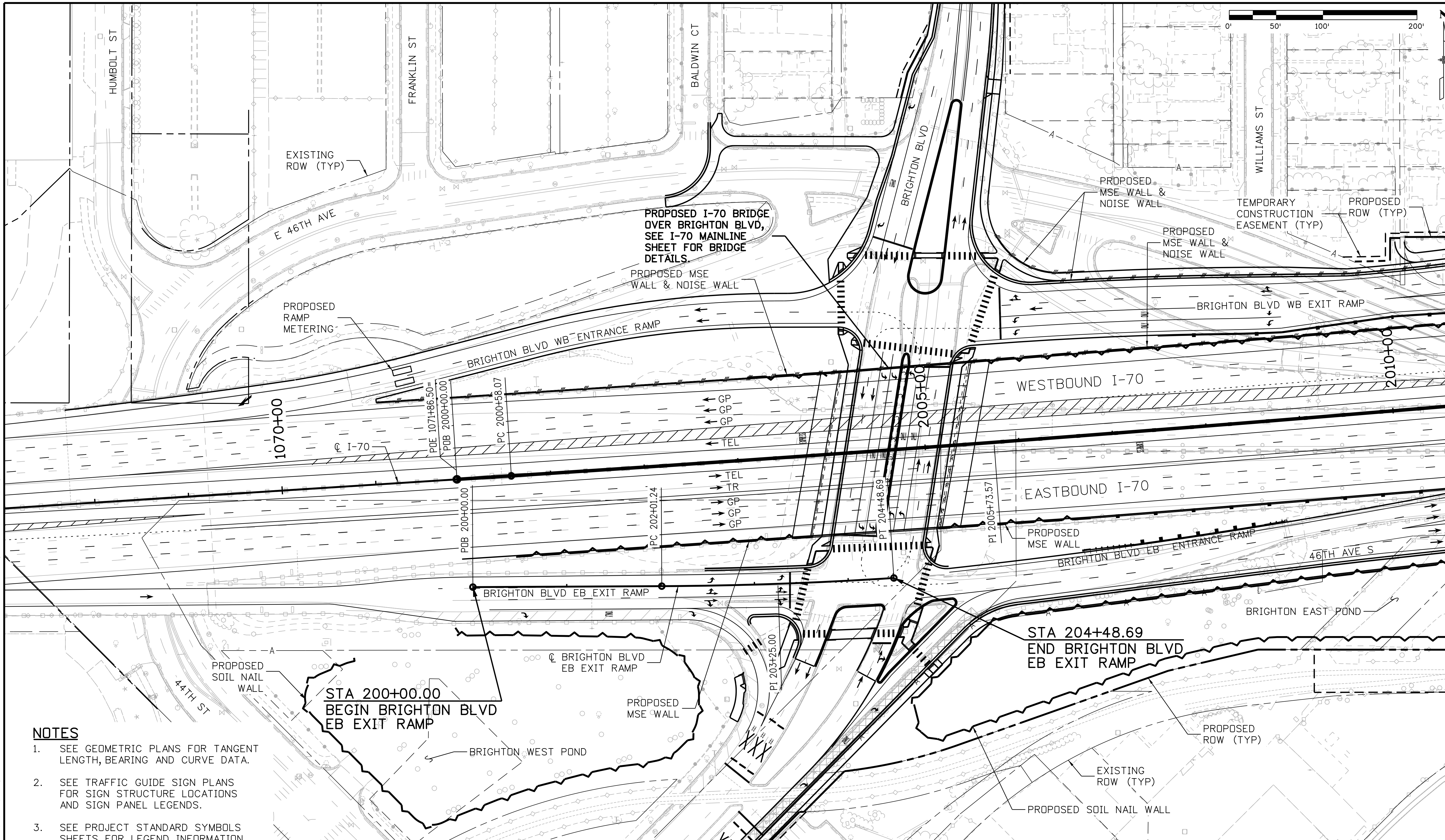
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL	
No Revisions:	
Revised:	
Void:	

CENTRAL 70
ROADWAY PLAN
BRIGHTON BLVD WB ENTRANCE RAMP
STA 110+00 TO STA STA 120+04.34

Designer:	Structure Numbers
Detailer:	
Sheet Subset: ROAD PLAN	Subset Sheets: RPL70 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 108



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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Print Date: 5/24/2017		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	CENTRAL 70 ROADWAY PLAN BRIGHTON BLVD EB EXIT RAMP STA 200+00 TO STA 204+48.69		Project No./Code
No Revisions:			FBR 0704-234
Revised:	Designer:	Structure Numbers	19631
	Detailer:		
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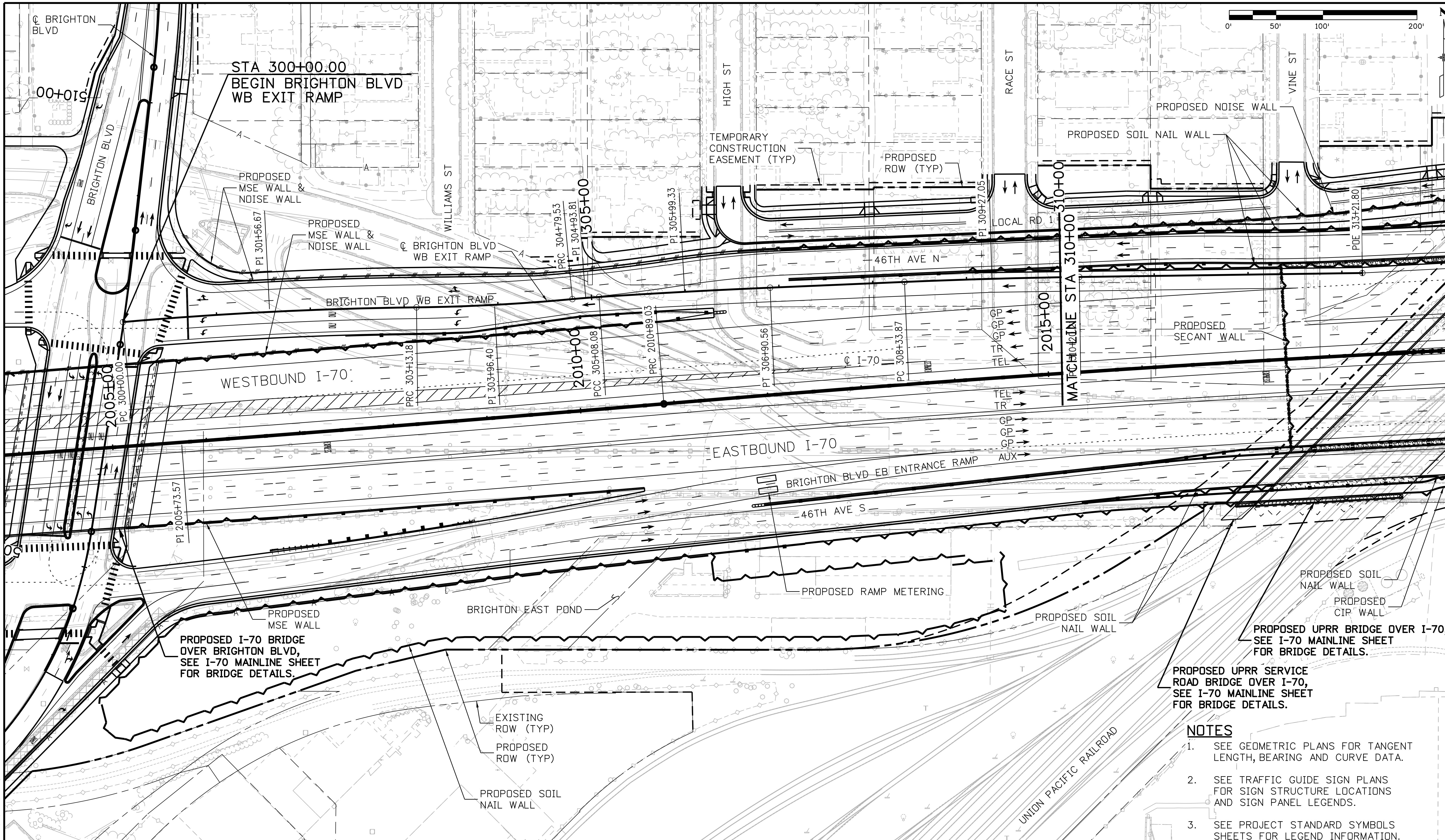

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

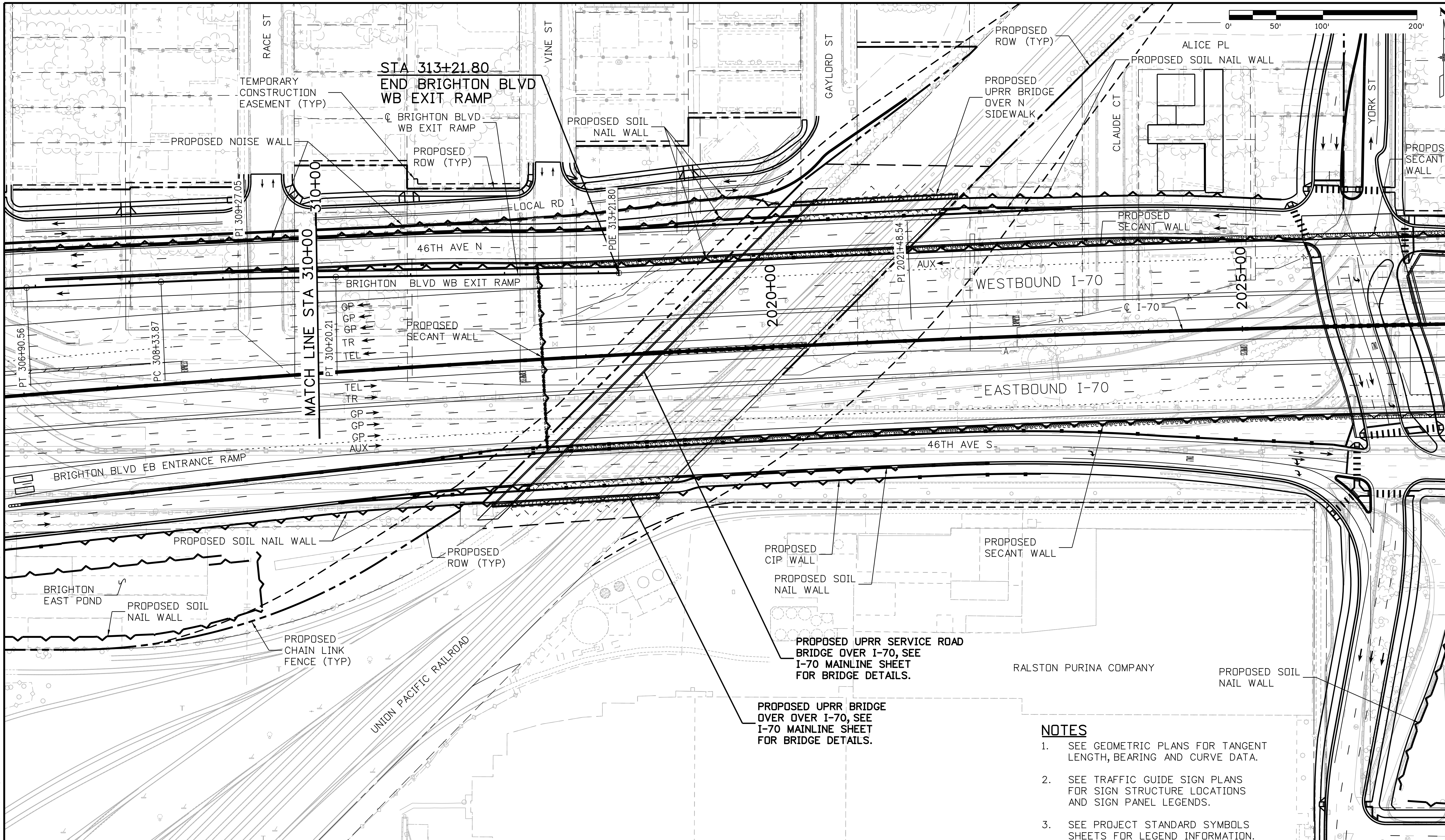
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
BRIGHTON BLVD WB EXIT RAMP
STA 300+00 TO STA 310+00

Designer:	Structure Numbers	
Detailer:		
Sheet Subset: ROAD PLAN	Subset Sheets: RPL72 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 110



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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Print Date: 5/24/2017			
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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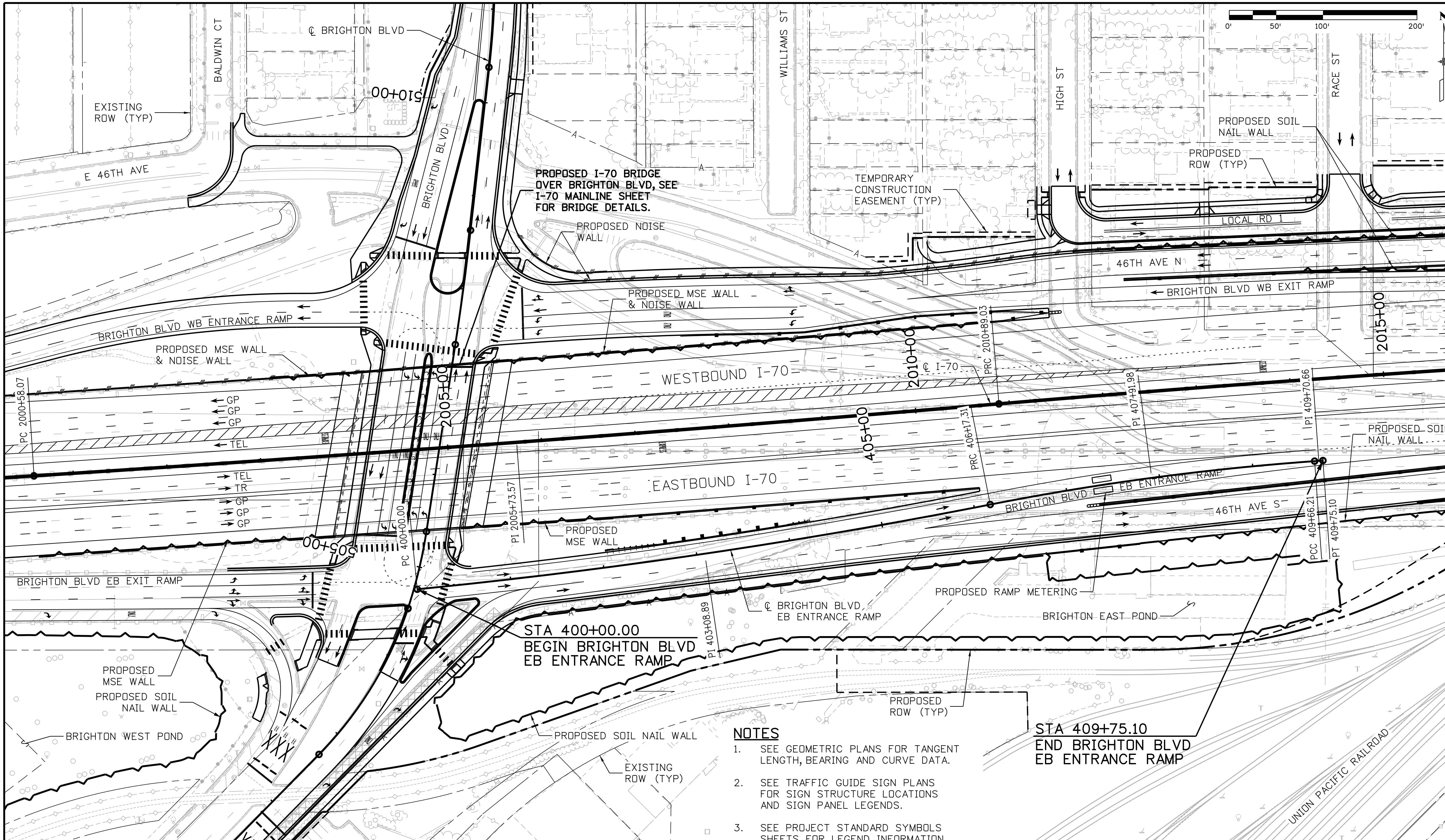
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
BRIGHTON BLVD WB EXIT RAMP
STA 310+00 TO STA 313+21.80

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PLAN		Subset Sheets: RPL73 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 111



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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Print Date: 5/24/2017			
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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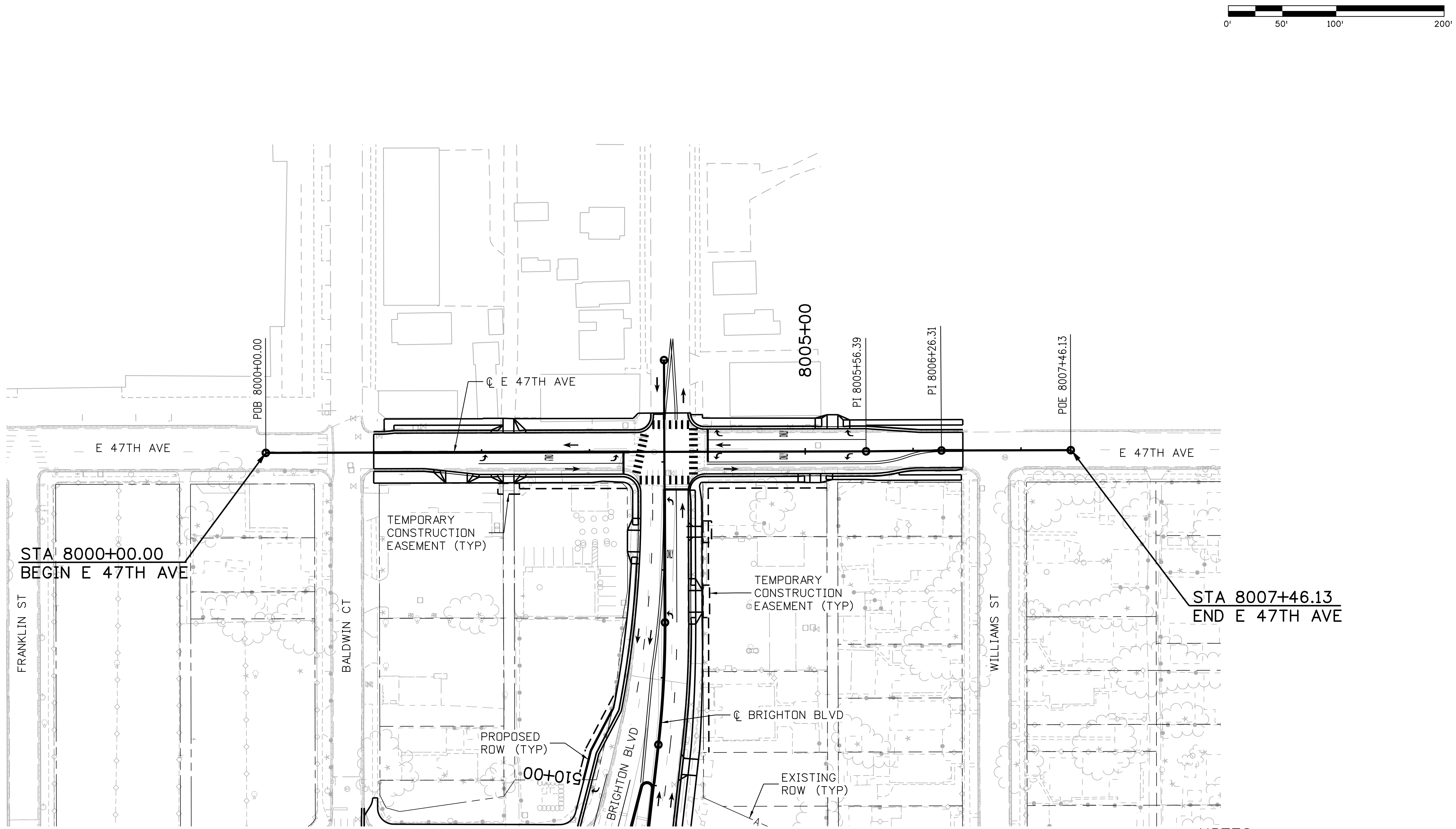
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
BRIGHTON BLVD EB ENTRANCE RAMP
STA 400+00.00 TO STA 409+75.10

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PLAN	Subset Sheets: RPL74 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 112



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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
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Denver, CO 80222
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Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
E 47TH AVE
STA 8000+00 TO STA 8007+46.13
Designer:
Detailer:
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Project No./Code
FBR 0704-234
19631
Sheet Number 113

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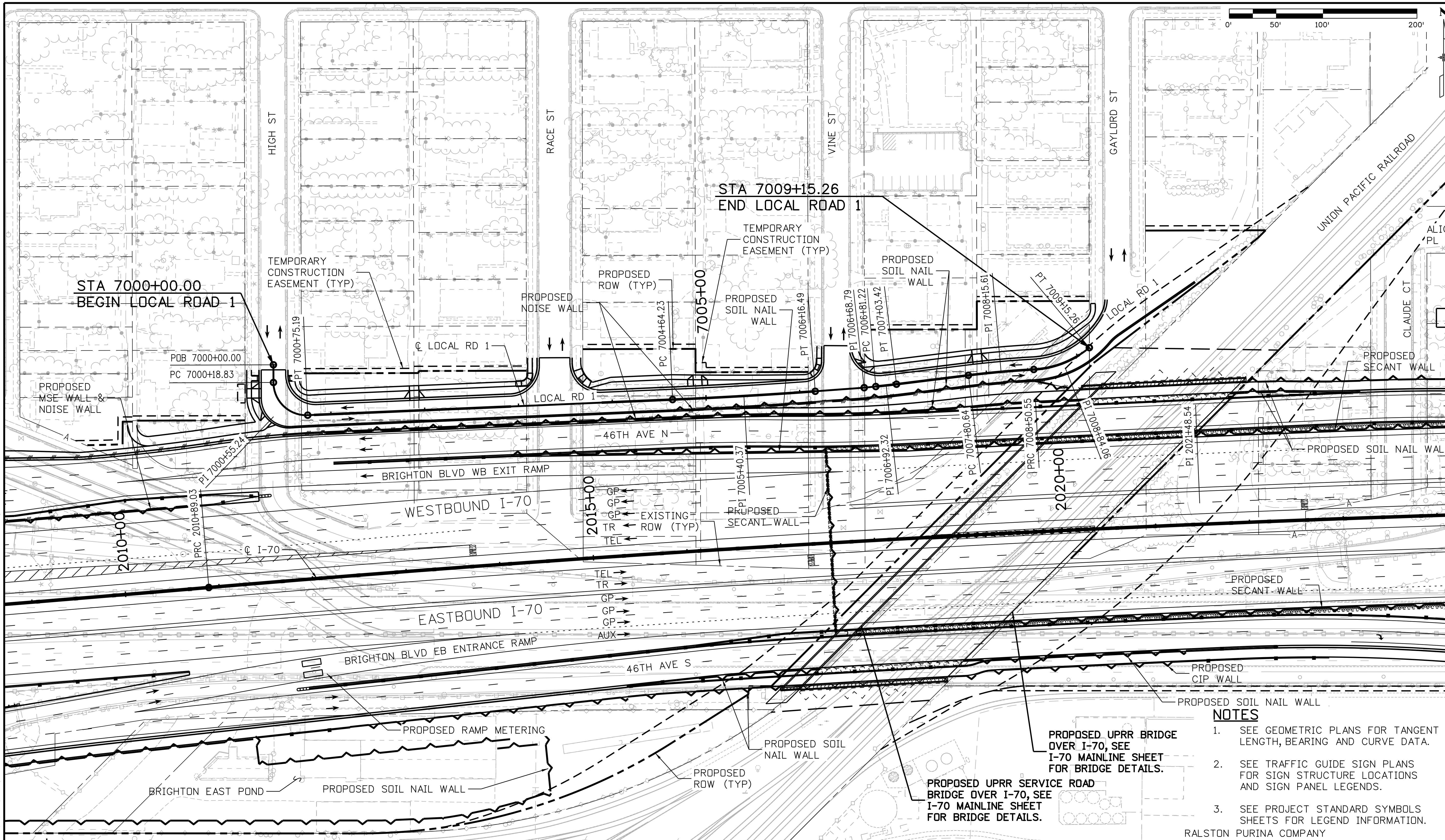

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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
CDOT
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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
ROADWAY PLAN
LOCAL ROAD 1
STA 7000+00 TO STA 7009+15.26

Designer:		Structure Numbers	
Detailer:			
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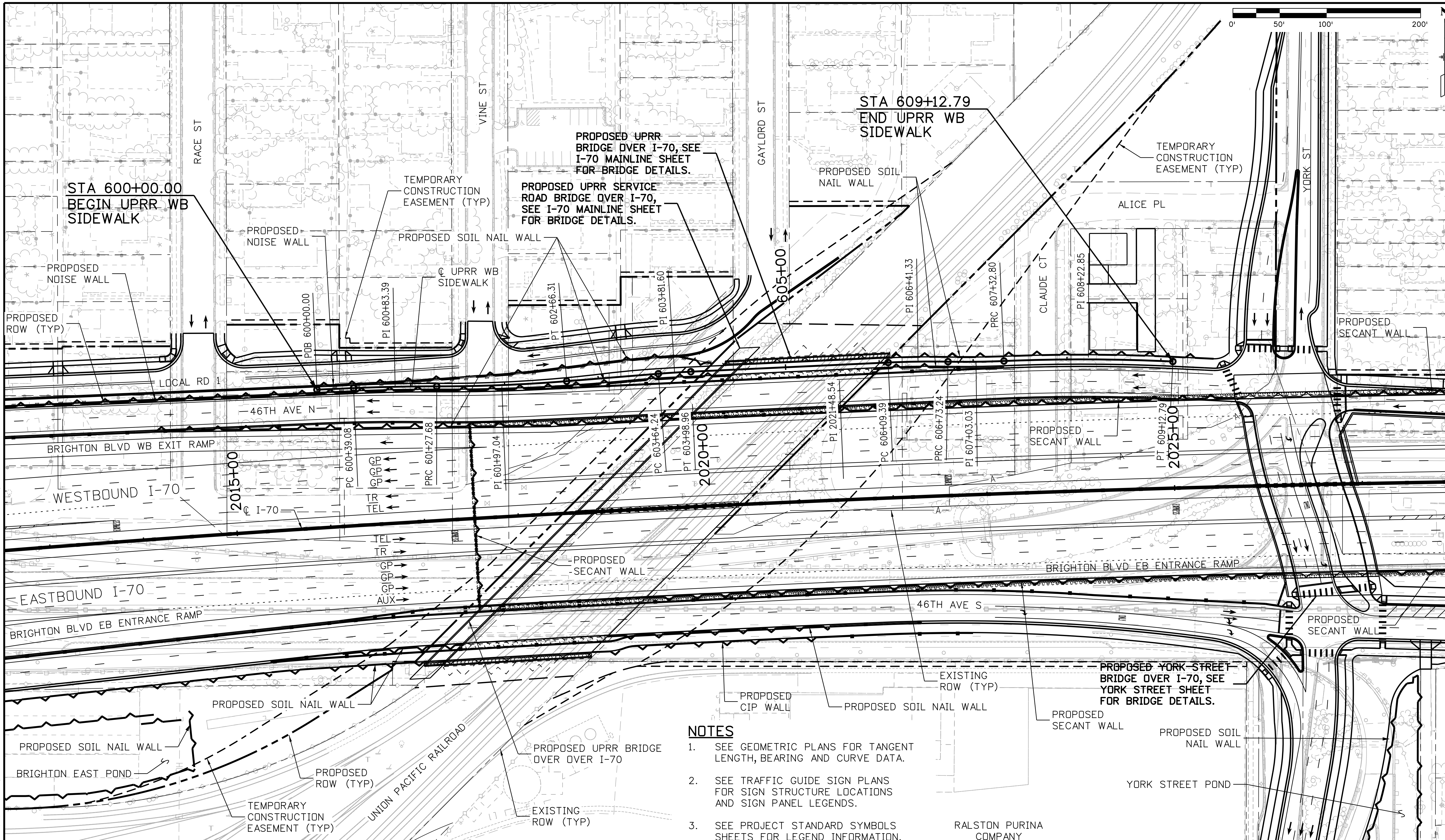
Project No./Code	
FBR 0704-234	
19631	
Sheet Number	114



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

Print Date: 5/24/2017		
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 PLAN
UPRR WB SIDEWALK PLAN
STA 600+00 TO STA 609+12.79

Designer: | Structure Numbers
Detailer:
Sheet Subset: ROAD PLAN | Subset Sheets: RPL77 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 115

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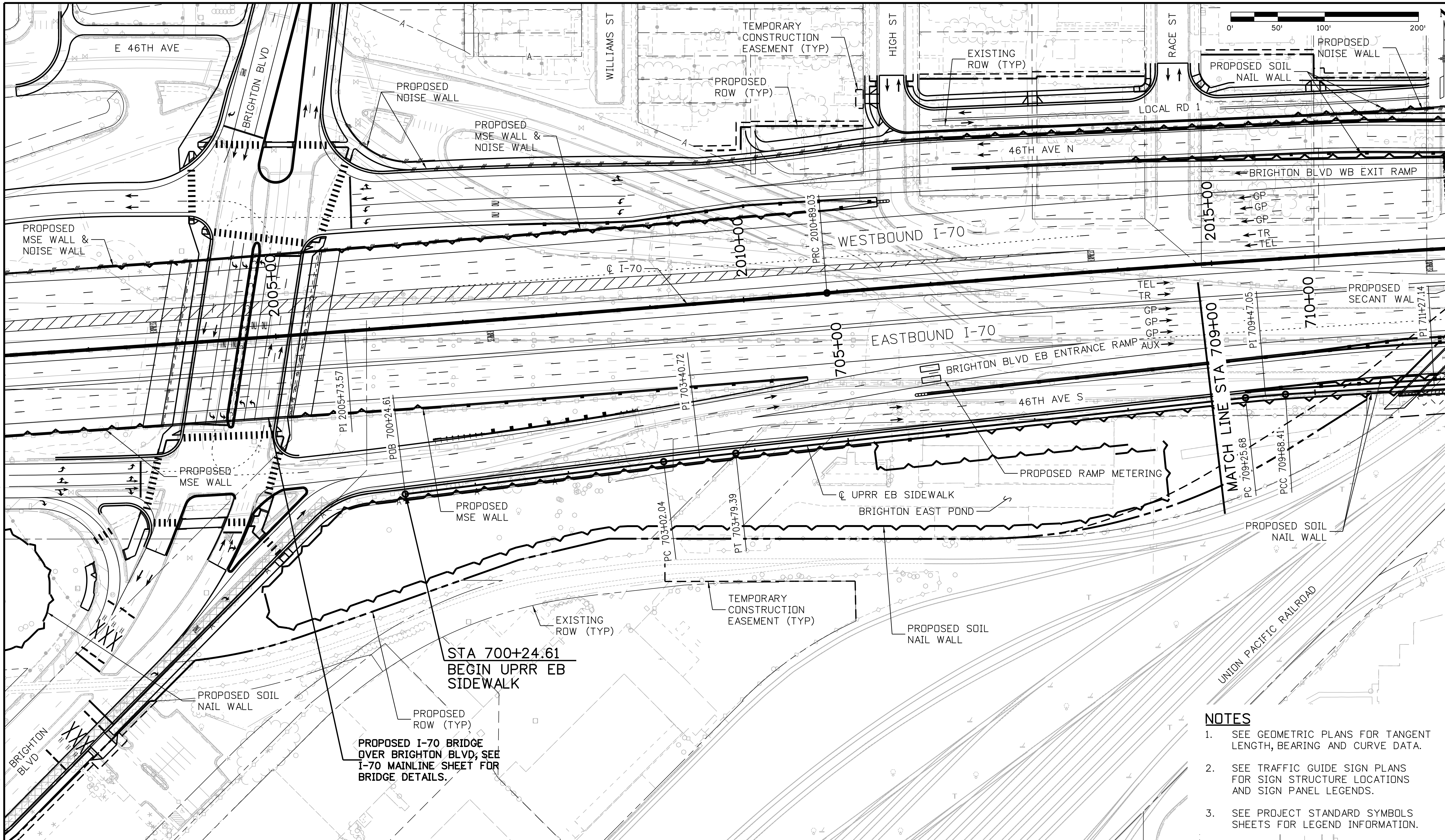


NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

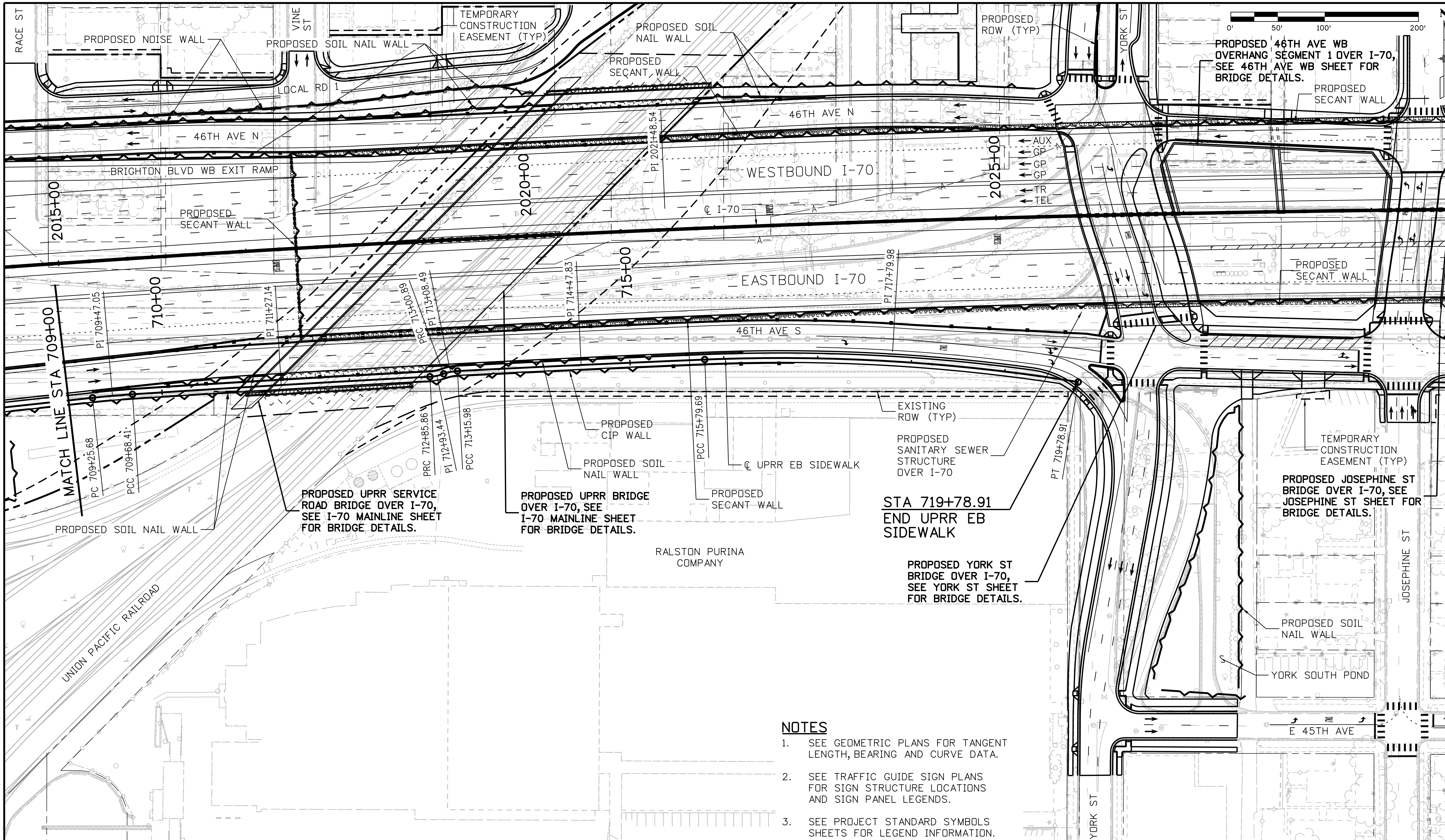
Print Date: 5/24/2017	Sheet Revisions	Colorado Department of Transportation	PROPOSAL
File Name: See sheet edge for information	Date: / Comments / Init.	2000 South Holly Street, Denver, CO 80222, Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:
Horiz. Scale: As Noted		Region 1	Revised:
Vert. Scale: As Noted		KJS	Void:
Unit Information			
Unit Leader			

Front Range Mobility Group

CENTRAL 70
ROADWAY PLAN
UPRR EB SIDEWALK PLAN
STA 700+24.61 TO STA 709+00

Designer:	Structure Numbers	Project No./Code
Detailer:		FBR 0704-234
Sheet Subset: ROAD PLAN	Subset Sheets: RPL78 of 142	19631
		Sheet Number 116

DENPWP02$ 2:26:28 PM \\denpwp01\pwicsjobs596\292432\515021_184\RDPL078-13599-RDPL_077_UPRR EB Sidewalk.dgn



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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Print Date: 5/24/2017		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			

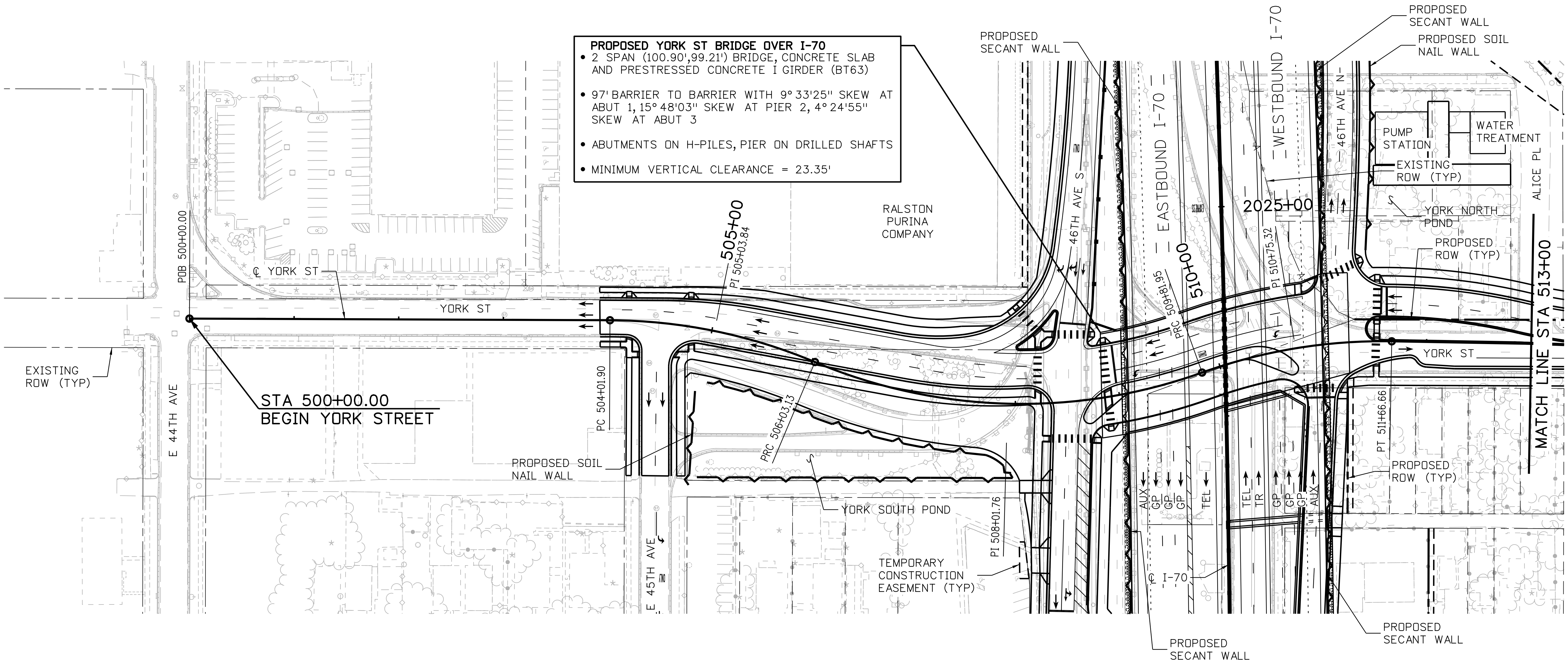
Colorado Department of Transportation
CDOT
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL	
No Revisions:	
Revised:	
Void:	

CENTRAL 70
ROADWAY PLAN
UPRR EB SIDEWALK PLAN
STA 709+00 TO STA 719+78.91

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PLAN		Subset Sheets: RPL79 of 142	

Project No./Code	
FBR 0704-234	
19631	
Sheet Number	117



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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Print Date: 5/24/2017		
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.

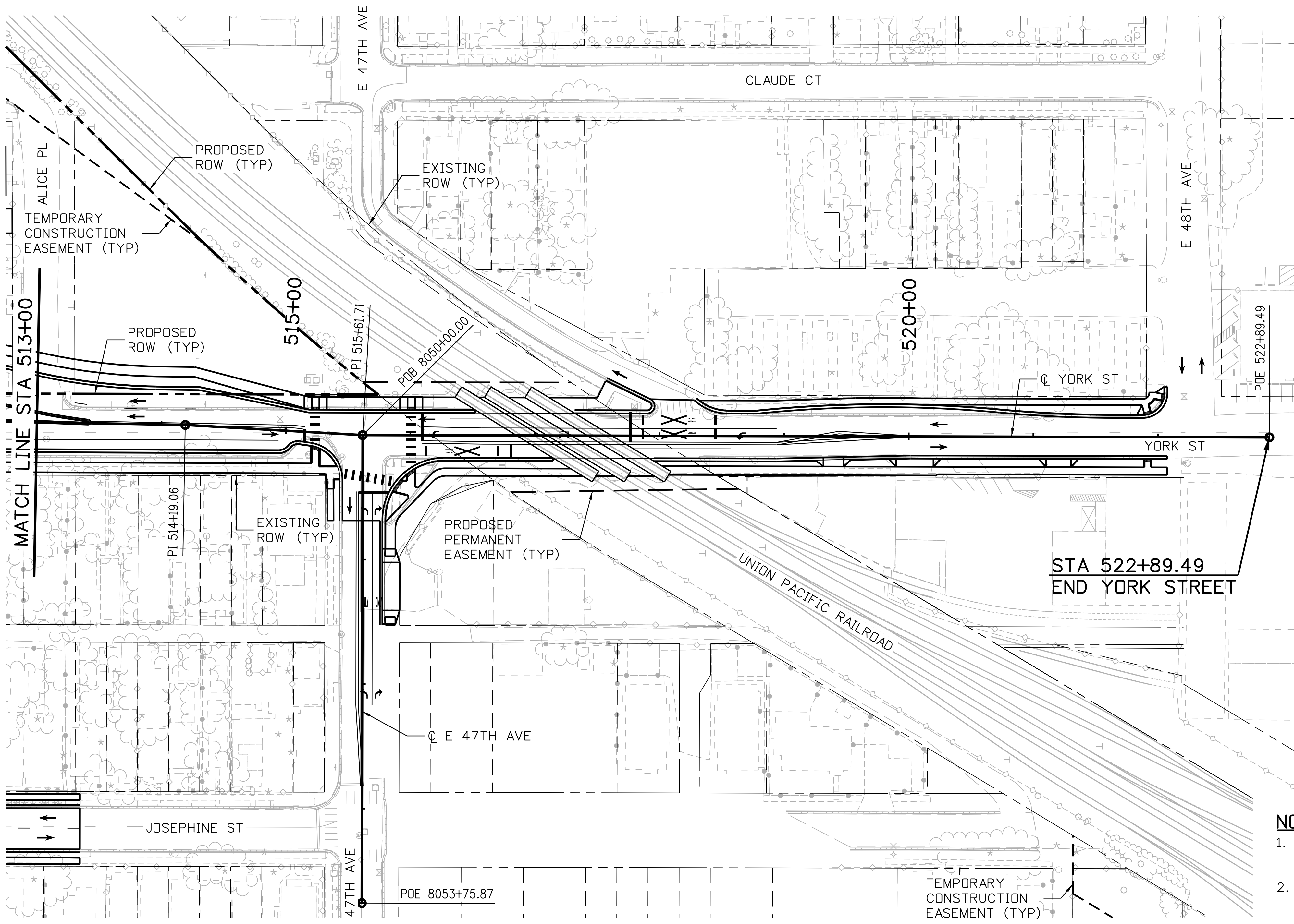
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
YORK STREET
STA 500+00 TO STA 513+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PLAN	Subset Sheets: RPL80 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 118



0' 50' 100' 200'

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

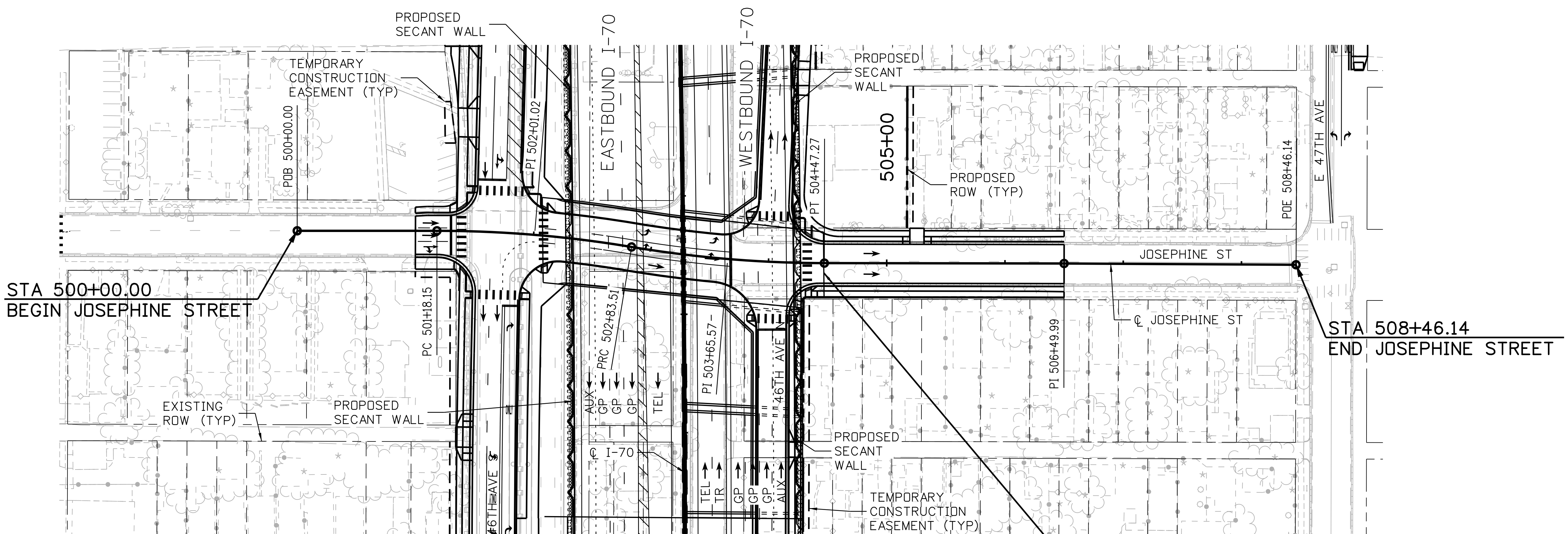
Colorado Department of Transportation
CDOT
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
YORK STREET
STA 513+00 TO STA 522+89.49

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL81 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 119



0' 50' 100' 200'

PROPOSED JOSEPHINE ST BRIDGE OVER I-70

- 2 SPAN (98.58', 97.83') BRIDGE, CONCRETE SLAB AND PRESTRESSED CONCRETE I GIRDER (BT63)
- VARIES 63.88' TO 68.25' BARRIER TO BARRIER WITH 6° 52'25" SKEW AT ABUT 1, 7° 32'16" SKEW AT PIER 2, 1° 48'27" SKEW AT ABUT 3
- ABUTMENTS ON H-PILES, PIER ON DRILLED SHAFTS
- MINIMUM VERTICAL CLEARANCE = 21.85'

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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.

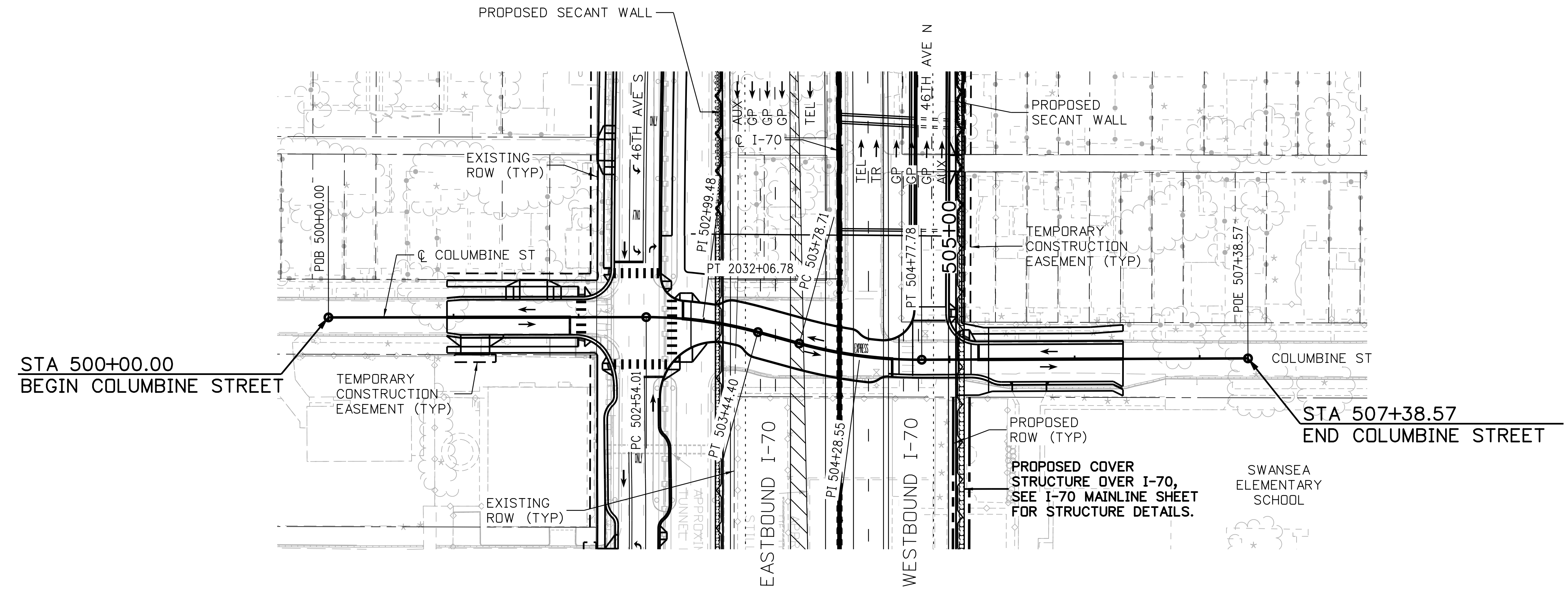
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
JOSEPHINE STREET
STA 500+00 TO STA 508+46.14

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL82 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 120



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

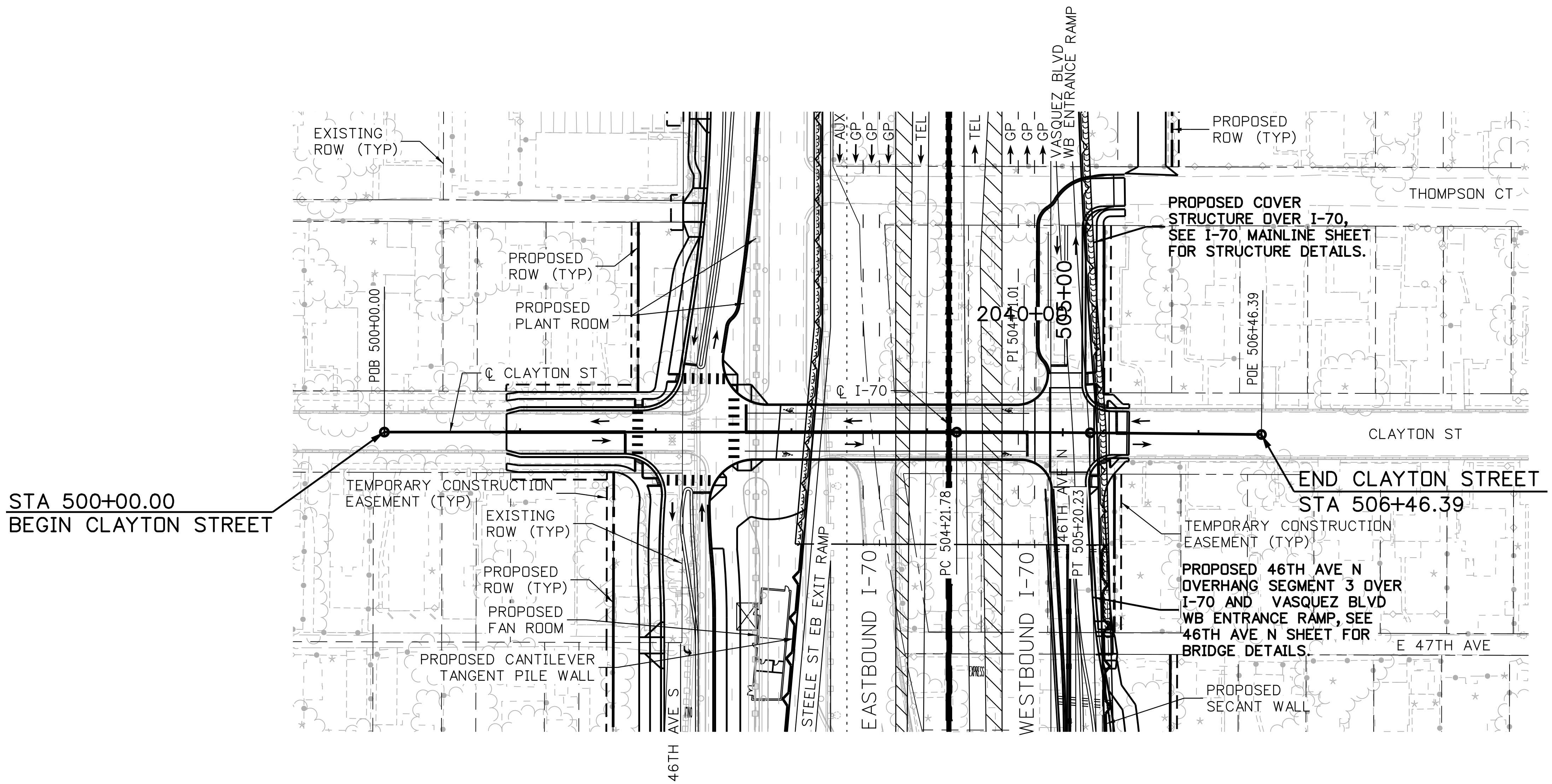
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
COLUMBINE STREET
STA 500+00 TO STA 507+38.57

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PLAN	Subset Sheets: RPL83 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 121



0' 50' 100' 200'

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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 PLAN
CLAYTON STREET
STA 500+00 TO STA 506+46.39

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL84 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 122

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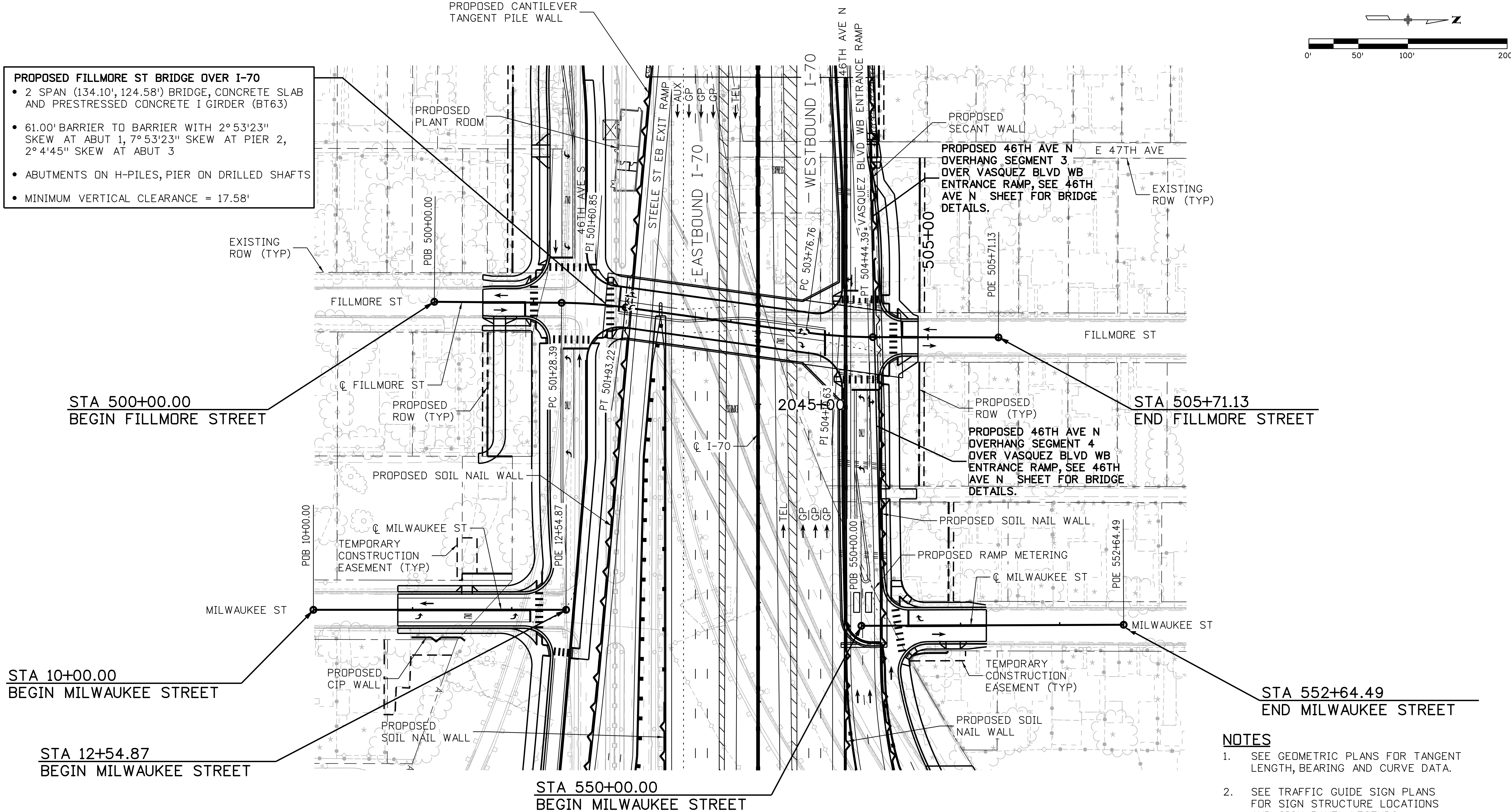

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

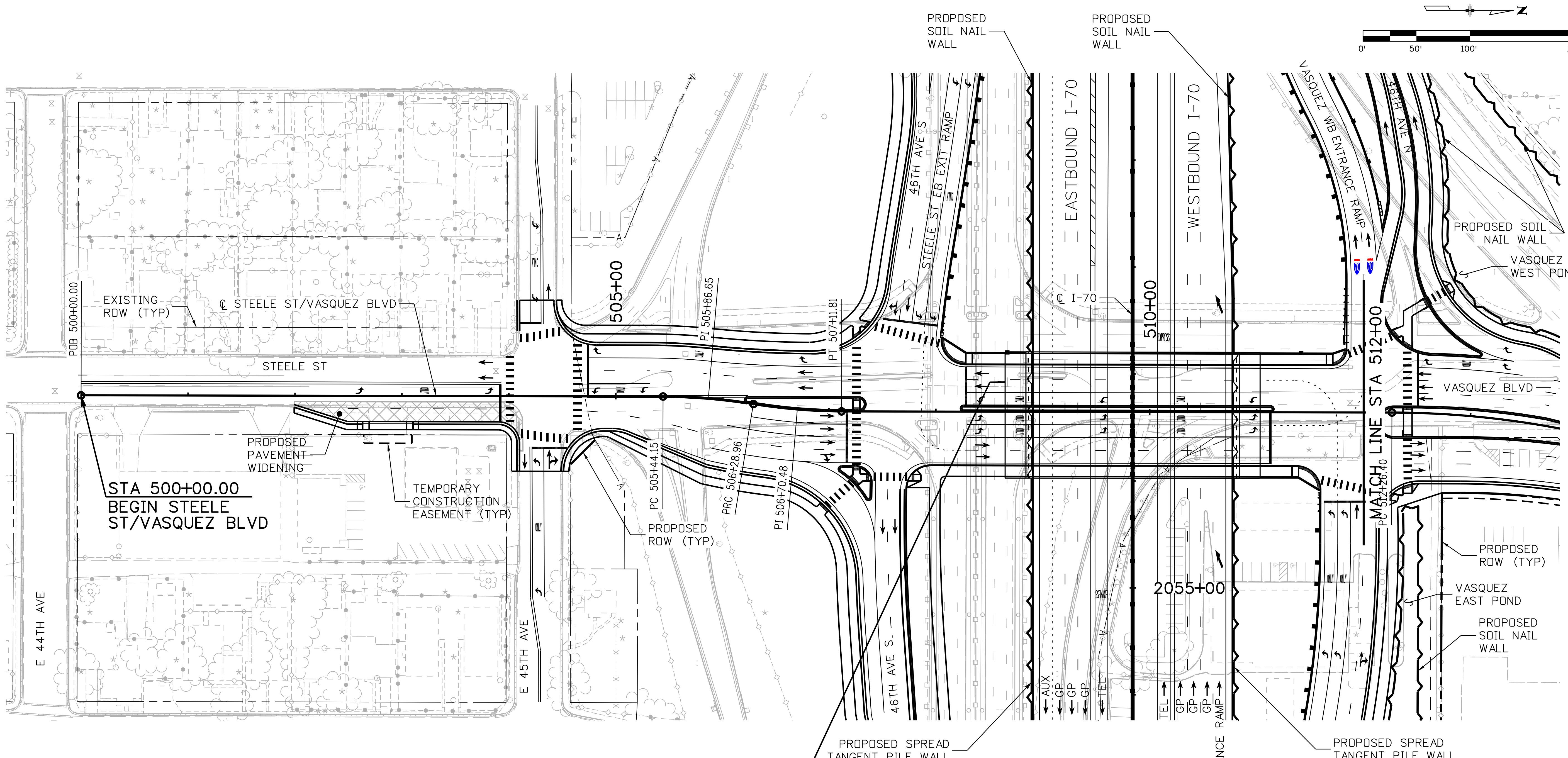
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
FILLMORE STREET AND MILWAUKEE STREET

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PLAN		Subset Sheets: RPL85 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 123



COLORADO WB ENTRANCE RAMP

PROPOSED STEELE ST/VASQUEZ BLVD BRIDGE OVER I-70

- 2 SPAN (98.46', 98.46') BRIDGE, CONCRETE SLAB AND PRESTRESSED CONCRETE I GIRDER (BT54)
- 115'-0" ROADWAY BARRIER TO BARRIER WITH 0° 07'32" SKEW.
- ABUTMENTS ON H-PILES; PIER ON DRILLED SHAFTS.
- MINIMUM VERTICAL CLEARANCE = 19.40'.
- VERTICAL CLEARANCE FOR FUTURE COVER = 16.50'

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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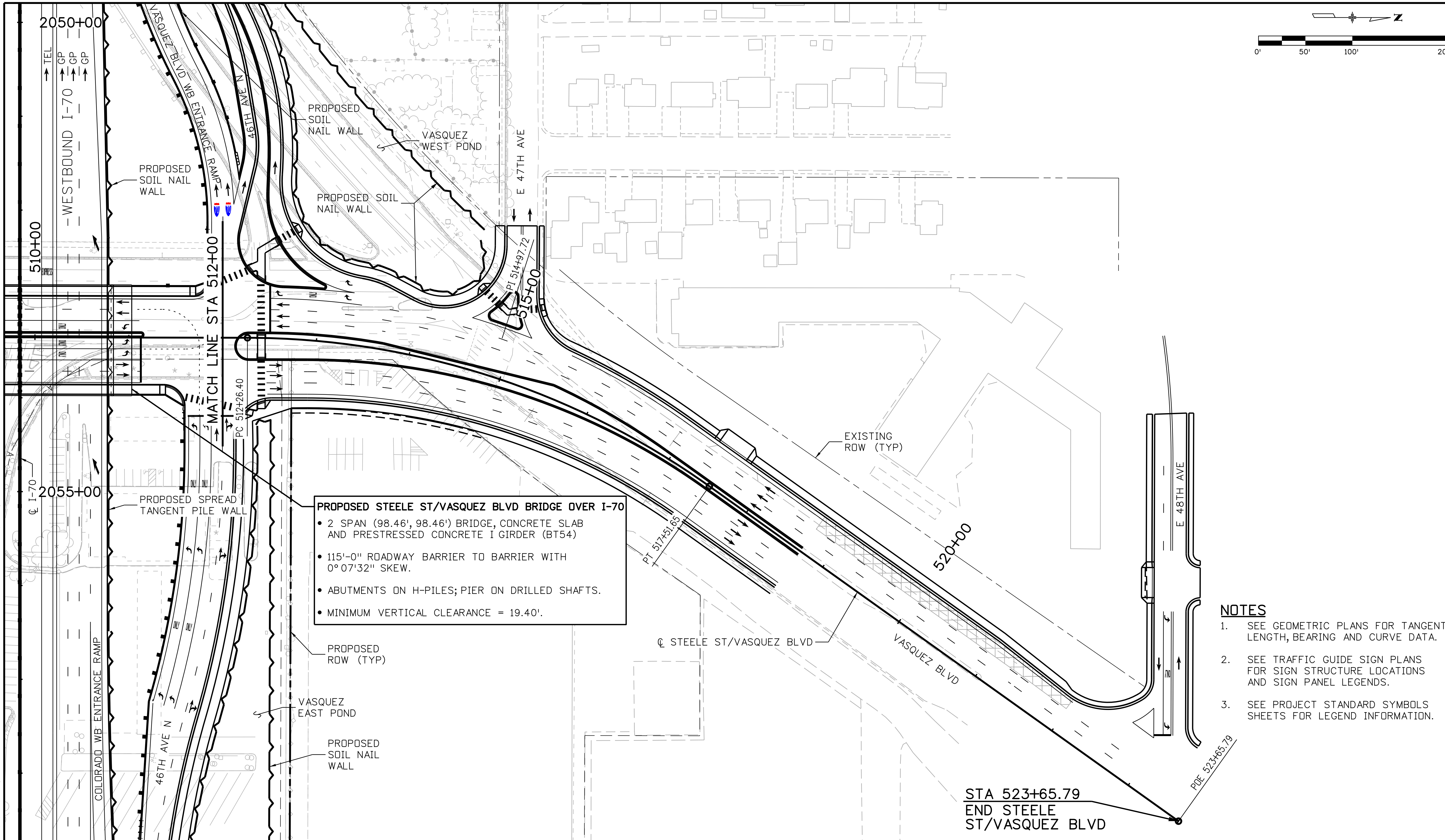
Print Date: 5/19/2017		Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 ROADWAY PLAN STEELE ST/VASQUEZ BLVD STA 500+00 TO STA 512+00	Project No./Code
File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 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: ROAD PLAN / Subset Sheets: RPL86 of 142	Sheet Number 124
	Unit Leader							



PROPOSED STEELE ST/VASQUEZ BLVD BRIDGE OVER I-70

- 2 SPAN (98.46', 98.46') BRIDGE, CONCRETE SLAB AND PRESTRESSED CONCRETE I GIRDER (BT54)
- 115'-0" ROADWAY BARRIER TO BARRIER WITH 0° 07'32" SKEW.
- ABUTMENTS ON H-PILES; PIER ON DRILLED SHAFTS.
- MINIMUM VERTICAL CLEARANCE = 19.40'.

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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:

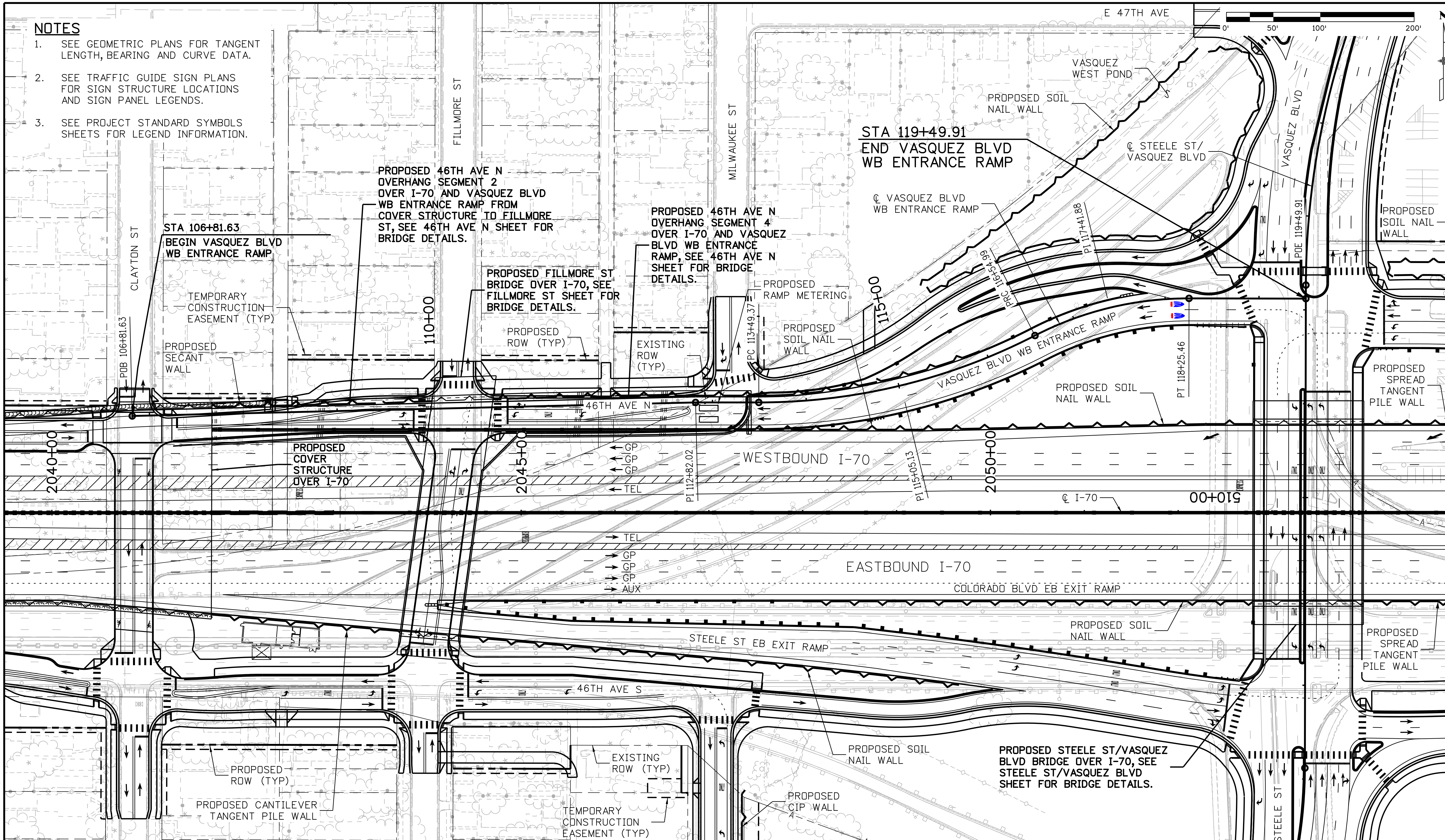
CENTRAL 70
ROADWAY PLAN
STEELE ST/VASQUEZ BLVD
STA 512+00 TO STA 523+65.79

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL87 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 125

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.



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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.

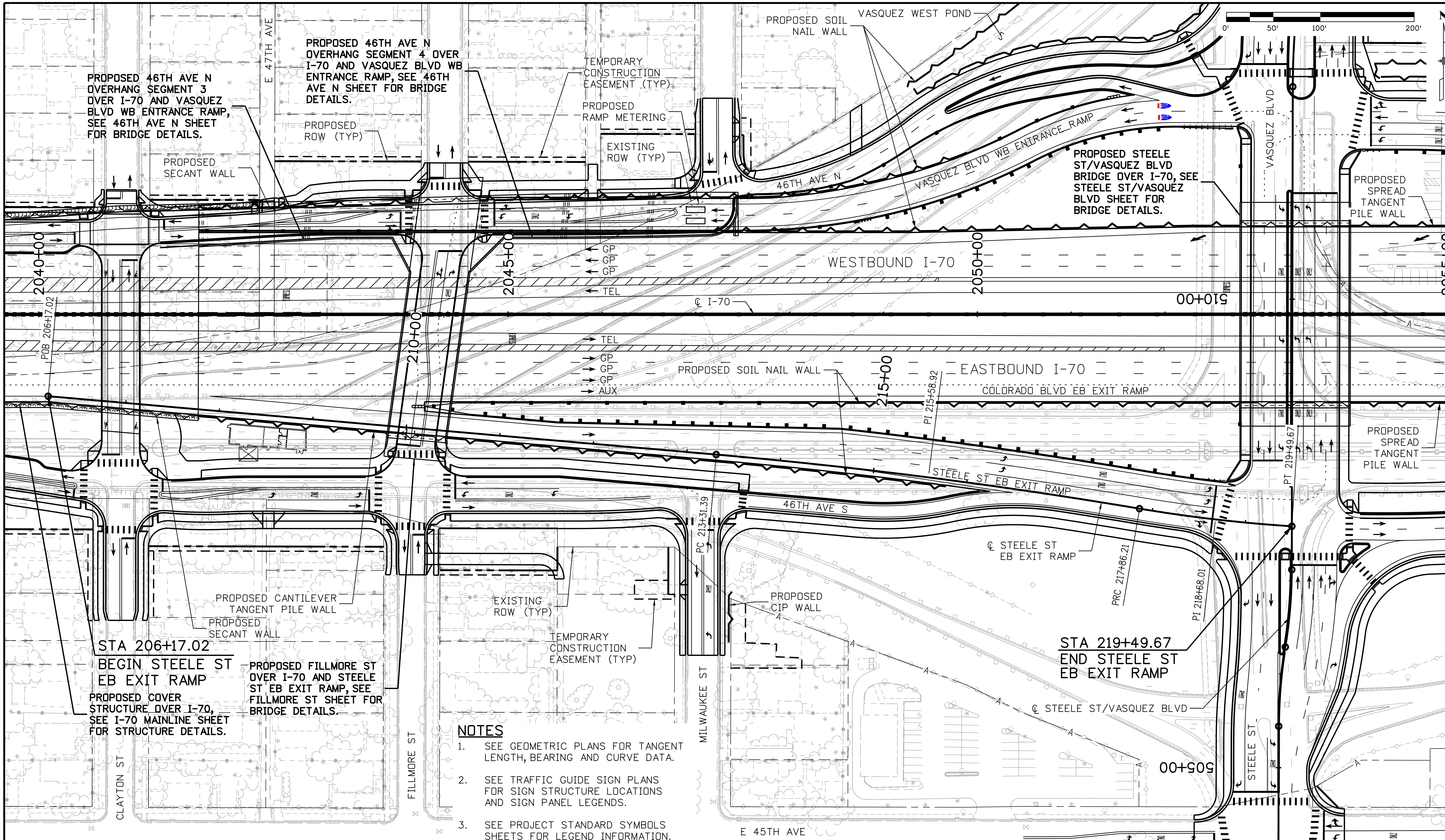
Colorado Department of Transportation
CDOT
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
VASQUEZ BLVD WB ENTRANCE RAMP
STA 106+81.63 TO STA 119+49.91

Designer:	Structure Numbers	
Detailer:		
Sheet Subset: ROAD PLAN	Subset Sheets: RPL88 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 126



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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.

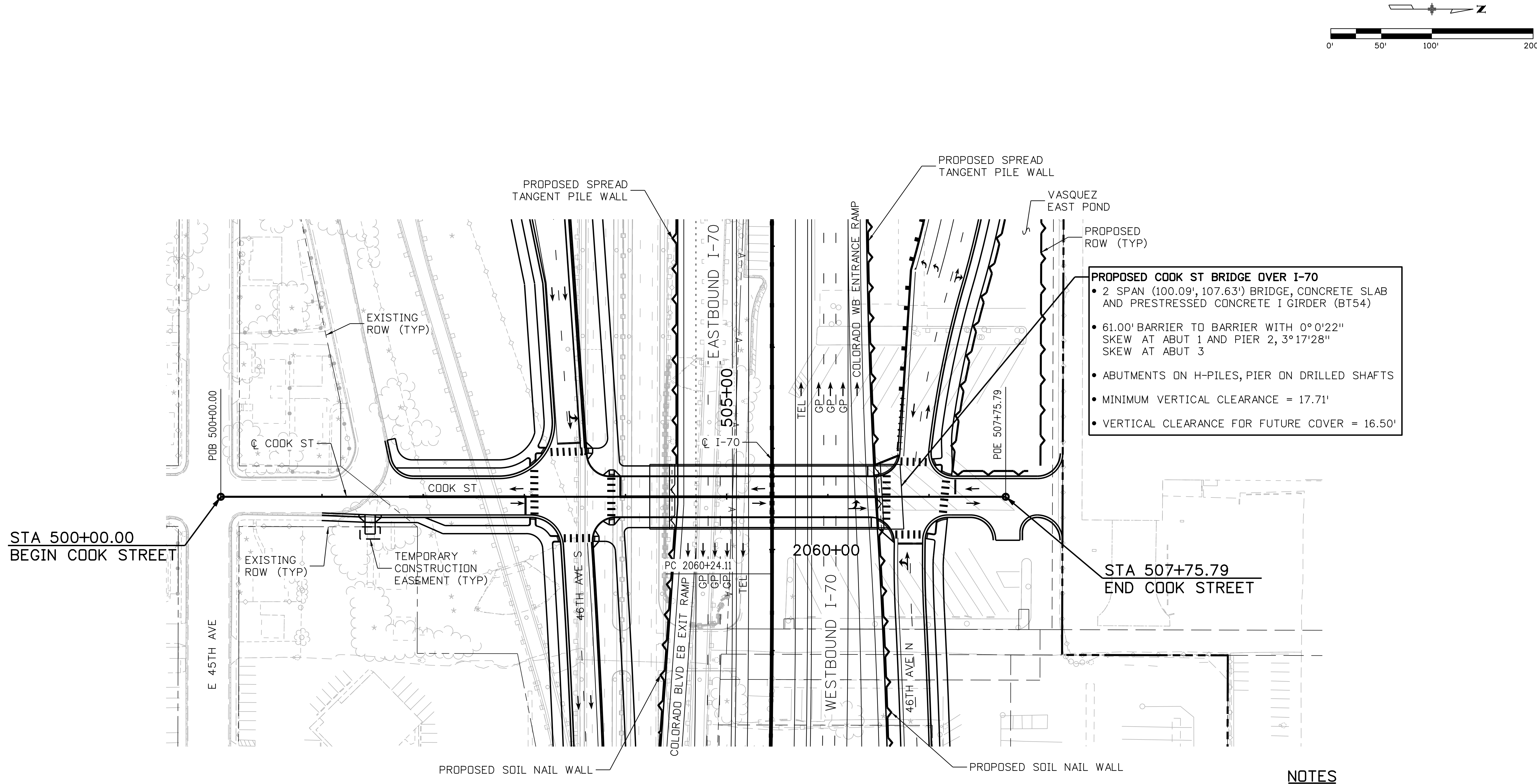
Colorado Department of Transportation
CDOT
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
STEELE ST EB EXIT RAMP
STA 206+17.02 TO STA 219+49.67

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PLAN	Subset Sheets: RPL89 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 127



PROPOSED COOK ST BRIDGE OVER I-70

- 2 SPAN (100.09', 107.63') BRIDGE, CONCRETE SLAB AND PRESTRESSED CONCRETE I GIRDER (BT54)
- 61.00' BARRIER TO BARRIER WITH 0° 0'22" SKEW AT ABUT 1 AND PIER 2, 3°17'28" SKEW AT ABUT 3
- ABUTMENTS ON H-PILES, PIER ON DRILLED SHAFTS
- MINIMUM VERTICAL CLEARANCE = 17.71'
- VERTICAL CLEARANCE FOR FUTURE COVER = 16.50'

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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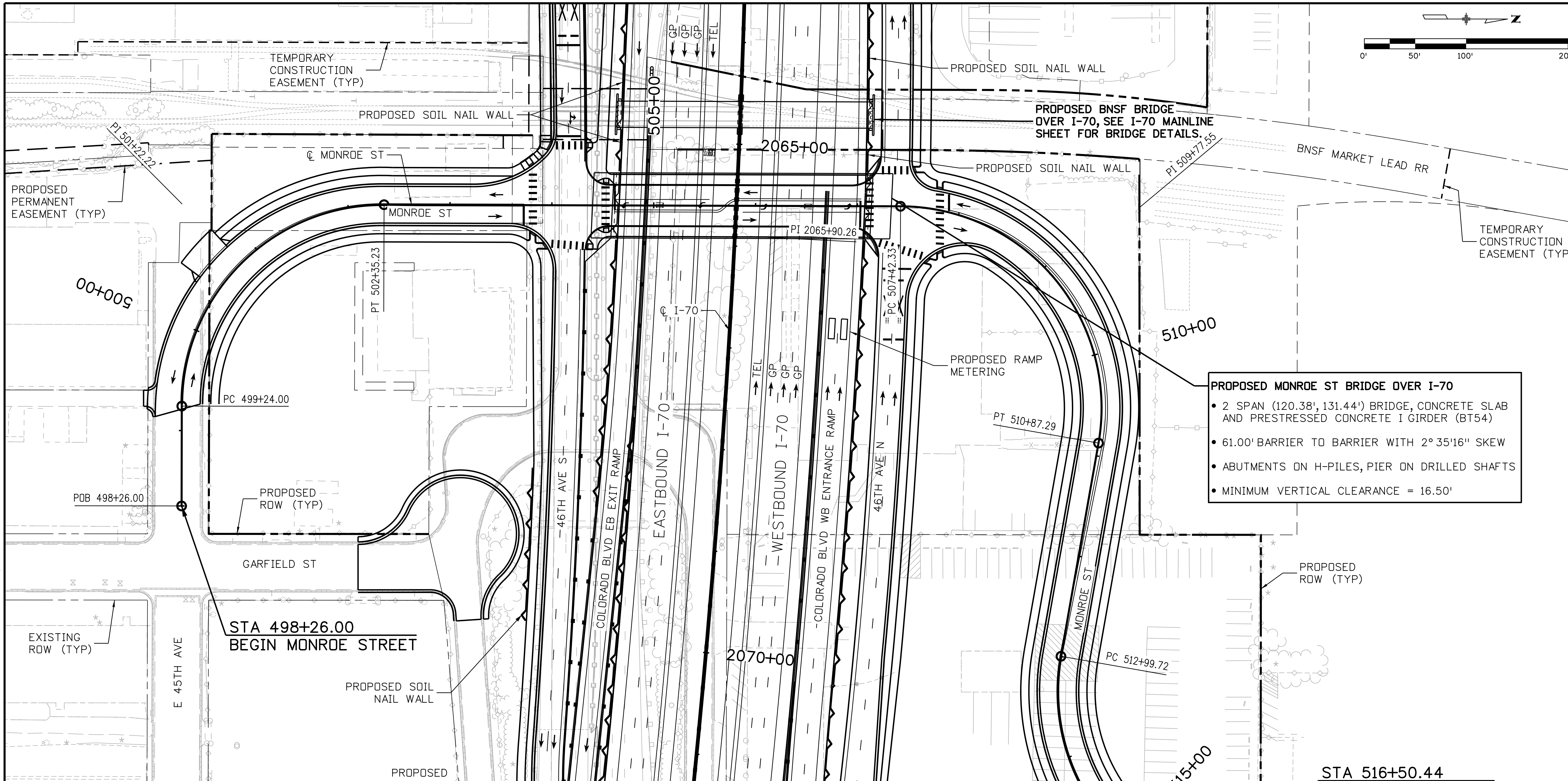
Print Date: 5/19/2017		Sheet Revisions	Colorado Department of Transportation	PROPOSAL
File Name: See sheet edge for information		Date: / Comments / Init.	2000 South Holly Street, Denver, CO 80222, Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:
Front Range Mobility Group	Horiz. Scale: As Noted		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

CENTRAL 70 ROADWAY PLAN COOK STREET STA 500+00 TO STA 507+75.79		Project No./Code
Designer:	Structure Numbers	FBR 0704-234
Detailer:		19631
Sheet Subset: ROAD PLAN	Subset Sheets: RPL90 of 142	Sheet Number 128



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

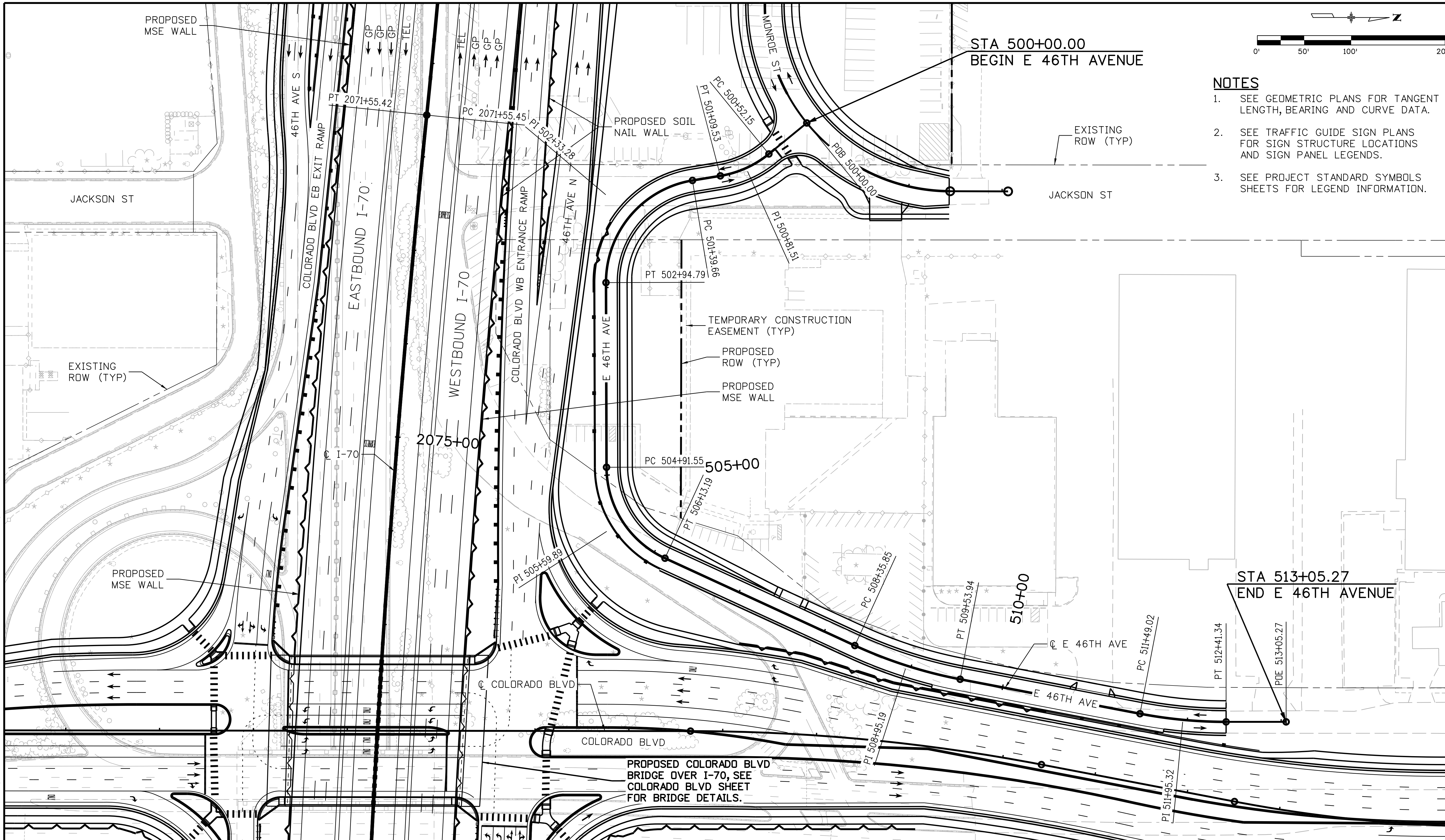
Colorado Department of Transportation
CDOT
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
MONROE STREET
STA 498+26.00 TO STA 516+50.44

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PLAN		Subset Sheets: RPL91 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 129



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

Print Date: 5/19/2017	Sheet Revisions (Date: / Comments / Init.)	Colorado Department of Transportation	PROPOSAL	CENTRAL 70 ROADWAY PLAN E 46TH AVENUE STA 500+00.00 TO STA 513+05.27
File Name: See sheet edge for information		2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:	Project No./Code: FBR 0704-234
Horiz. Scale: As Noted			Revised:	19631
Vert. Scale: As Noted		Region 1	Void:	Designer: / Detailer: / Structure Numbers
Unit Information		KJS		Sheet Subset: ROAD PLAN / Subset Sheets: RPL92 of 142
Unit Leader				Sheet Number 130

Front Range Mobility Group

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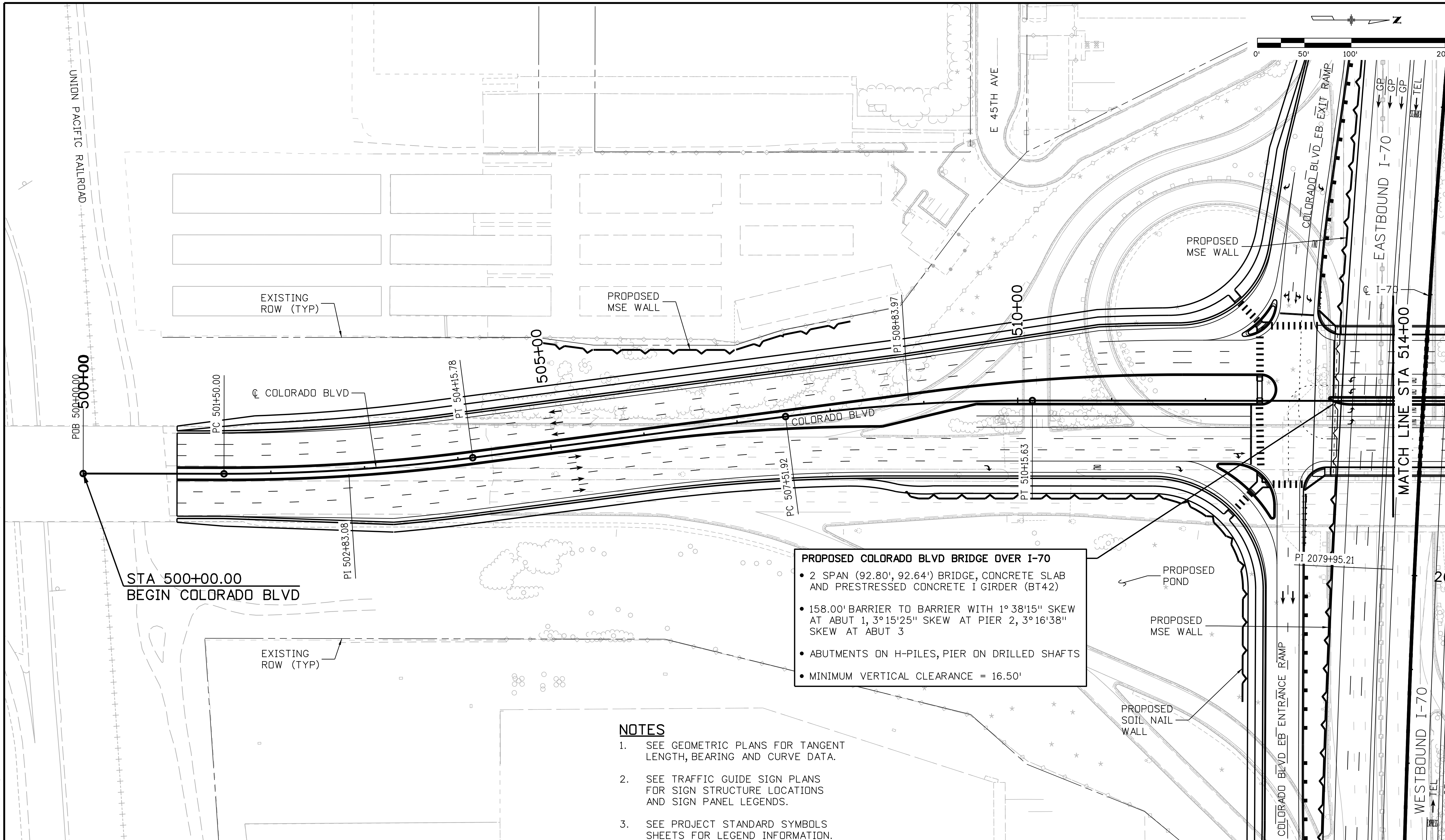

PROPOSED COLORADO BLVD BRIDGE OVER I-70

- 2 SPAN (92.80', 92.64') BRIDGE, CONCRETE SLAB AND PRESTRESSED CONCRETE I GIRDER (BT42)
- 158.00' BARRIER TO BARRIER WITH 1° 38'15" SKEW AT ABUT 1, 3° 15'25" SKEW AT PIER 2, 3° 16'38" SKEW AT ABUT 3
- ABUTMENTS ON H-PILES, PIER ON DRILLED SHAFTS
- MINIMUM VERTICAL CLEARANCE = 16.50'

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

Print Date: 5/24/2017
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
CDOT
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 PLAN
COLORADO BLVD
STA 500+00 TO STA 514+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL93 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 131

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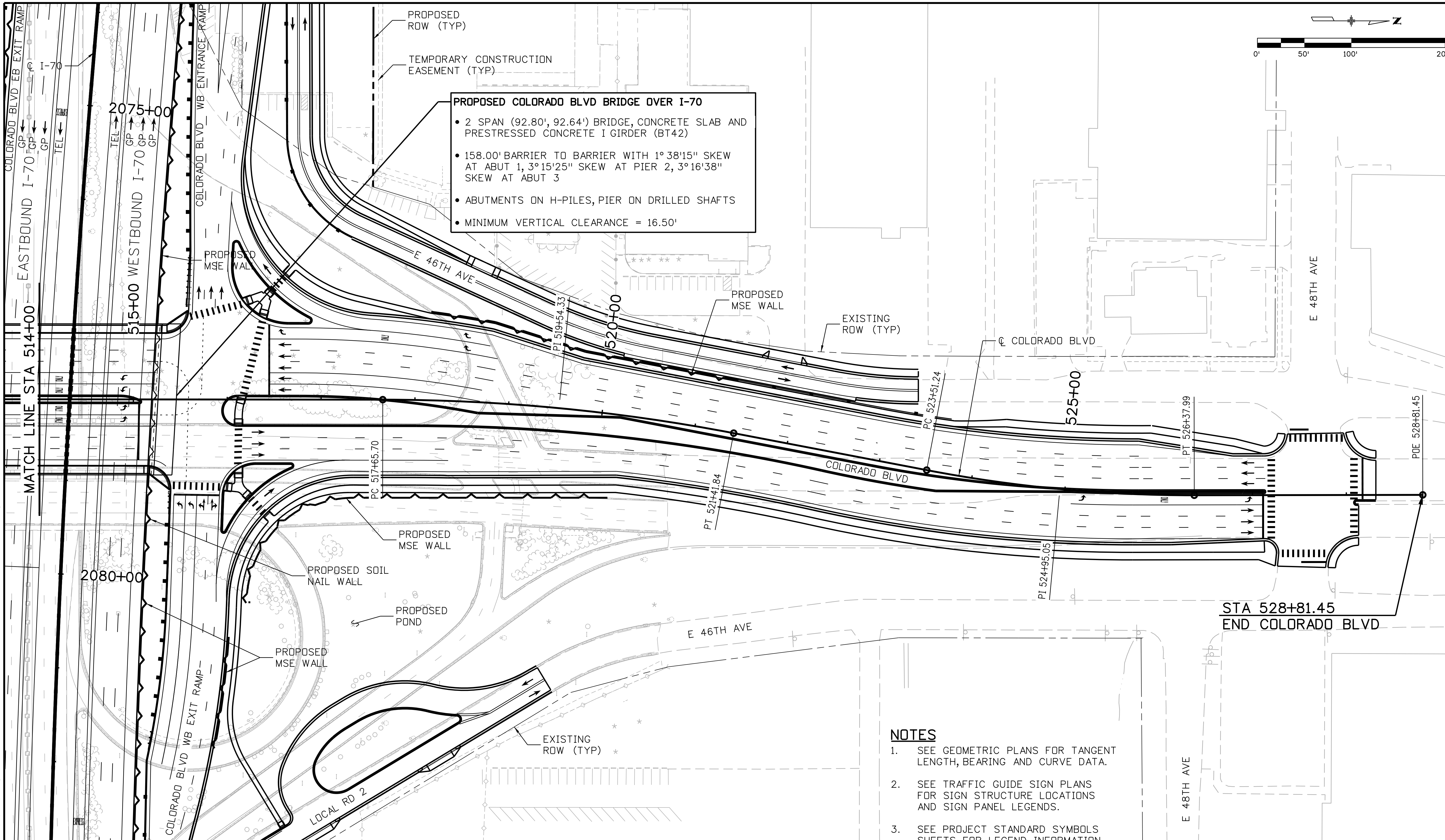

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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Print Date: 5/24/2017	
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.

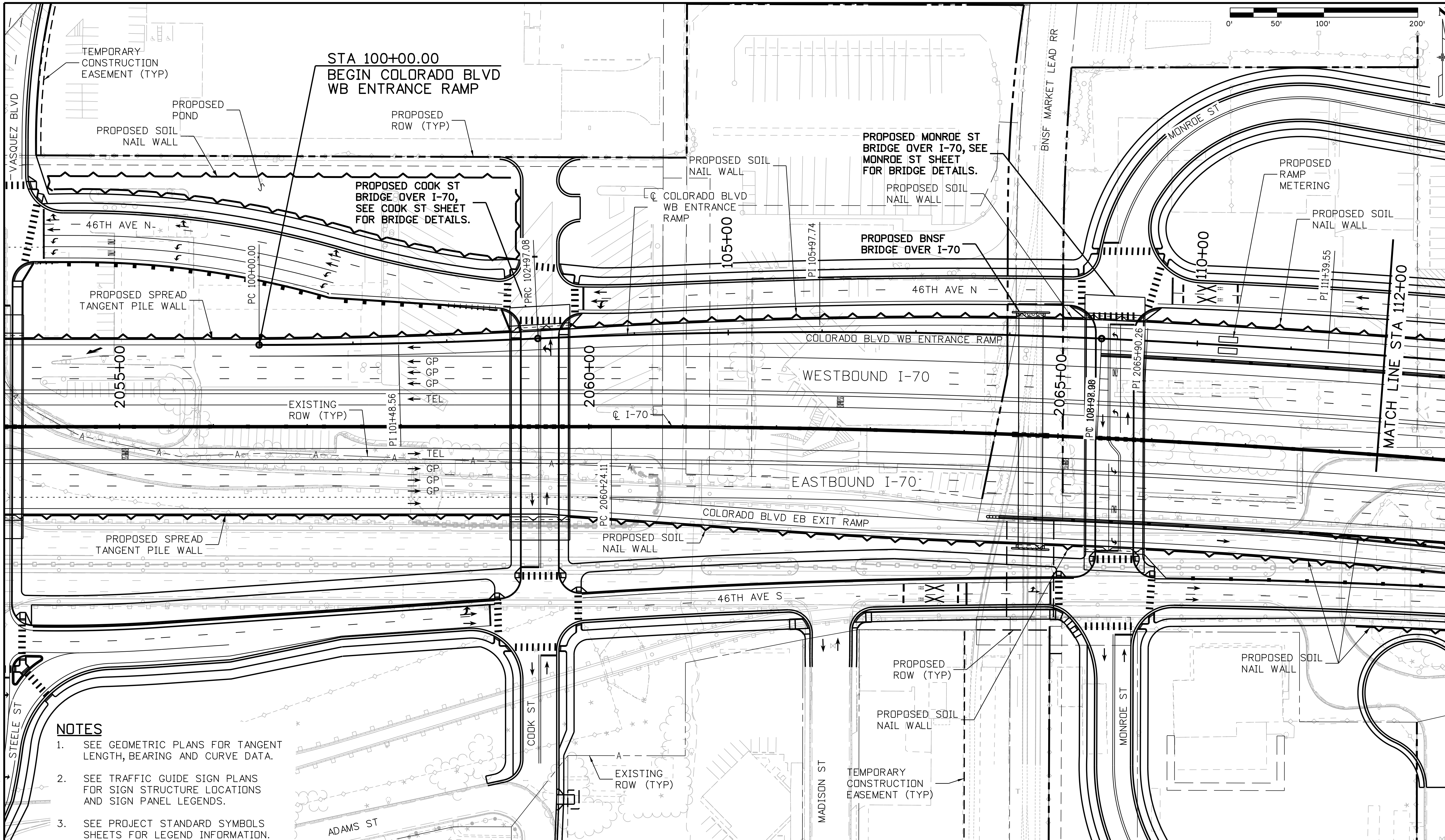
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
COLORADO BLVD
STA 514+00 TO STA 528+81.45

Designer:	Structure Numbers
Detailer:	
Sheet Subset: ROAD PLAN	Subset Sheets: RPL94 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 132



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

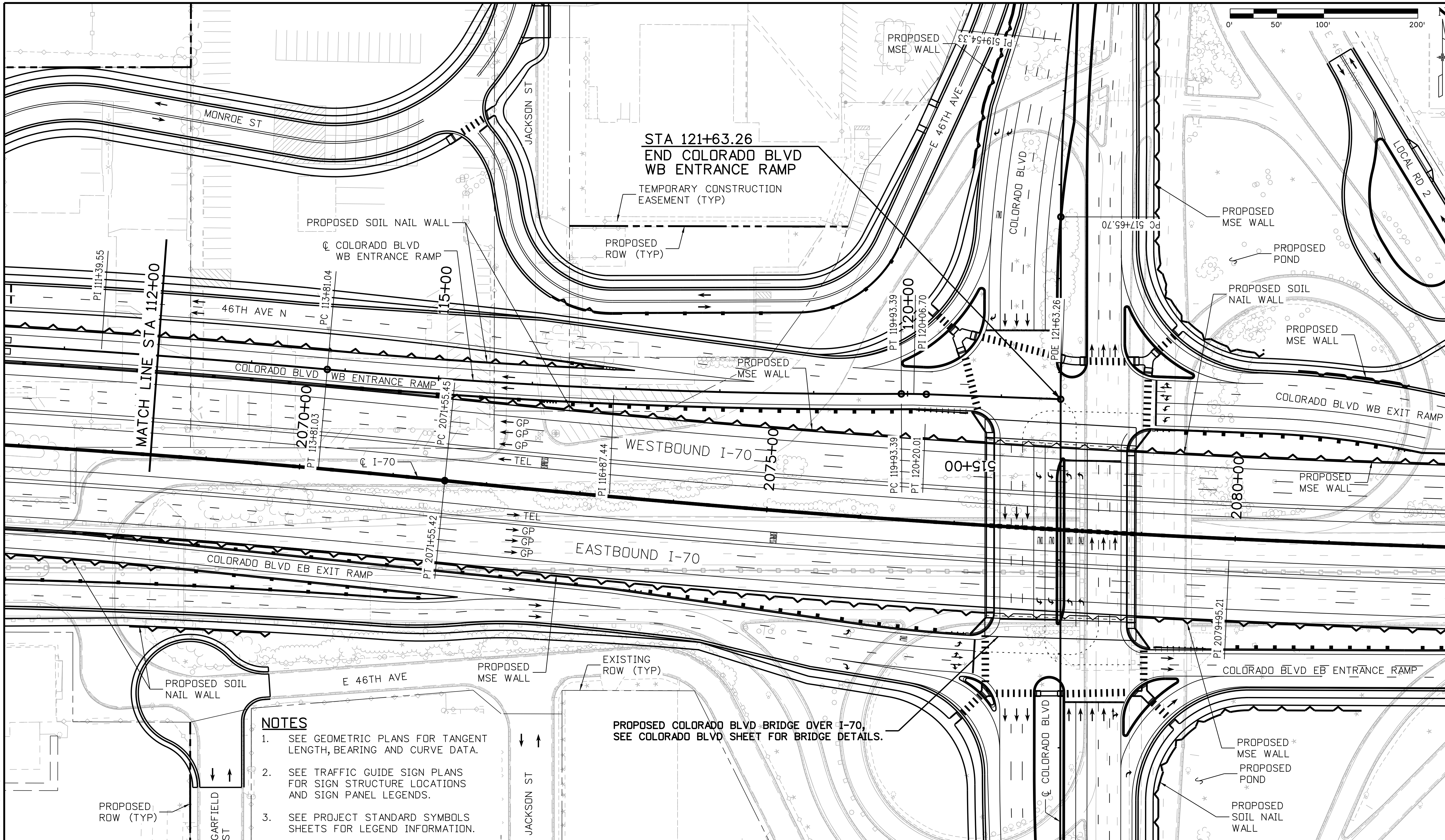
Colorado Department of Transportation
CDOT
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
COLORADO BLVD WB ENTRANCE RAMP
STA 100+00 TO STA 112+00

Designer:	Structure Numbers	
Detailer:		
Sheet Subset: ROAD PLAN	Subset Sheets: RPL95 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 133



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

Print Date: 5/24/2017		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
ROADWAY PLAN
COLORADO BLVD WB ENTRANCE RAMP
STA 112+00 TO STA 121+63.26

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PLAN		Subset Sheets: RPL96 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 134

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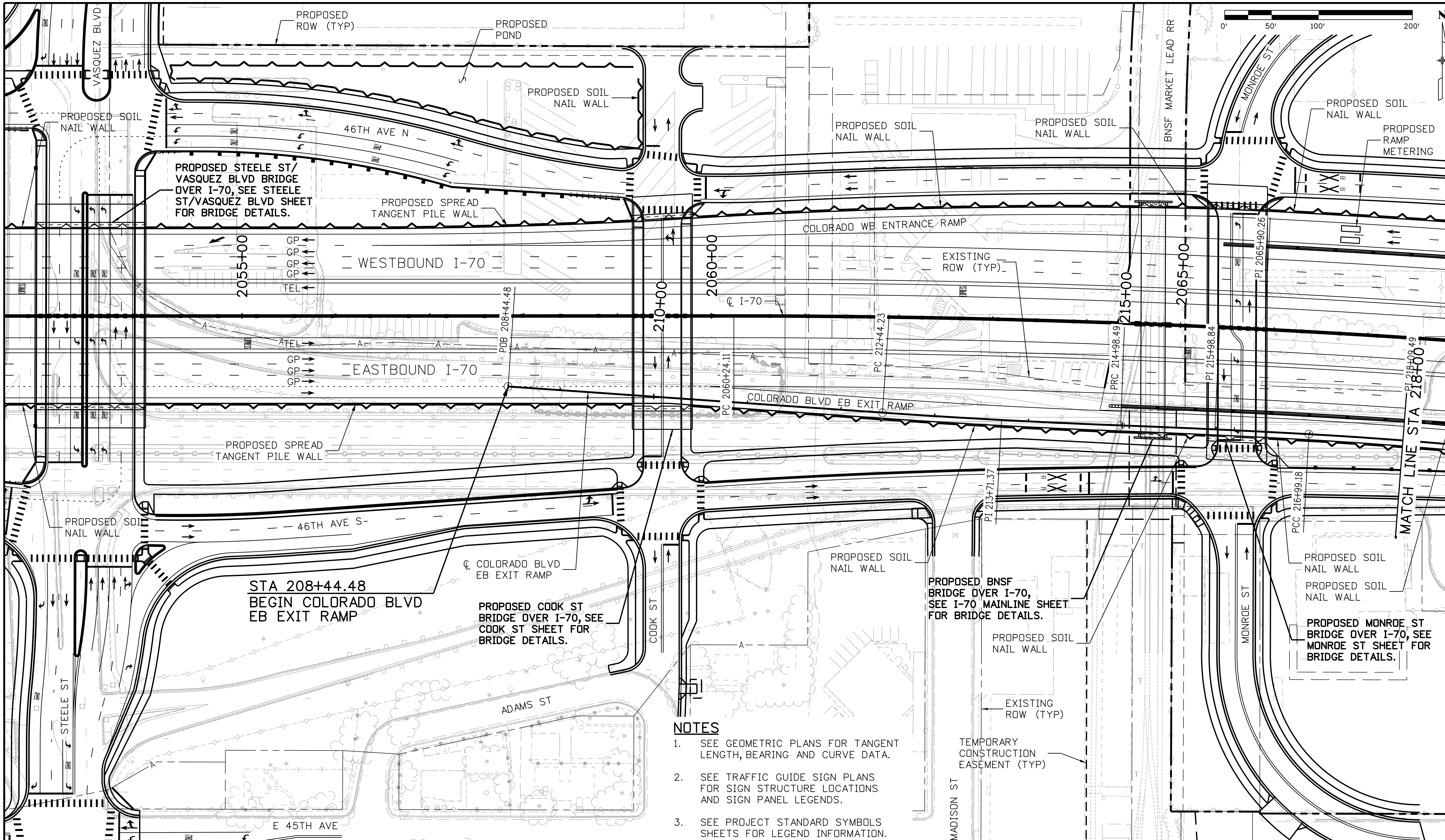

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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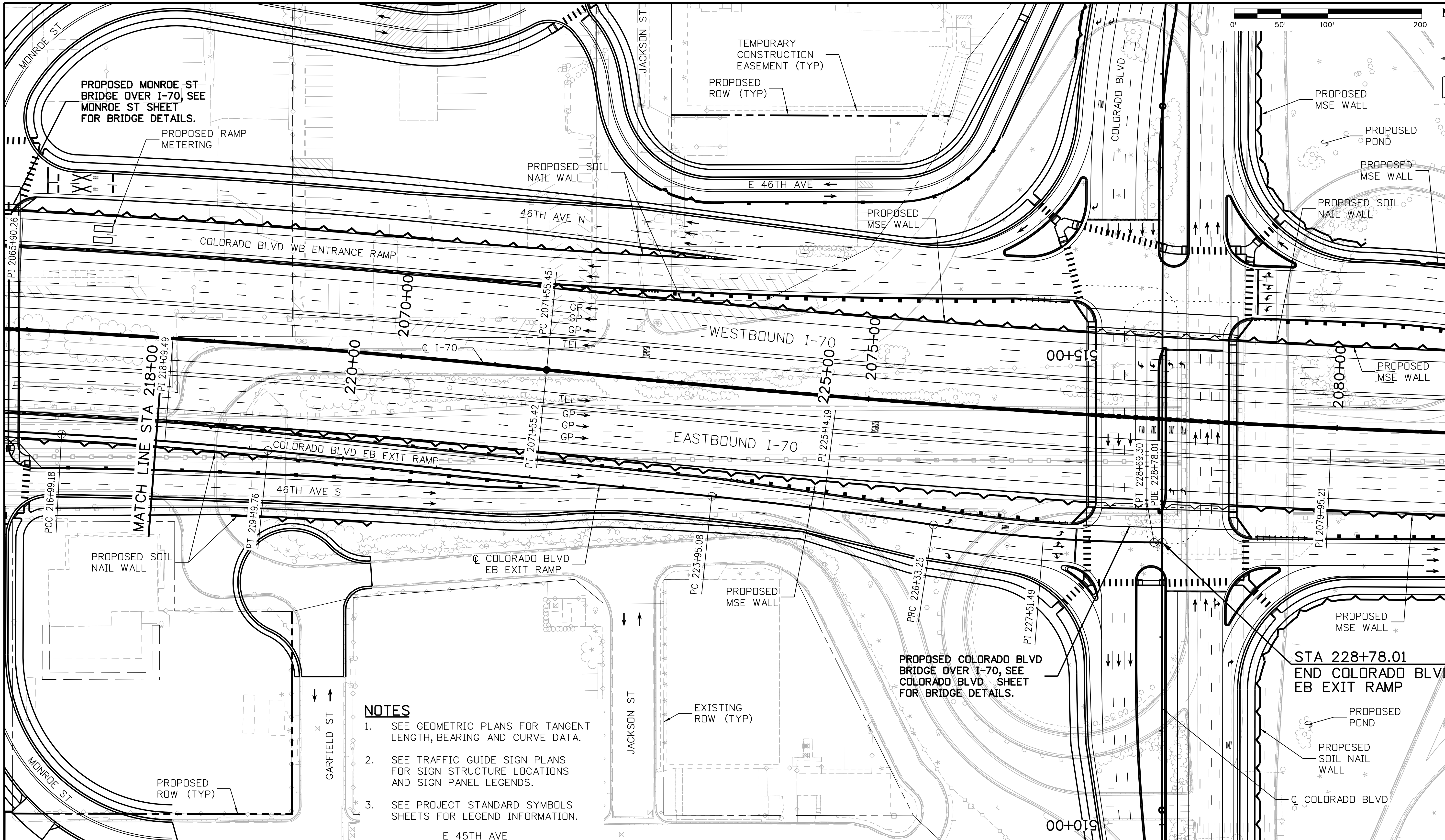
Print Date: 5/19/2017		Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 ROADWAY PLAN COLORADO BLVD EB EXIT RAMP STA 208+44.48 TO STA 218+00	Project No./Code
File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:	Designer:	FBR 0704-234
Front Range Mobility Group	Horiz. Scale: As Noted					Revised:	Detailer:	19631
	Vert. Scale: As Noted				Region 1	Void:	Structure Numbers	Sheet Number 135
	Unit Information				KJS		Sheet Subset: ROAD PLAN	Subset Sheets: RPL97 of 142
	Unit Leader							



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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Print Date: 5/24/2017		
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.

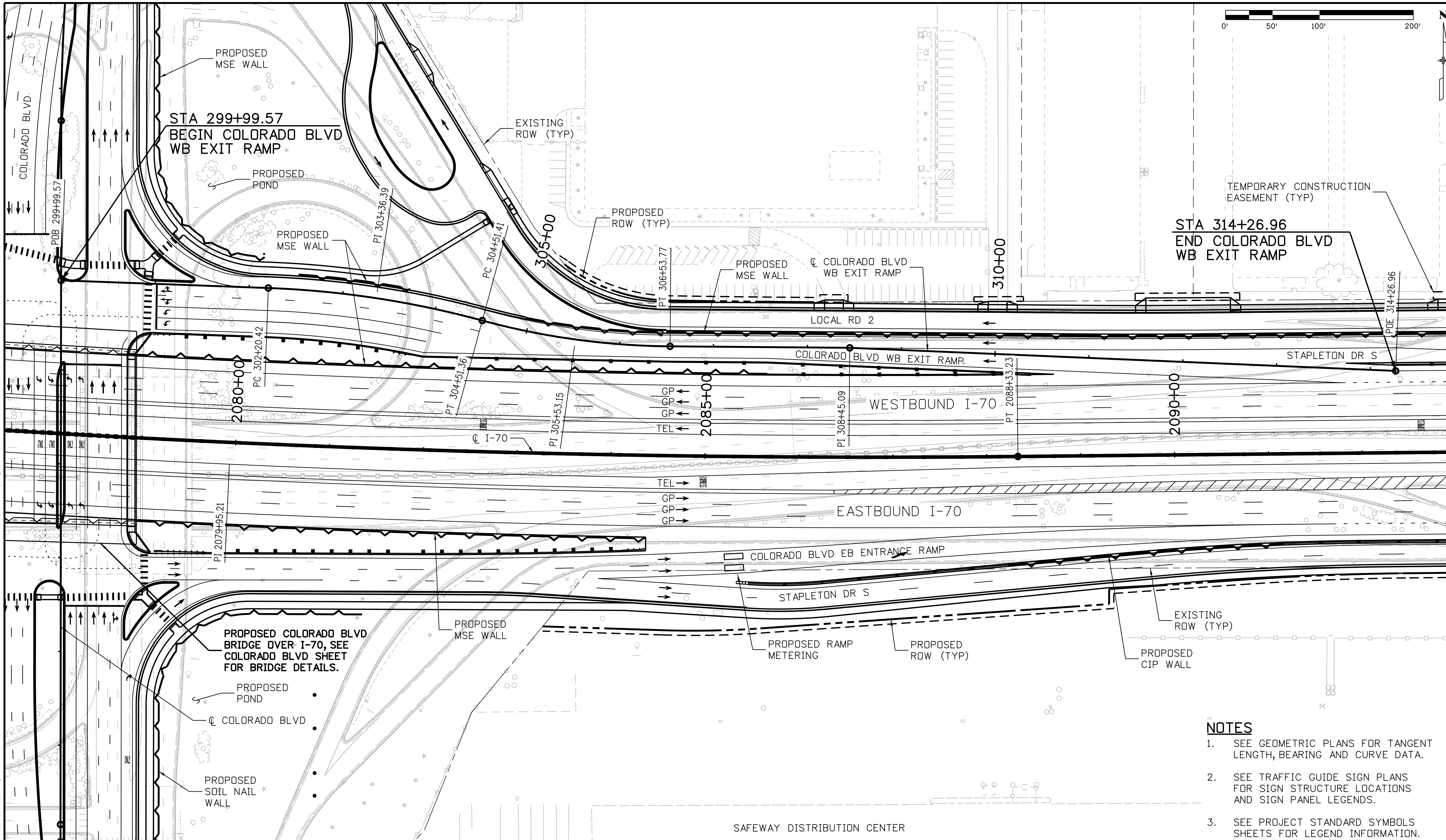
Colorado Department of Transportation
CDOT
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
COLORADO BLVD EB EXIT RAMP
STA 218+00 TO STA 228+78.01

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PLAN	Subset Sheets: RPL98 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 136



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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Print Date: 5/24/2017	
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.

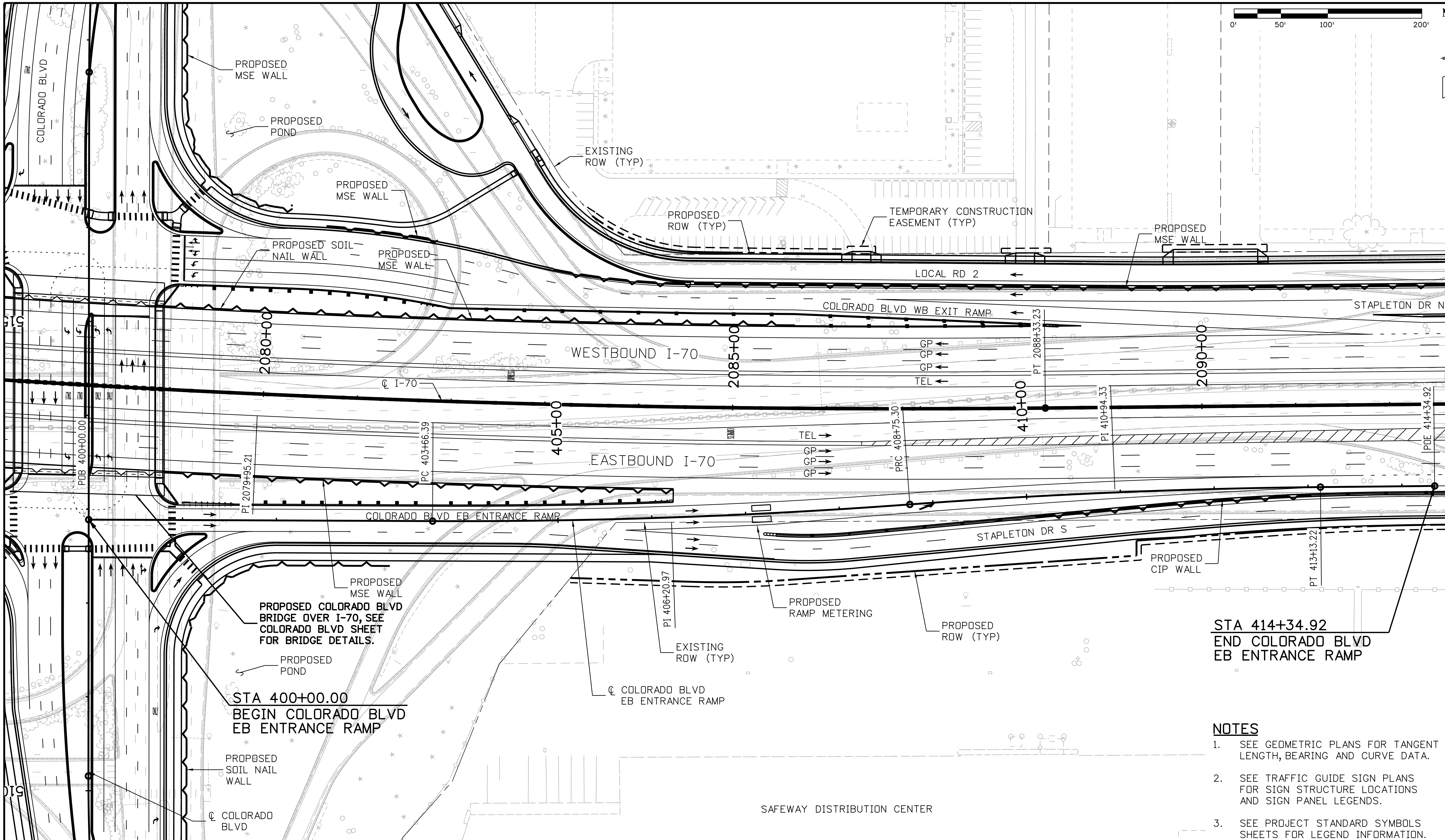
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
COLORADO BLVD WB EXIT RAMP
STA 299+99.57 TO STA 314+26.96

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL99 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 137



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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Print Date: 5/24/2017		
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.

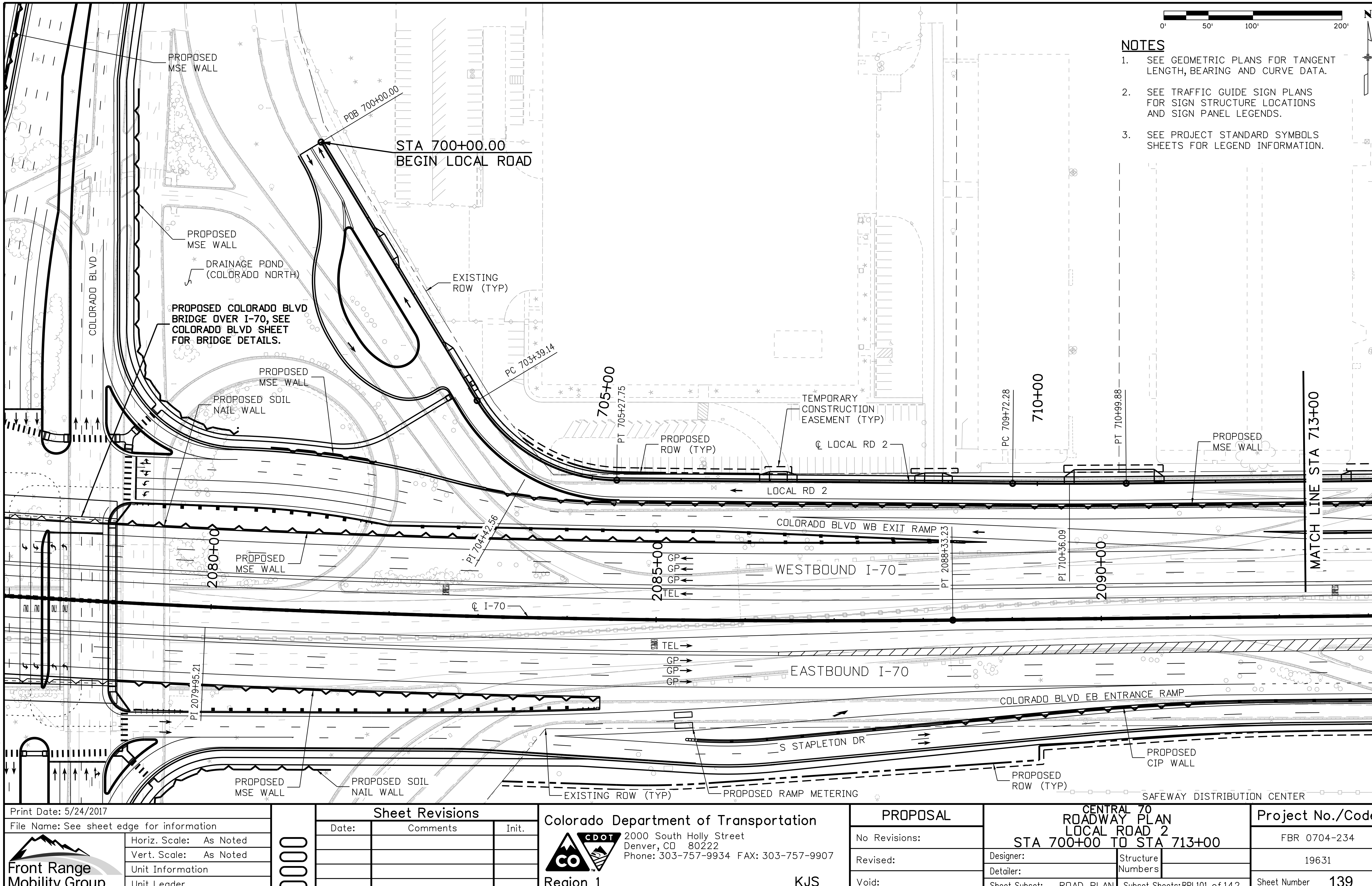
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

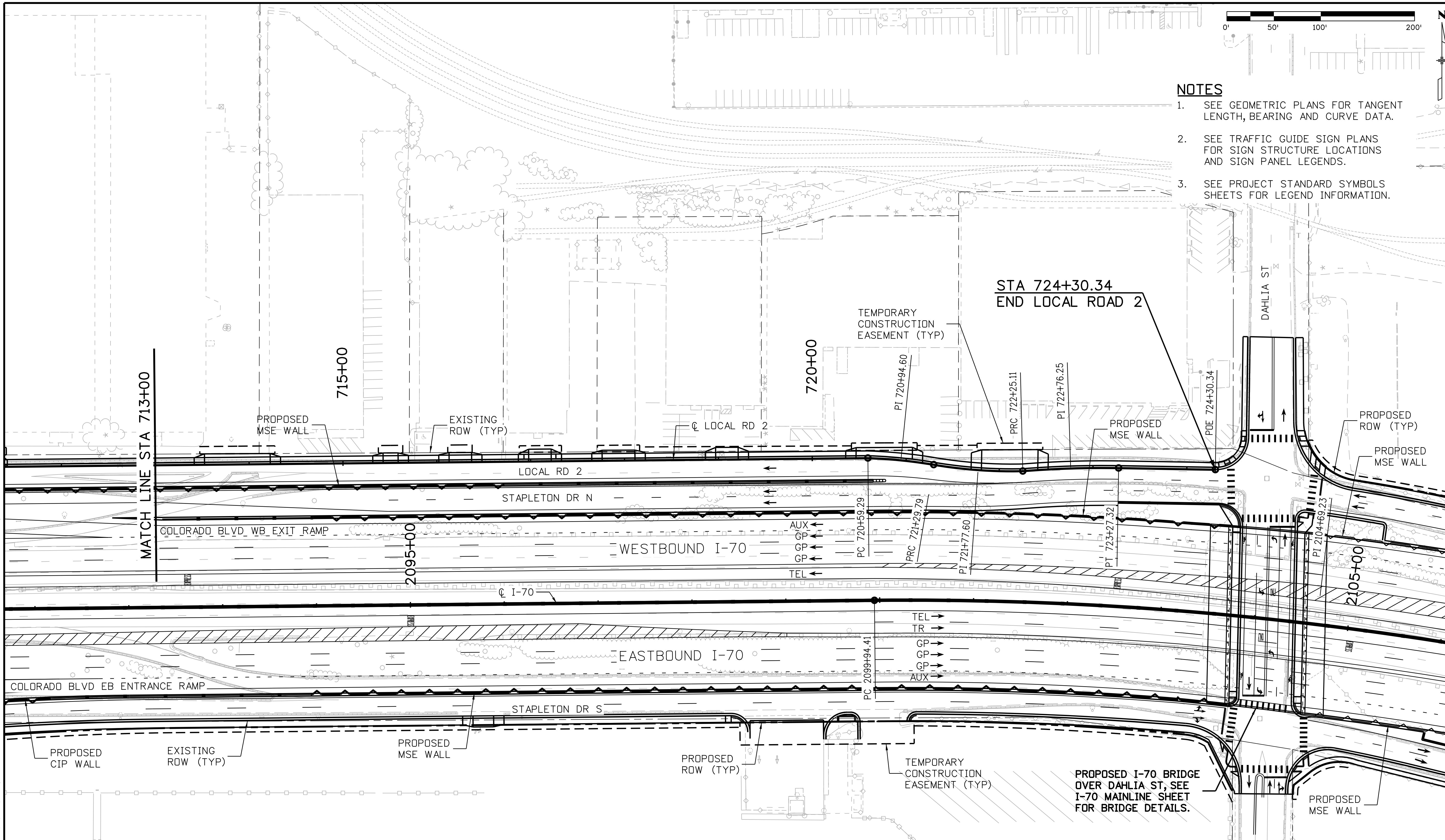
CENTRAL 70
ROADWAY PLAN
COLORADO BLVD EB ENTRANCE RAMP
STA 400+00 TO STA 414+34.92

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PLAN		Subset Sheets: RPL100 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 138



0' 50' 100' 200'
N
NOTES
1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.
PROPOSED MSE WALL
POB 700+00.00
STA 700+00.00
BEGIN LOCAL ROAD
PROPOSED MSE WALL
DRAINAGE POND (COLORADO NORTH)
EXISTING ROW (TYP)
COLORADO BLVD
PROPOSED COLORADO BLVD BRIDGE OVER I-70, SEE COLORADO BLVD SHEET FOR BRIDGE DETAILS.
PC 703+39.14
PROPOSED MSE WALL
PROPOSED SOIL NAIL WALL
705+00
PT 705+27.75
PROPOSED ROW (TYP)
TEMPORARY CONSTRUCTION EASEMENT (TYP)
℄ LOCAL RD 2
PC 709+72.28
710+00
PT 710+99.88
PROPOSED MSE WALL
MATCH LINE STA 713+00
LOCAL RD 2
COLORADO BLVD WB EXIT RAMP
PI 704+42.56
2080+00
PROPOSED MSE WALL
2085+00
GP
GP
GP
TEL
WESTBOUND I-70
PT 2088+33.23
PI 710+36.09
2090+00
℄ I-70
TEL
GP
GP
GP
EASTBOUND I-70
PI 2079+95.21
COLORADO BLVD EB ENTRANCE RAMP
S STAPLETON DR
PROPOSED CIP WALL
PROPOSED MSE WALL
PROPOSED SOIL NAIL WALL
EXISTING ROW (TYP)
PROPOSED RAMP METERING
PROPOSED ROW (TYP)
SAFEWAY DISTRIBUTION CENTER
DENPWP01$ 2:27:19 PM \\denpwp01\pwicsjobs596\292432\515021.116\RDPL101-13599-RDPL_100_Access Rd 2.dgn
Print Date: 5/24/2017
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
CDOT CO
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 PLAN
LOCAL ROAD 2
STA 700+00 TO STA 713+00
Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL101 of 142
Project No./Code
FBR 0704-234
19631
Sheet Number 139



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

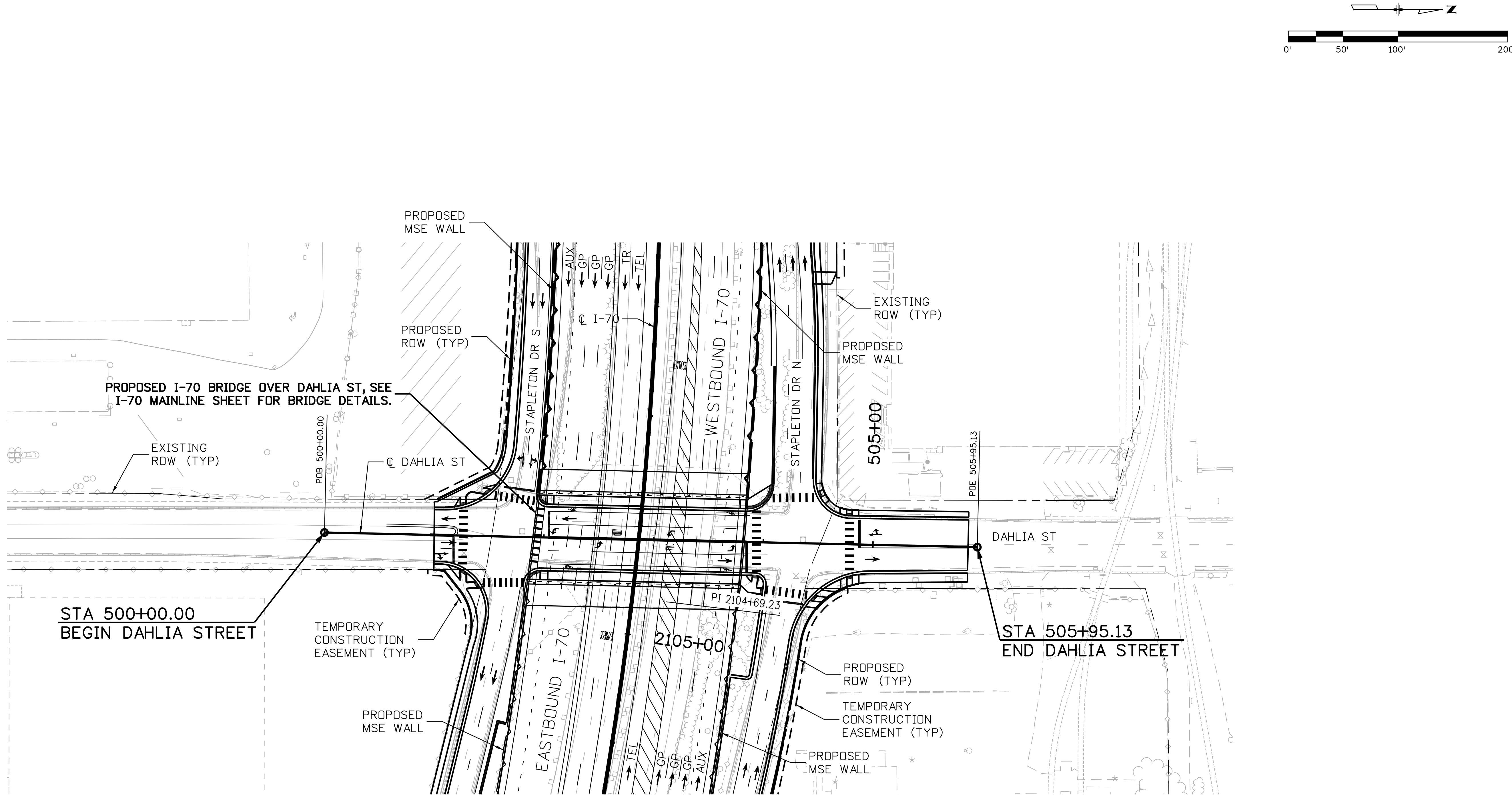
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
LOCAL ROAD 2
STA 713+00 TO STA 724+30.34

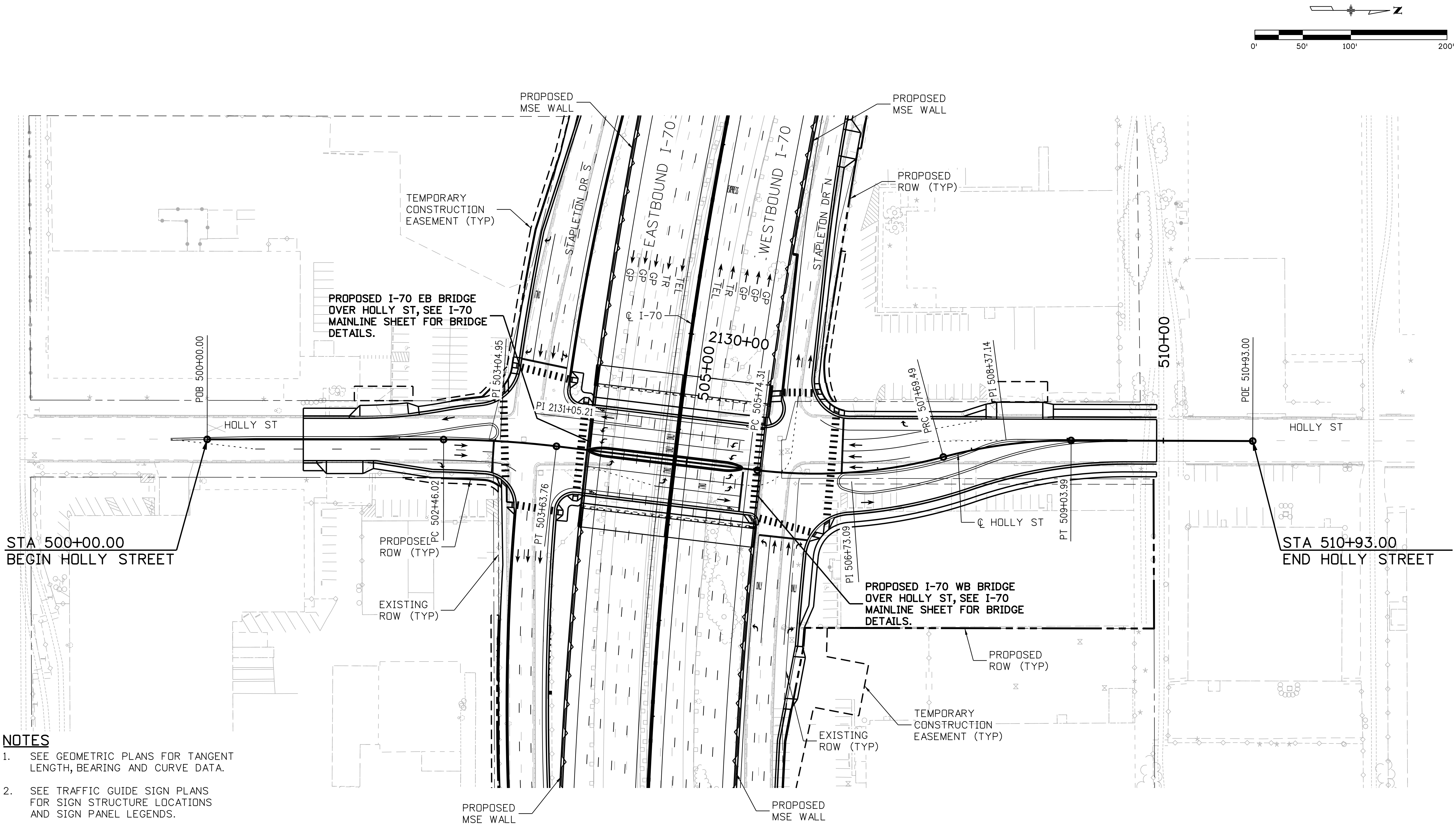
Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL102 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 140



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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Print Date: 5/19/2017		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
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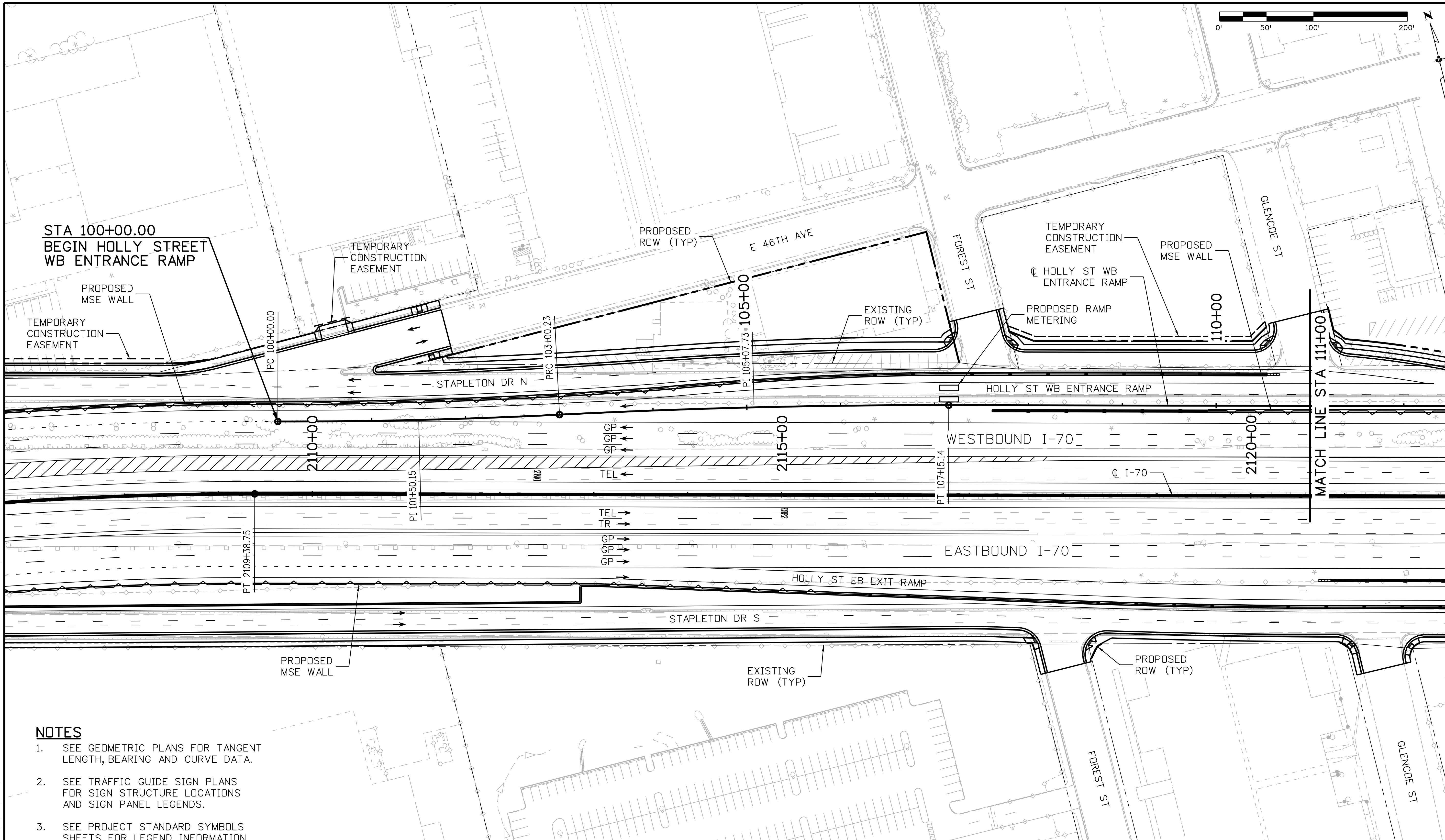
Region 1
KJS

PROPOSAL	CENTRAL 70 ROADWAY PLAN HOLLY STREET STA 500+00 TO STA 510+93.00		Project No./Code
No Revisions:			FBR 0704-234
Revised:	Designer:	Structure Numbers	19631
	Detailer:		
Void:	Sheet Subset: ROAD PLAN	Subset Sheets: RPL104 of 142	Sheet Number 142



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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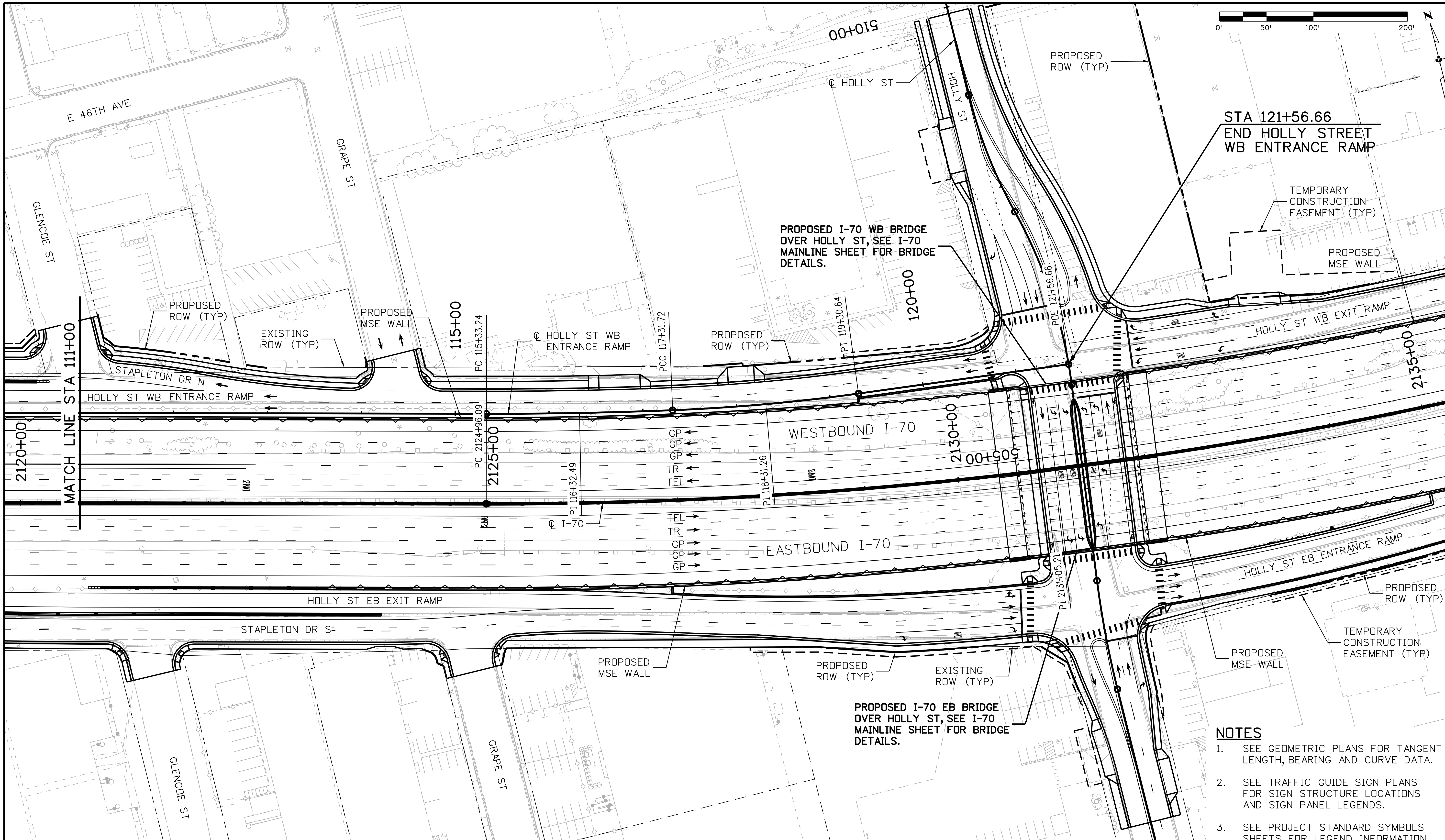
Print Date: 5/19/2017		Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 ROADWAY PLAN	Project No./Code
File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street, Denver, CO 80222, Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:	HOLLY STREET WB ENTRANCE RAMP STA 100+00 TO STA 111+00	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	Void:	Sheet Subset: ROAD PLAN	Sheet Number 143
	Unit Leader				KJS		Subset Sheets: RPL105 of 142	



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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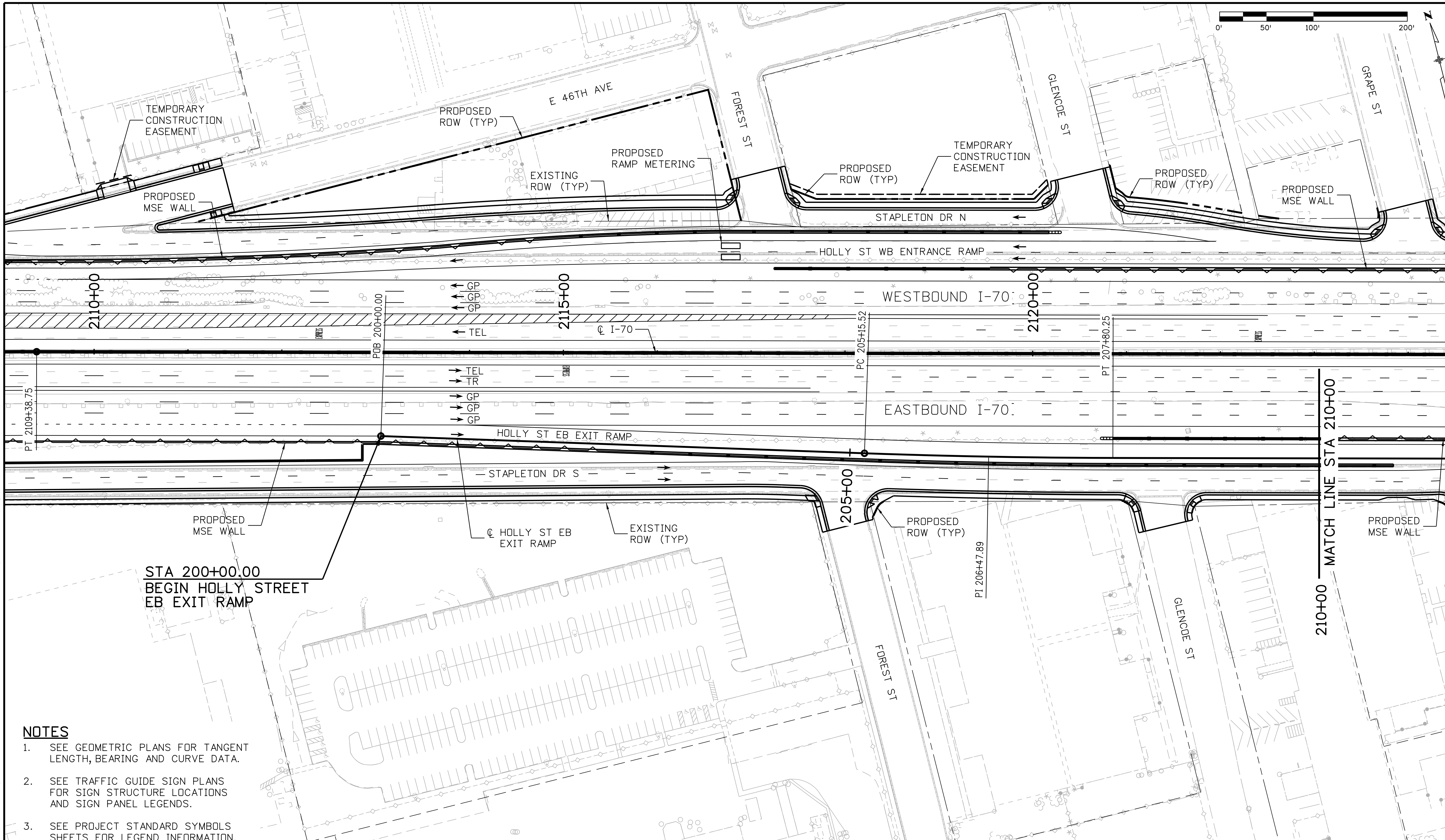
Print Date: 5/19/2017		Sheet Revisions		
File Name: See sheet edge for information		Date:	Comments	Init.
Front Range Mobility Group	Horiz. Scale: As Noted			
	Vert. Scale: As Noted			
	Unit Information			
	Unit Leader			

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

PROPOSAL	CENTRAL 70 ROADWAY PLAN HOLLY STREET WB ENTRANCE RAMP STA 111+00 TO STA 121+56.66		Project No./Code
No Revisions:			FBR 0704-234
Revised:	Designer:	Structure Numbers	19631
	Detailer:		
Void:	Sheet Subset: ROAD PLAN	Subset Sheets: RPL106 of 142	Sheet Number 144



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

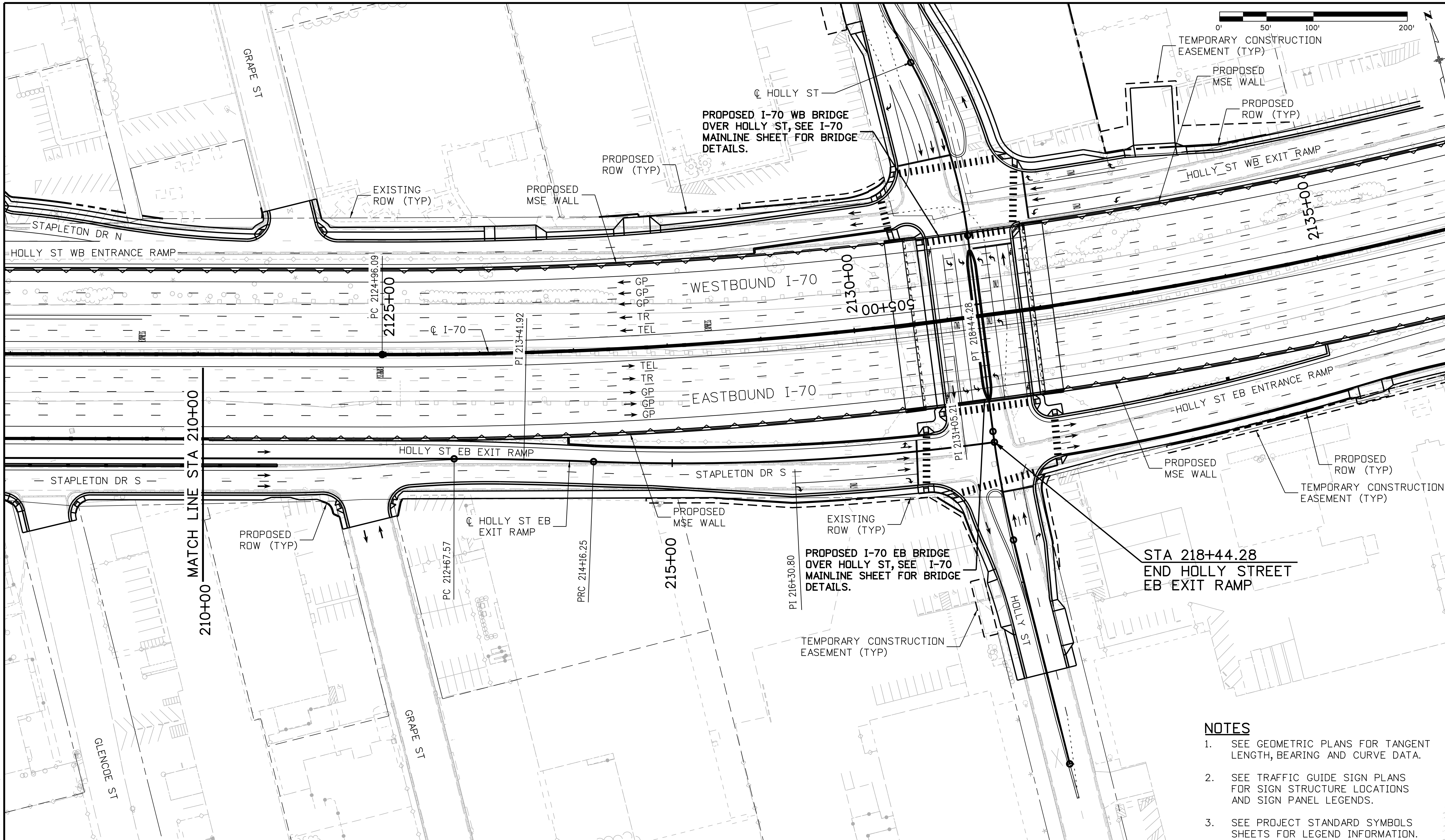
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
HOLLY STREET EB EXIT RAMP
STA 200+00 TO STA 210+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL107 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 145



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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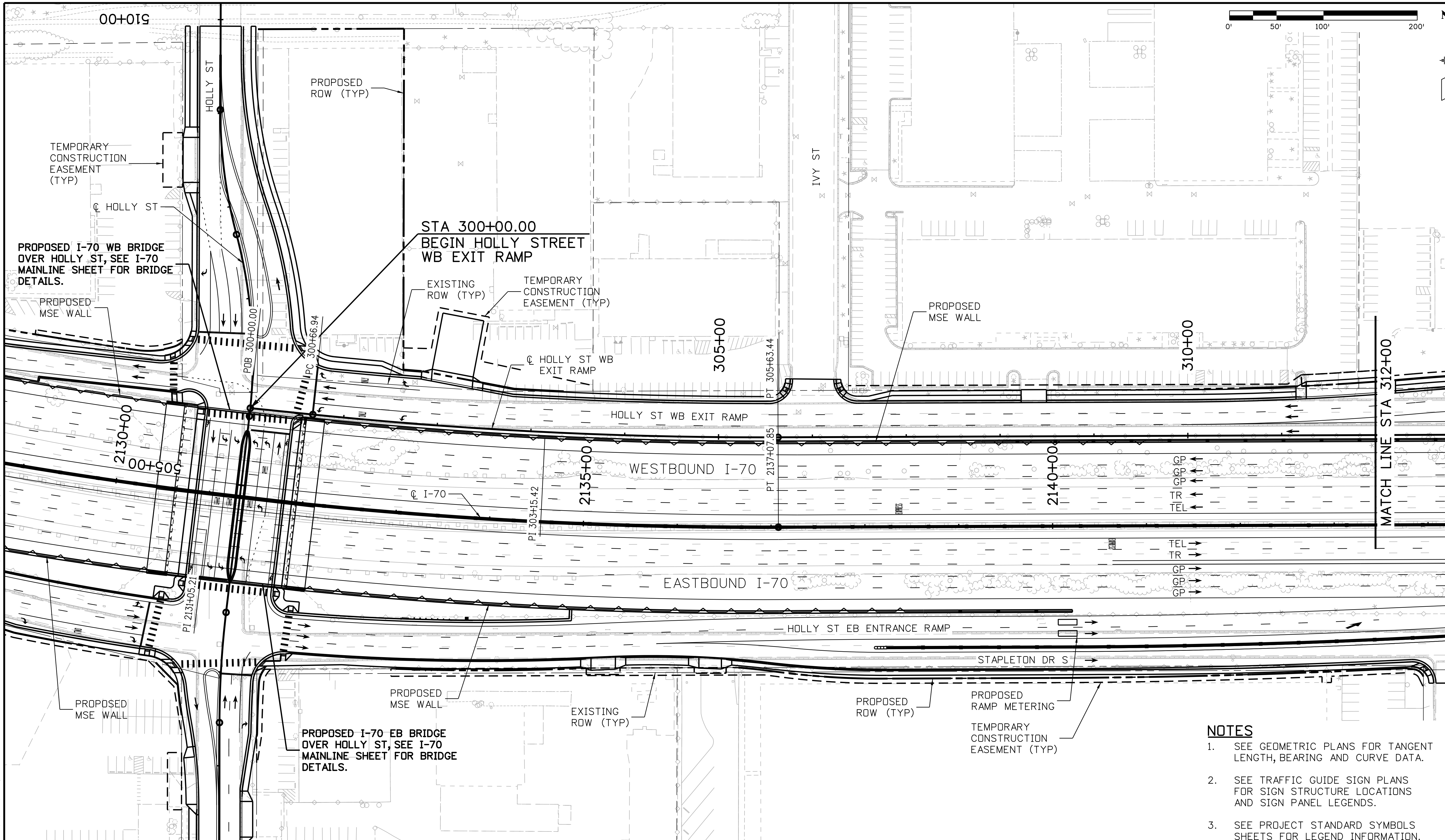
Print Date: 5/22/2017		Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 ROADWAY PLAN HOLLY STREET EB EXIT RAMP STA 210+00 TO STA 218+44.28	Project No./Code
File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 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: ROAD PLAN / Subset Sheets: RPL108 of 142	Sheet Number 146
	Unit Leader							



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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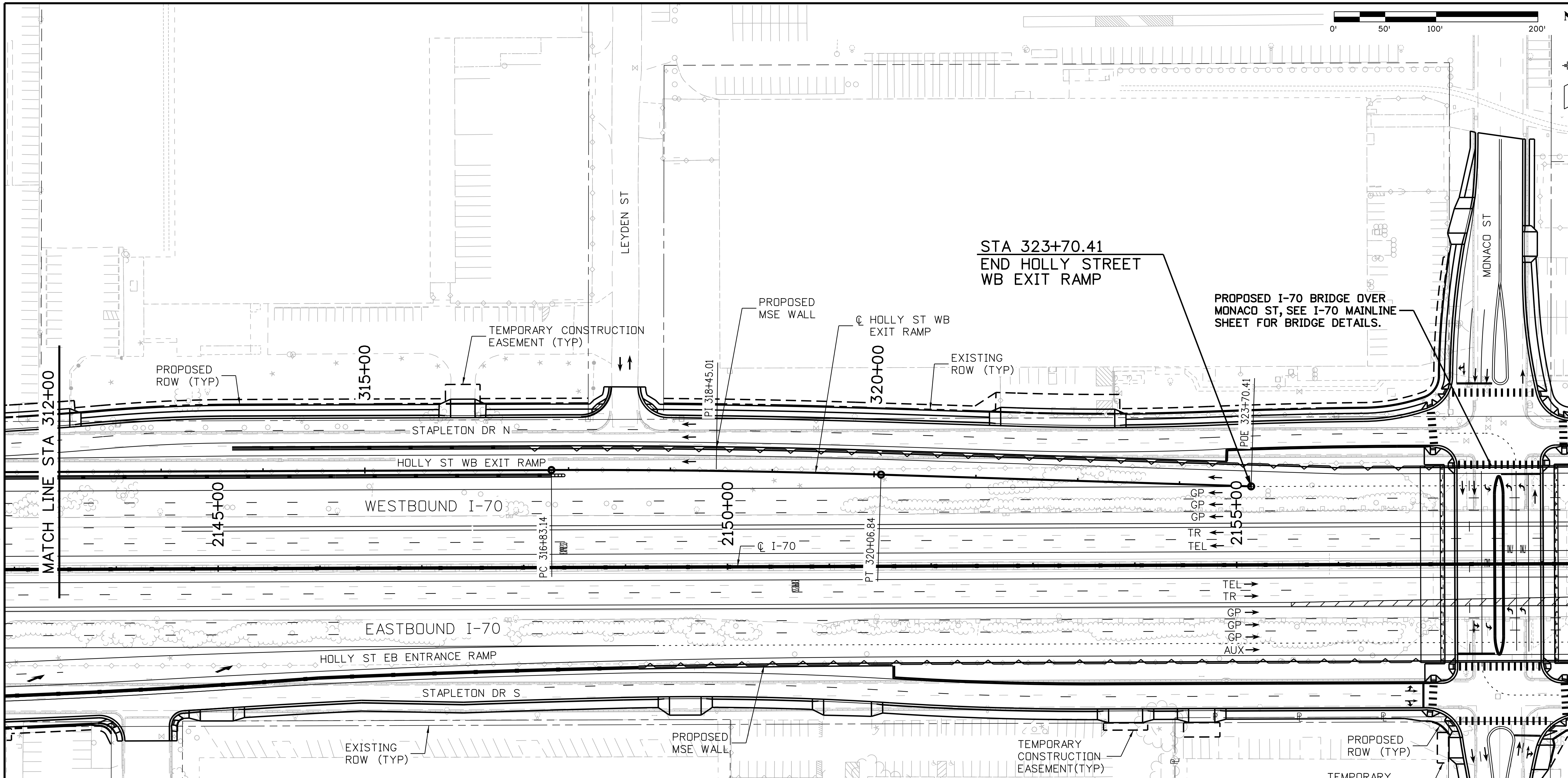
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
HOLLY STREET WB EXIT RAMP
STA 300+00 TO STA 312+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL109 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 147



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

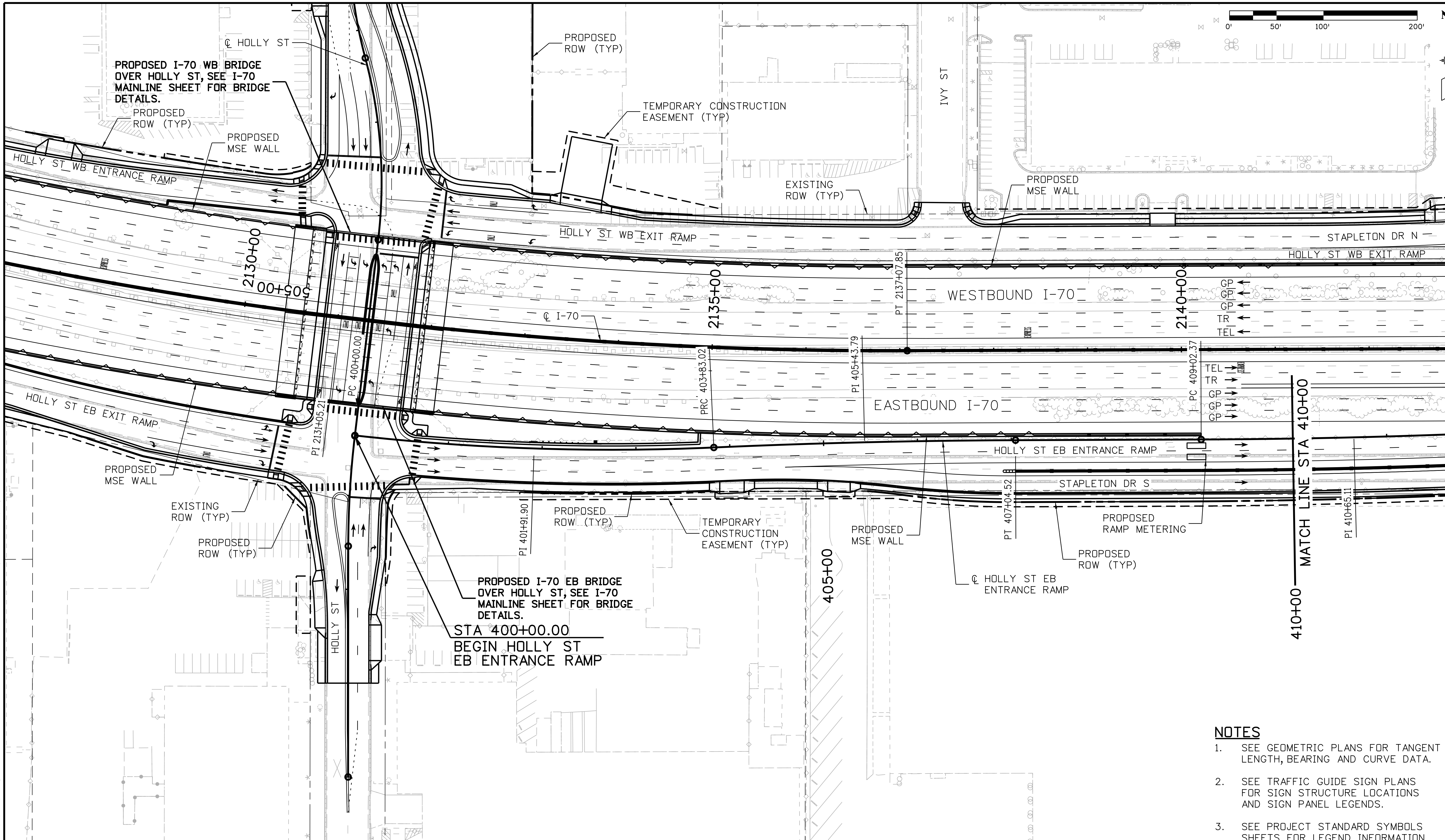
Colorado Department of Transportation
CDOT
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
HOLLY STREET WB EXIT RAMP
STA 312+00 TO STA 323+70.41

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PLAN	Subset Sheets: RPL110 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 148



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

Print Date: 5/22/2017		Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 ROADWAY PLAN HOLLY ST EB ENTRANCE RAMP STA 400+00 TO STA 410+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: ROAD PLAN / Subset Sheets: RPL111 of 142	Sheet Number 149
	Unit Leader							

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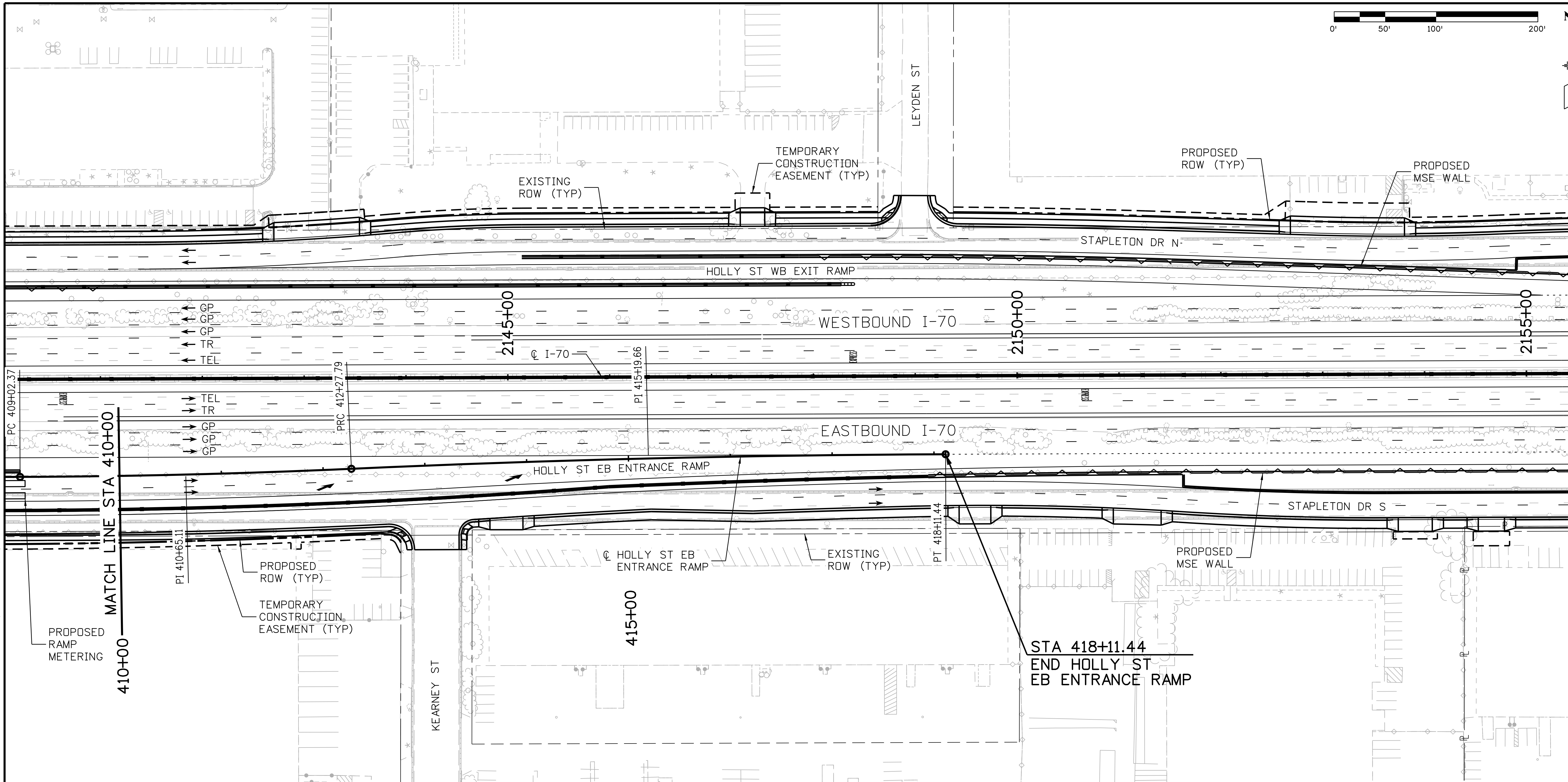

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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

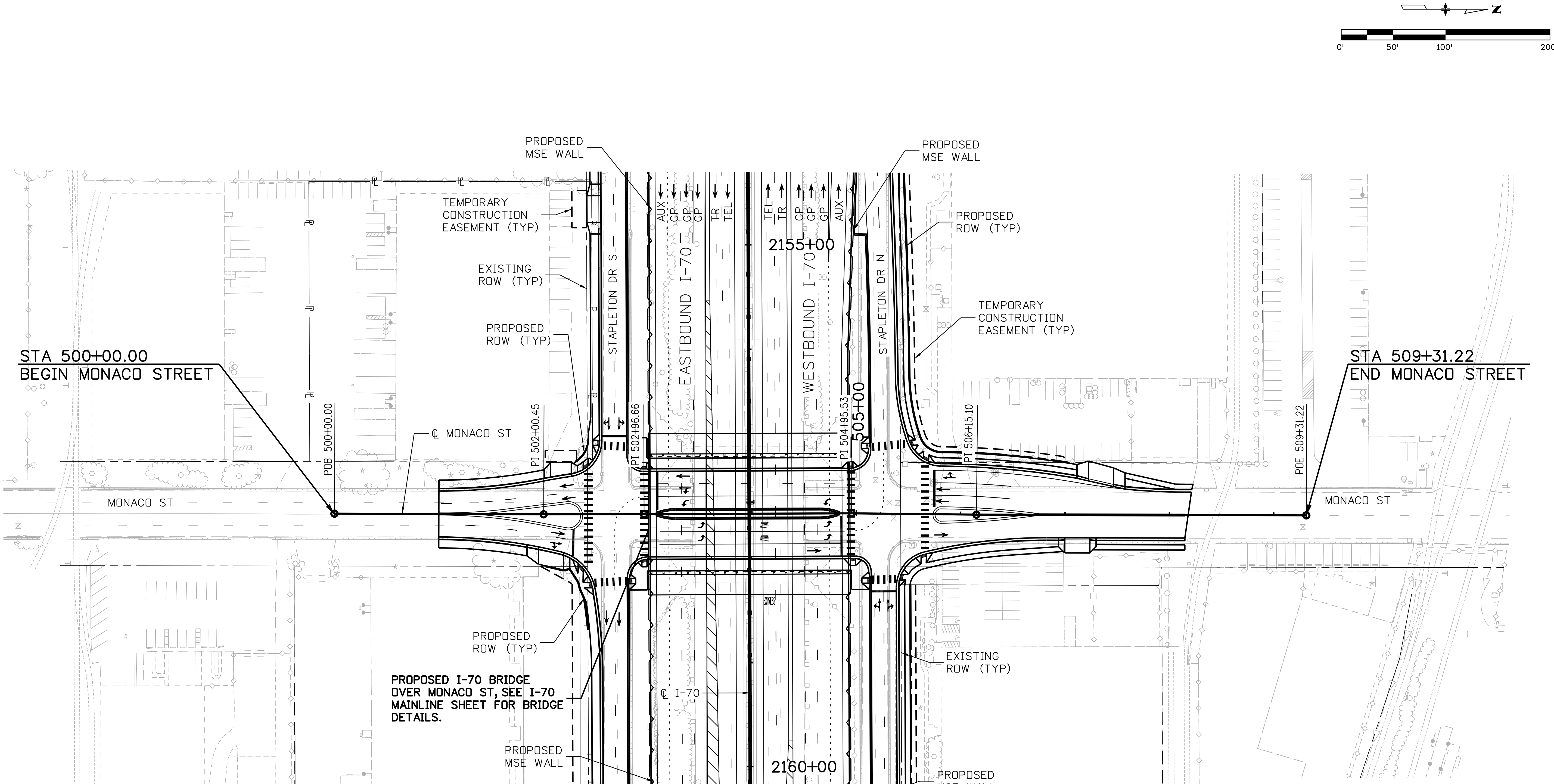
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
HOLLY ST EB ENTRANCE RAMP
STA 410+00 TO STA 418+11.44

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL112 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 150



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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
CDOT
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 PLAN
MONACO STREET
STA 500+00 TO STA 509+31.22

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL113 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 151

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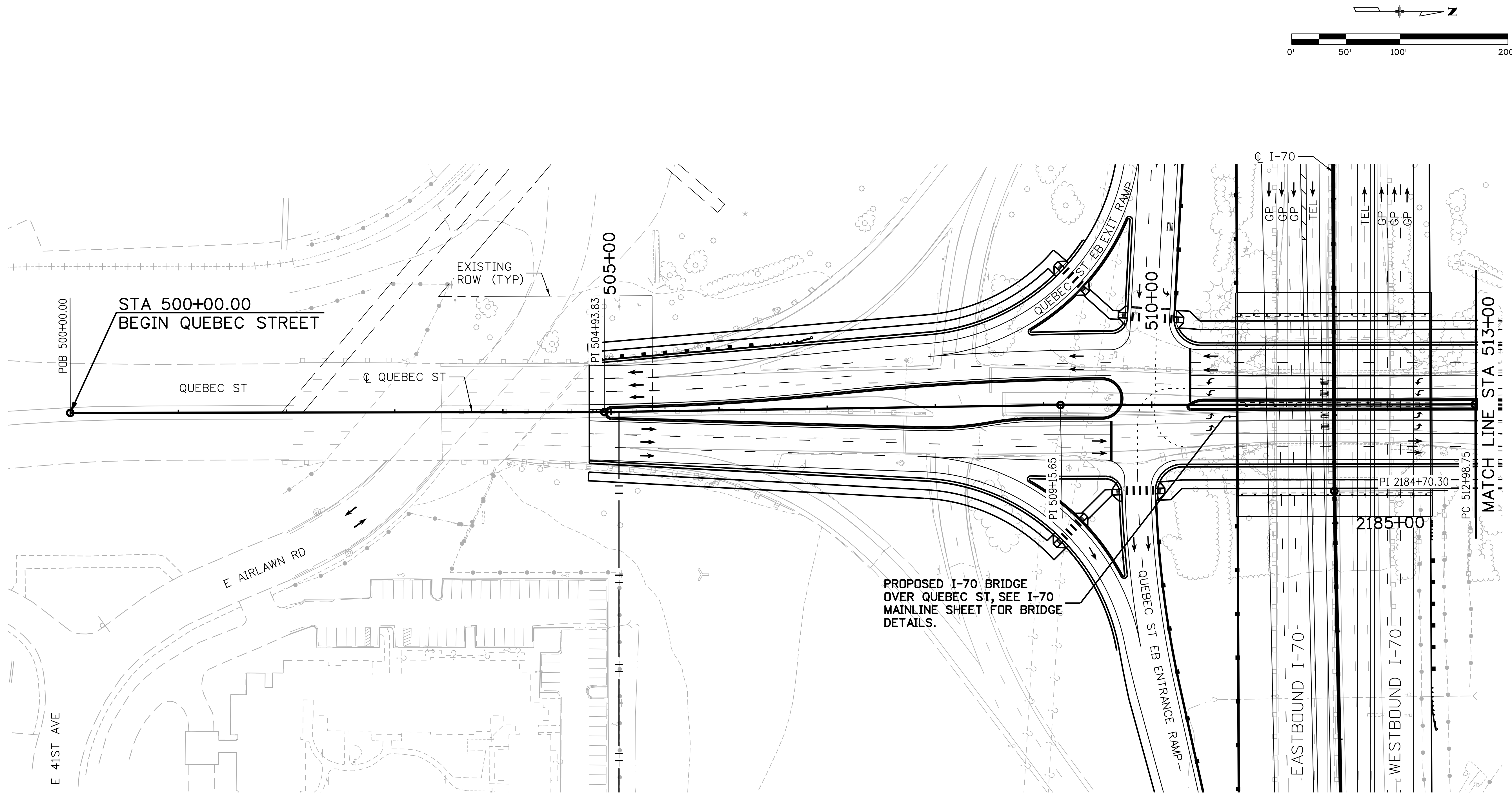


NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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

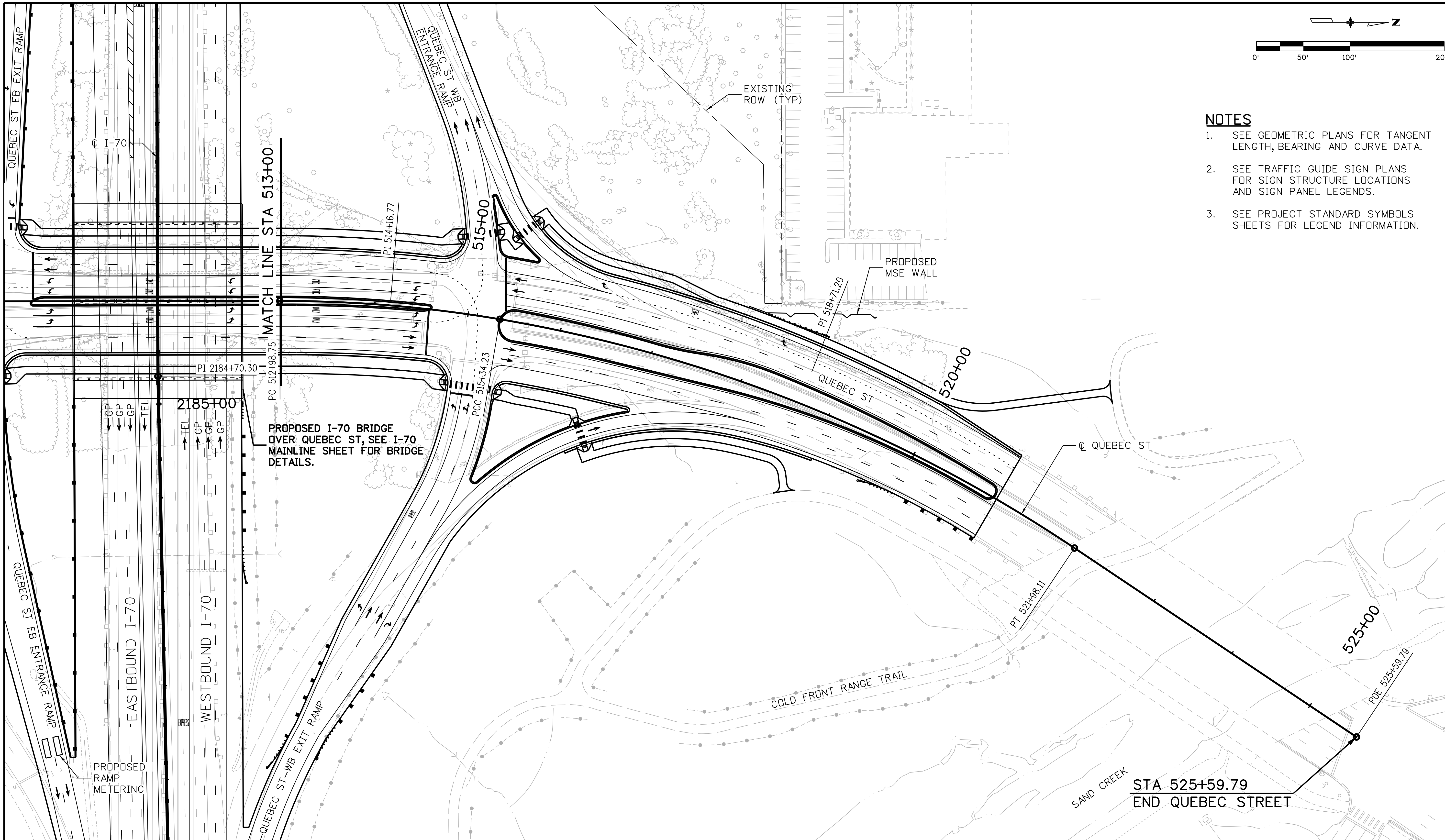
Date:	Comments	Init.

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 PLAN
QUEBEC STREET
STA 500+00 TO STA 513+00
Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL114 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 152



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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 PLAN
QUEBEC STREET
STA 513+00 TO STA 525+59.79
Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL115 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 153

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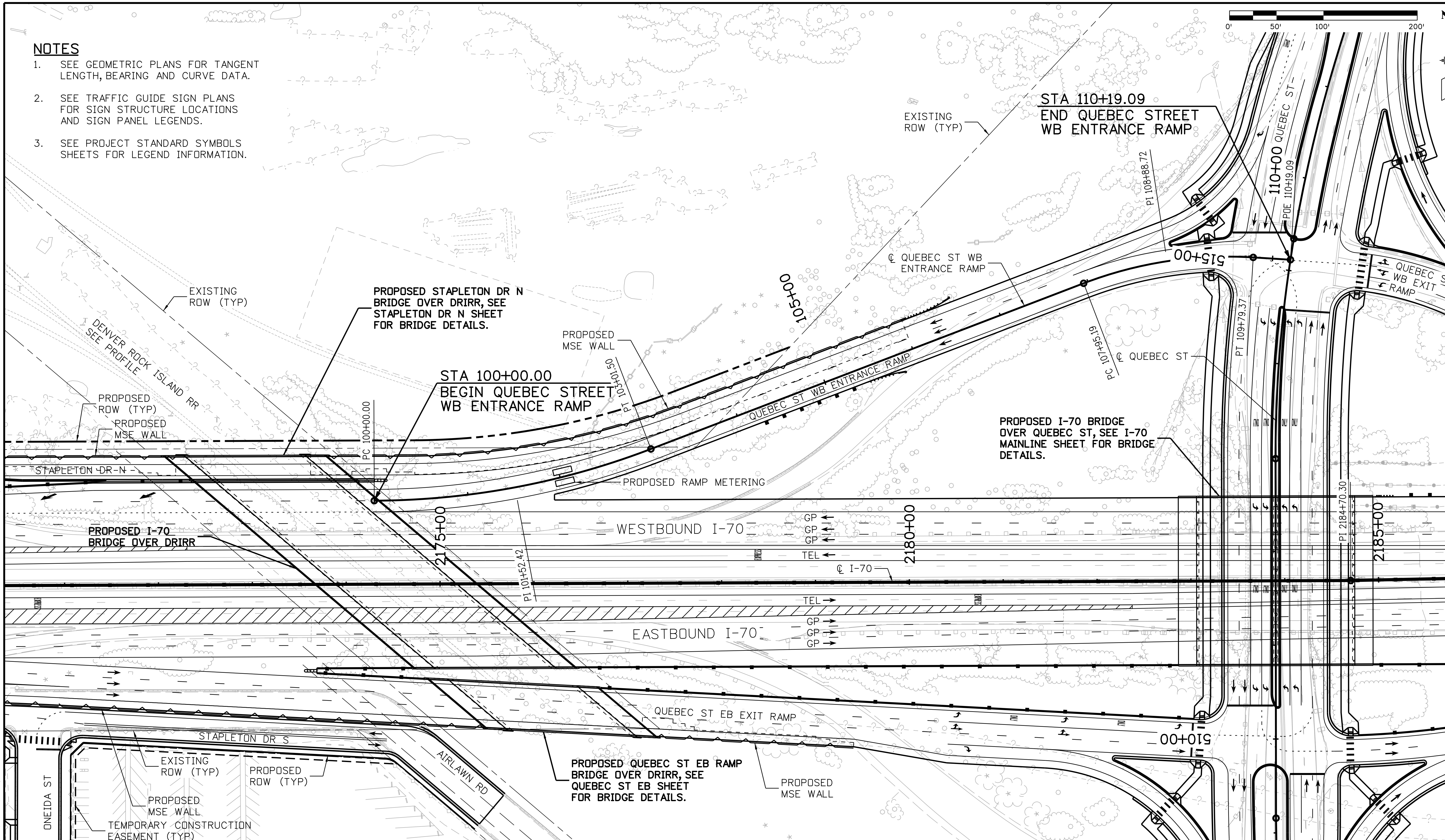
NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.



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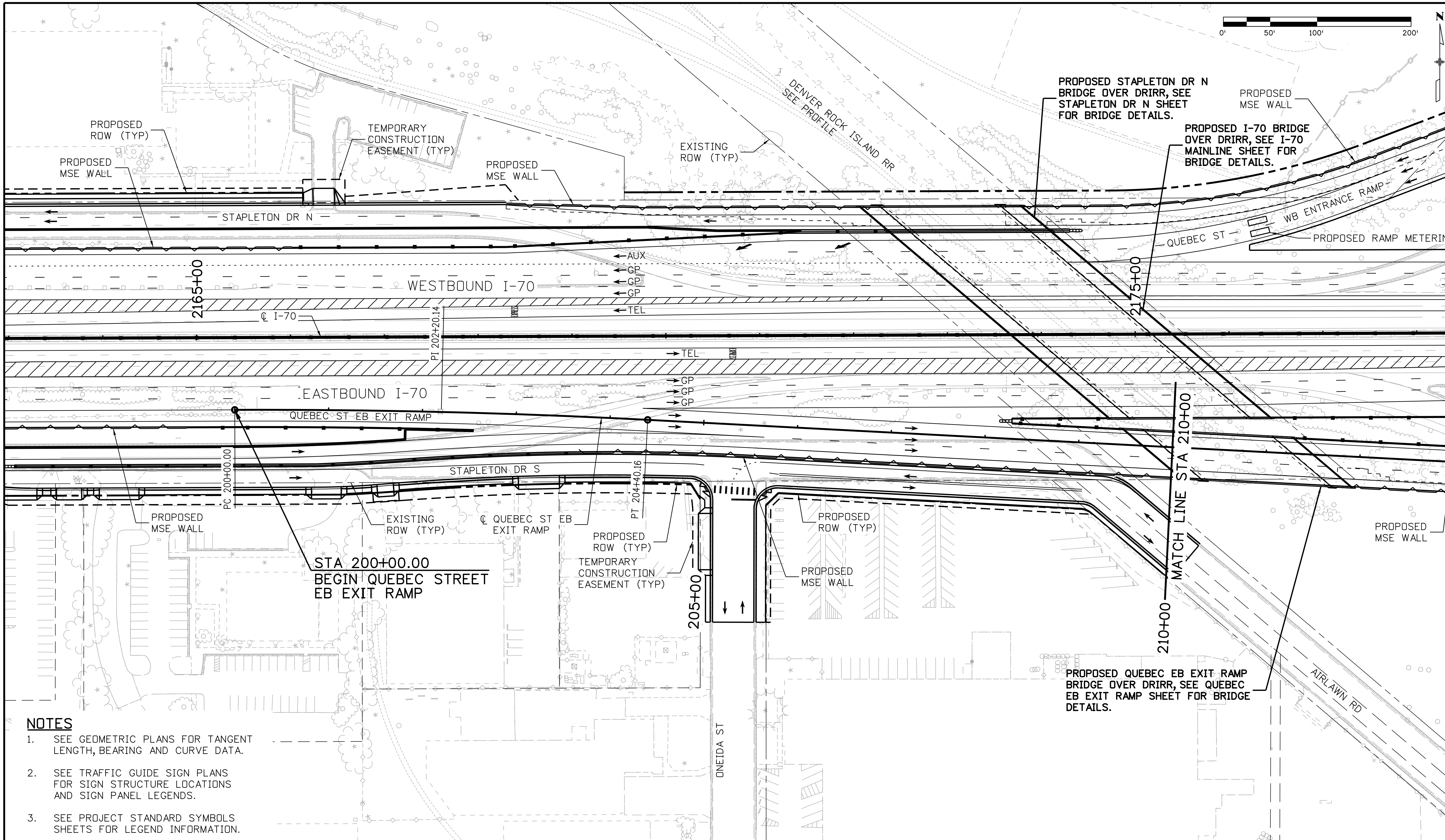
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL	
No Revisions:	
Revised:	
Void:	

CENTRAL 70
ROADWAY PLAN
QUEBEC STREET WB ENTRANCE RAMP
STA 100+00 TO STA 110+19.09

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PLAN		Subset Sheets: RPL116 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 154



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

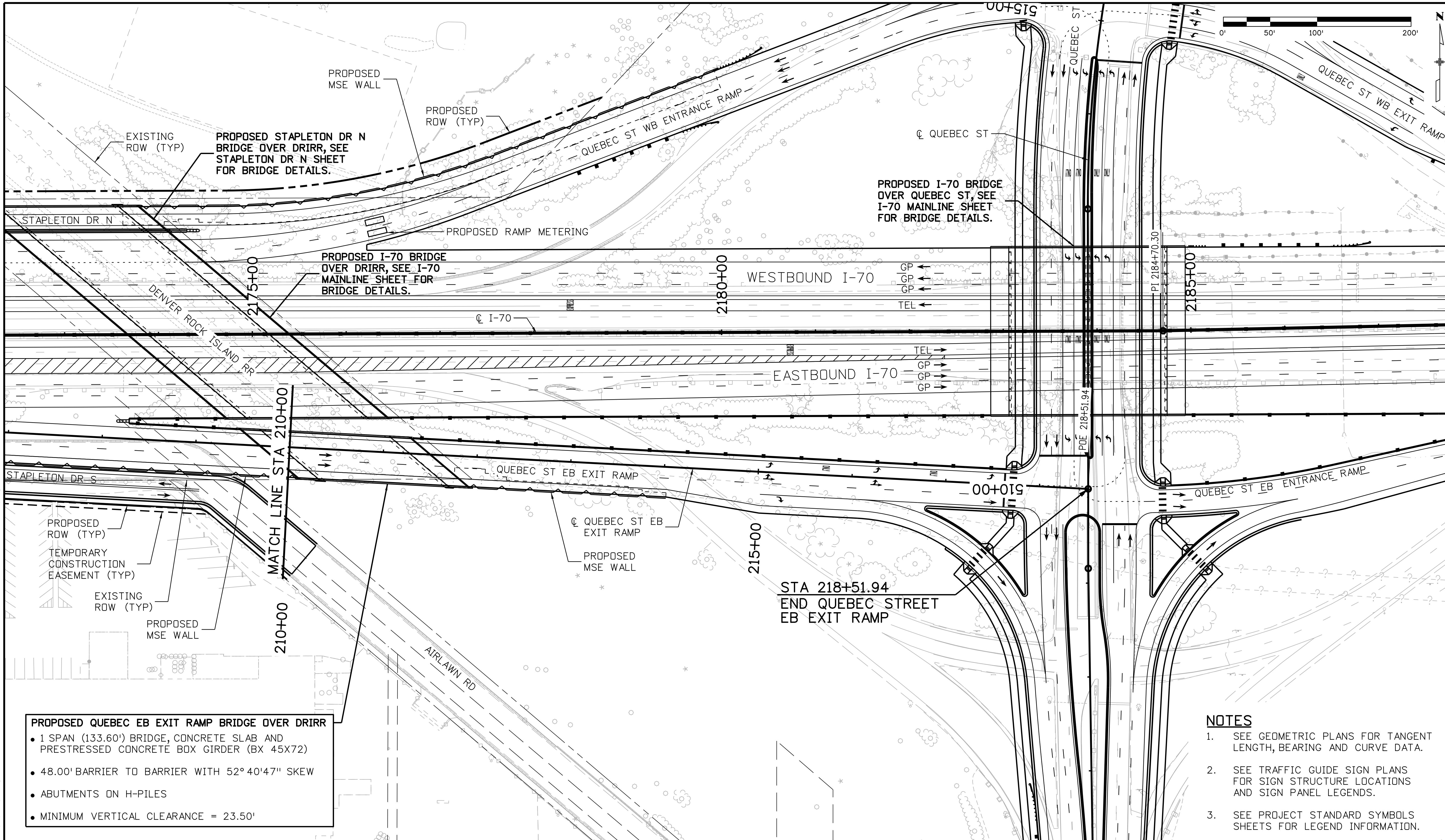
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
QUEBEC STREET EB EXIT RAMP
STA 200+00 TO STA 210+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PLAN	Subset Sheets:	RPL117 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 155



PROPOSED QUEBEC EB EXIT RAMP BRIDGE OVER DRIRR

- 1 SPAN (133.60') BRIDGE, CONCRETE SLAB AND PRESTRESSED CONCRETE BOX GIRDER (BX 45X72)
- 48.00' BARRIER TO BARRIER WITH 52° 40'47" SKEW
- ABUTMENTS ON H-PILES
- MINIMUM VERTICAL CLEARANCE = 23.50'

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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Print Date: 5/19/2017		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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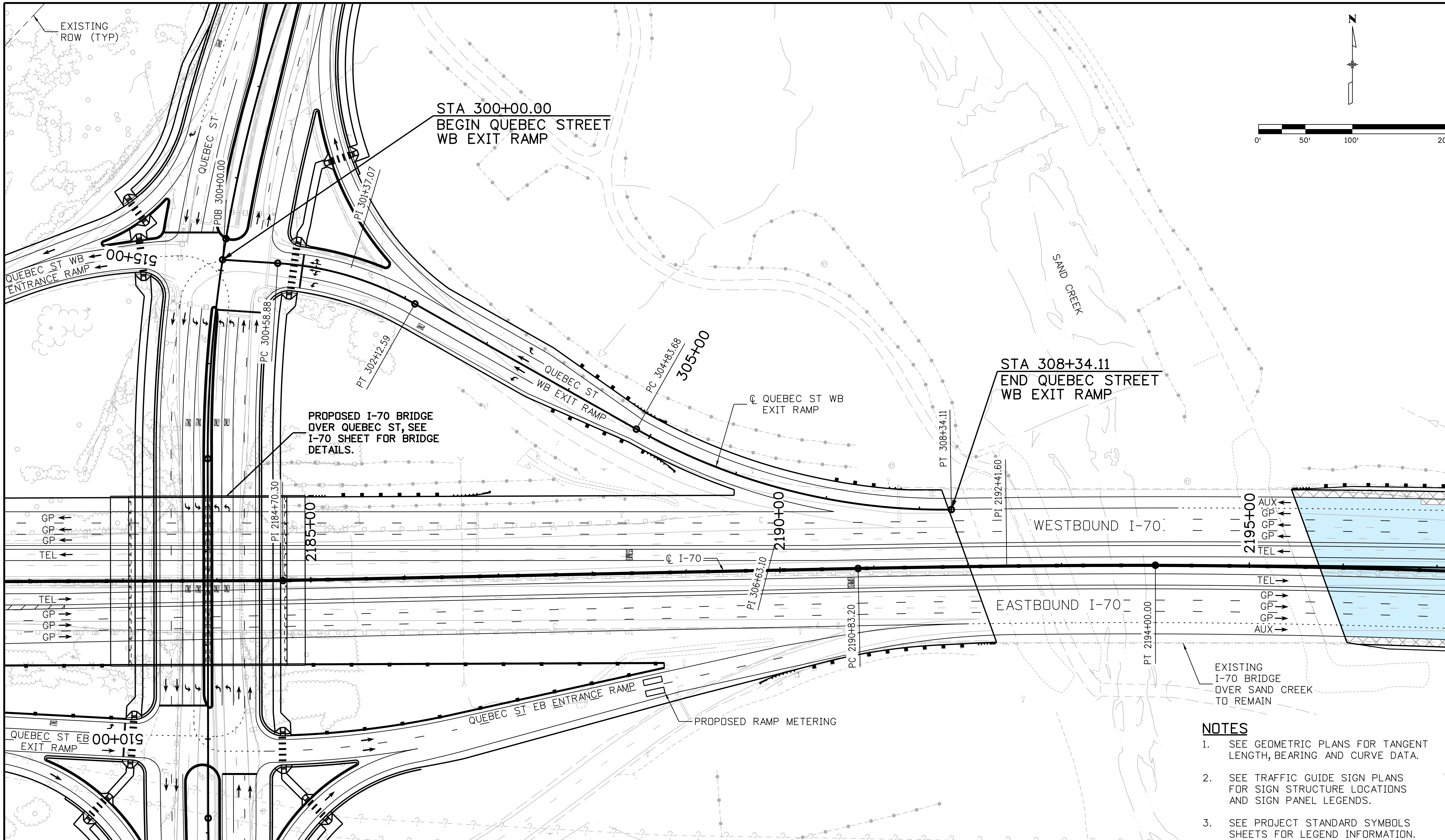
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL	CENTRAL 70 ROADWAY PLAN QUEBEC STREET EB EXIT RAMP STA 210+00 TO STA 218+51.94		Project No./Code
No Revisions:			FBR 0704-234
Revised:	Designer:	Structure Numbers	19631
	Detailer:		
Void:	Sheet Subset: ROAD PLAN	Subset Sheets: RPL118 of 142	Sheet Number 156



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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

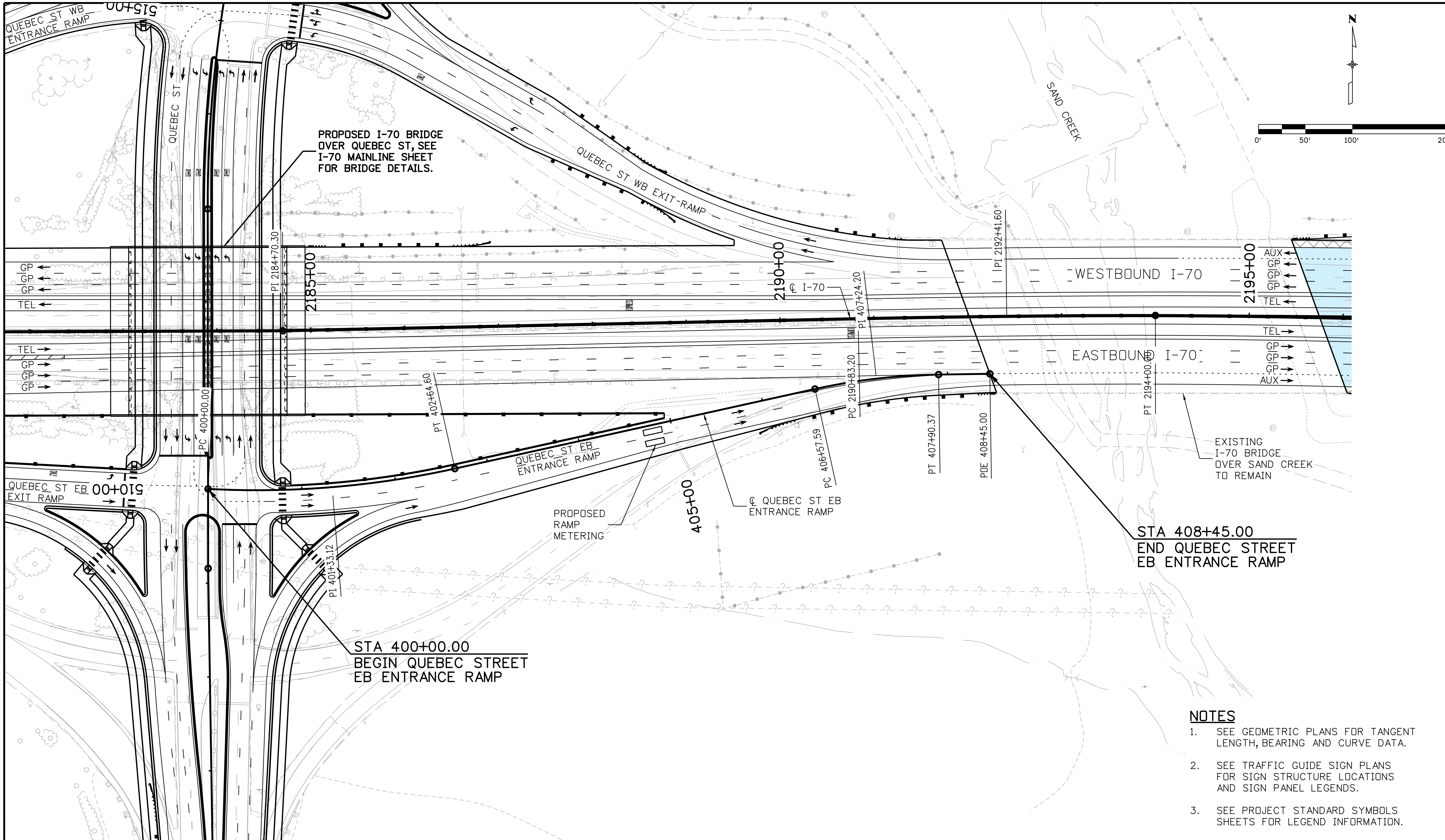
Sheet Revisions		
Date:	Comments	Init.

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 PLAN
QUEBEC STREET WB EXIT RAMP
STA 300+00 TO STA 308+34.11
Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL119 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 157



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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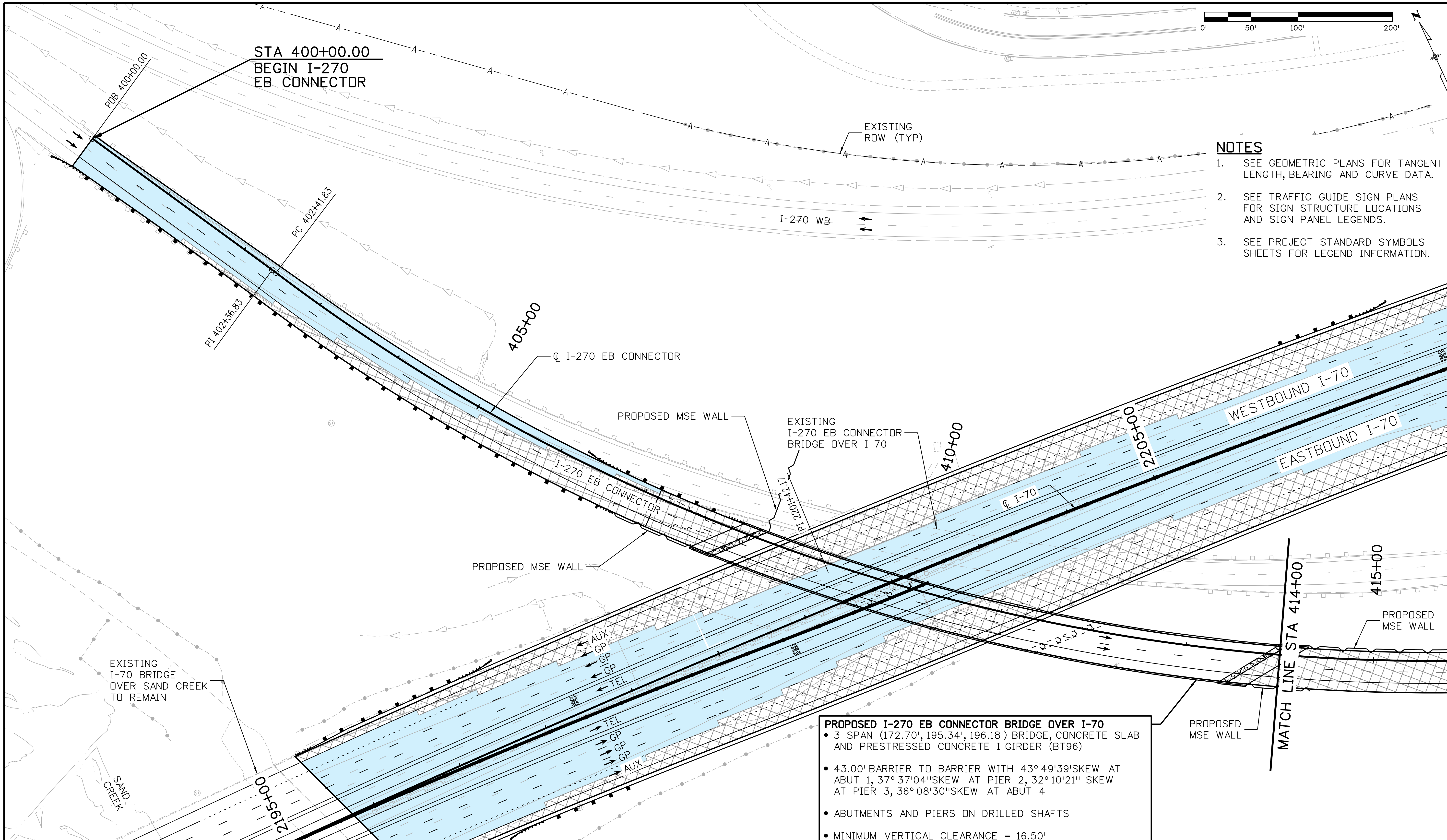
Print Date: 5/19/2017		Sheet Revisions		
File Name: See sheet edge for information		Date:	Comments	Init.
Front Range Mobility Group	Horiz. Scale: As Noted			
	Vert. Scale: As Noted			
	Unit Information			
	Unit Leader			

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

PROPOSAL	CENTRAL 70 ROADWAY PLAN QUEBEC STREET EB ENTRANCE RAMP STA 400+00 TO STA 408+45.00		Project No./Code
No Revisions:			FBR 0704-234
Revised:	Designer:	Structure Numbers	19631
Void:	Detailer:		
	Sheet Subset: ROAD PLAN	Subset Sheets: RPL120 of 142	Sheet Number 158



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

PROPOSED I-270 EB CONNECTOR BRIDGE OVER I-70

- 3 SPAN (172.70', 195.34', 196.18') BRIDGE, CONCRETE SLAB AND PRESTRESSED CONCRETE I GIRDER (BT96)
- 43.00' BARRIER TO BARRIER WITH 43° 49'39'SKEW AT ABUT 1, 37° 37'04"SKEW AT PIER 2, 32° 10'21" SKEW AT PIER 3, 36° 08'30"SKEW AT ABUT 4
- ABUTMENTS AND PIERS ON DRILLED SHAFTS
- MINIMUM VERTICAL CLEARANCE = 16.50'

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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.

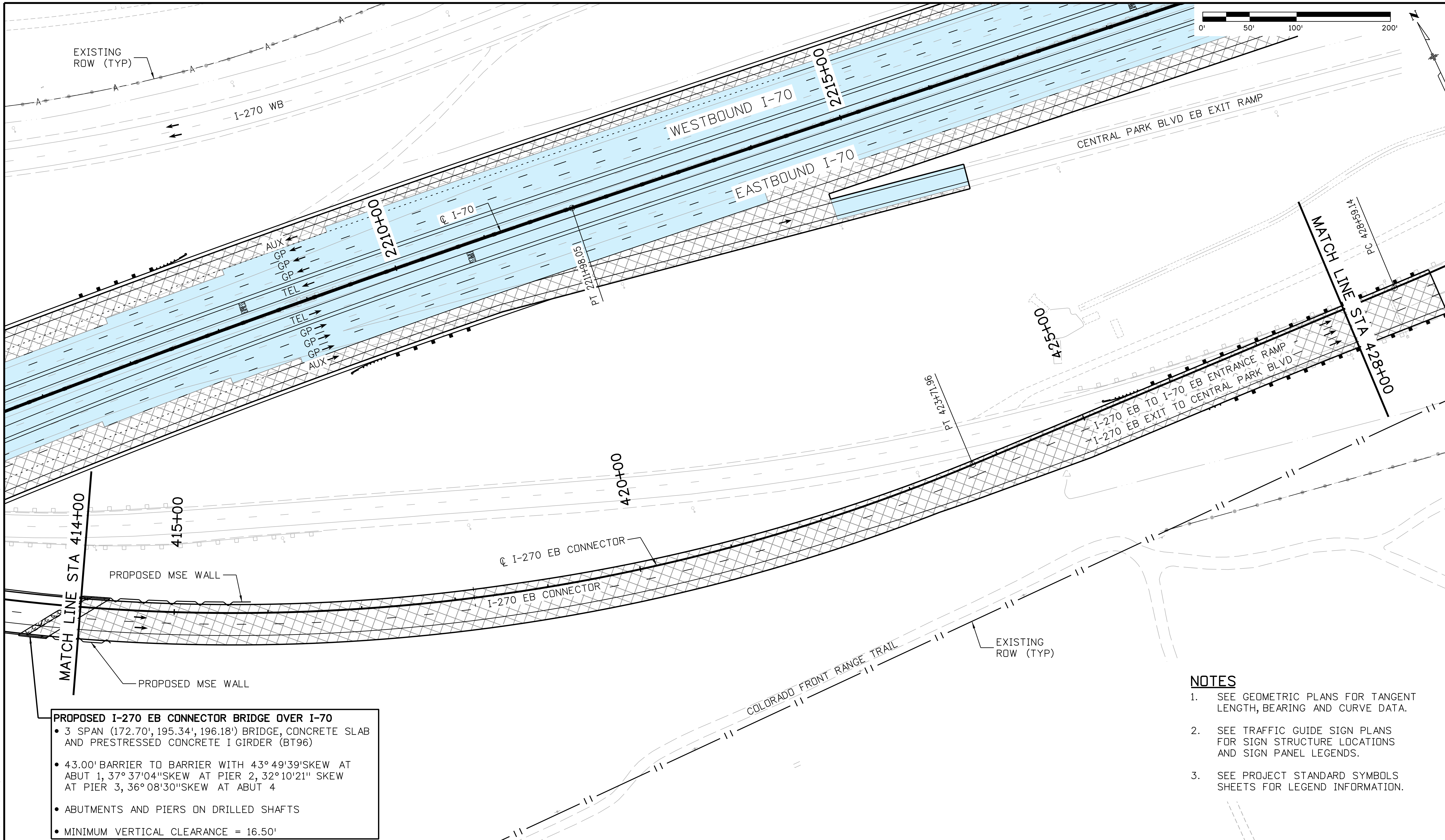
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

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

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PLAN	Subset Sheets: RPL121 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 159



PROPOSED I-270 EB CONNECTOR BRIDGE OVER I-70

- 3 SPAN (172.70', 195.34', 196.18') BRIDGE, CONCRETE SLAB AND PRESTRESSED CONCRETE I GIRDER (BT96)
- 43.00' BARRIER TO BARRIER WITH 43° 49'39'SKEW AT ABUT 1, 37° 37'04"SKEW AT PIER 2, 32° 10'21" SKEW AT PIER 3, 36° 08'30"SKEW AT ABUT 4
- ABUTMENTS AND PIERS ON DRILLED SHAFTS
- MINIMUM VERTICAL CLEARANCE = 16.50'

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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 PLAN
I-270 EB CONNECTOR
STA 414+00 TO STA 428+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
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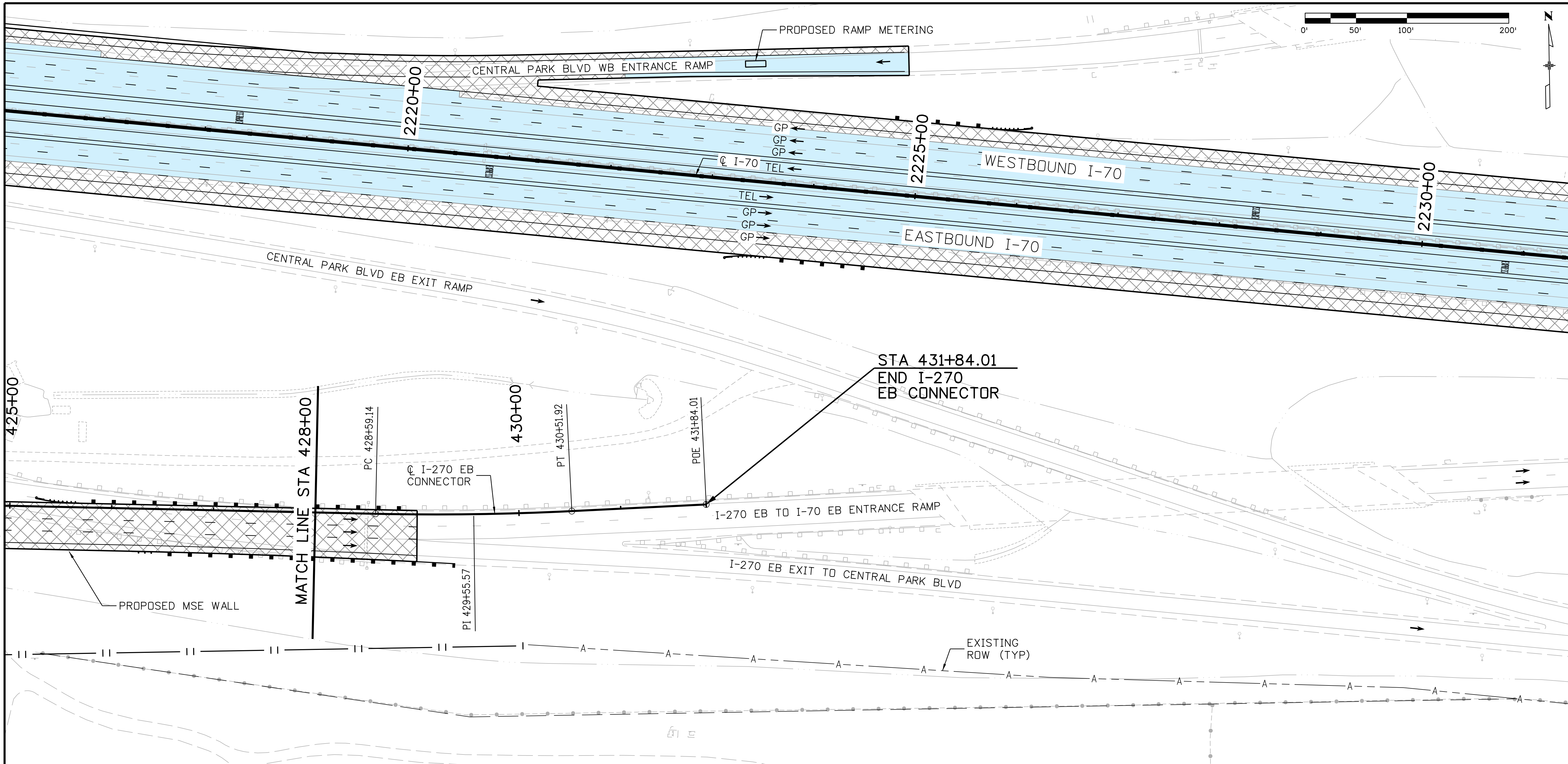
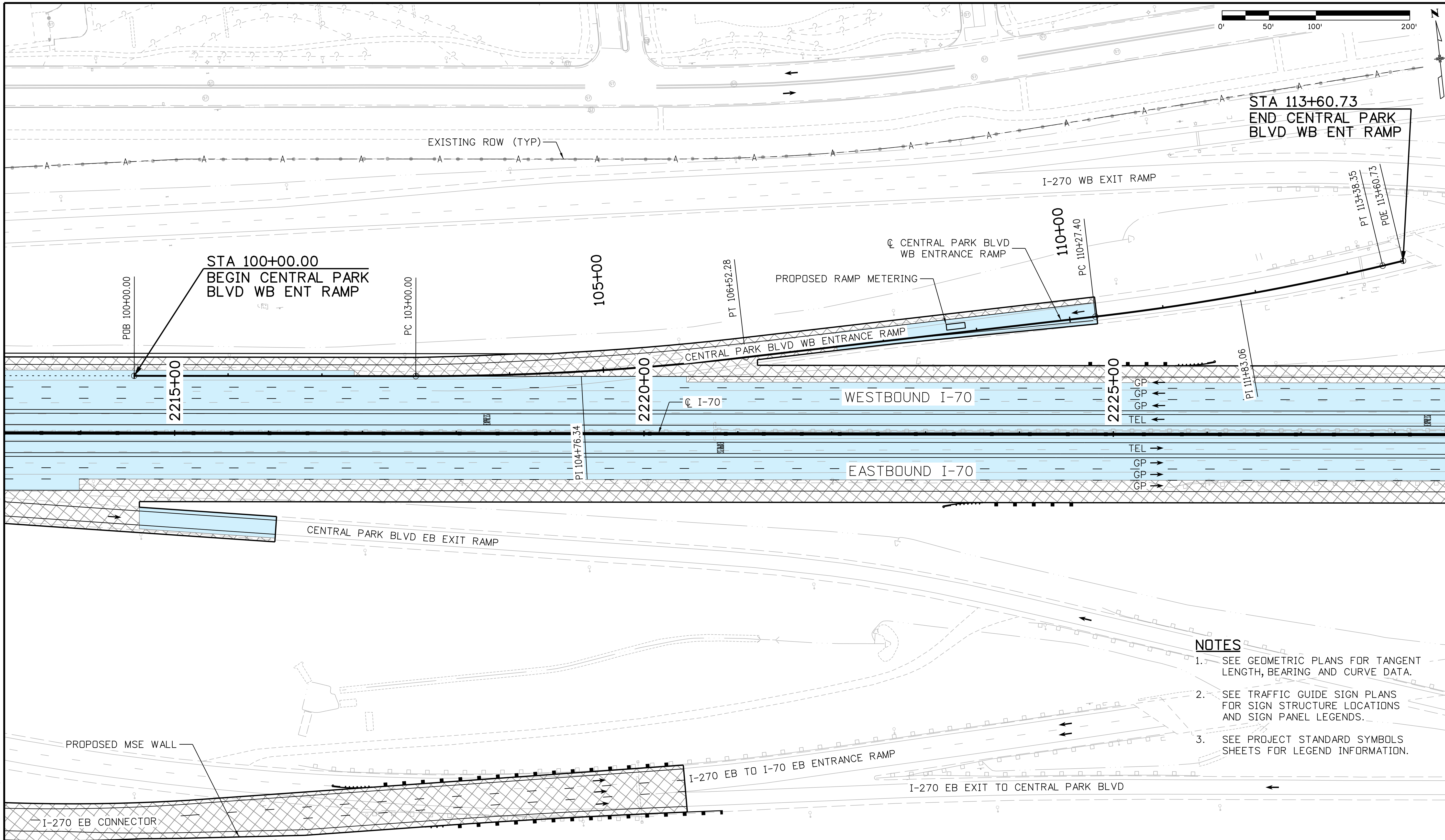
Project No./Code
FBR 0704-234
19631
Sheet Number 160



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

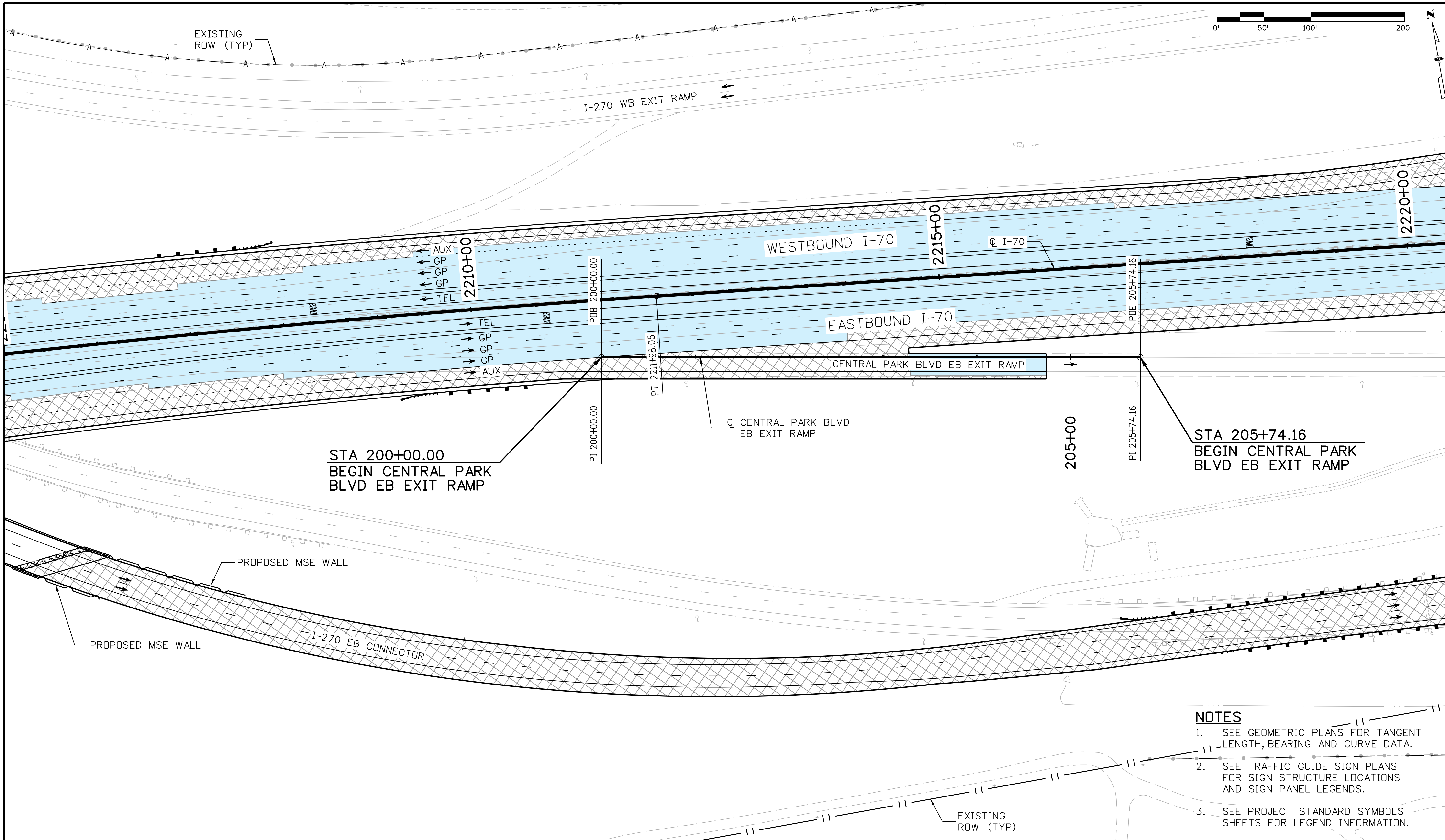
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
CENTRAL PARK BLVD WB ENT RAMP
STA 100+00 TO STA 113+60.73

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PLAN	Subset Sheets: RPL124 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 162



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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Print Date: 5/19/2017		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			

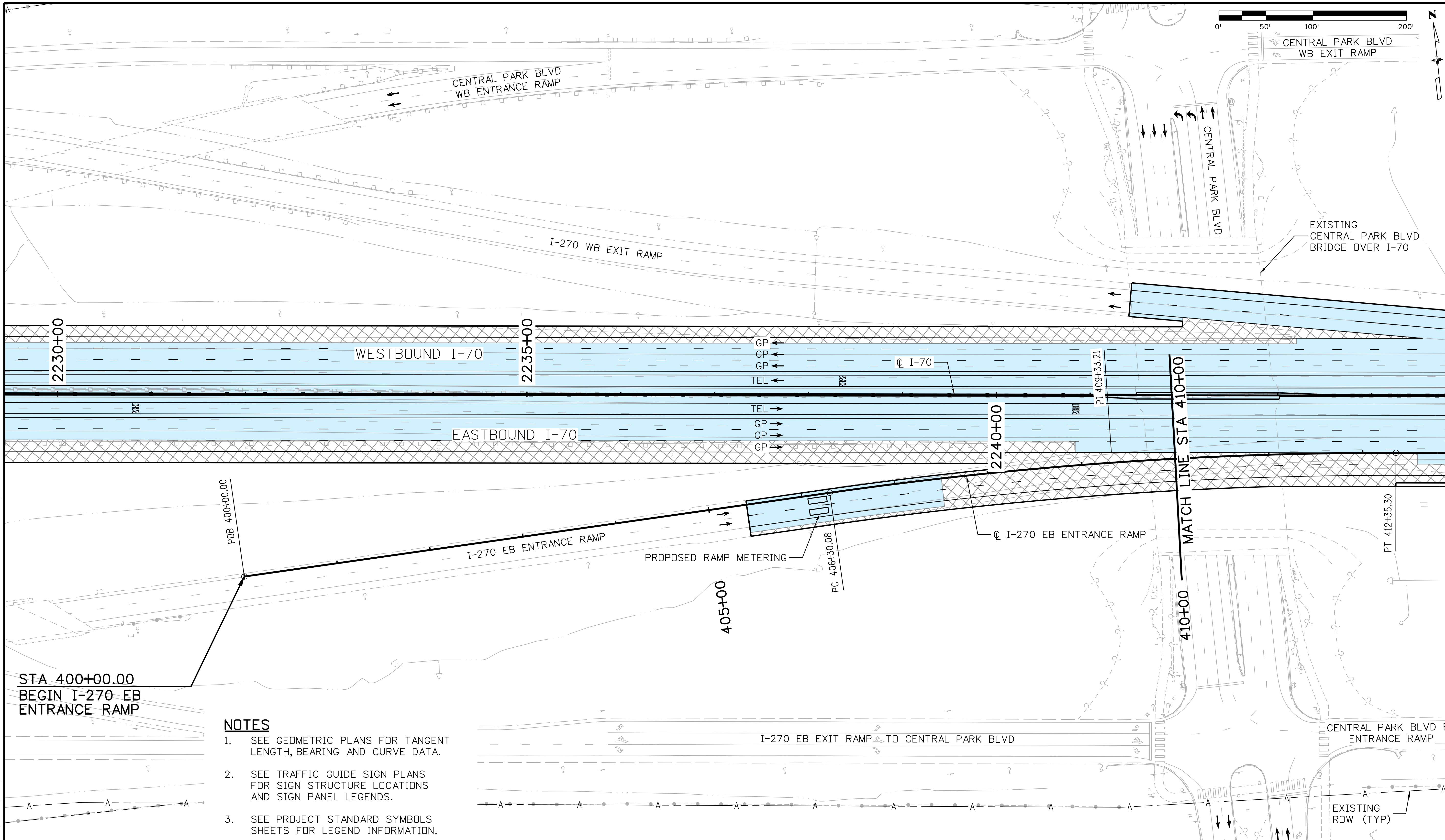
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL	
No Revisions:	
Revised:	
Void:	

CENTRAL 70
ROADWAY PLAN
CENTRAL PARK BLVD EB EXIT RAMP
STA 200+00 TO STA 205+74.16

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PLAN		Subset Sheets: RPL125 of 142	

Project No./Code	
FBR 0704-234	
19631	
Sheet Number	163



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

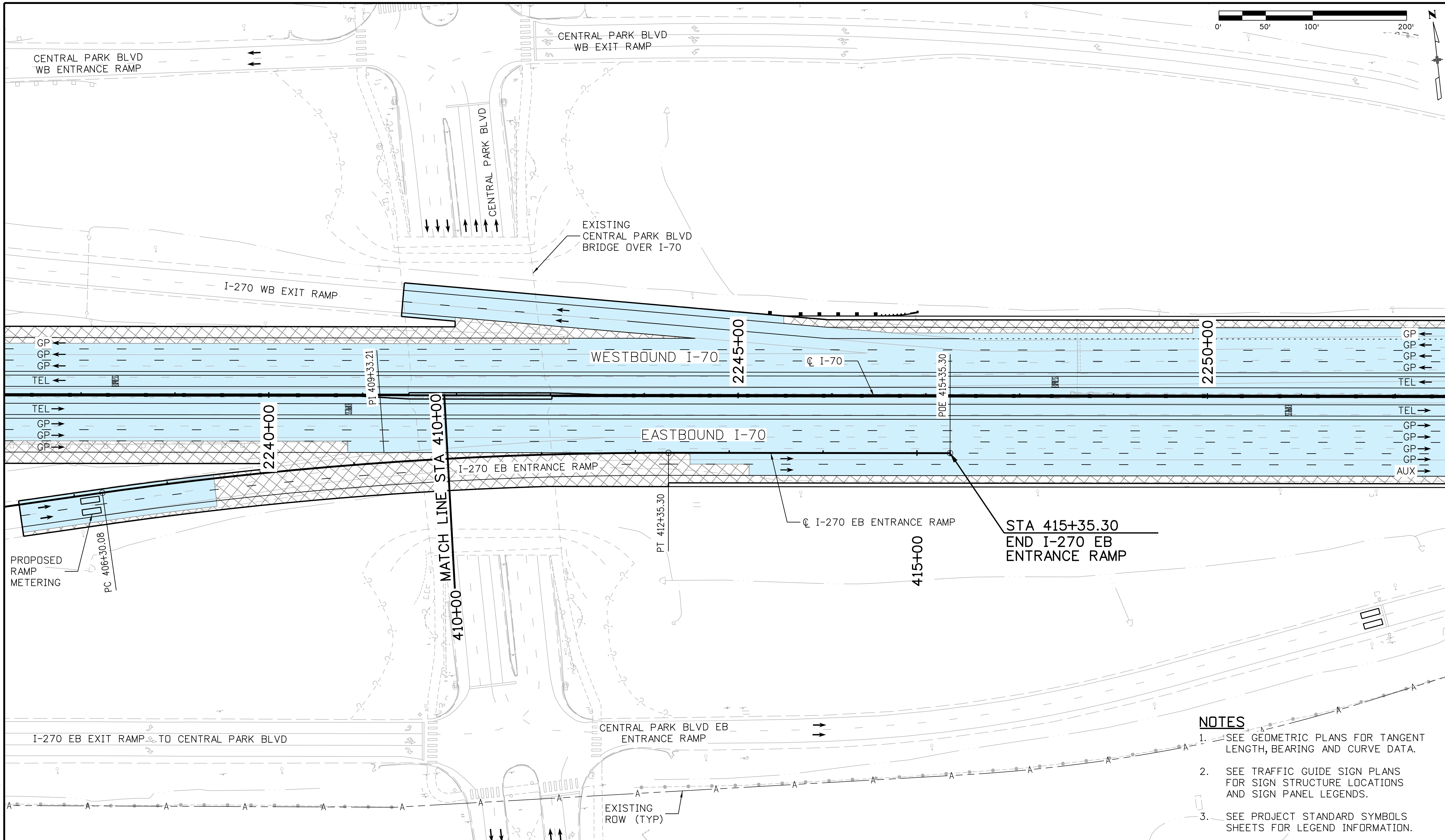
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
I-270 EB ENTRANCE RAMP
STA 400+00 TO STA 410+00

Designer:	Structure Numbers	
Detailer:		
Sheet Subset: ROAD PLAN	Subset Sheets: RPL126 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 164



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

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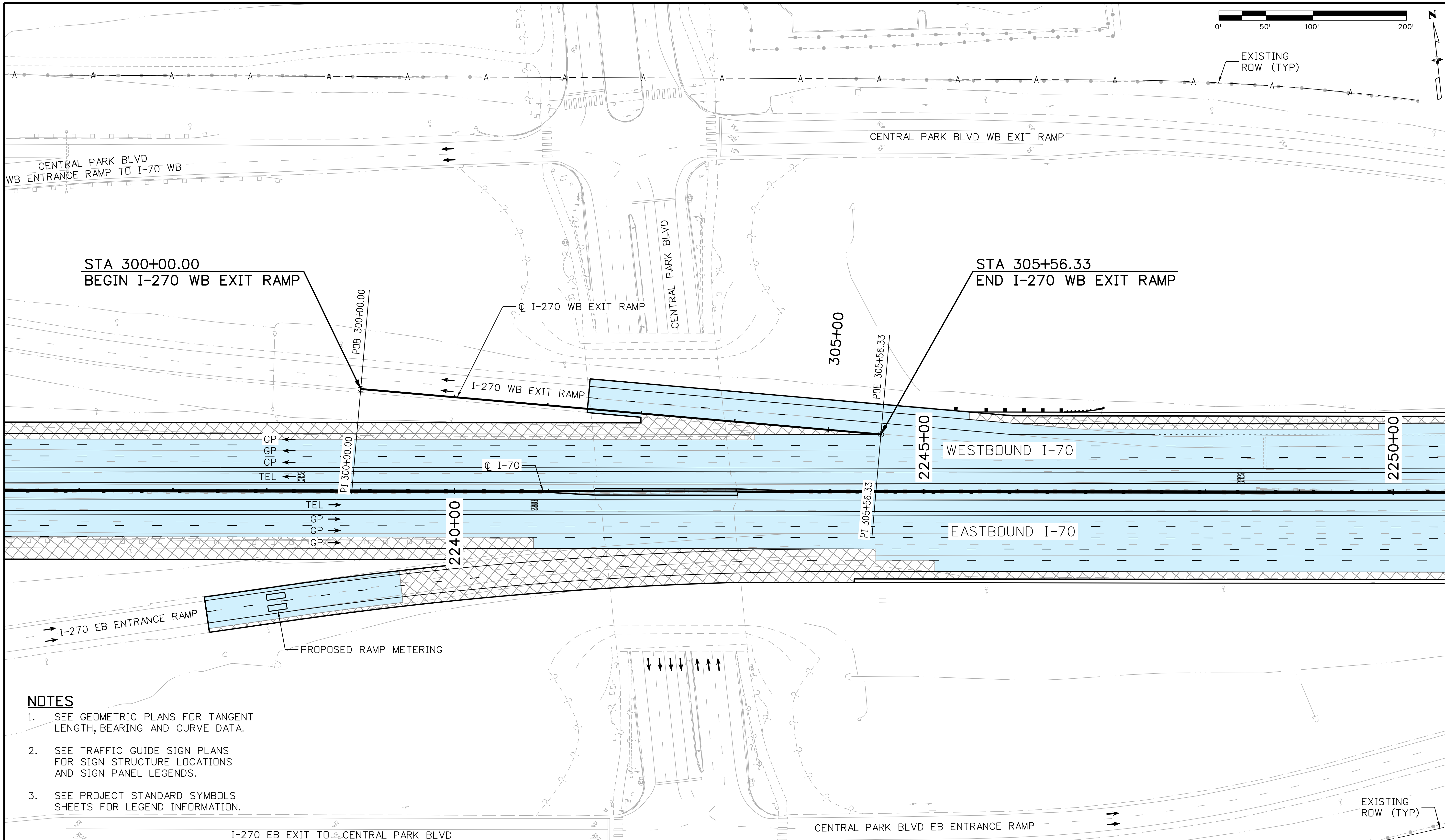
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
I-270 EB ENTRANCE RAMP
STA 410+00 TO STA 415+35.30

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL127 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 165



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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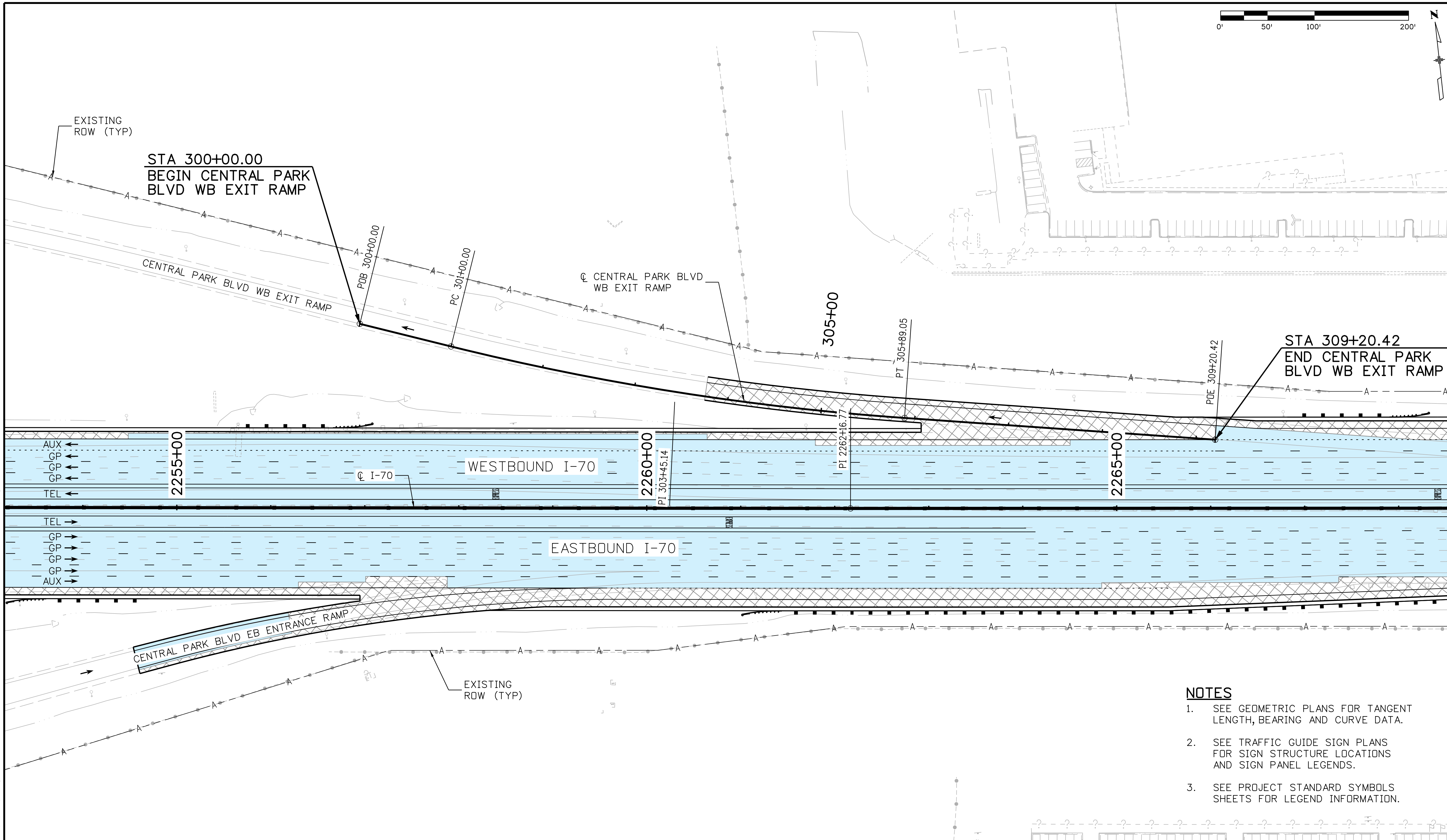
Print Date: 5/19/2017		Sheet Revisions			Colorado Department of Transportation	PROPOSAL	CENTRAL 70 ROADWAY PLAN I-270 WB EXIT RAMP STA 300+00 TO STA 305+56.33	Project No./Code
File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 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				Region 1	Void:	Sheet Subset: ROAD PLAN	Subset Sheets: RPL128 of 142	Sheet Number 166
	Unit Information				KJS			
	Unit Leader							



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

DENPWP01$ 11:36:54 AM \\denpwp01\pwicsjobs596\291560\515021_445\RDPL129-13599-RDPL_128_CPB WB Off Ramp.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

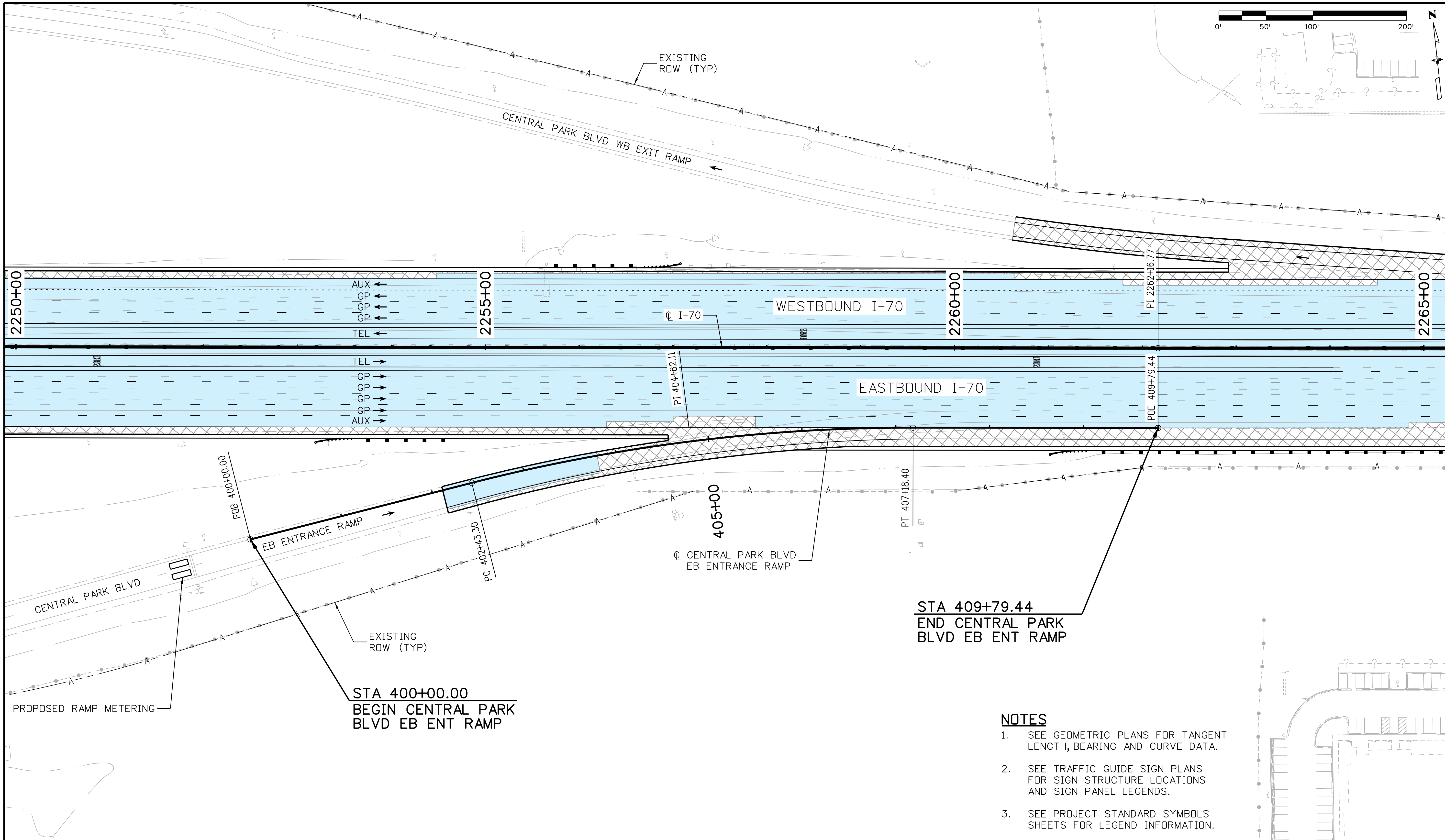
Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation
CDOT
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 PLAN
CENTRAL PARK BLVD WB EXIT RAMP
STA 300+00 TO STA 309+20.42
Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL129 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 167



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

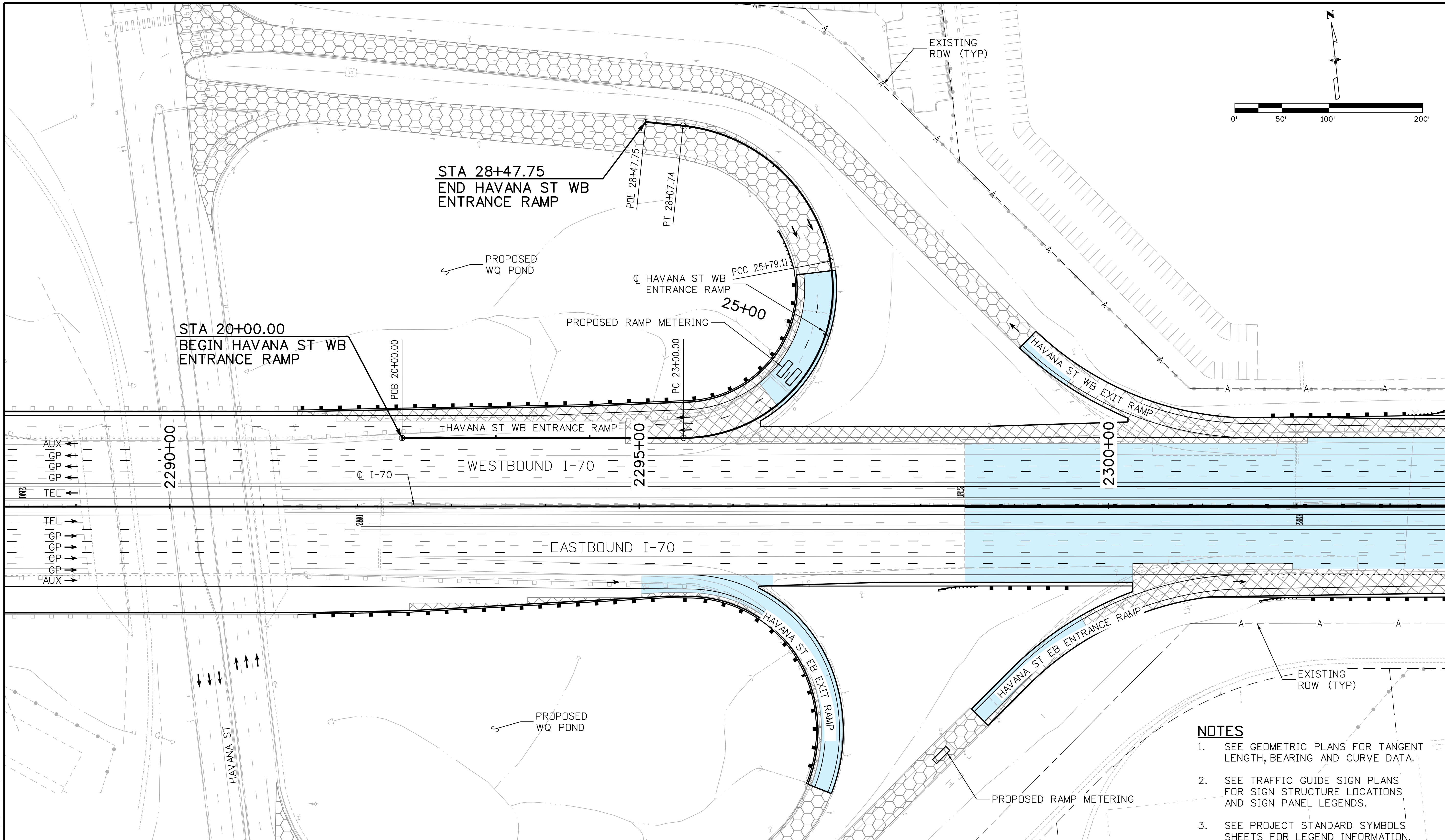
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
CENTRAL PARK BLVD EB ENT RAMP
STA 400+00 TO STA 409+79.44

Designer:	Structure Numbers	
Detailer:		
Sheet Subset: ROAD PLAN	Subset Sheets: RPL130 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 168



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

DENPWP01$ 2:04:09 PM \\denpwp01\pwicsjobs596\291245\515021_446\RDPL131-13599-RDPL_130_Havana WB On Ramp.dgn

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.

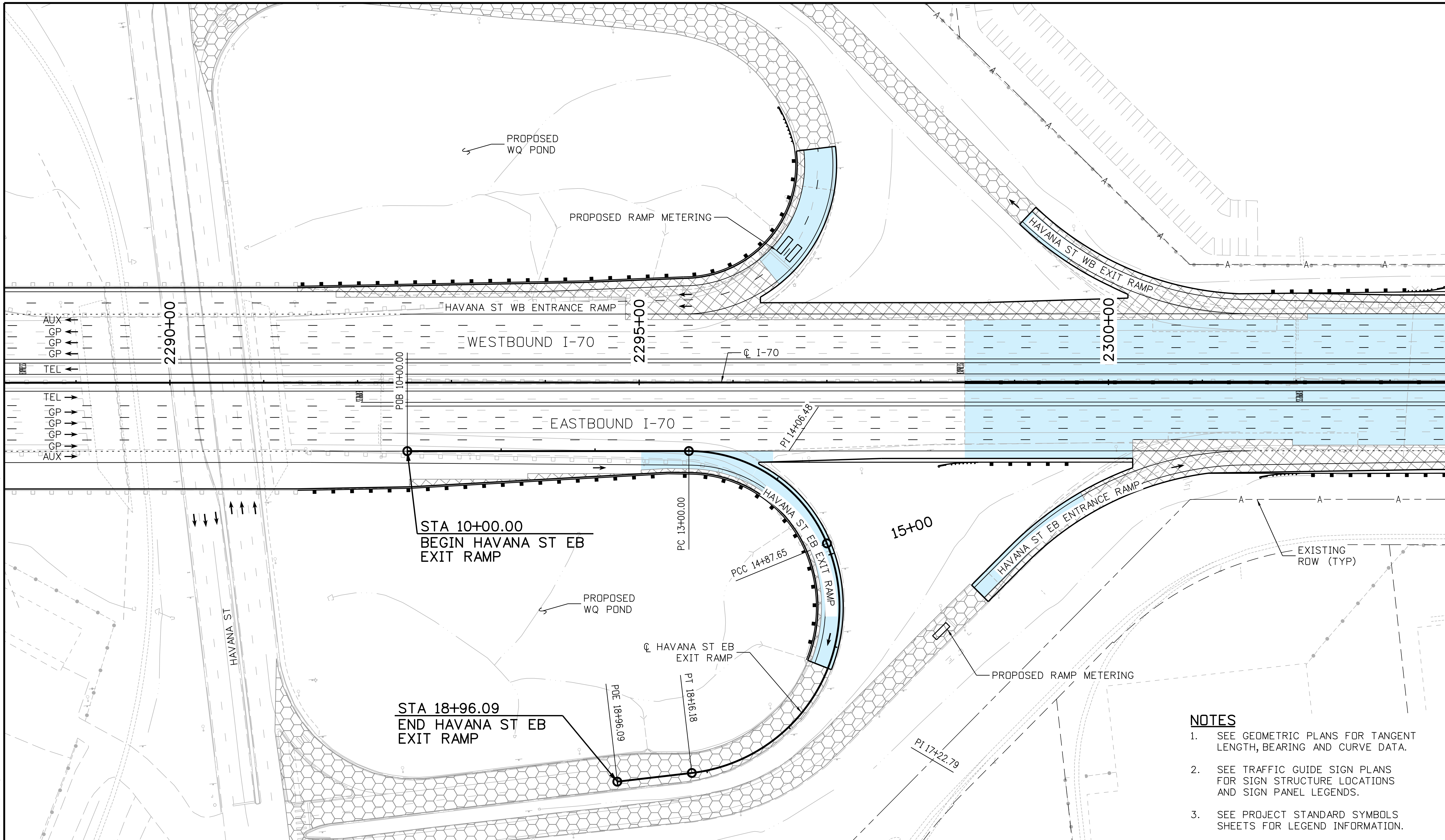
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
HAVANA ST WB ENTRANCE RAMP
STA 20+00 TO STA 28+47.75

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PLAN		Subset Sheets: RPL131 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 169



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

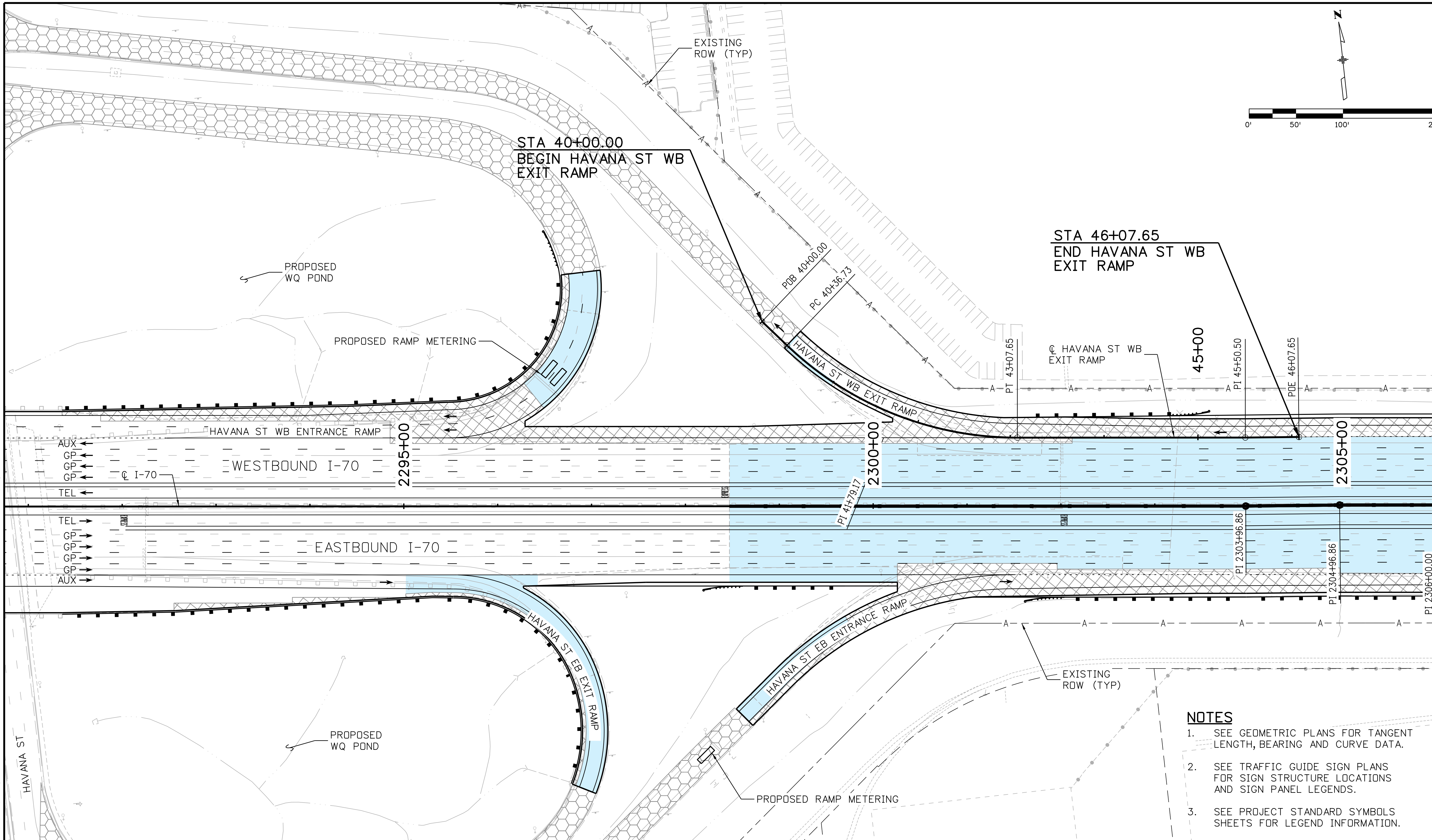
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
HAVANA ST EB EXIT RAMP
STA 10+00 TO STA 18+03.94

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PLAN	Subset Sheets: RPL132 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 170



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

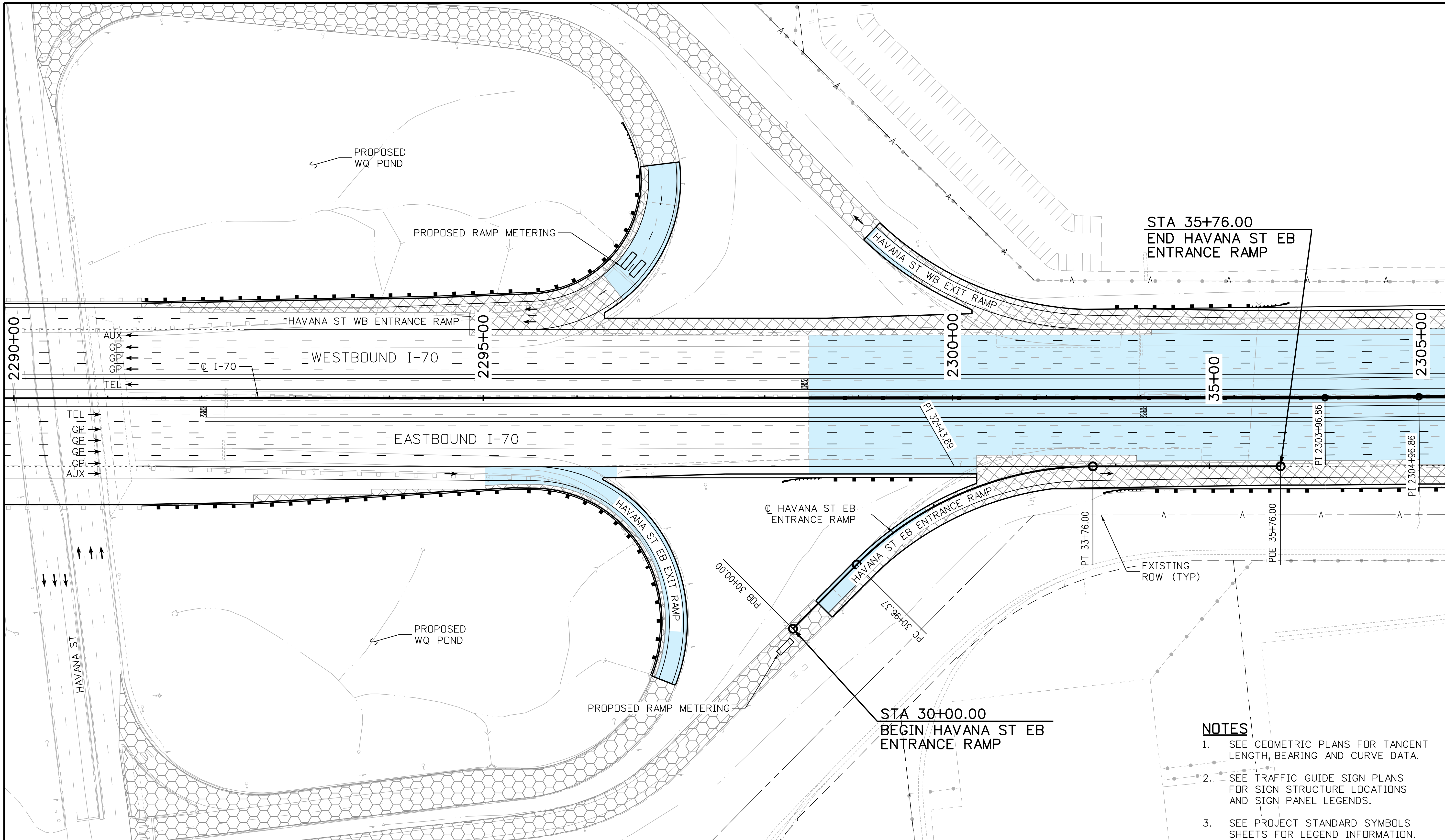
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
HAVANA ST WB EXIT RAMP
STA 40+00 TO STA 46+07.65

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PLAN	Subset Sheets: RPL133 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 171



NOTES
1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

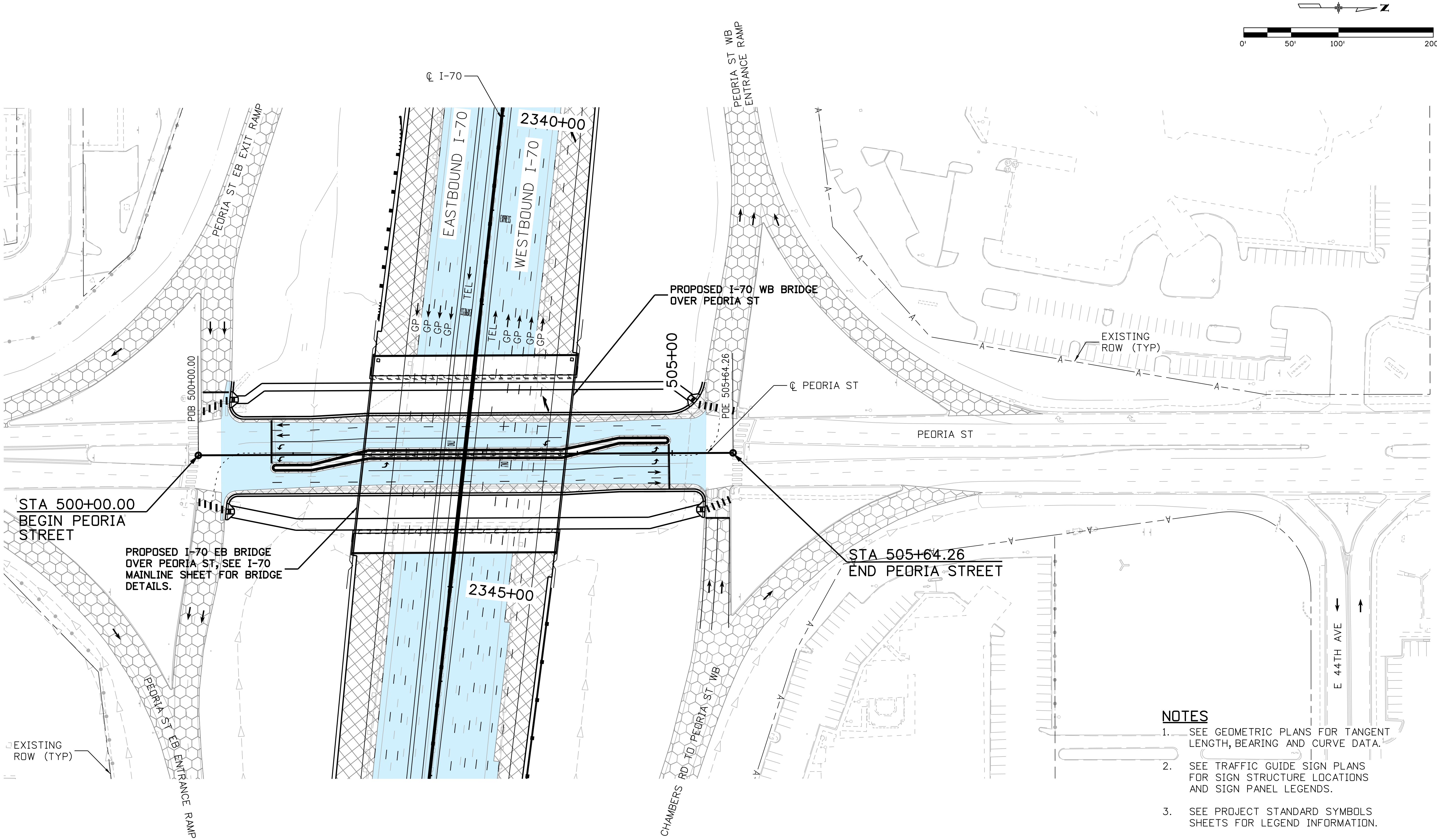
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
HAVANA ST EB ENTRANCE RAMP
STA 30+00 TO STA 36+59.06

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PLAN	Subset Sheets: RPL134 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 172



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

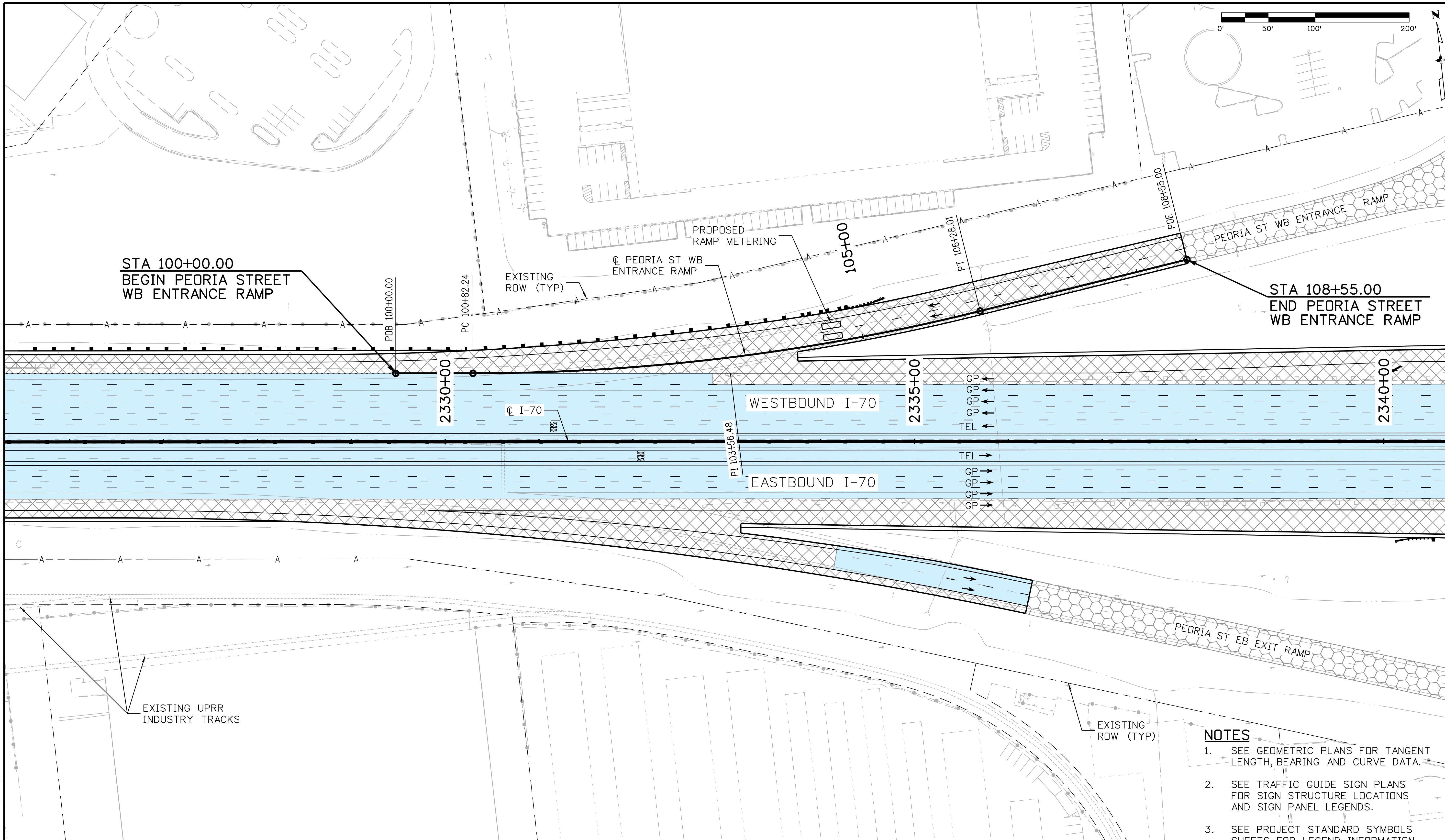
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
PEORIA STREET
STA 500+00 TO STA 505+64.26

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL135 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 173



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

DENPWP03$ 1:58:07 PM \\denpwp01\pwicsjobs596\291245\515021_93\RDPL136-13599-RDPL_135_Peoria WB On Ramp.dgn

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.

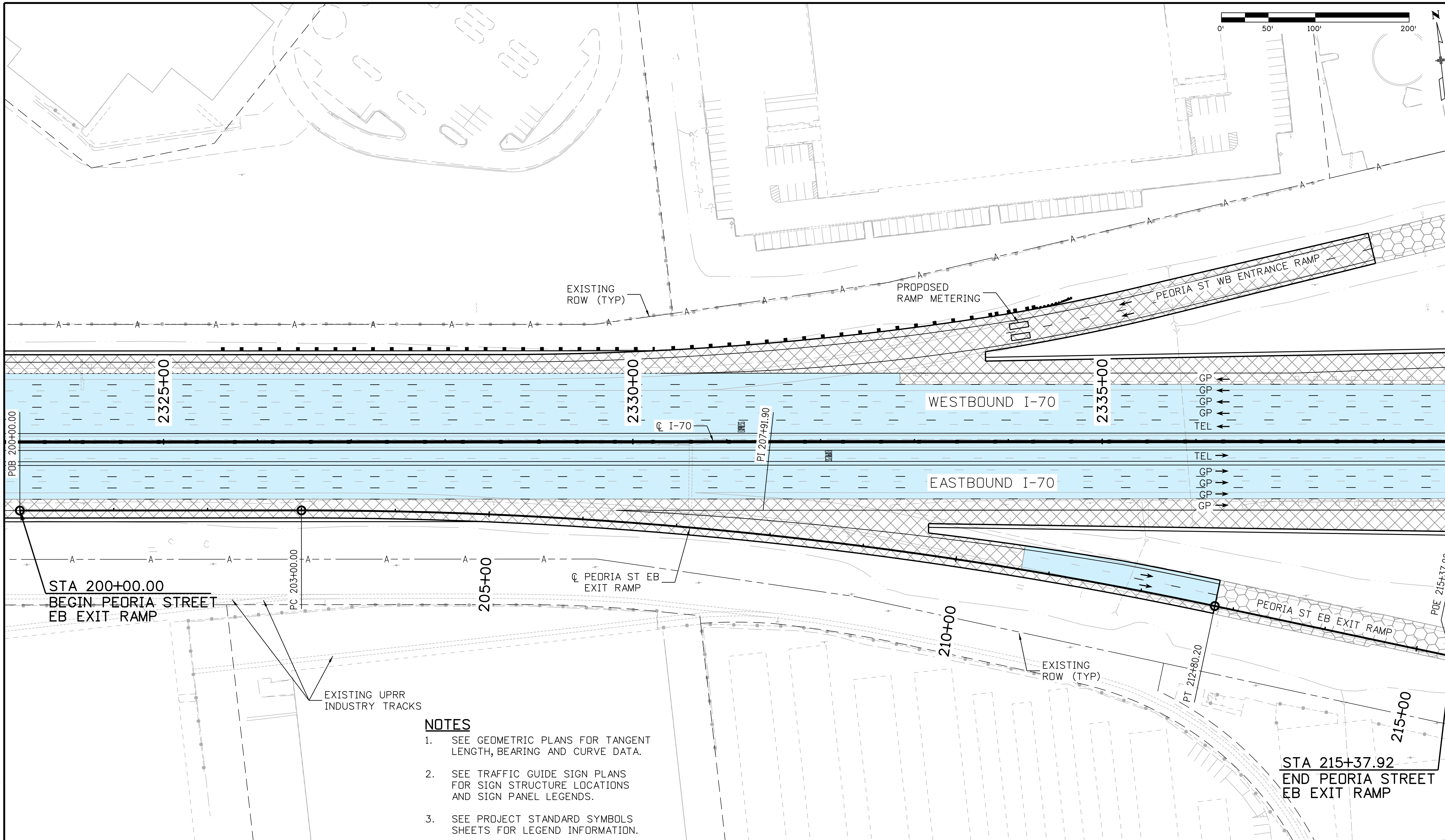
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
PEORIA STREET WB ENTRANCE RAMP
STA 100+00 TO STA 108+55.00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PLAN		Subset Sheets: RPL136 of 142	

Project No./Code	
FBR 0704-234	
19631	
Sheet Number	174



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

Print Date: 5/19/2017		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	CENTRAL 70 ROADWAY PLAN PEORIA STREET EB EXIT RAMP STA 200+00 TO STA 211+80.20	Project No./Code
No Revisions:		FBR 0704-234
Revised:	Designer: / Structure Numbers	19631
Void:	Detailer:	
	Sheet Subset: ROAD PLAN / Subset Sheets: RPL137 of 142	Sheet Number 175

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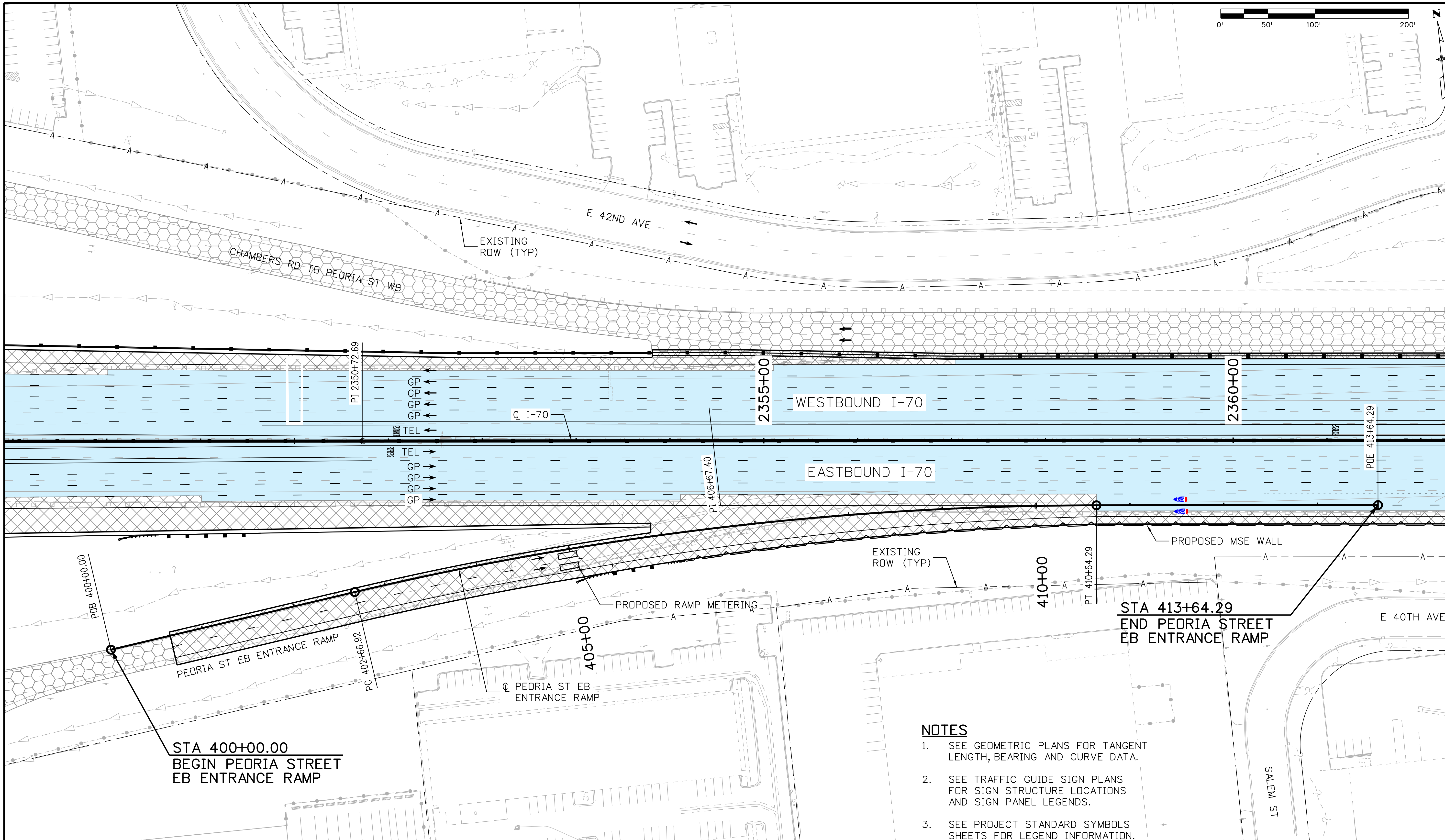

NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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 PLAN
PEORIA STREET EB ENTRANCE RAMP
STA 400+00 TO STA 410+80.46
Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL138 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 176

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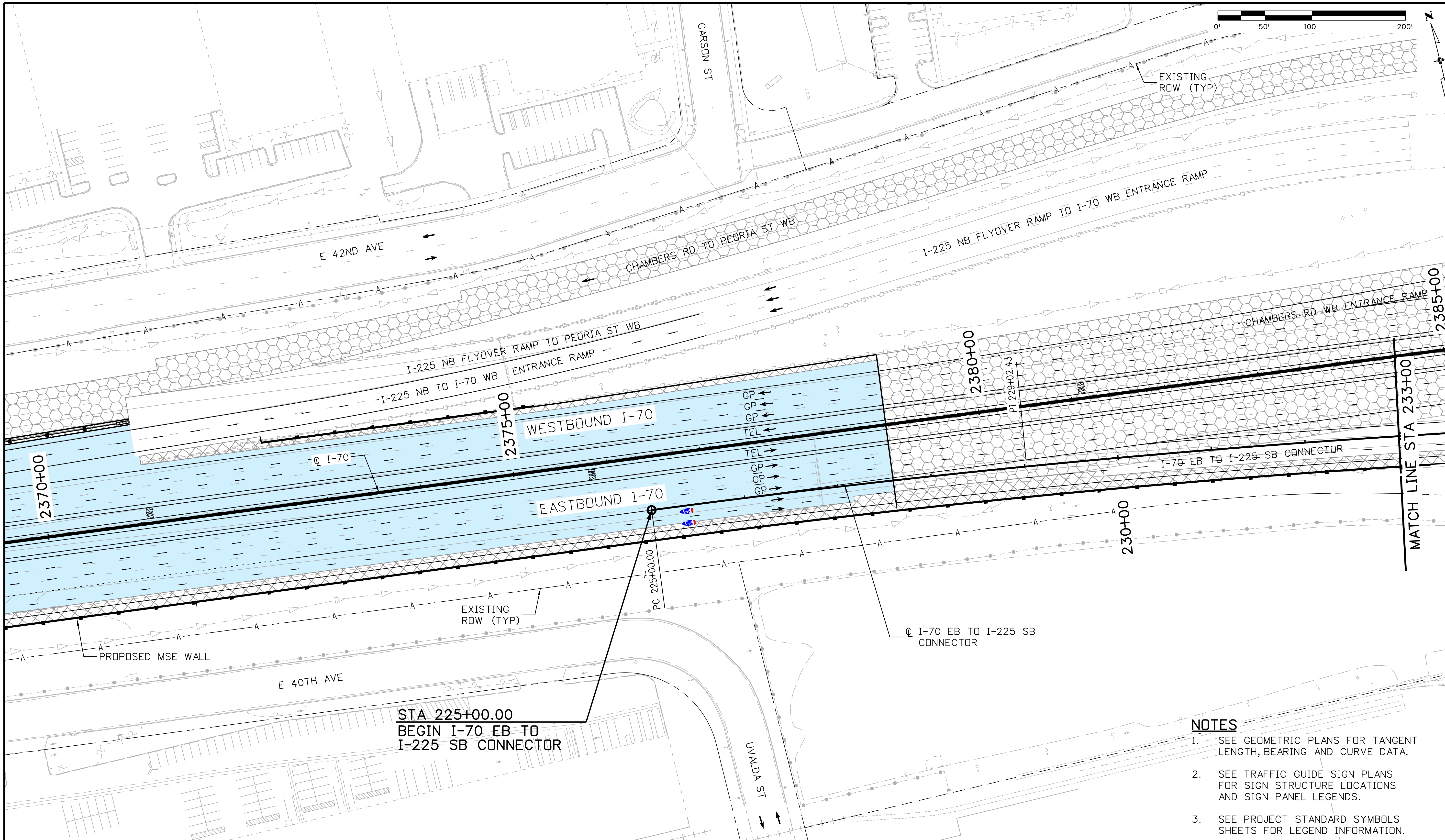


NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

DENPWP02$ 1:59:29 PM \\denpwp01\pwicsjobs596\291245\515021_96\RDPL139-13599-RDPL_138_I-70 EB to I-225 SB GP.dgn

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.

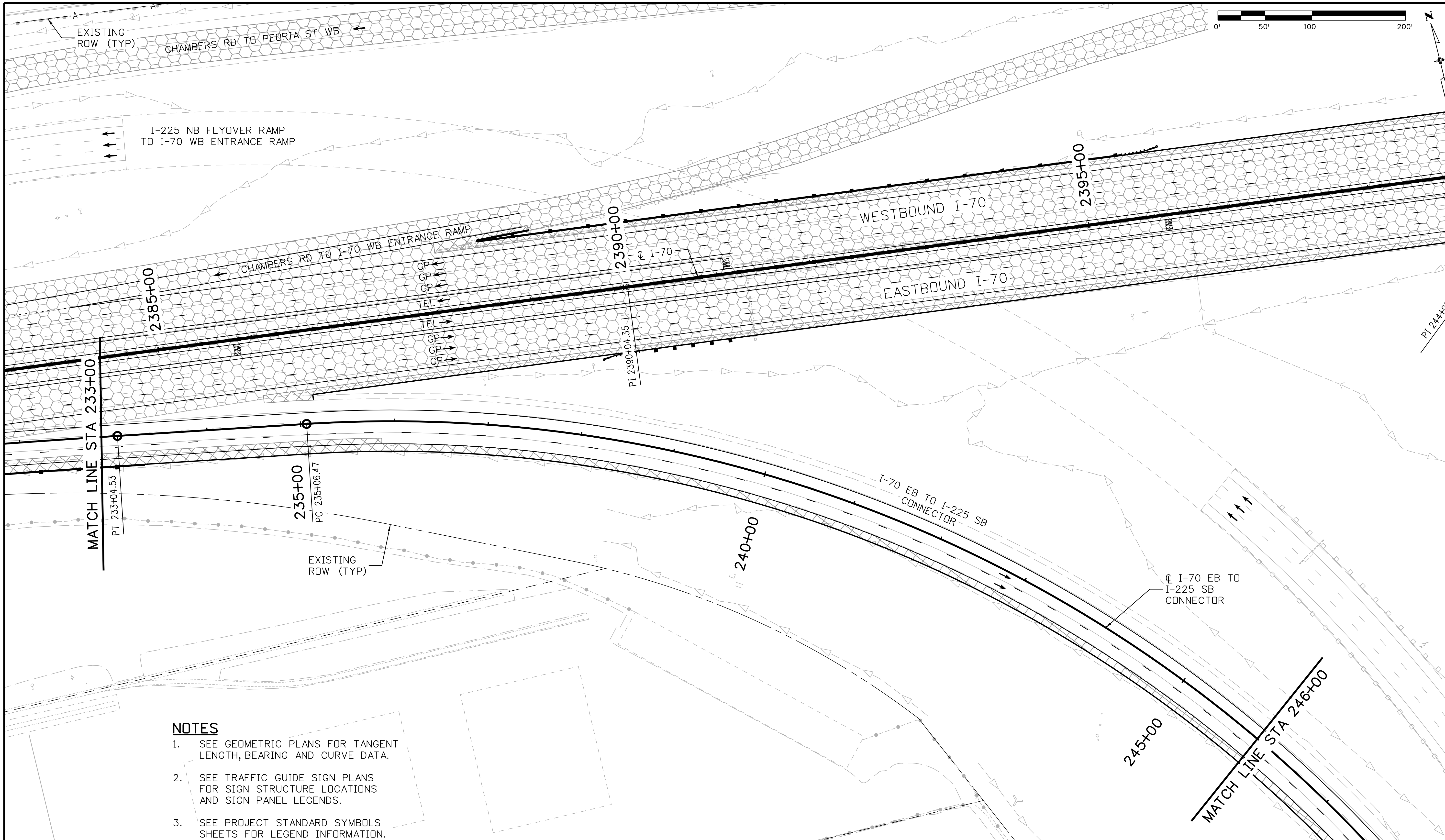
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
I-70 EB TO I-225 SB CONNECTOR
STA 225+00 TO STA 233+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PLAN		Subset Sheets: RPL139 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 177



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

DENPWP01$ 7:55:41 AM \\denpwp01\pwicsjobs596\291431\515021_97\RDPL140-13599-RDPL_139_I-70 EB to I-225 SB GP.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

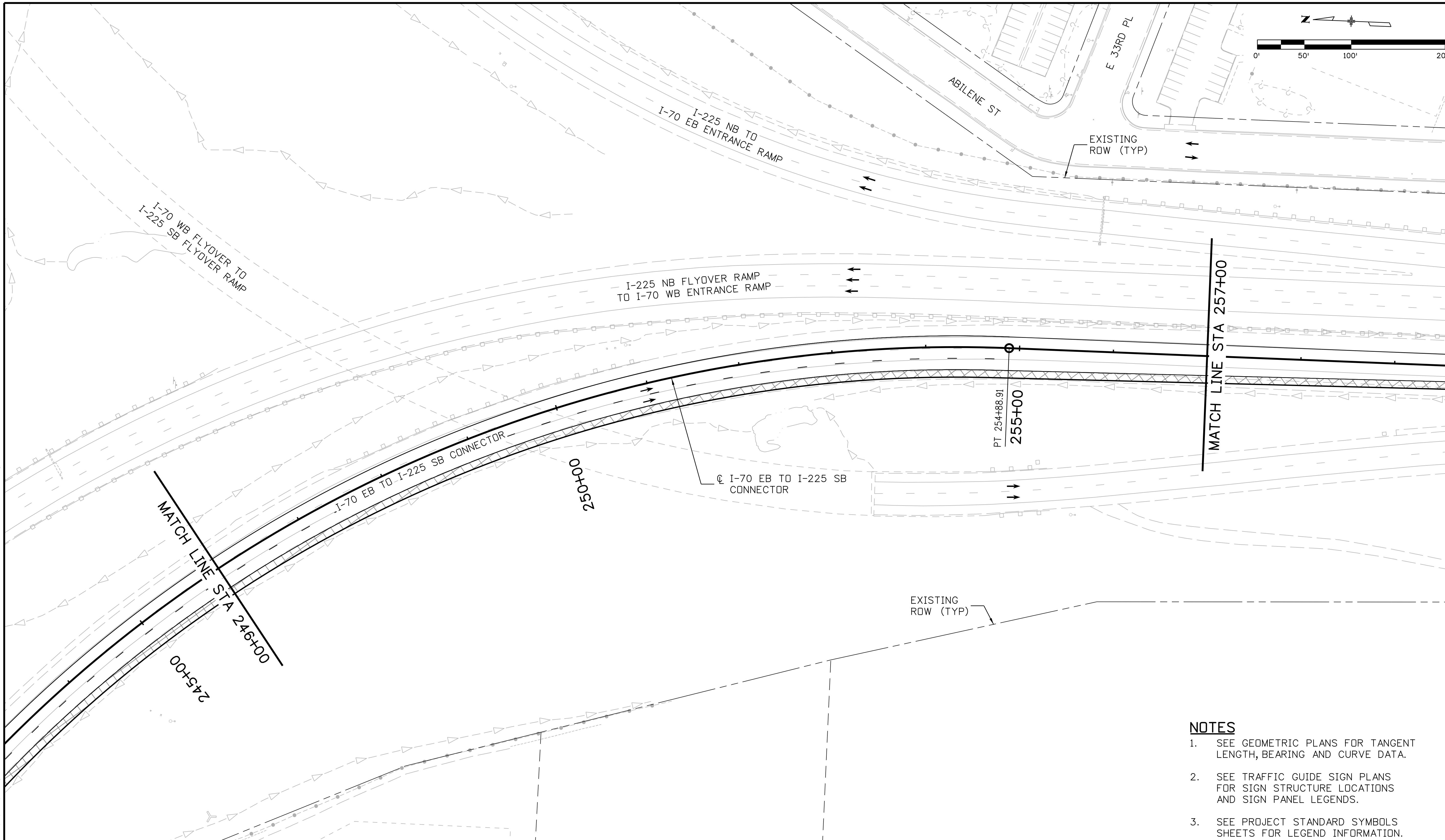
Sheet Revisions		
Date:	Comments	Init.

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 PLAN
I-70 EB TO I-225 SB CONNECTOR
STA 233+00 TO STA 246+00
Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL140 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 178



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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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.

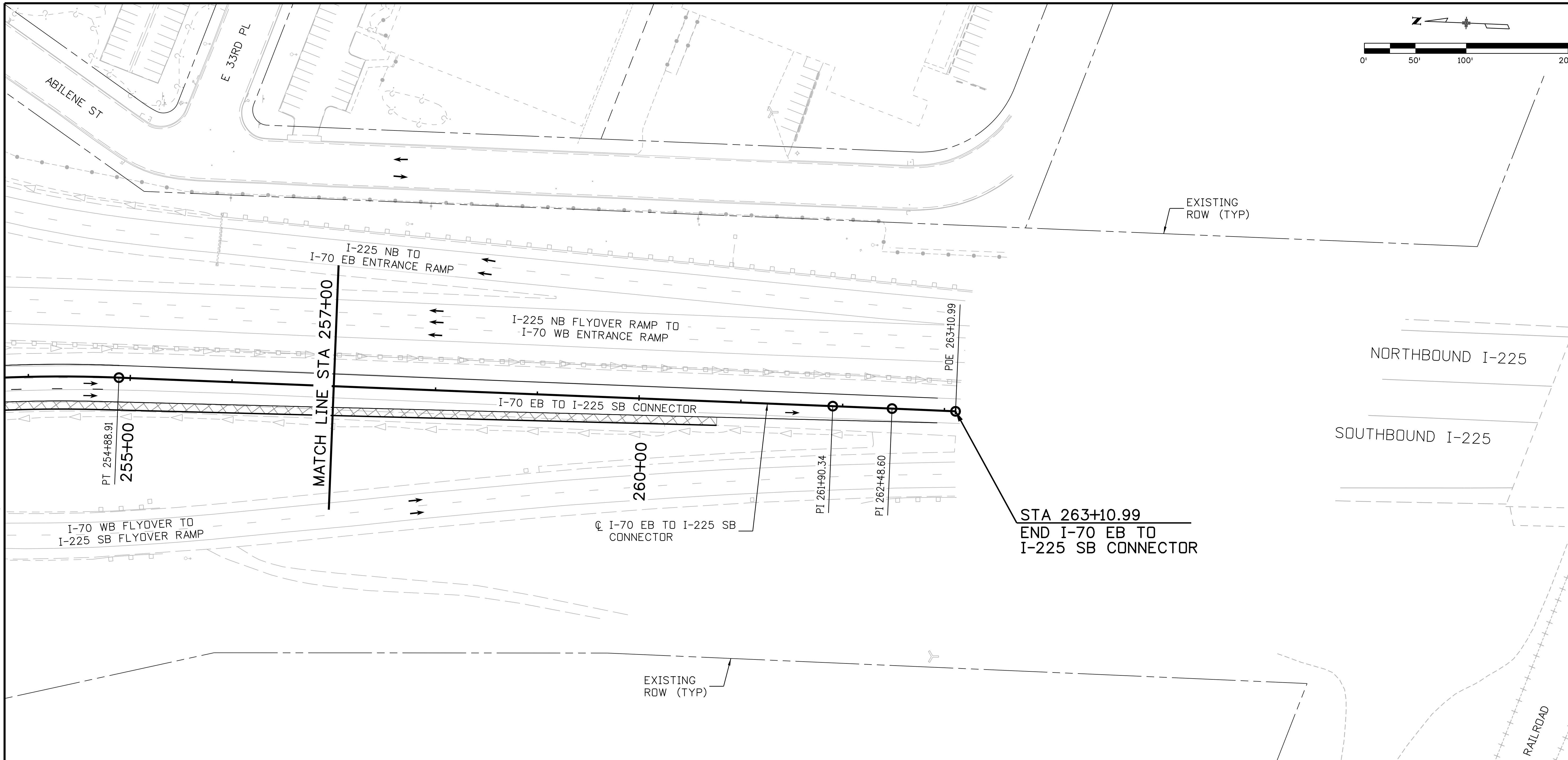
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
I-70 EB TO I-225 SB CONNECTOR
STA 246+00 TO STA 257+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PLAN		Subset Sheets: RPL141 of 142	

Project No./Code
FBR 0704-234
19631
Sheet Number 179



NOTES

1. SEE GEOMETRIC PLANS FOR TANGENT LENGTH, BEARING AND CURVE DATA.
2. SEE TRAFFIC GUIDE SIGN PLANS FOR SIGN STRUCTURE LOCATIONS AND SIGN PANEL LEGENDS.
3. SEE PROJECT STANDARD SYMBOLS SHEETS FOR LEGEND INFORMATION.

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.

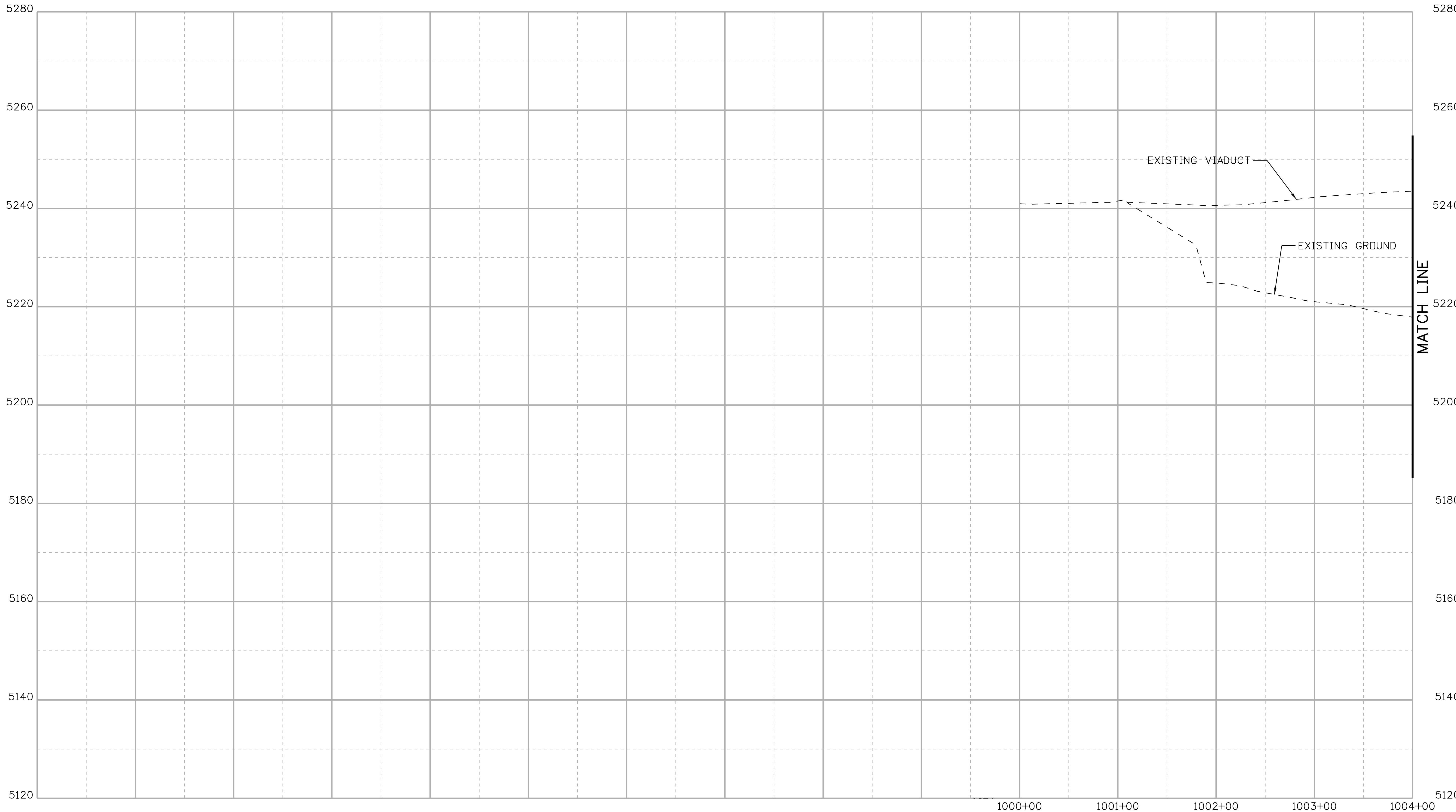
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PROPOSAL
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PLAN
I-70 EB TO I-225 SB CONNECTOR
STA 257+00 TO STA 263+10.99
Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PLAN
Subset Sheets: RPL142 of 142

Project No./Code
FBR 0704-234
19631
Sheet Number 180

DENPWP02$ 1:58:04 PM \\denpwp01\pwicsjobs596\291245\515021_99\RDPL142-13599-RDPL_141_I-70 EB to I-225 SB GP.dgn



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.

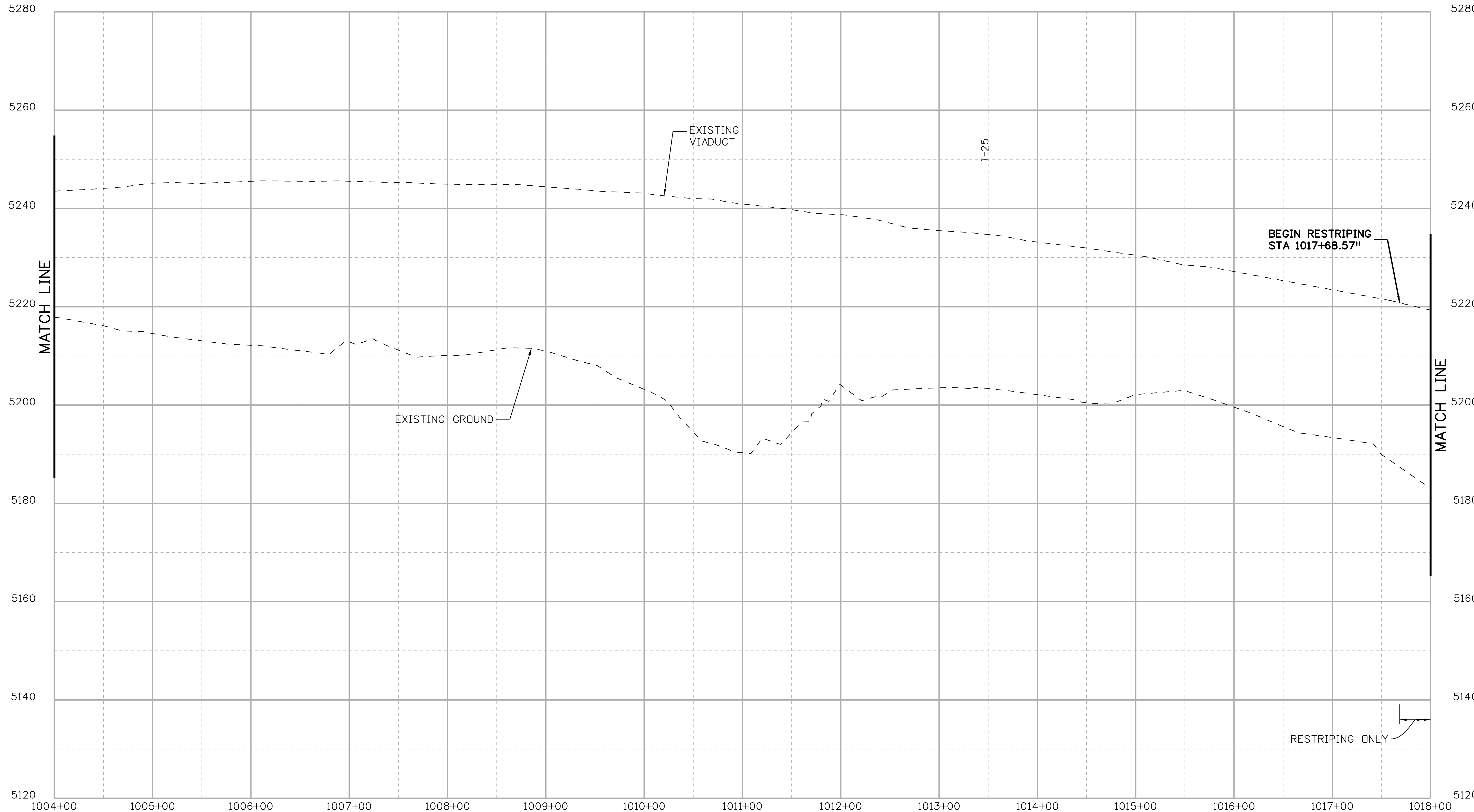
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 1000+00 TO STA 1004+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR1 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 181



DENPWP01$ 12:58:59 PM \\denpwp01\pwicsjobs596\291206\515021_193\RDPR002-13599-RDPR_002_I70 Mainline.dgn

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
I-70 MAINLINE
STA 1004+00 TO STA 1018+00

Designer:

Detailer:

Structure Numbers

Sheet Subset: ROAD PROF

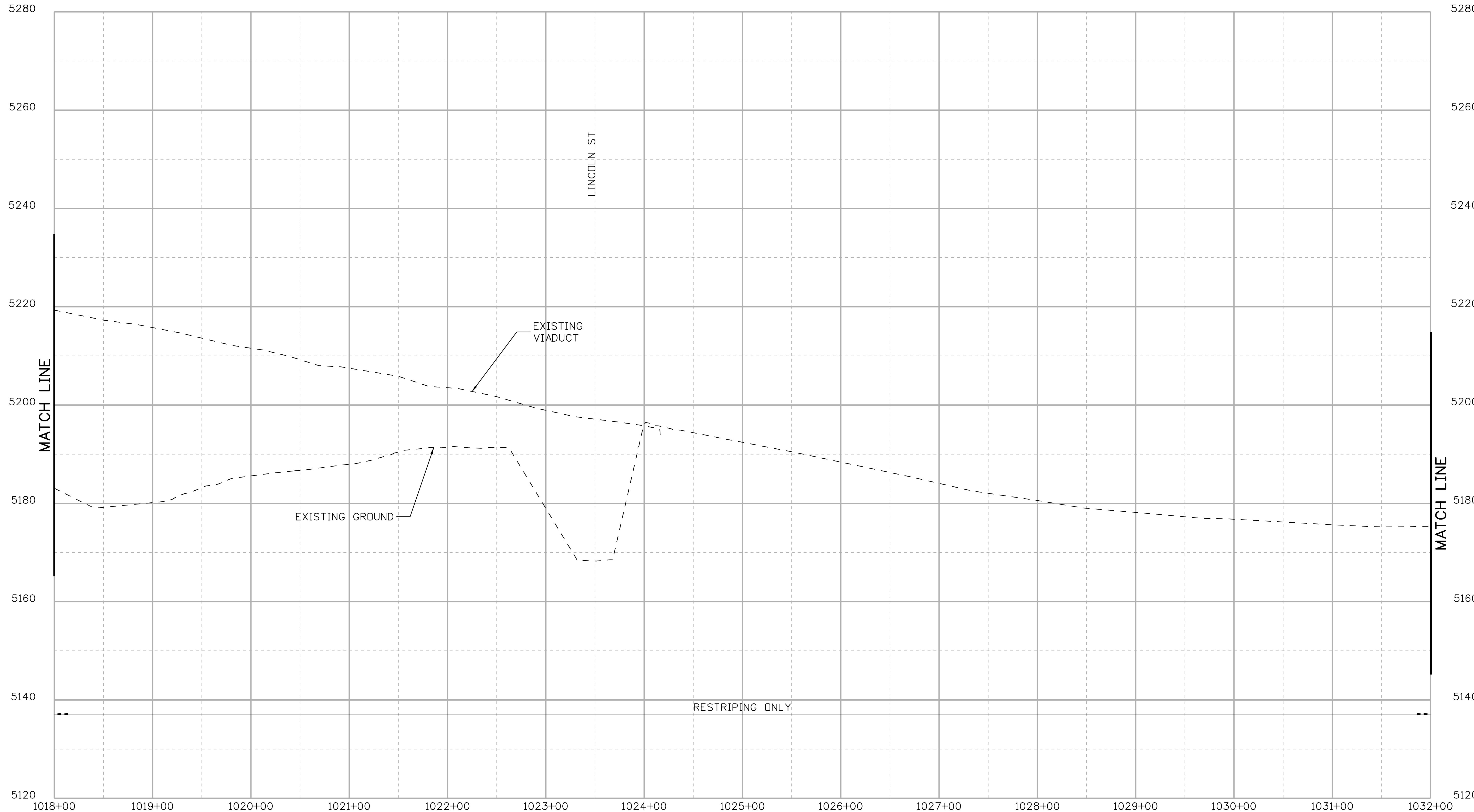
Subset Sheets: RPR2 of 136

Project No./Code

FBR 0704-234

19631

Sheet Number 182



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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
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Region 1
KJS

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No Revisions:	
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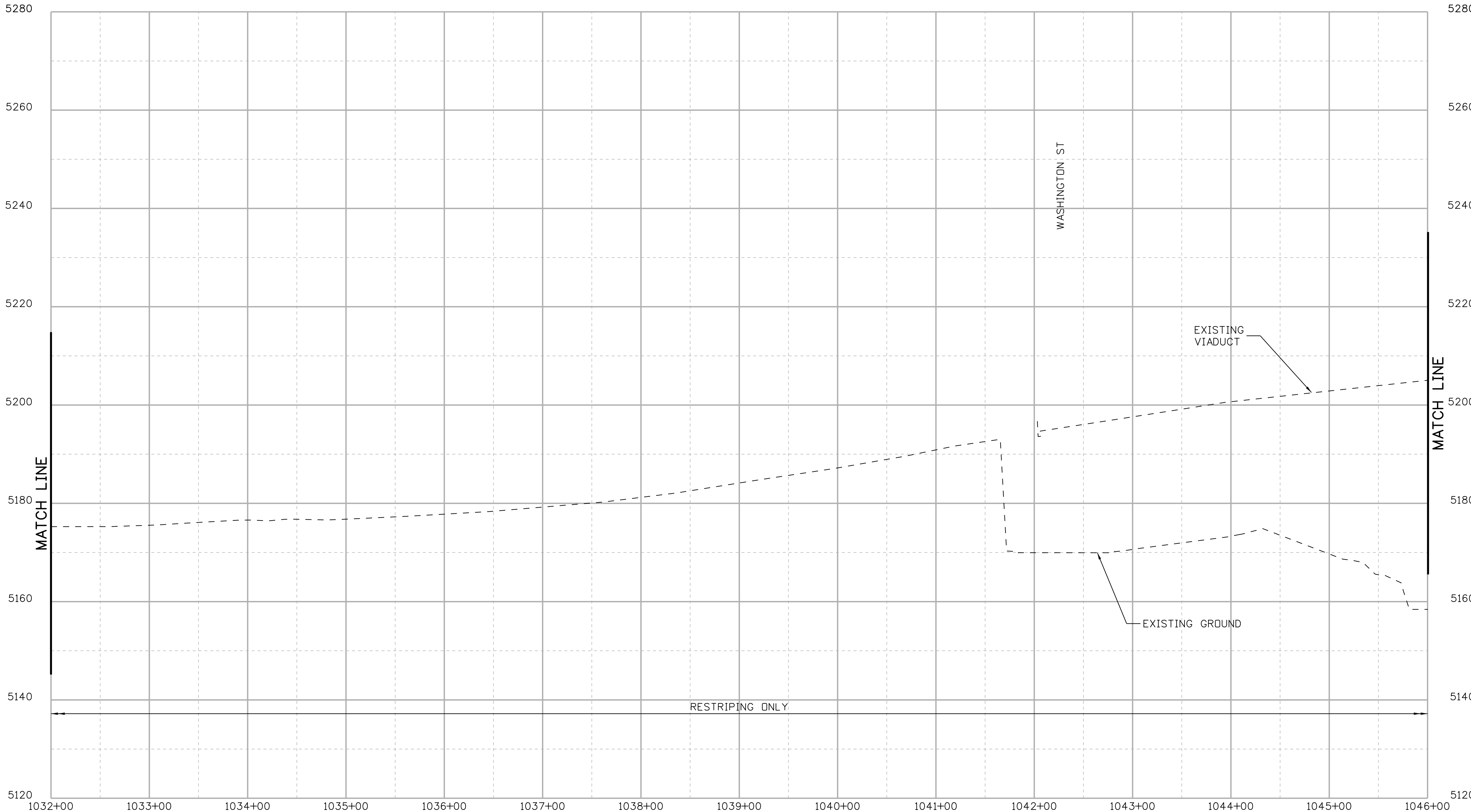
Void:	

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 1018+00 TO STA 1032+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PROF		Subset Sheets: RPR3 of 136	

Project No./Code	
FBR 0704-234	
19631	
Sheet Number	183



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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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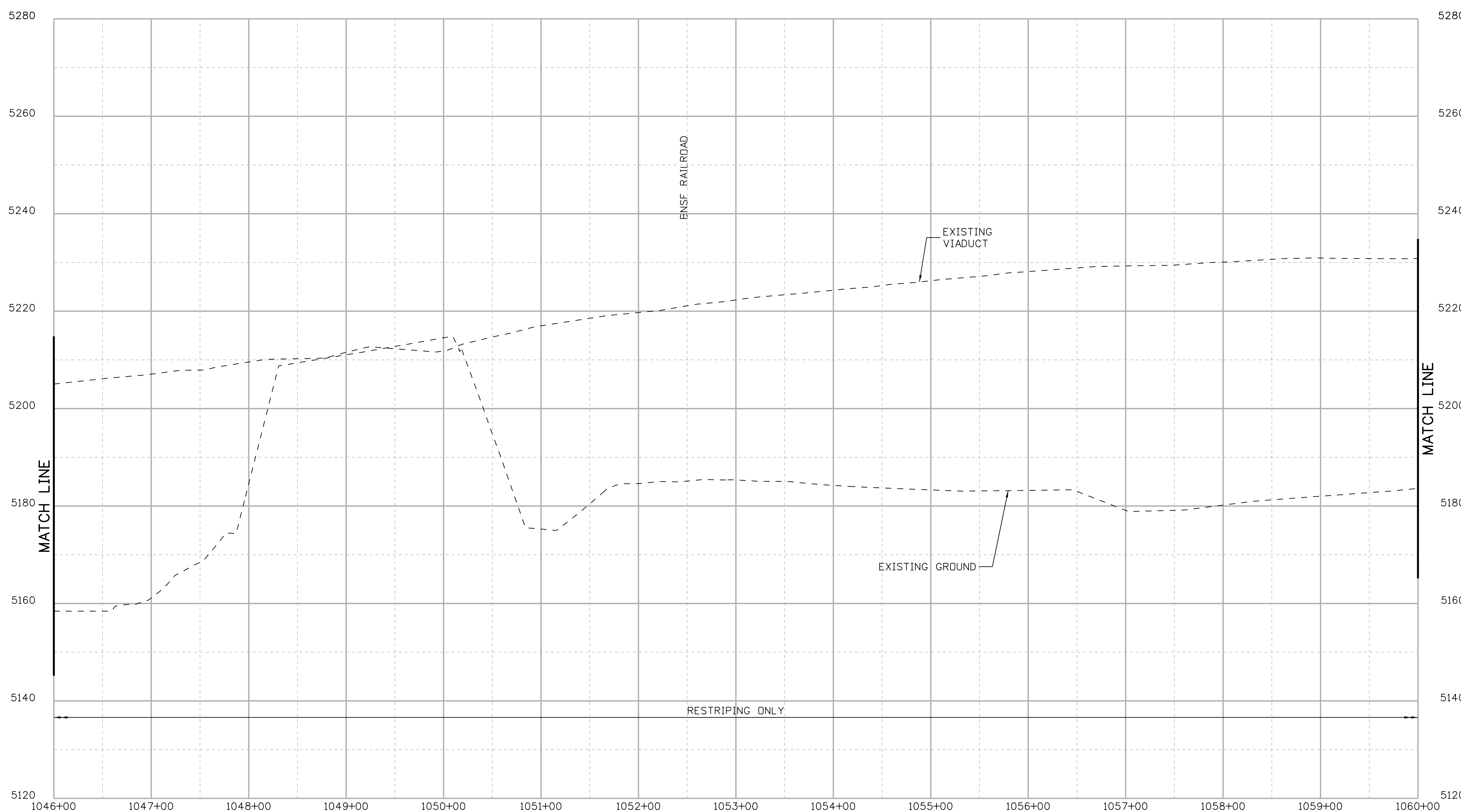
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 1032+00 TO STA 1046+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PROF	Subset Sheets: RPR4	of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 184



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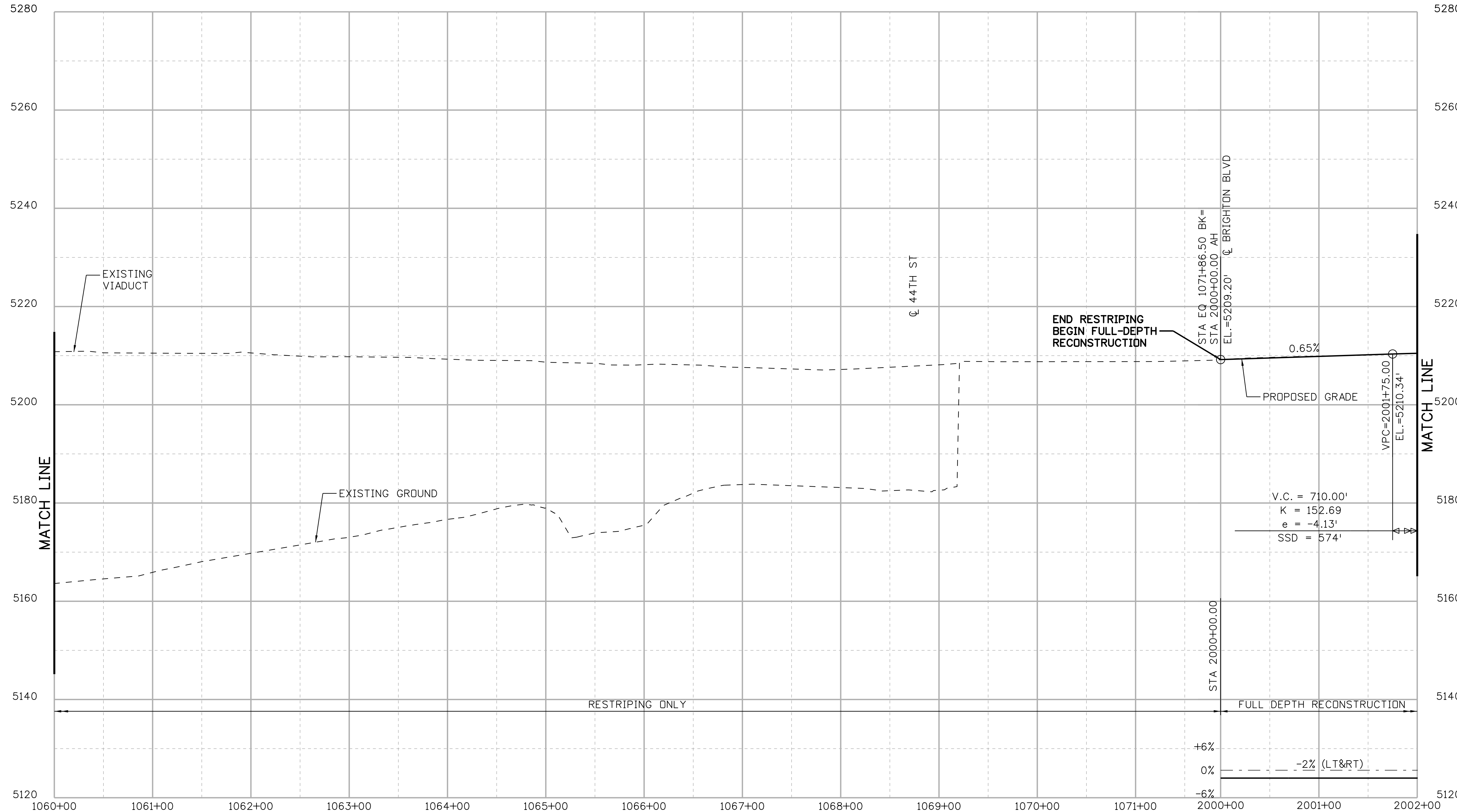
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 1046+00 TO STA 1060+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR5 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 185



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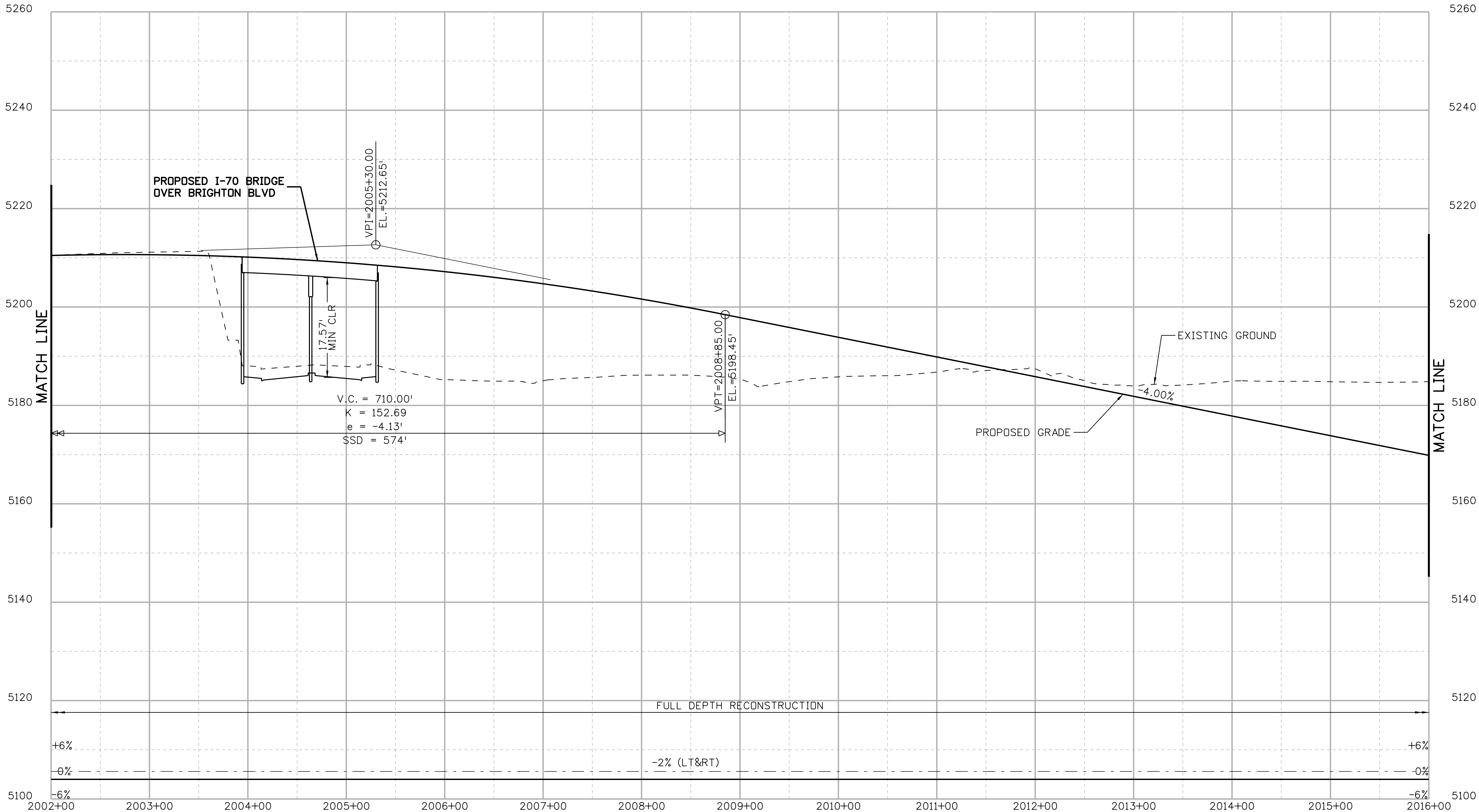
Print Date: 5/22/2017		Sheet Revisions	Colorado Department of Transportation	PRELIMINARY
File Name: File Name: See sheet edge for information		Date: / Comments / Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:
Front Range Mobility Group	Horiz. Scale: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

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 1060+00 TO STA 2002+00

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR6 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 186



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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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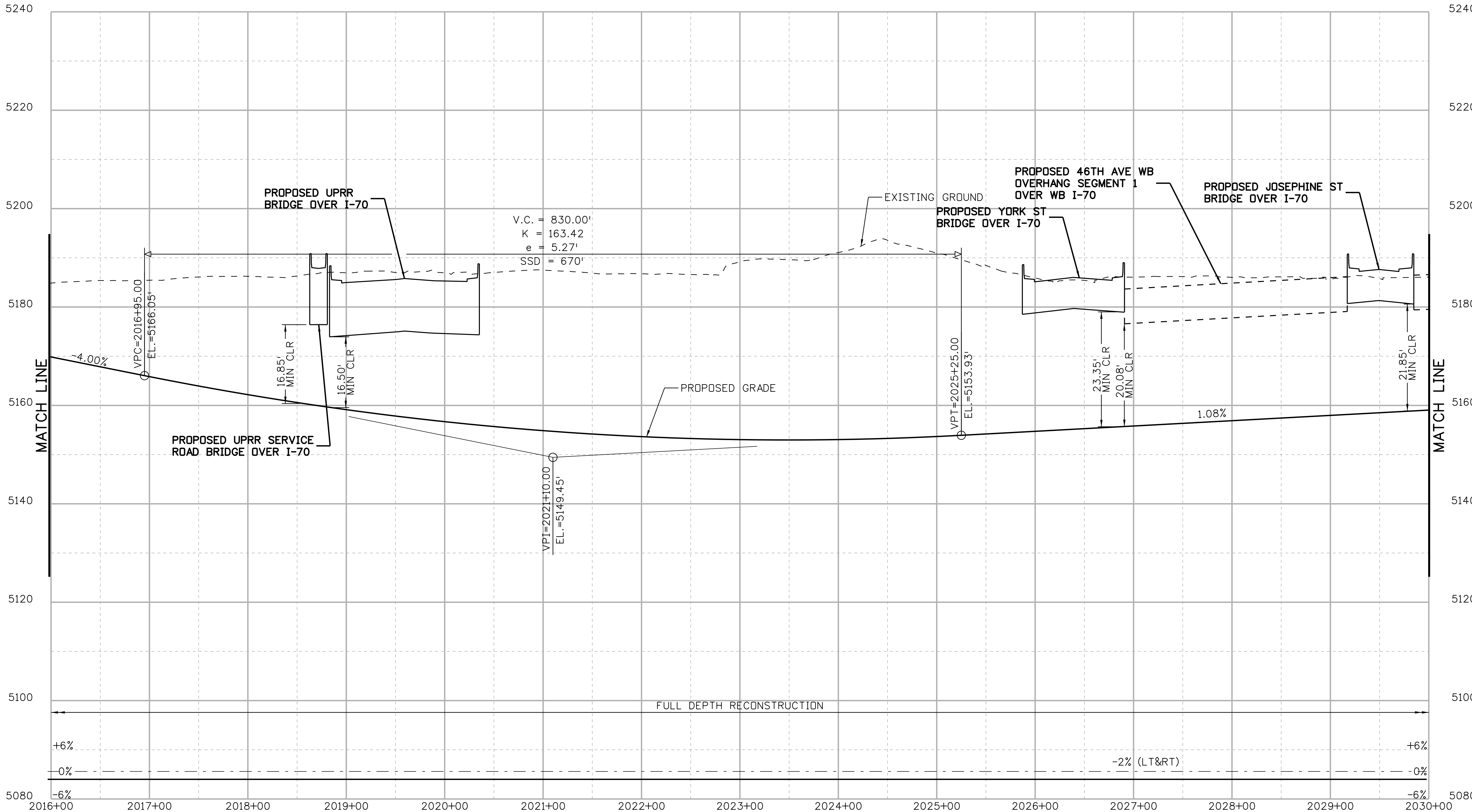
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2002+00 TO STA 2016+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR7 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 187



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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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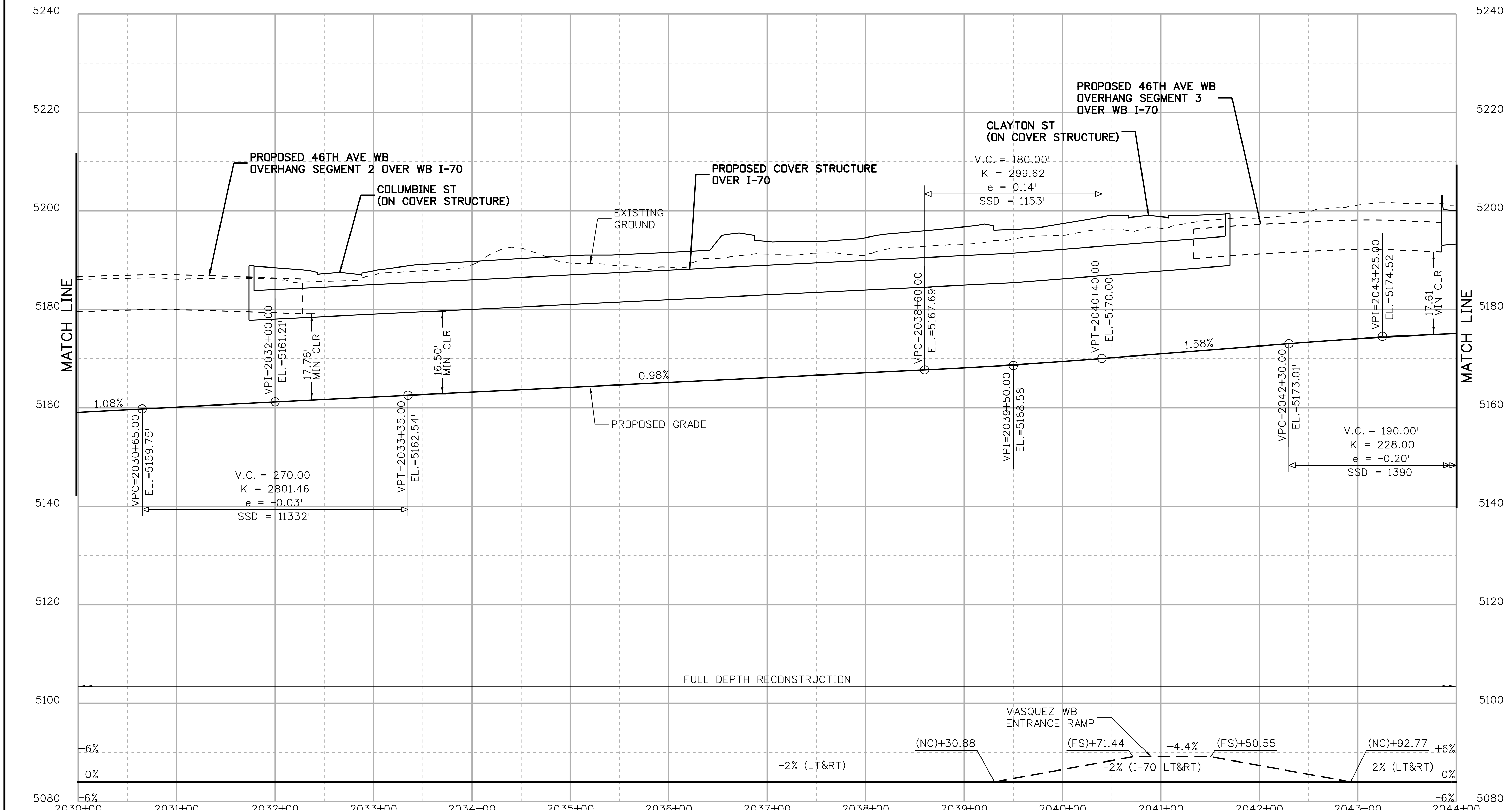
PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2016+00 TO STA 2030+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PROF	Subset Sheets: RPR8	of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 188



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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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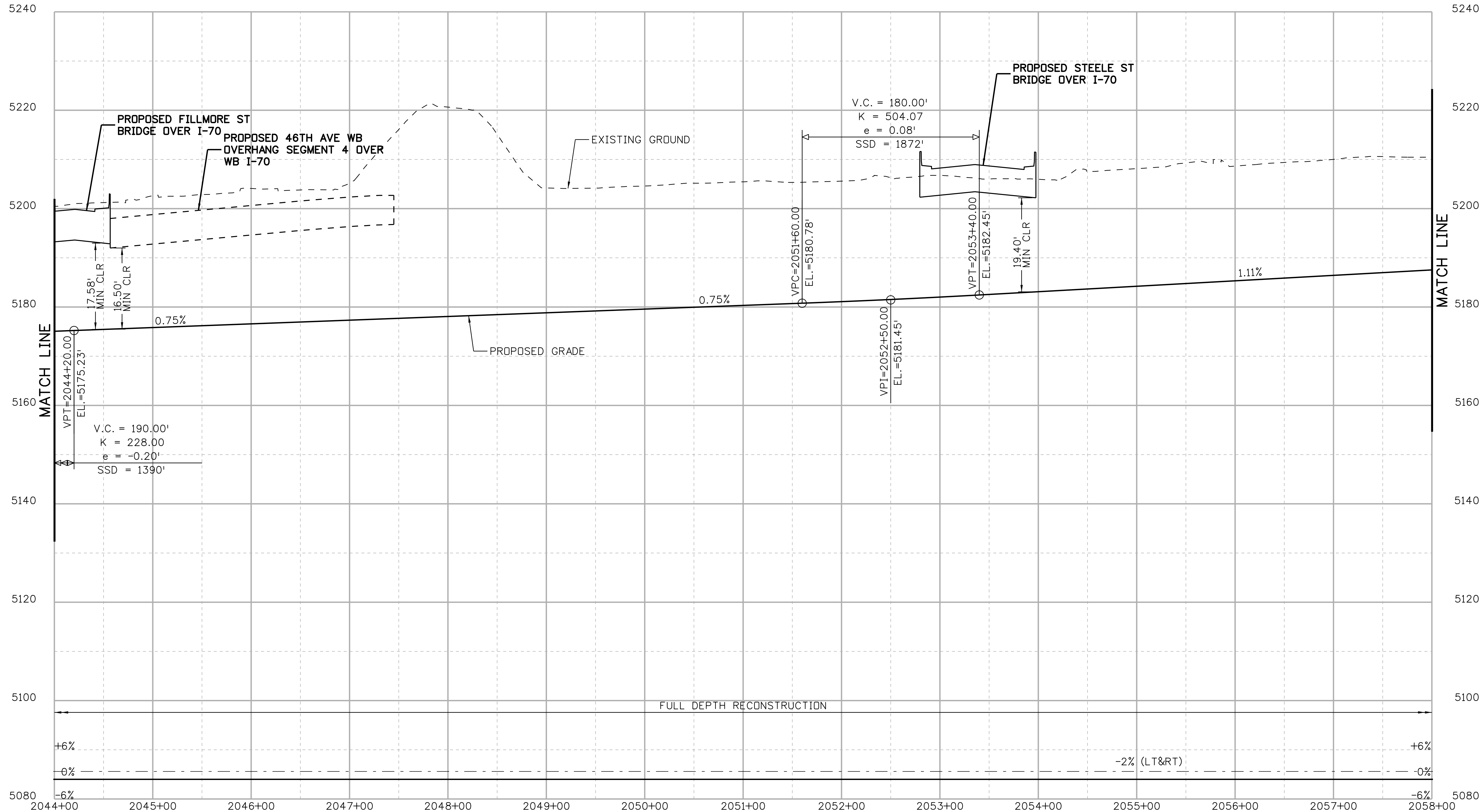
CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2030+00 TO STA 2044+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PROF		Subset Sheets: RPR9 of 136	

Project No./Code
FBR 0704-234
19631
Sheet Number 189



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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.

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No Revisions:
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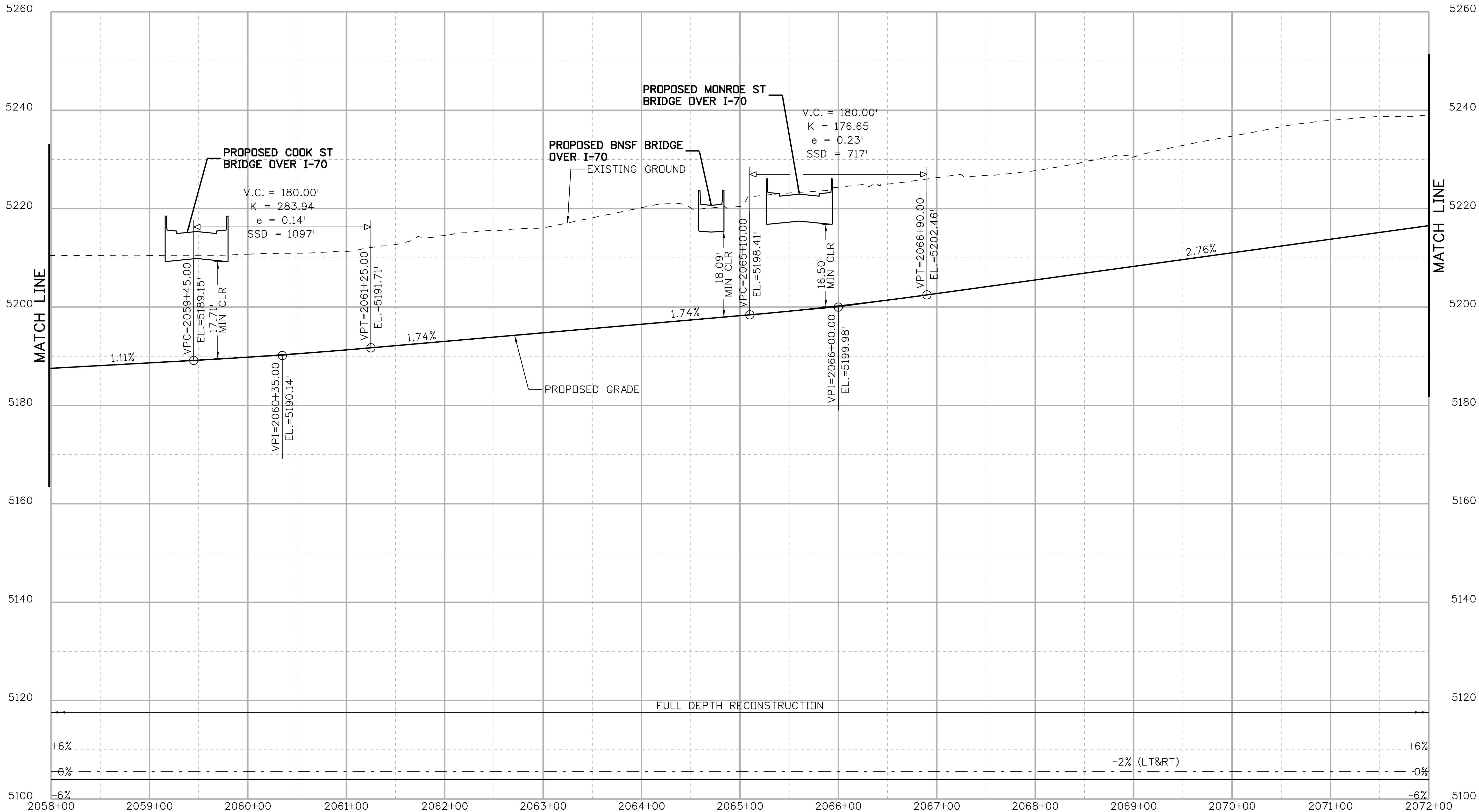
CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2044+00 TO STA 2058+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR10 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 190



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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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No Revisions:
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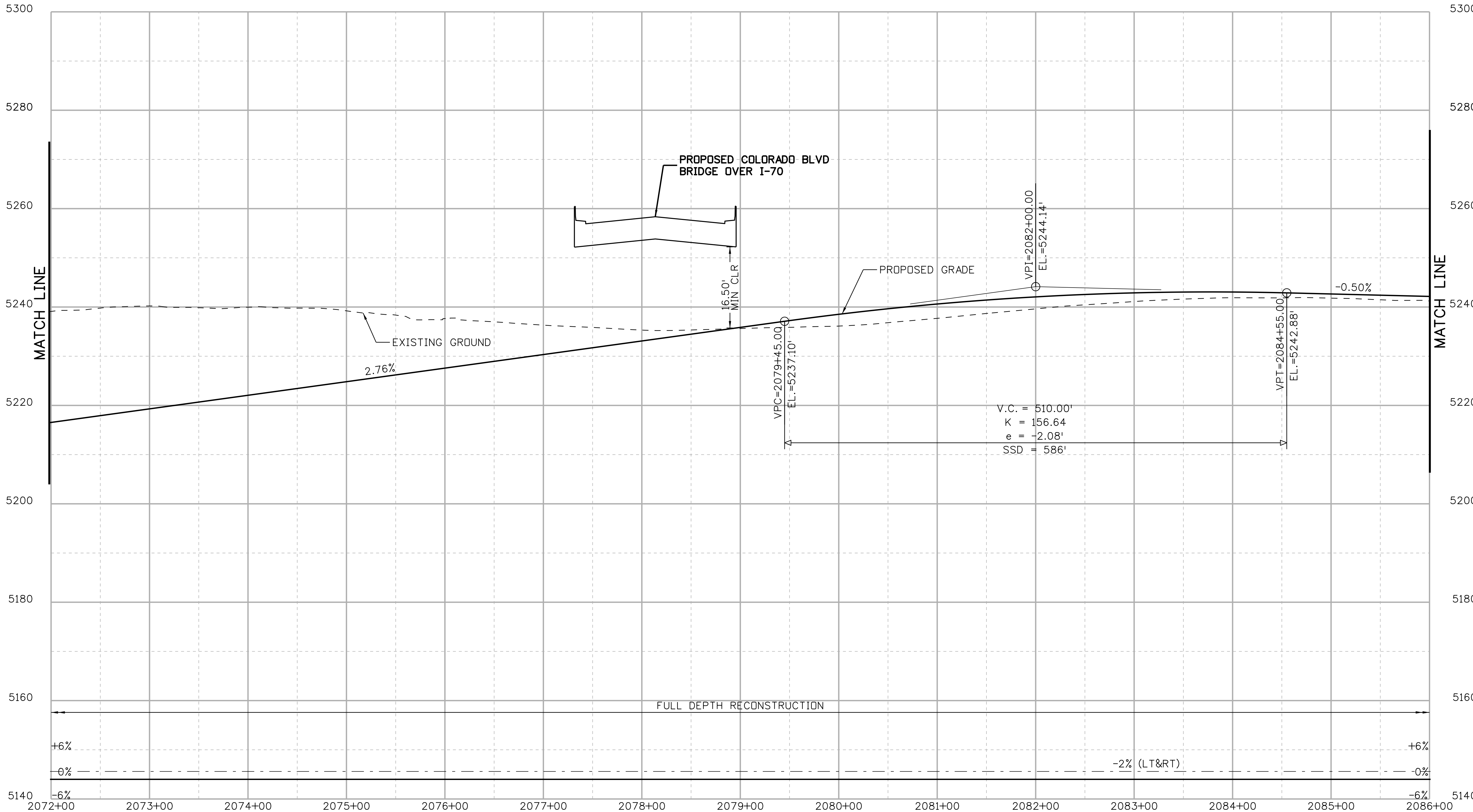
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2058+00 TO STA 2072+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PROF	Subset Sheets: RPR11	of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 191



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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.

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PRELIMINARY
No Revisions:
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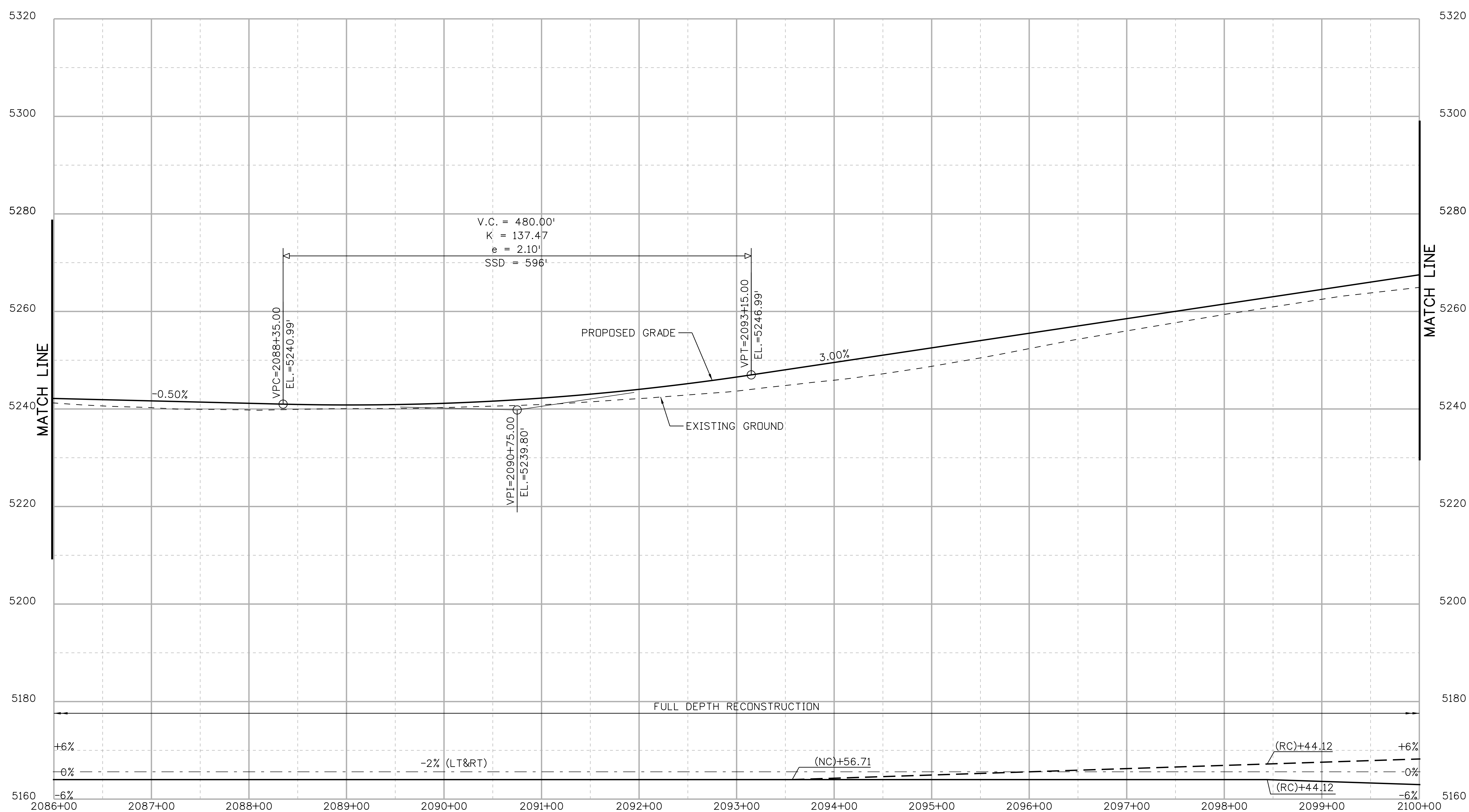
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2072+00 TO STA 2086+00
Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR12 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 192



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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
CDOT
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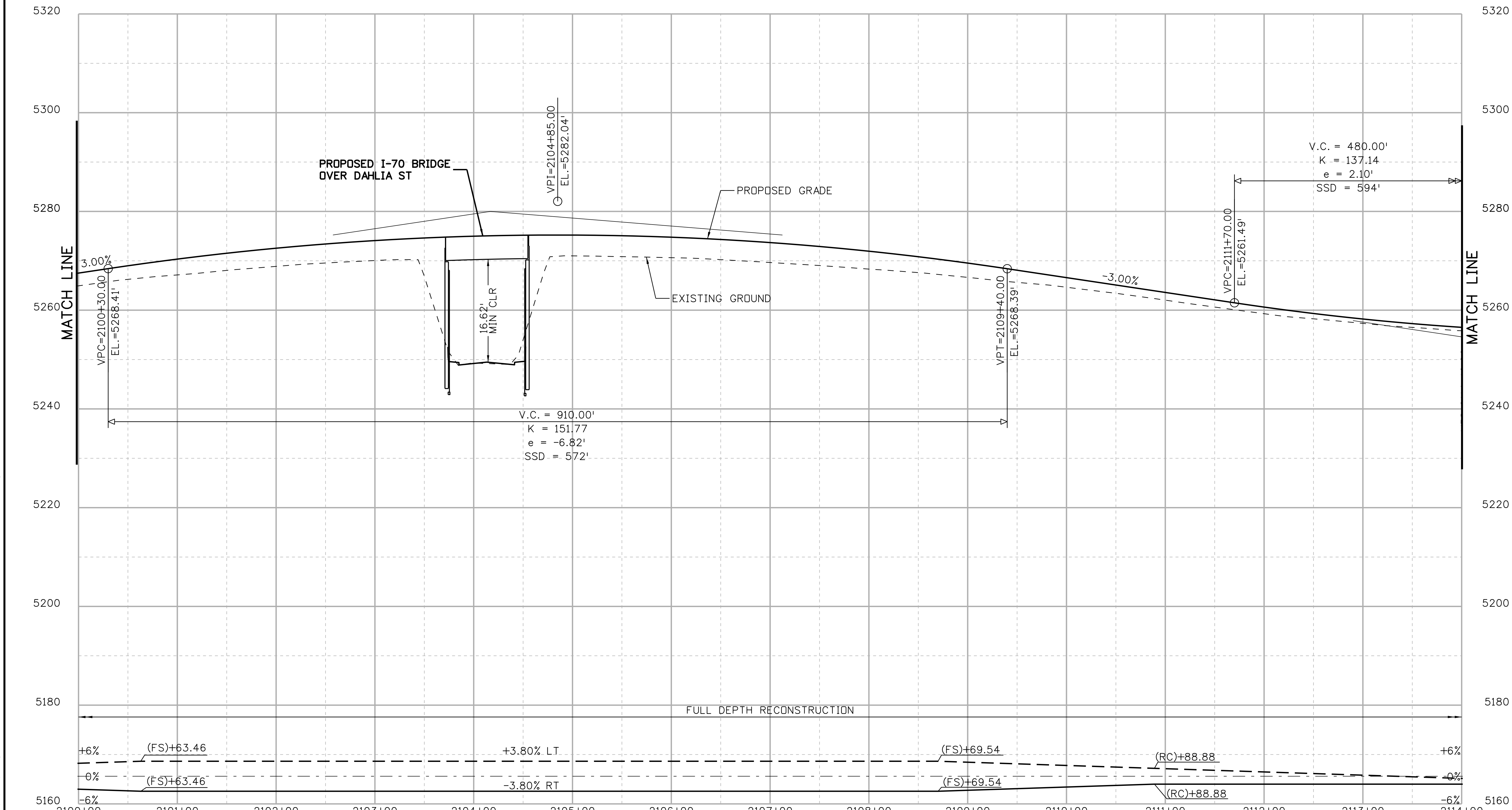
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2086+00 TO STA 2100+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PROF	Subset Sheets: RPR13 of 136	

Project No./Code
FBR 0704-234
19631
Sheet Number 193



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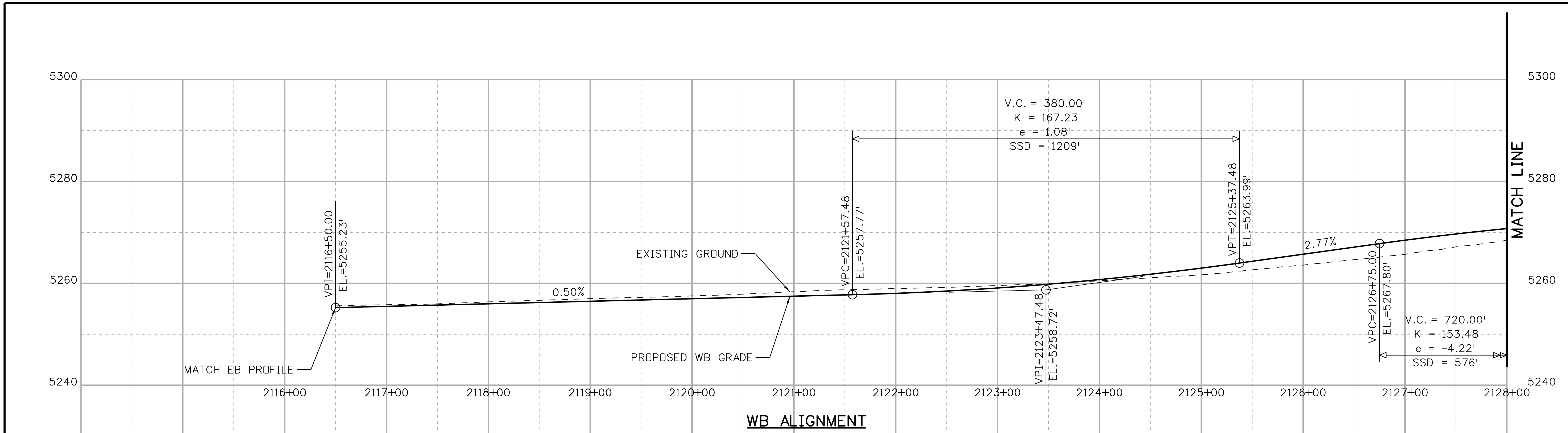
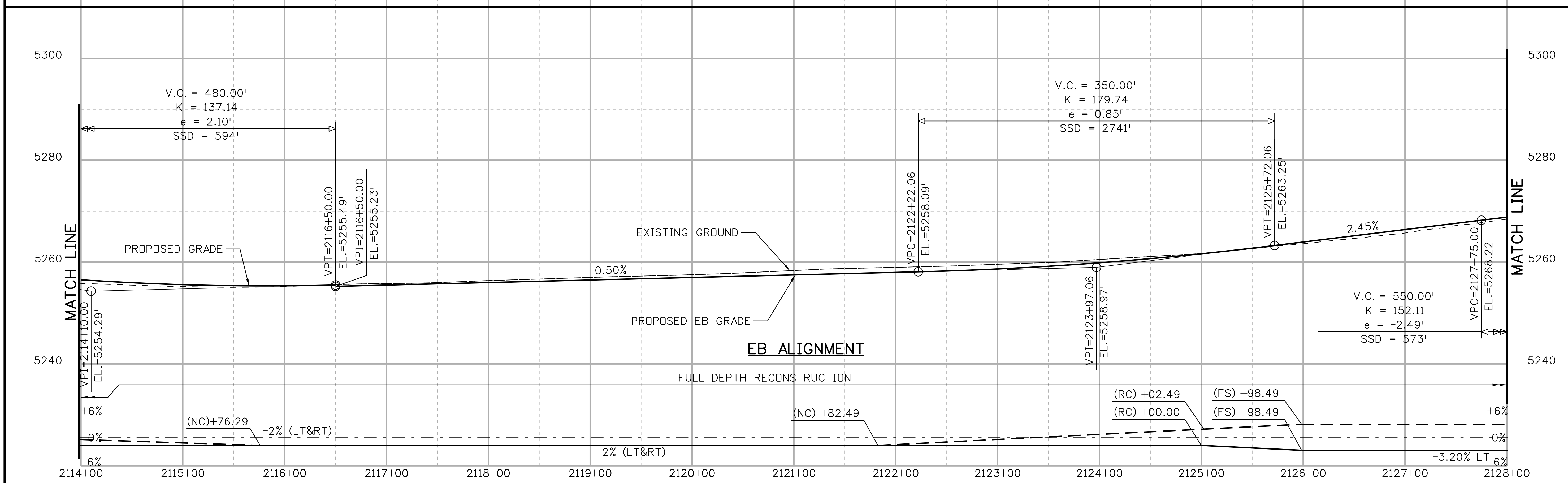
Print Date: 5/19/2017	Sheet Revisions	Colorado Department of Transportation	PRELIMINARY
File Name: File Name: See sheet edge for information	Date: / Comments / Init.	2000 South Holly Street, Denver, CO 80222, Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:
Horiz. Scale: As Noted		Region 1	Revised: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

Front Range Mobility Group

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2100+00 TO STA 2114+00

Designer:	Structure Numbers	Project No./Code
Detailer:		FBR 0704-234
Sheet Subset: ROAD PROF	Subset Sheets: RPR14 of 136	19631
		Sheet Number 194





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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.

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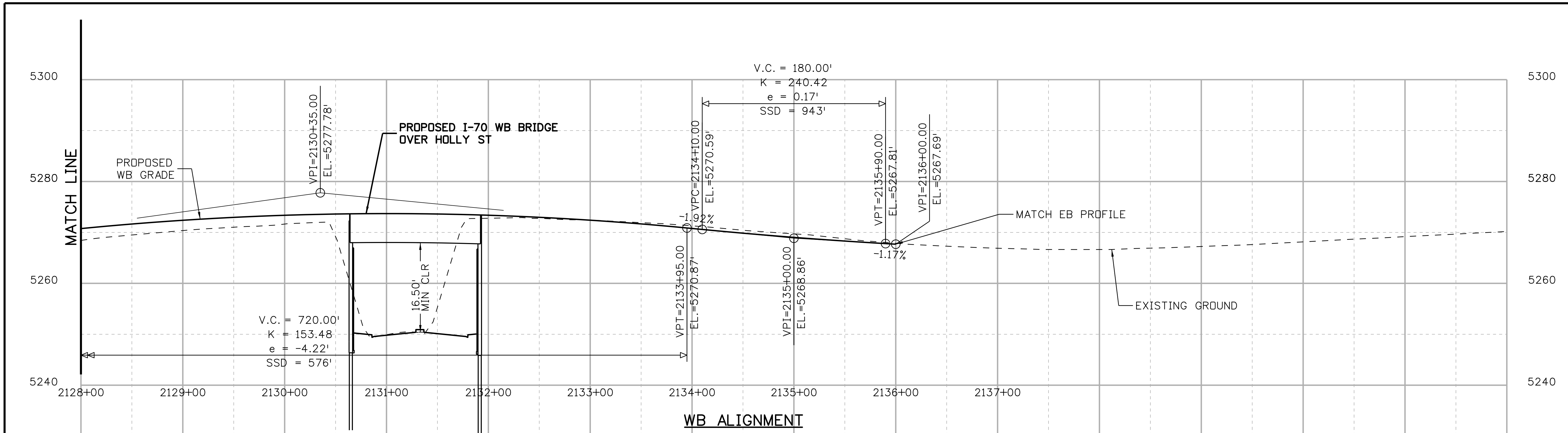
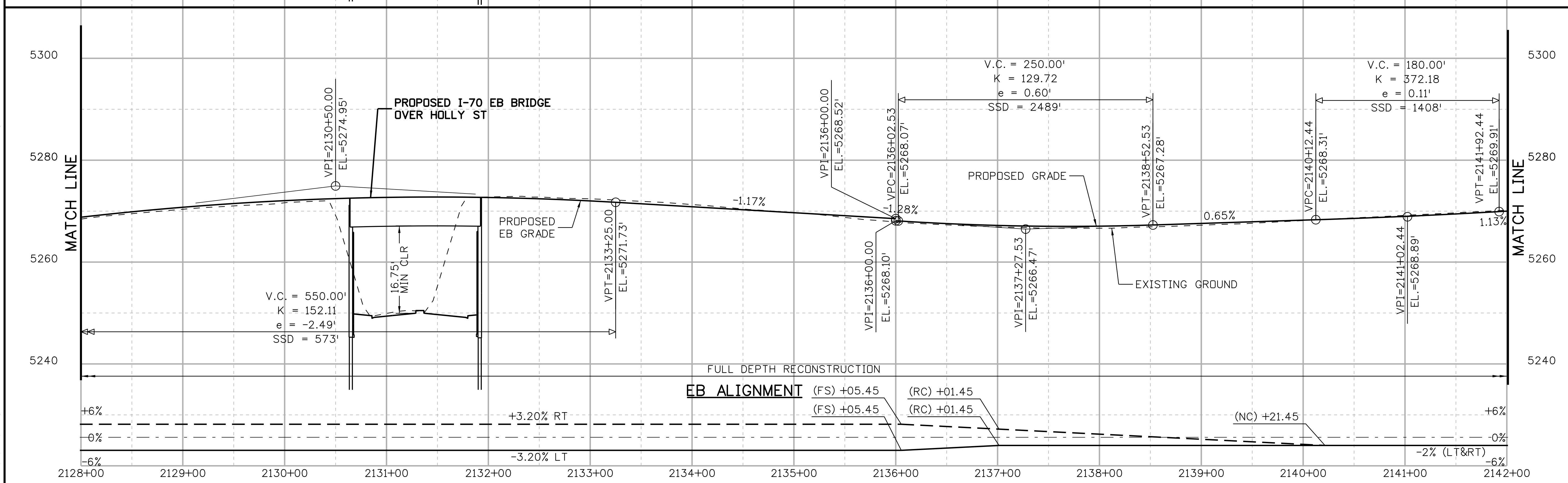
PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2114+00 TO STA 2128+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR15 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 195





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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Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2128+00 TO STA 2142+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PROF	Subset Sheets: RPR16 of 136	

Project No./Code
FBR 0704-234
19631
Sheet Number 196

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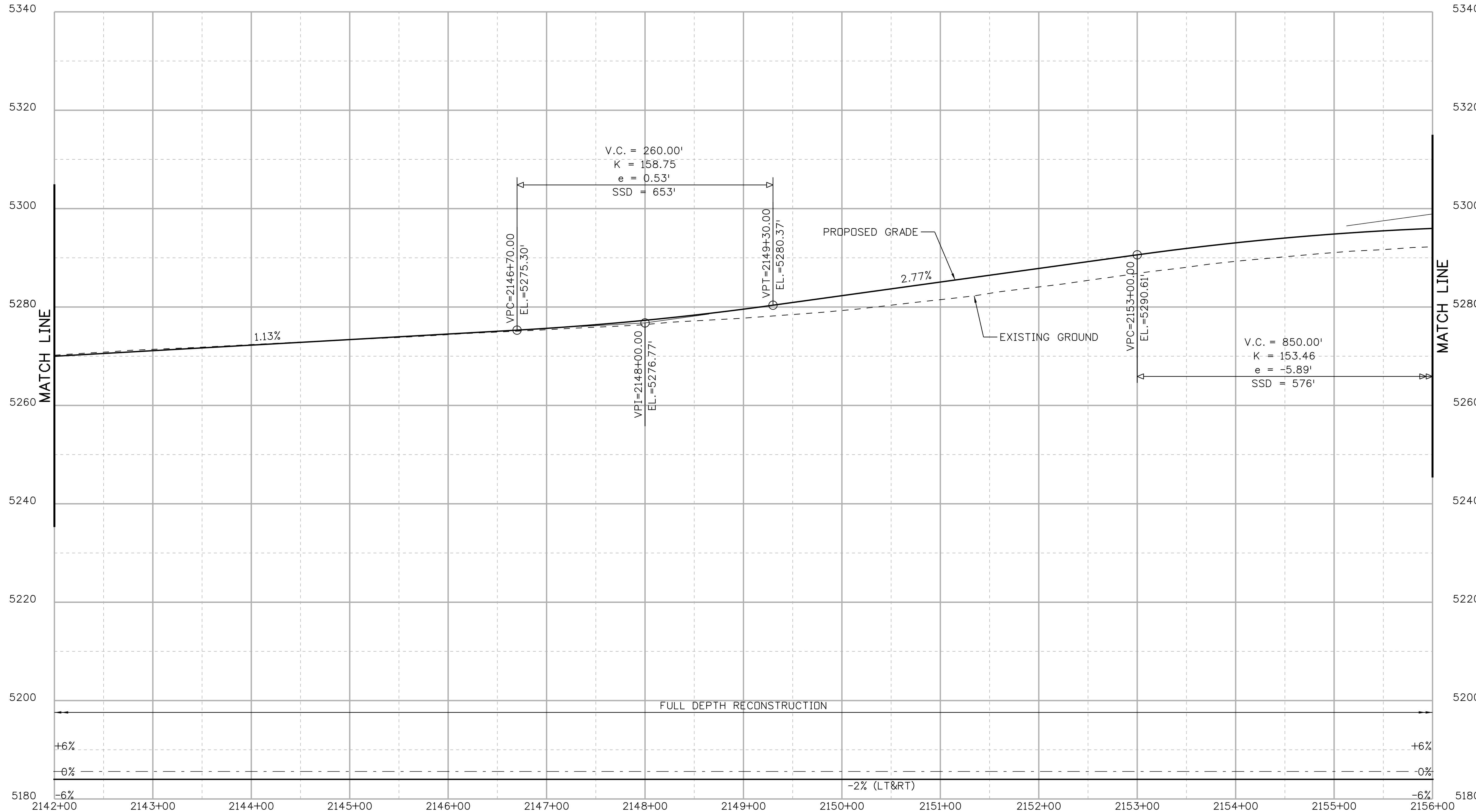

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Print Date: 5/19/2017			
File Name: File Name: See sheet edge for information			
Front Range Mobility Group	Horiz. Scale: As Noted		
	Vert. Scale: As Noted		
	Unit Information		
	Unit Leader		

Sheet Revisions

Date:	Comments	Init.

Colorado Department of Transportation
CDOT
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Denver, CO 80222
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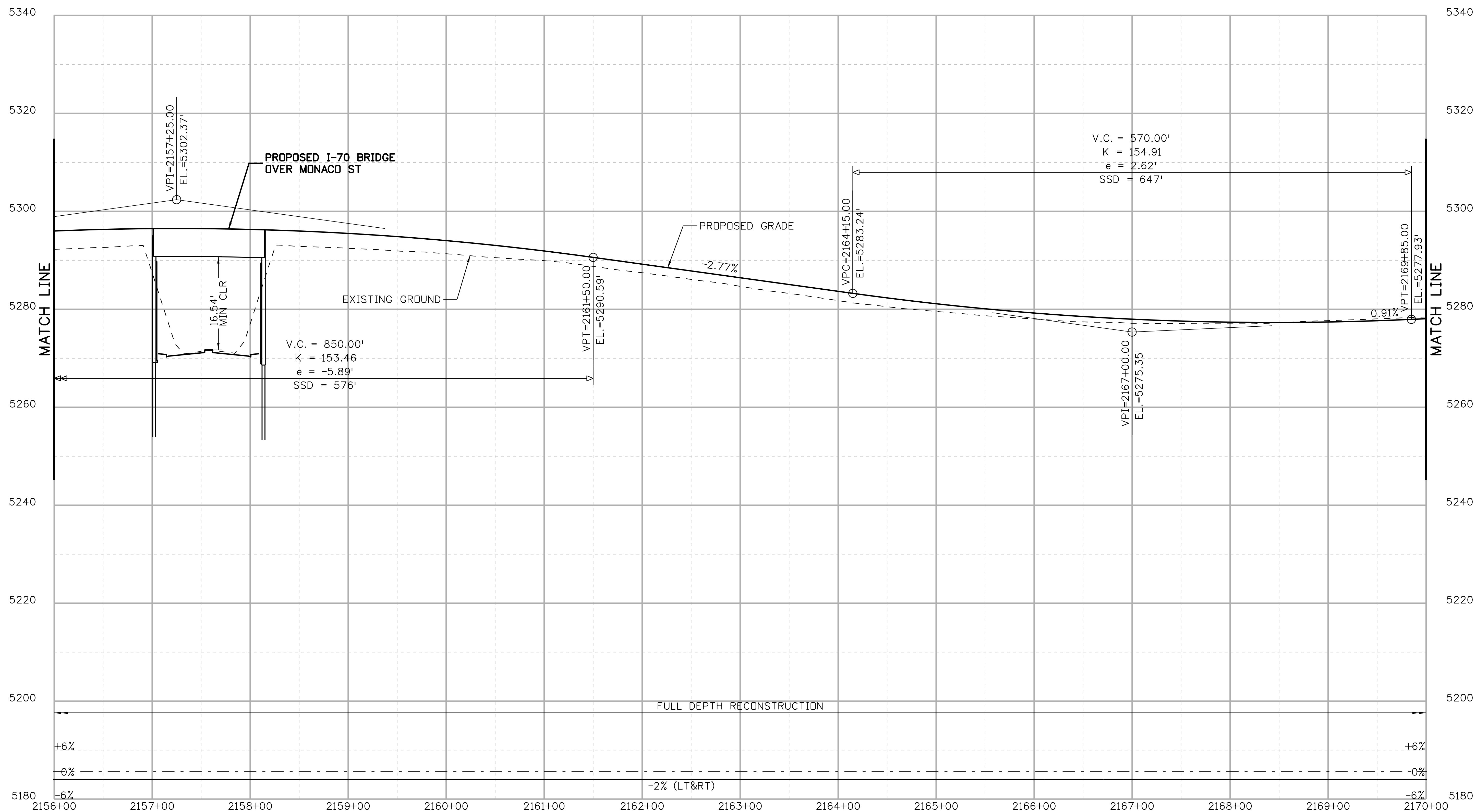
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2142+00 TO STA 2156+00

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR17 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 197



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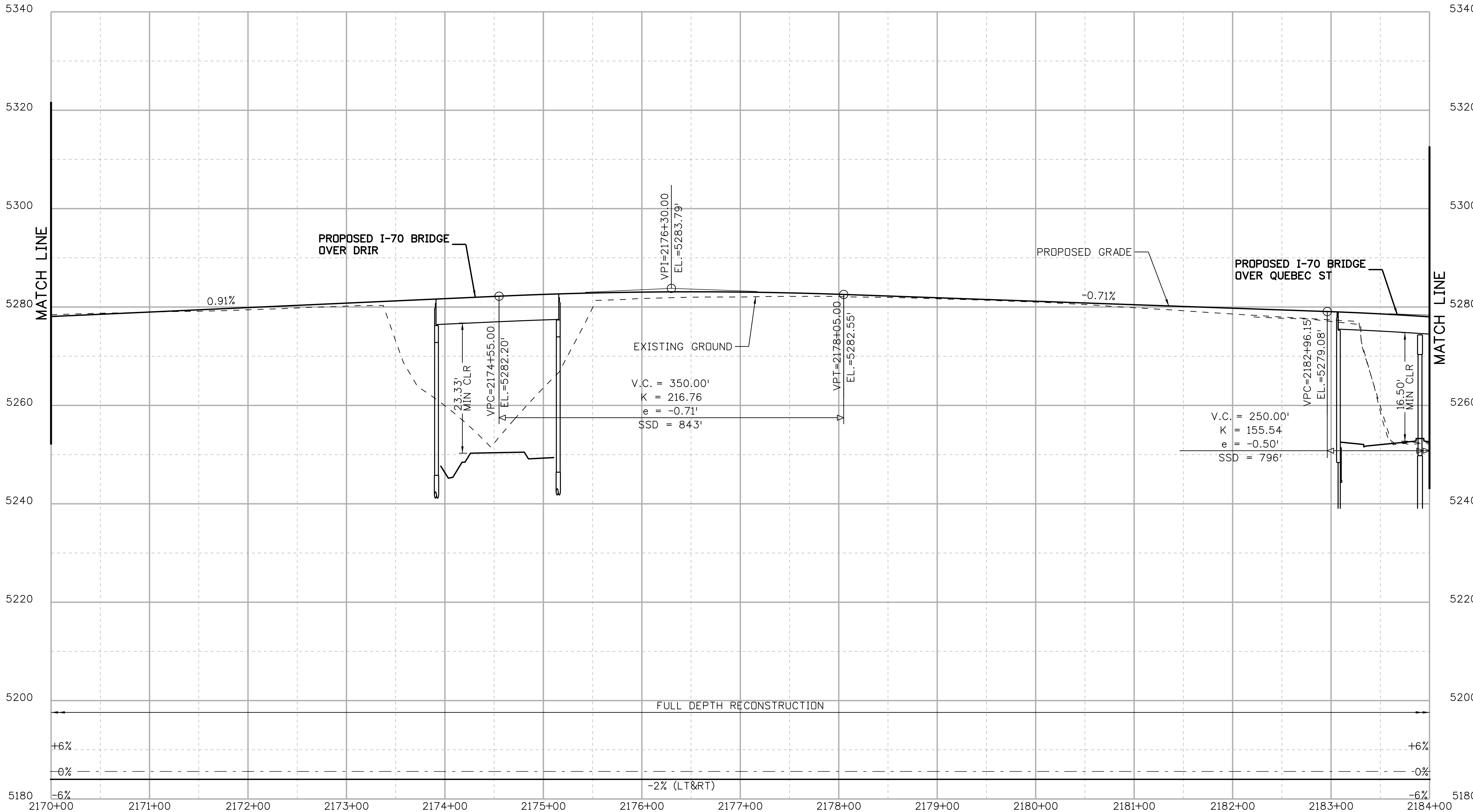
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2156+00 TO STA 2170+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR18 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 198



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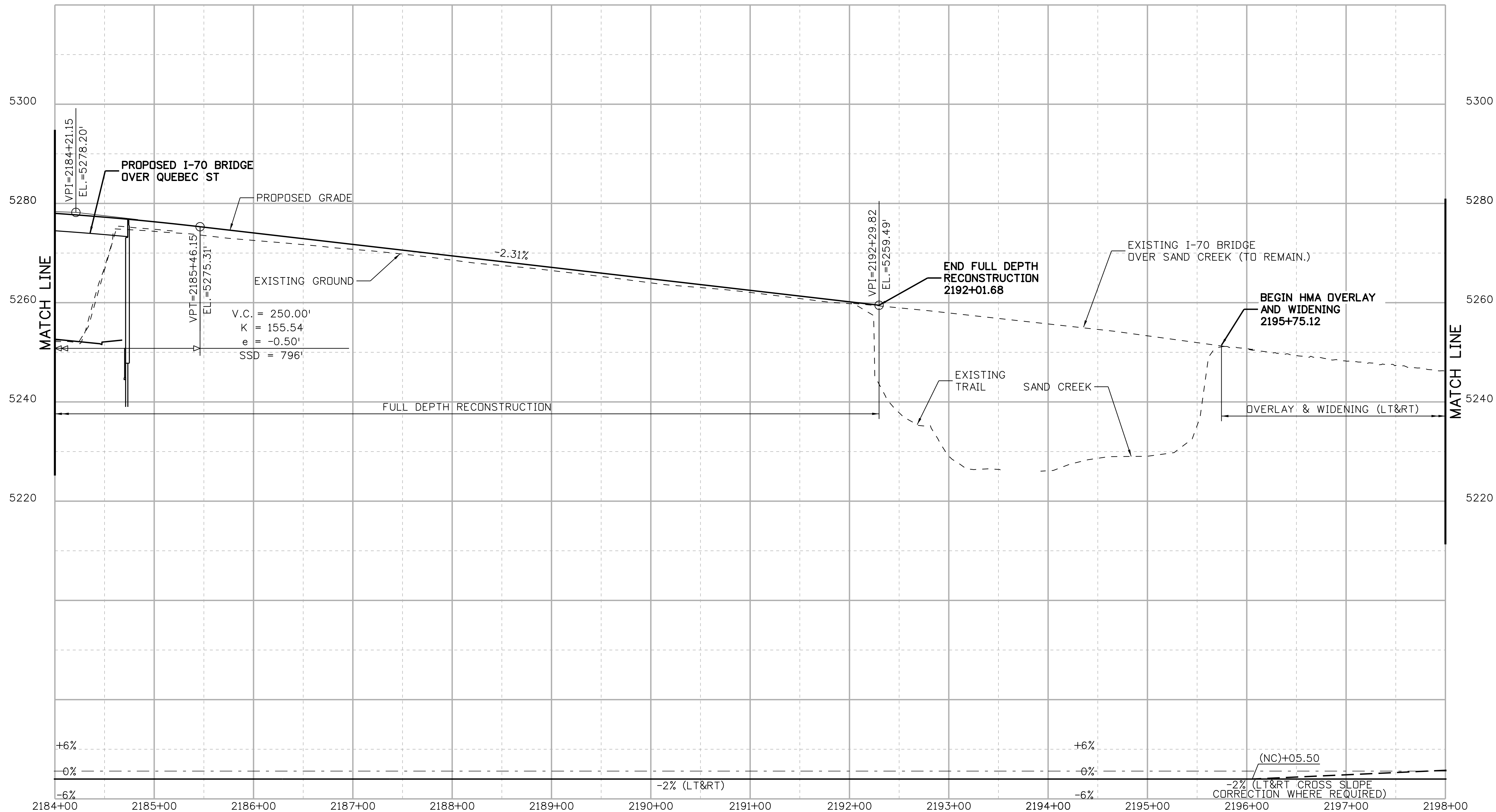
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2170+00 TO STA 2184+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR19 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 199



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
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Region 1
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PRELIMINARY
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Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2184+00 TO STA 2198+00

Designer:
Detailer:
Sheet Subset: ROAD PROF
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Subset Sheets: RPR20 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 200

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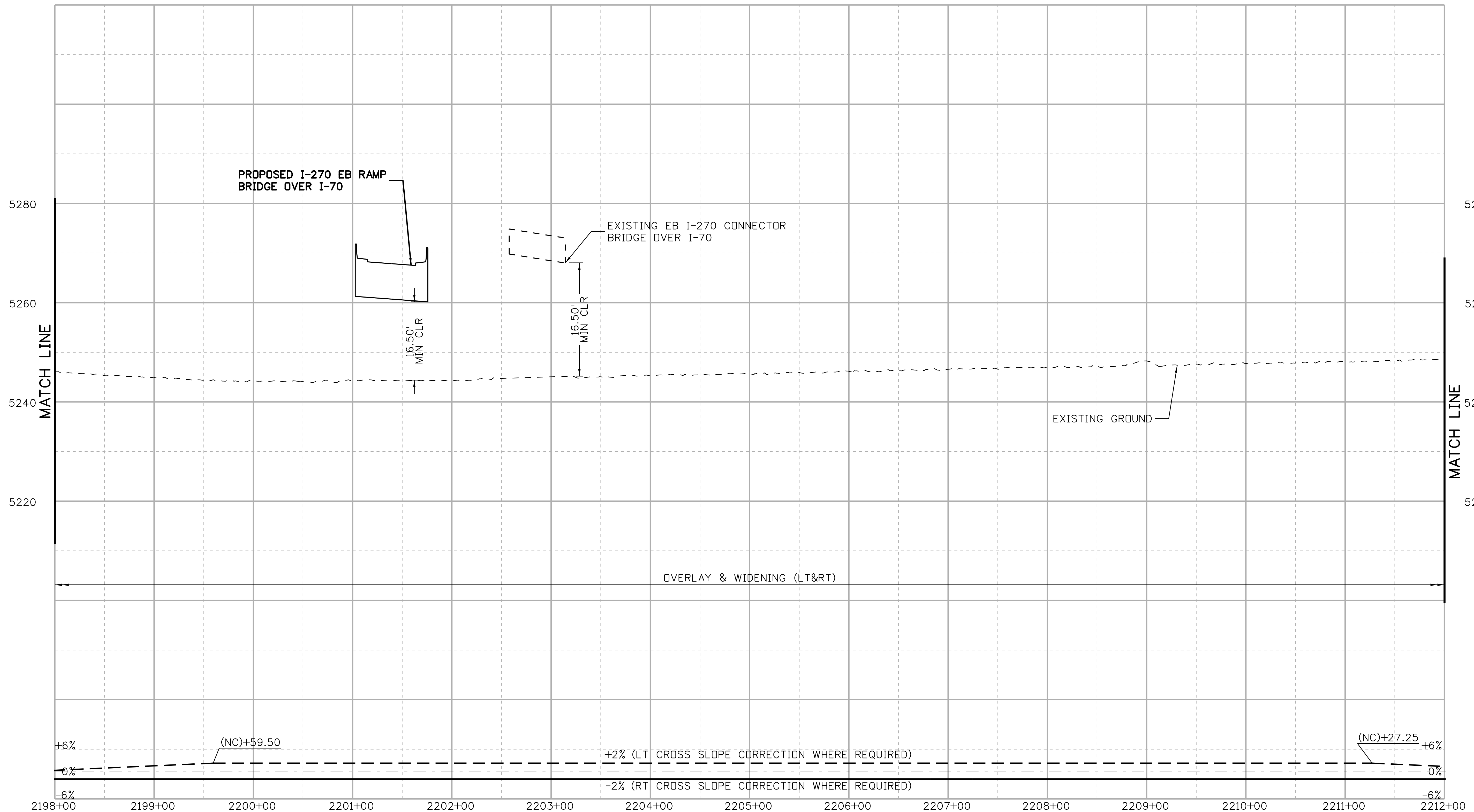

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Print Date: 5/22/2017			
File Name: File Name: See sheet edge for information			
Front Range Mobility Group	Horiz. Scale: As Noted		
	Vert. Scale: As Noted		
	Unit Information		
	Unit Leader		

Sheet Revisions

Date:	Comments	Init.

Colorado Department of Transportation
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PRELIMINARY
No Revisions:
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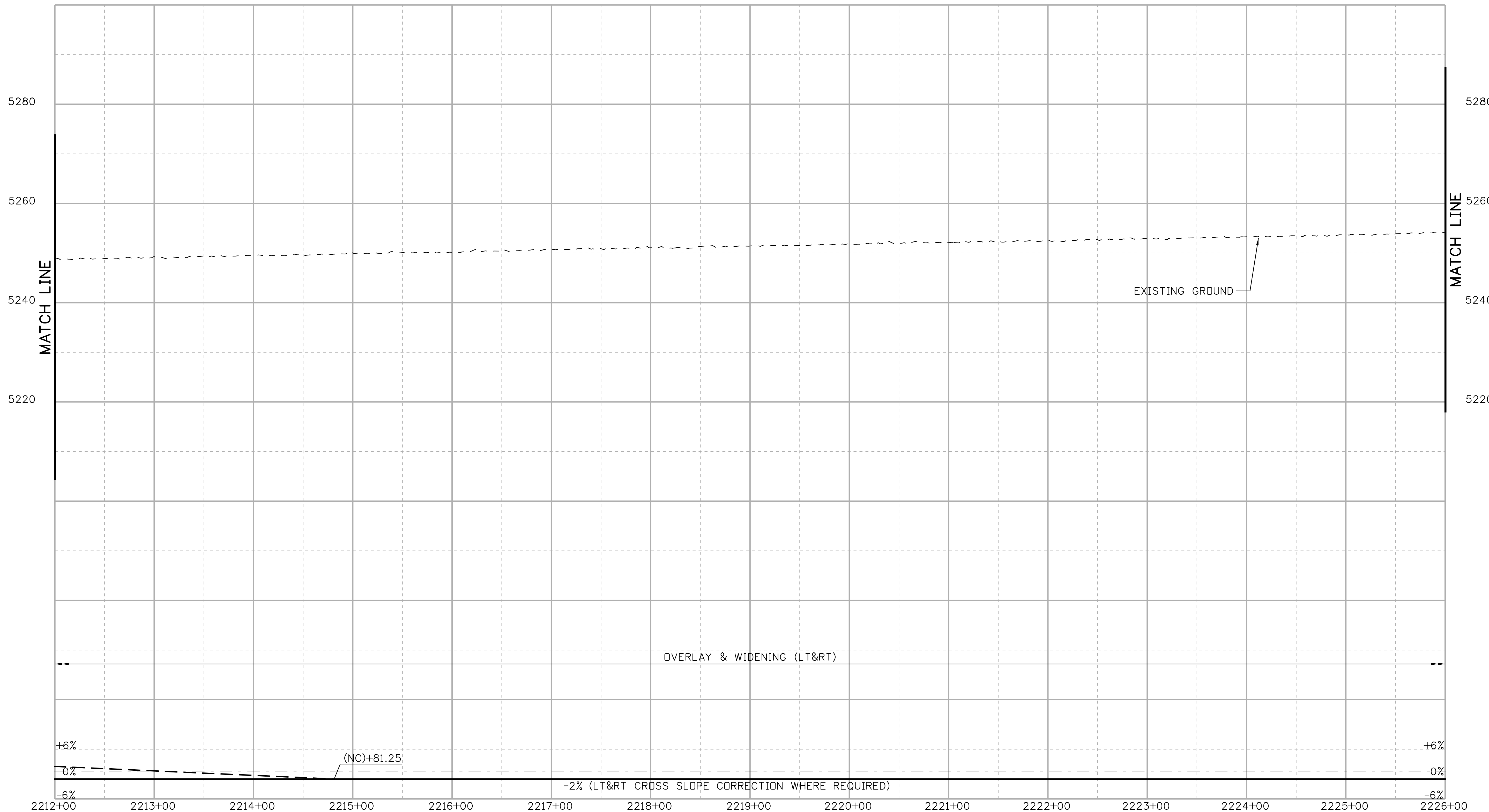
CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2198+00 TO STA 2212+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR21 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 201



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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

PRELIMINARY
No Revisions:
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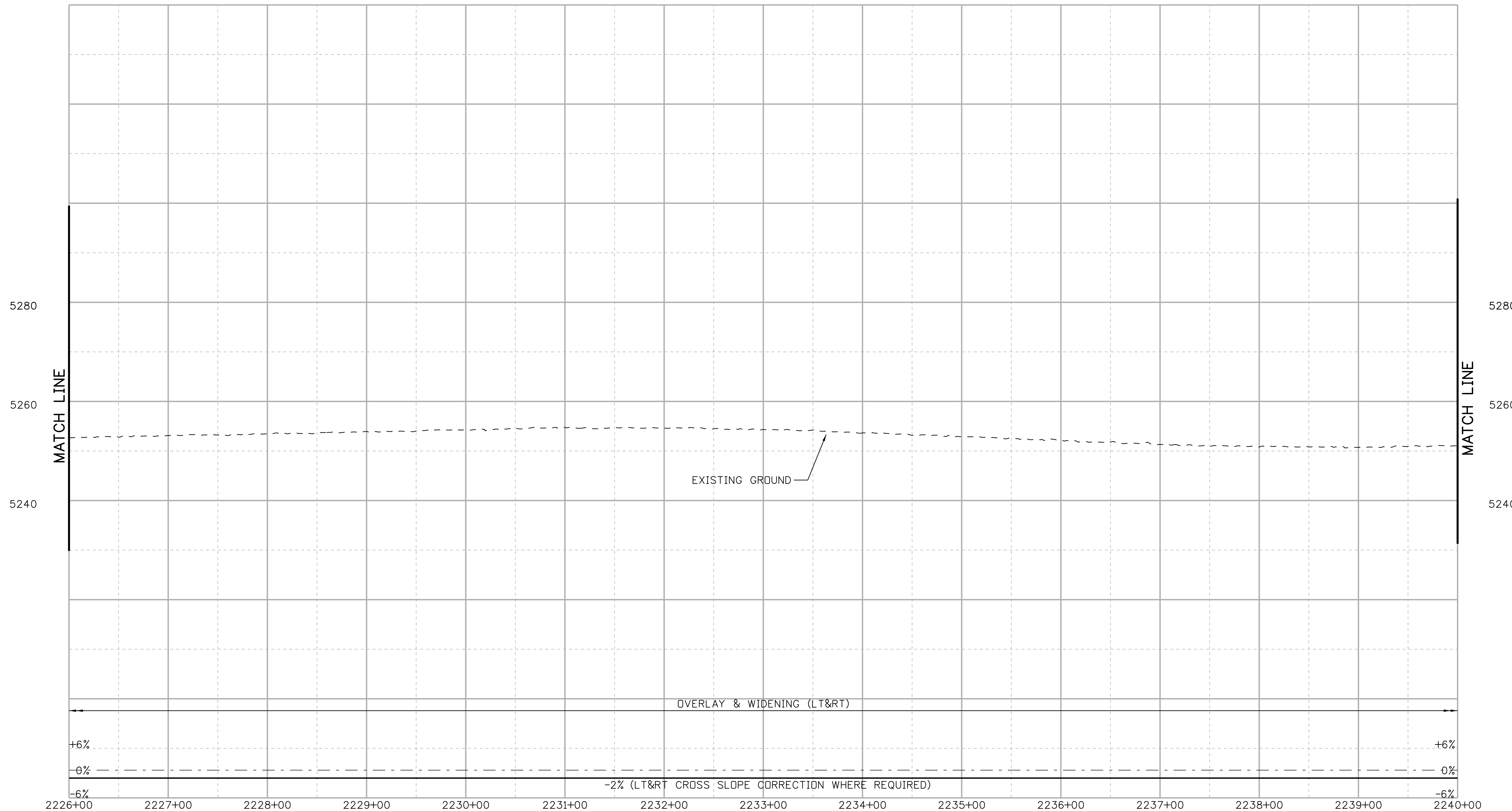
CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2212+00 TO STA 2226+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR22 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 202



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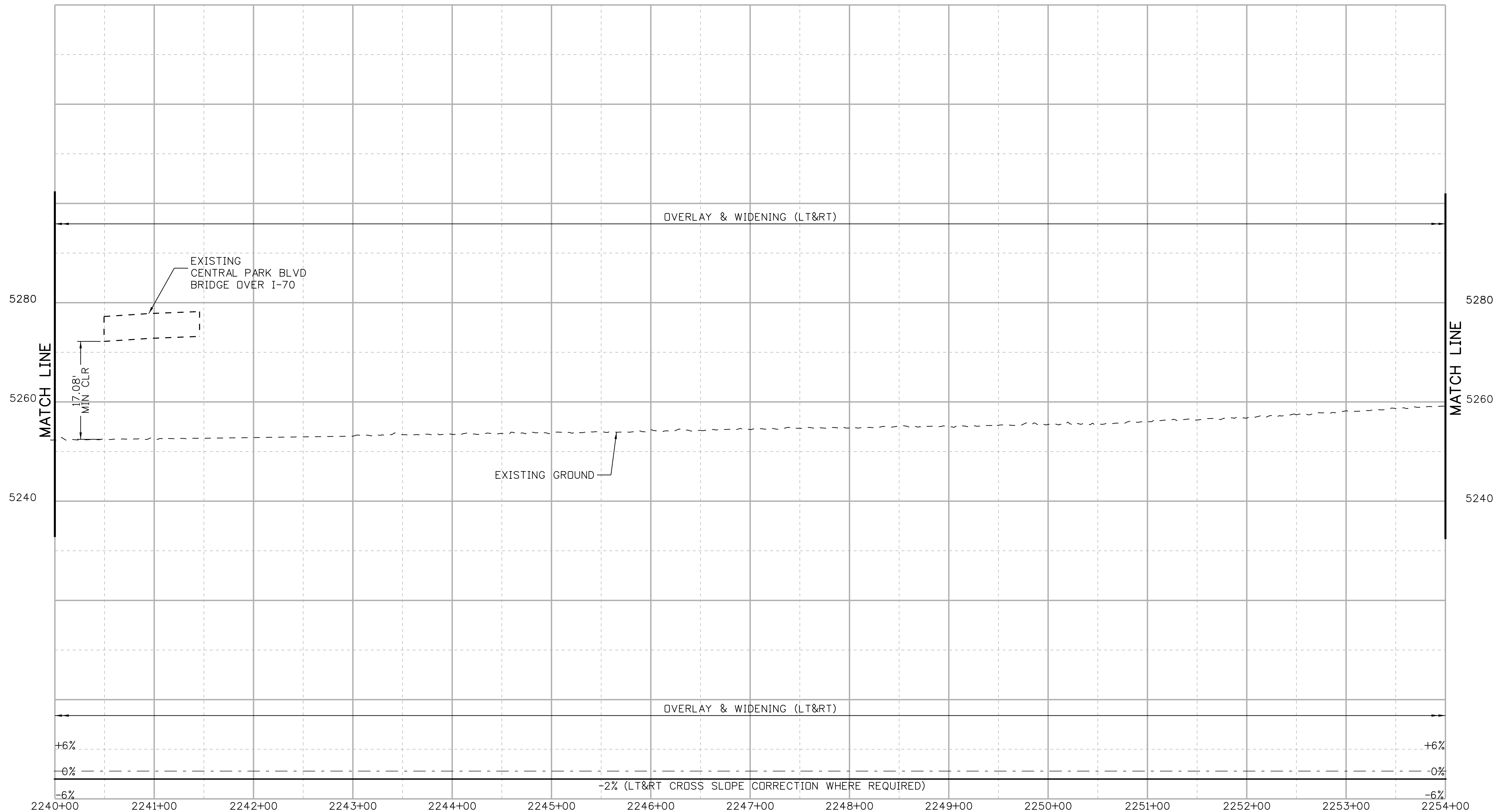
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2226+00 TO STA 2240+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PROF	Subset Sheets: RPR23 of 136	

Project No./Code
FBR 0704-234
19631
Sheet Number 203



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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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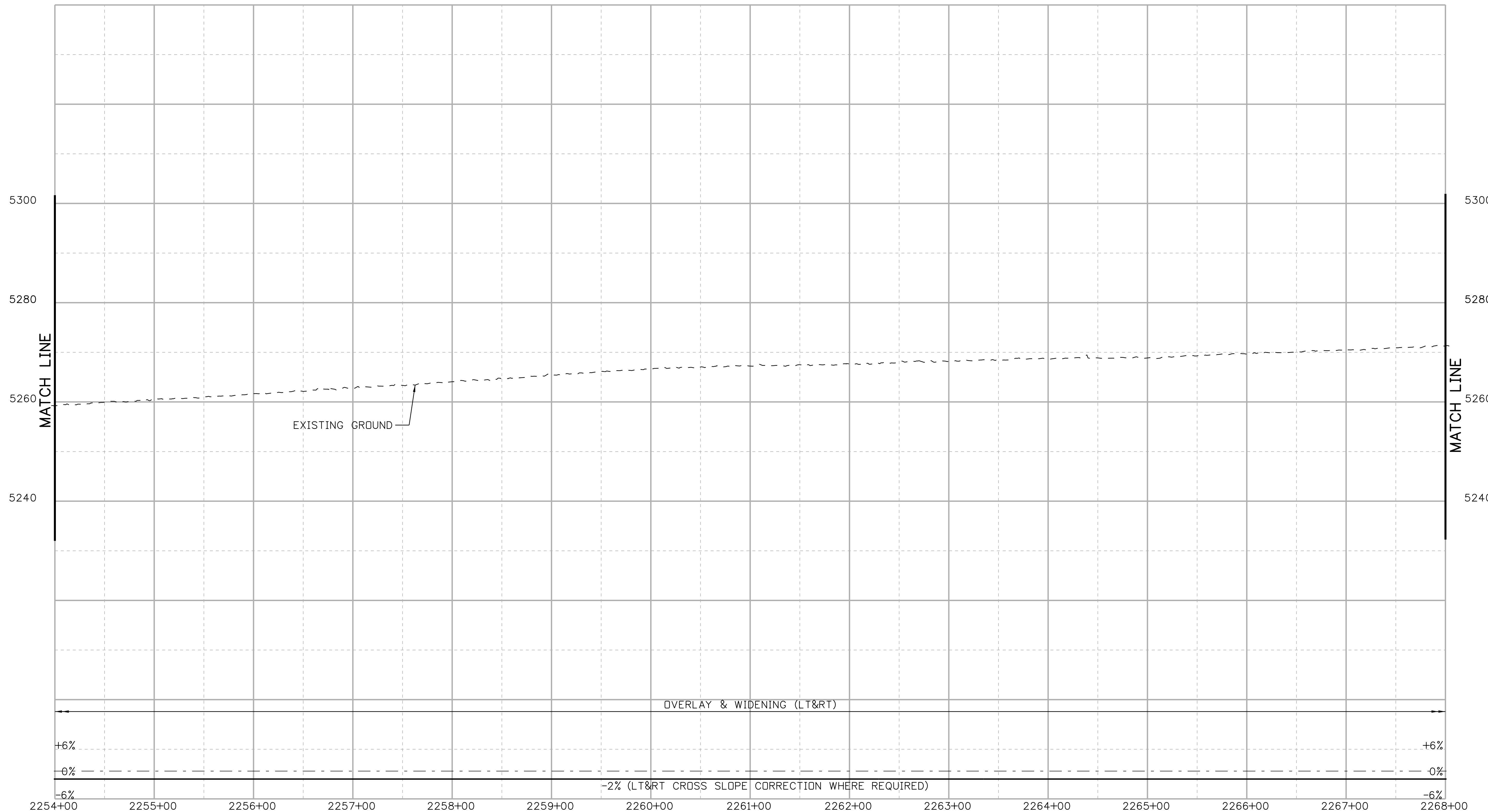
PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2240+00 TO STA 2254+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR24 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 204



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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.

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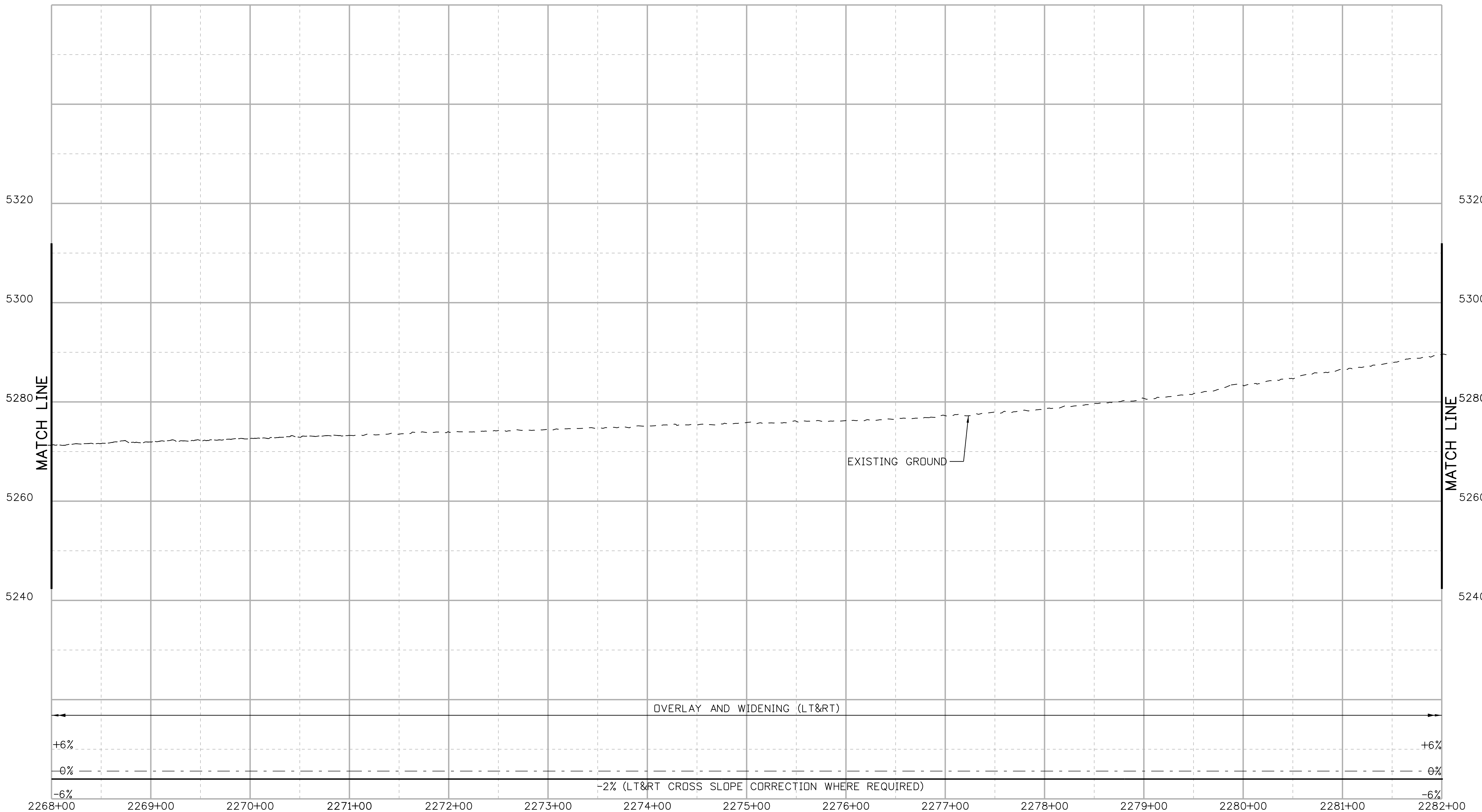
PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2254+00 TO STA 2268+00
Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR25 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 205



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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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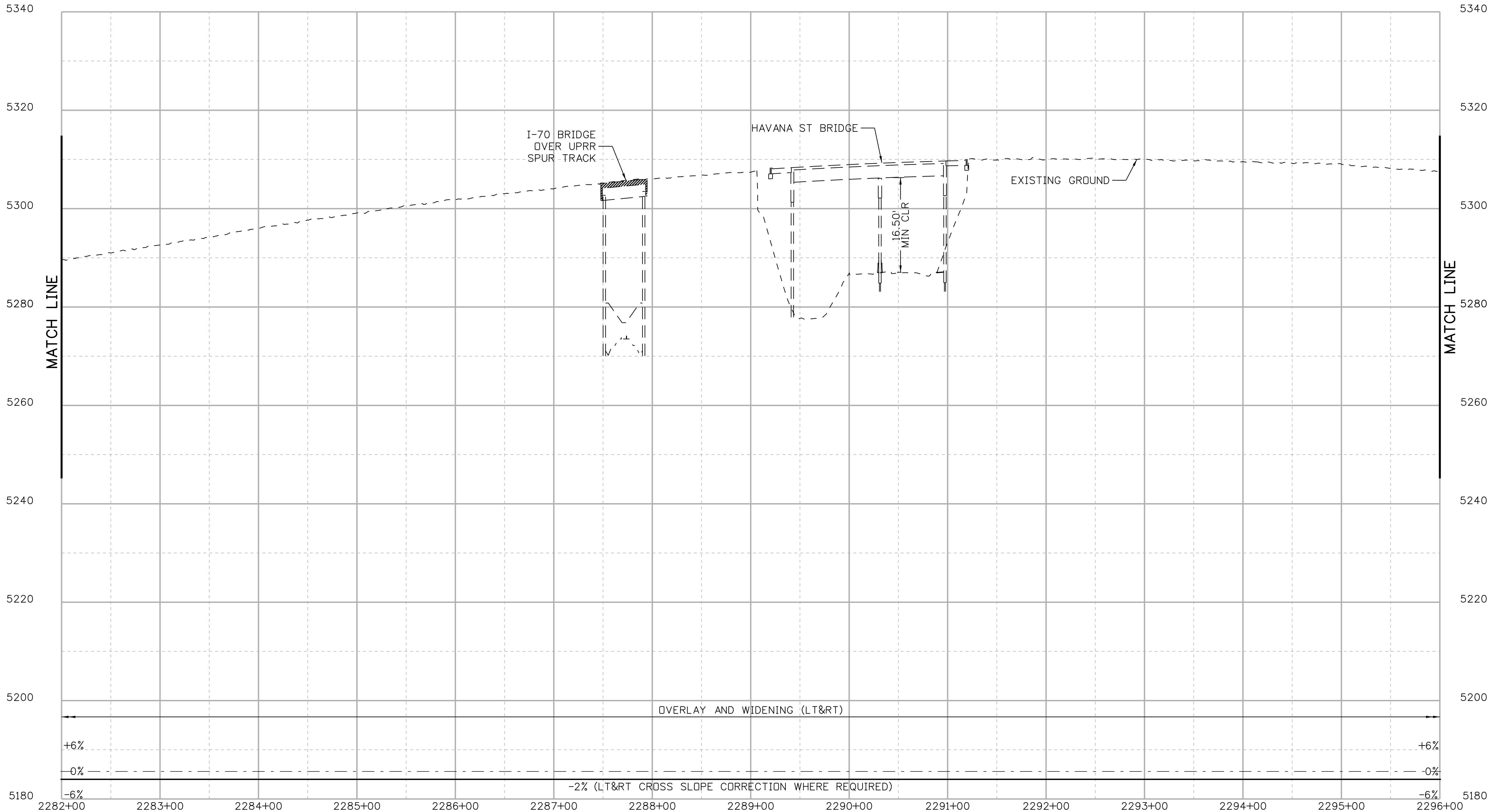
PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2268+00 TO STA 2282+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PROF	Subset Sheets: RPR26 of 136	

Project No./Code	
FBR 0704-234	
19631	
Sheet Number	206



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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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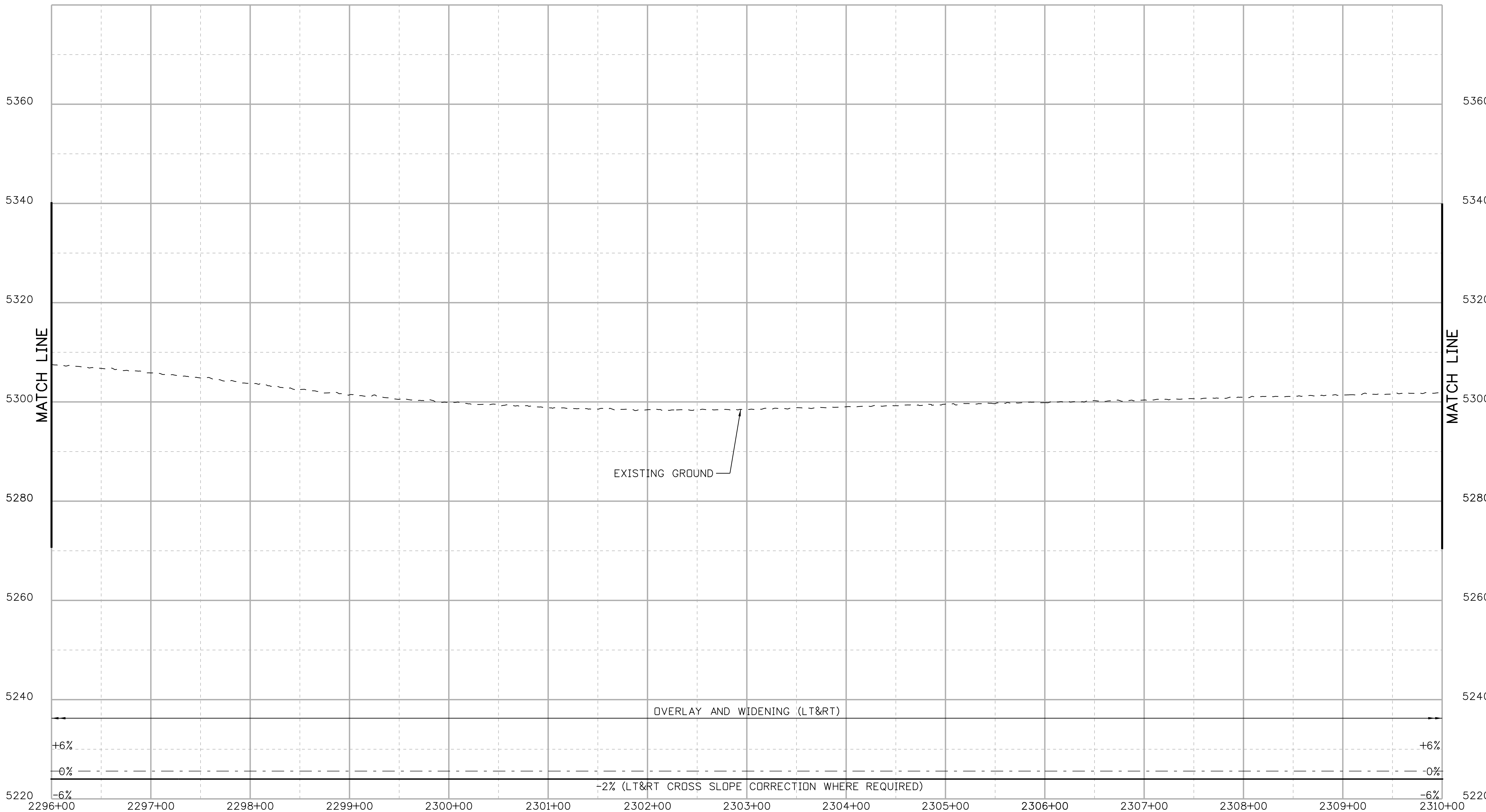
PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2282+00 TO STA 2296+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR27 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 207



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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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Phone: 303-757-9934 FAX: 303-757-9907
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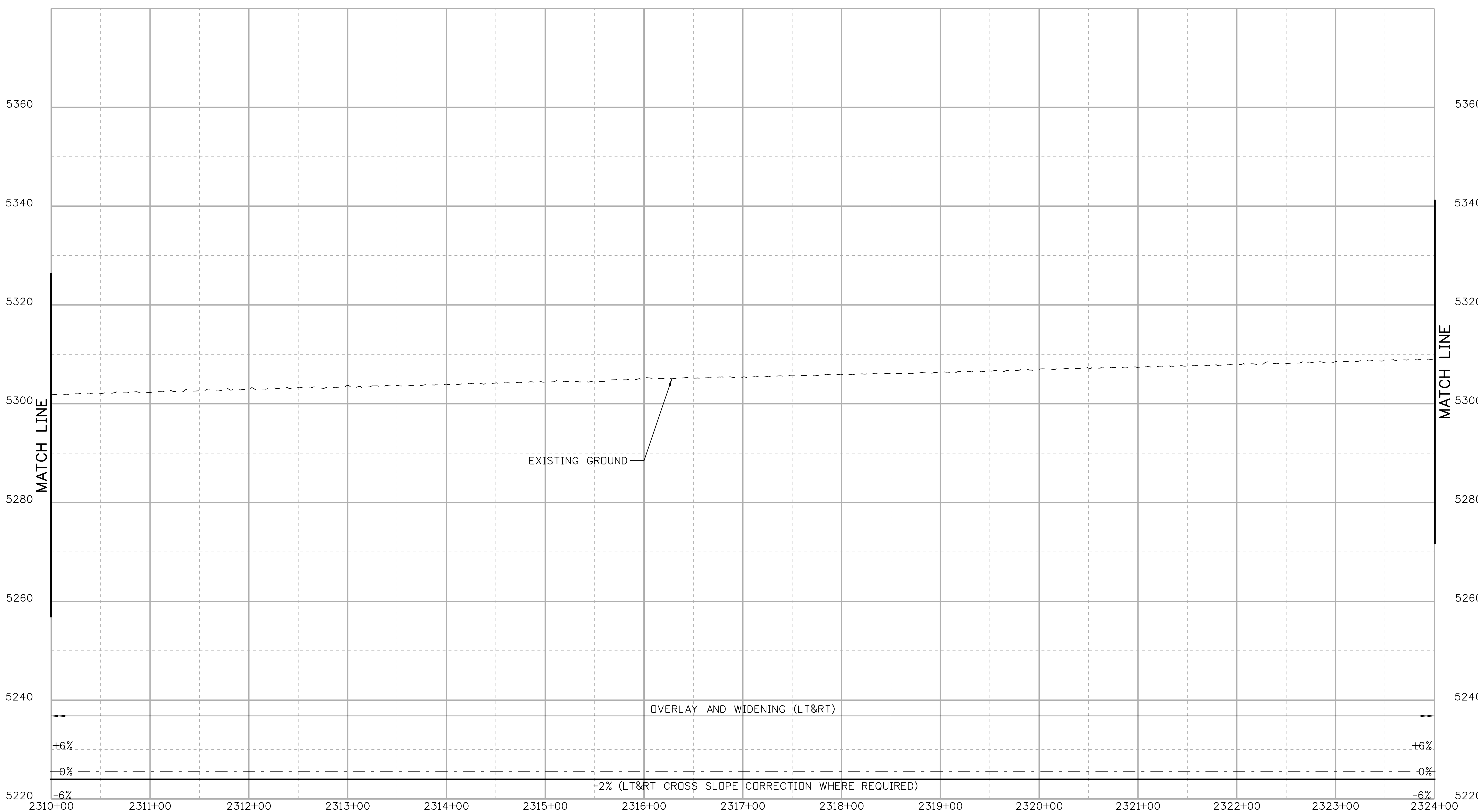
PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2296+00 TO STA 2310+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR28 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 208



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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.

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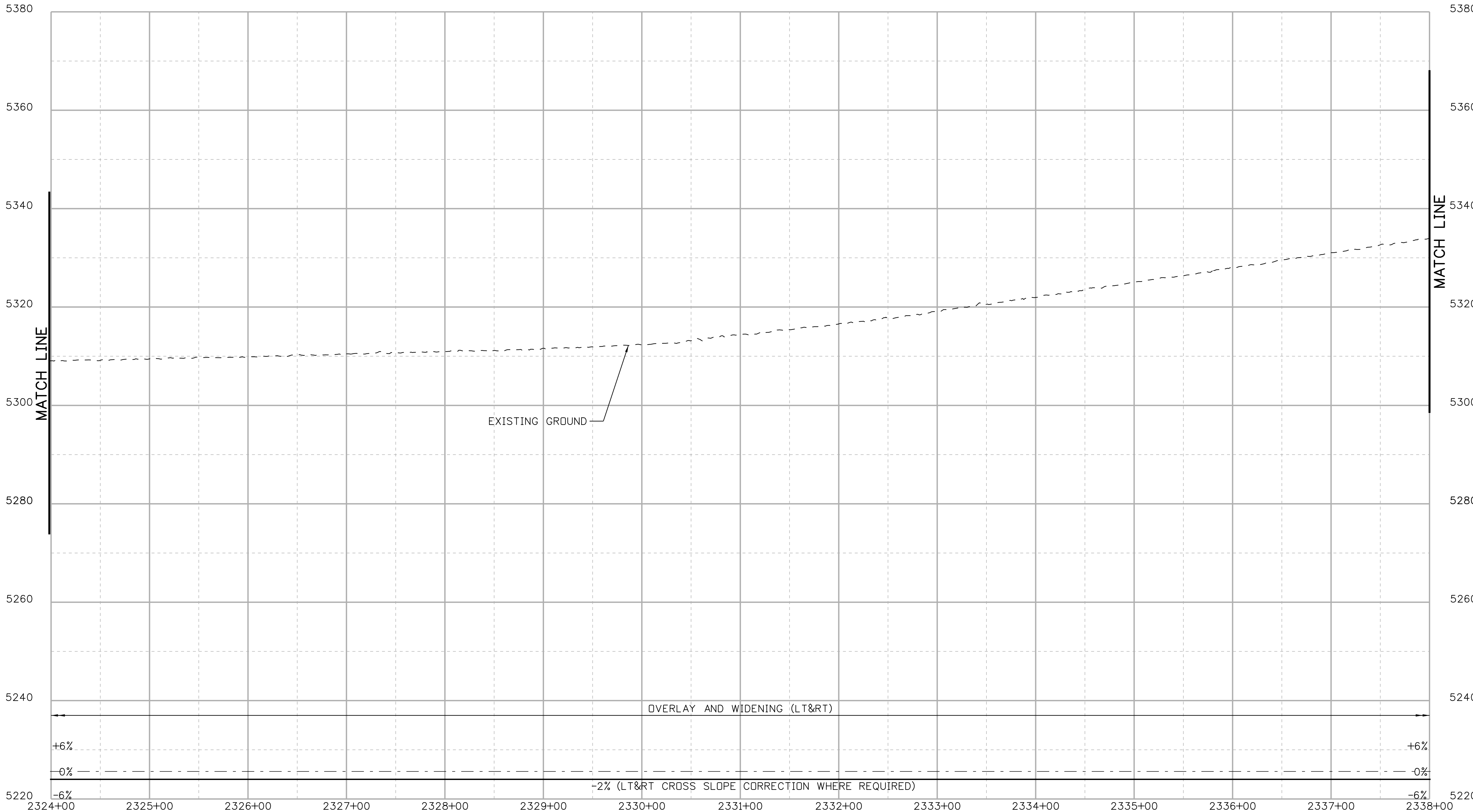
PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2310+00 TO STA 2324+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PROF	Subset Sheets: RPR29 of 136	

Project No./Code
FBR 0704-234
19631
Sheet Number 209



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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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PRELIMINARY

No Revisions:

Revised:

Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2324+00 TO STA 2338+00

Designer:

Detailer:

Structure Numbers

Sheet Subset: ROAD PROF

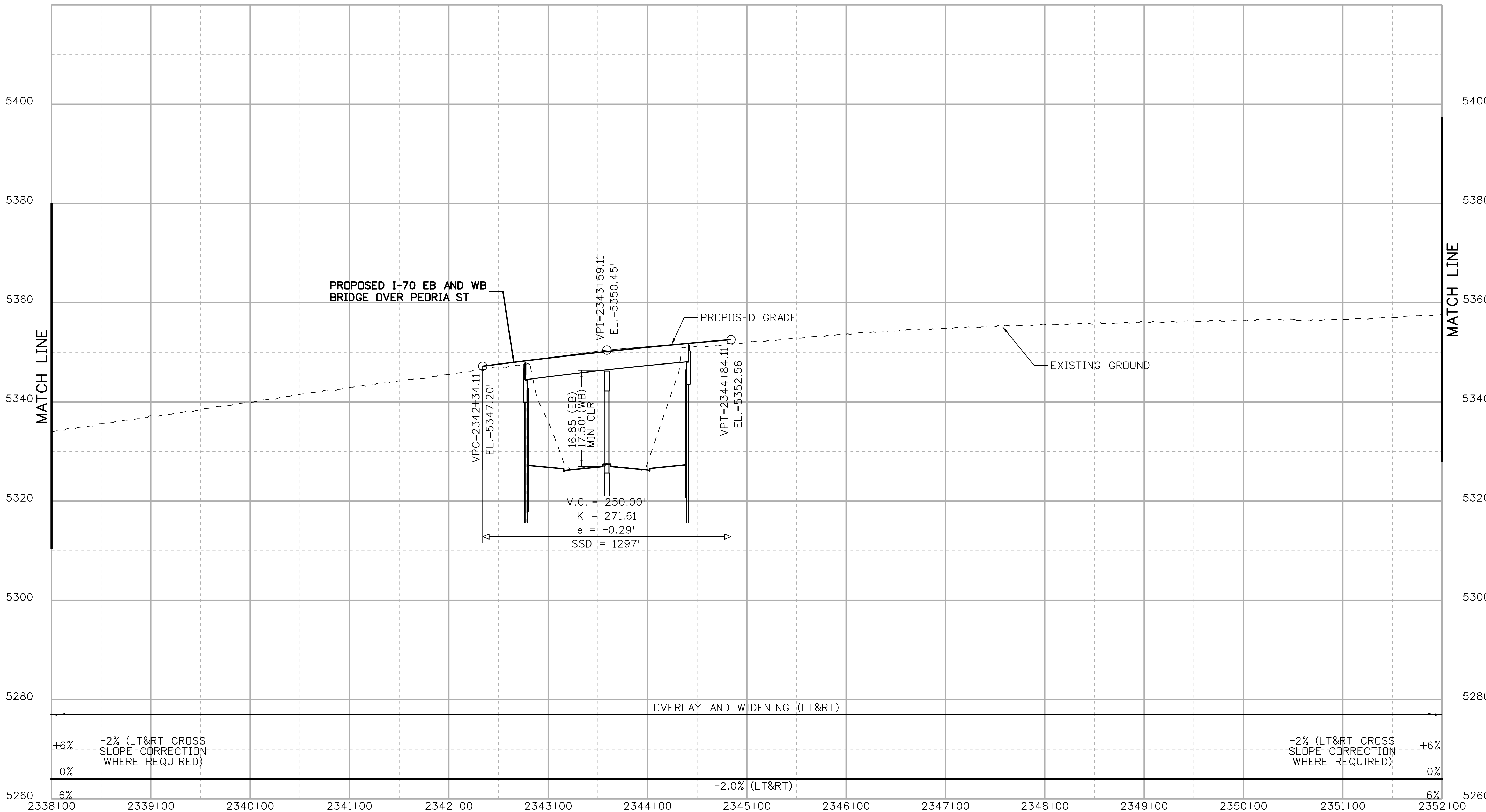
Subset Sheets: RPR30 of 136

Project No./Code

FBR 0704-234

19631

Sheet Number 210



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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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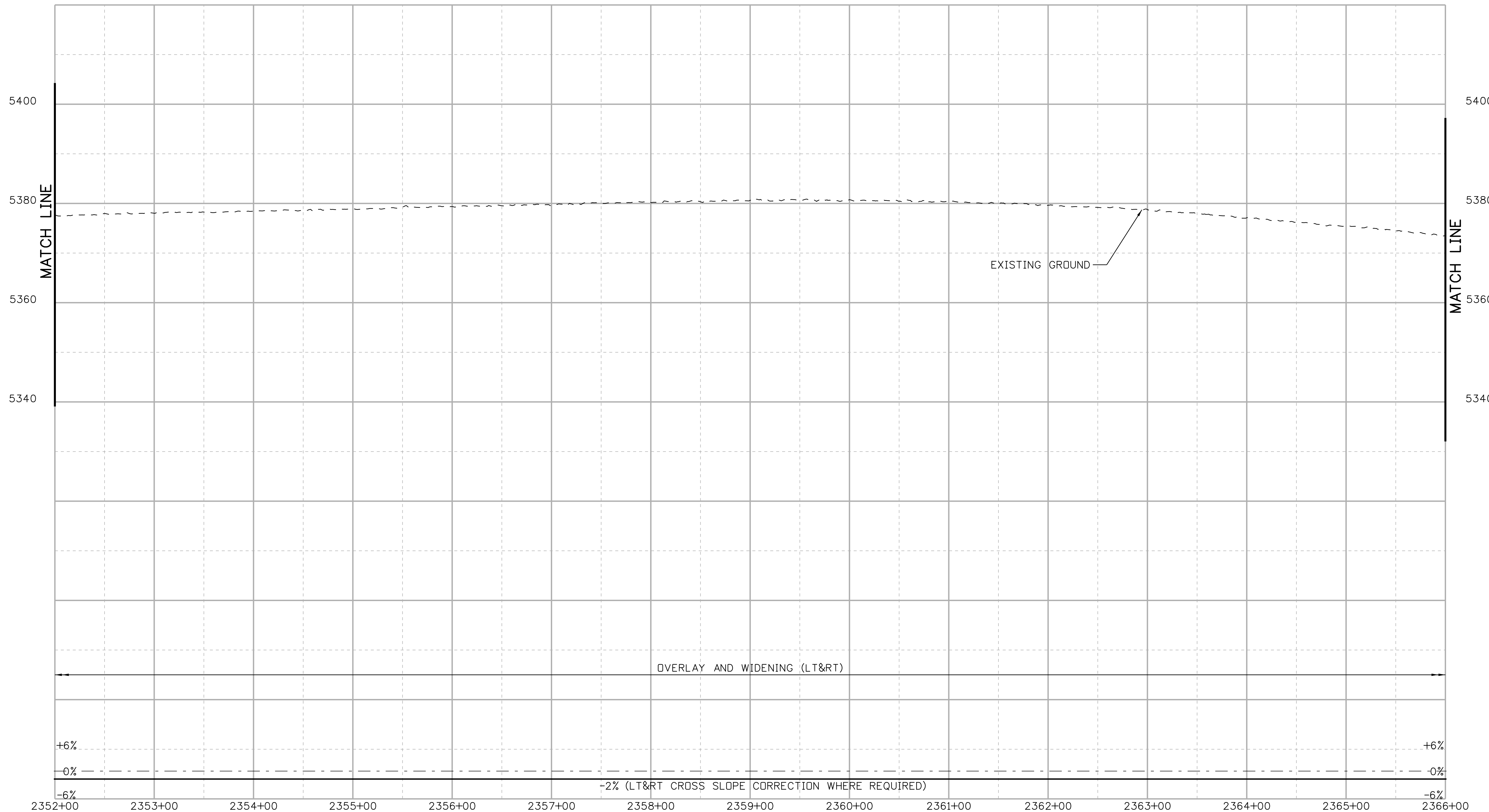
Region 1
KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2338+00 TO STA 2352+00

Designer:	Structure Numbers
Detailer:	
Sheet Subset: ROAD PROF	Subset Sheets: RPR31 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 211



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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			

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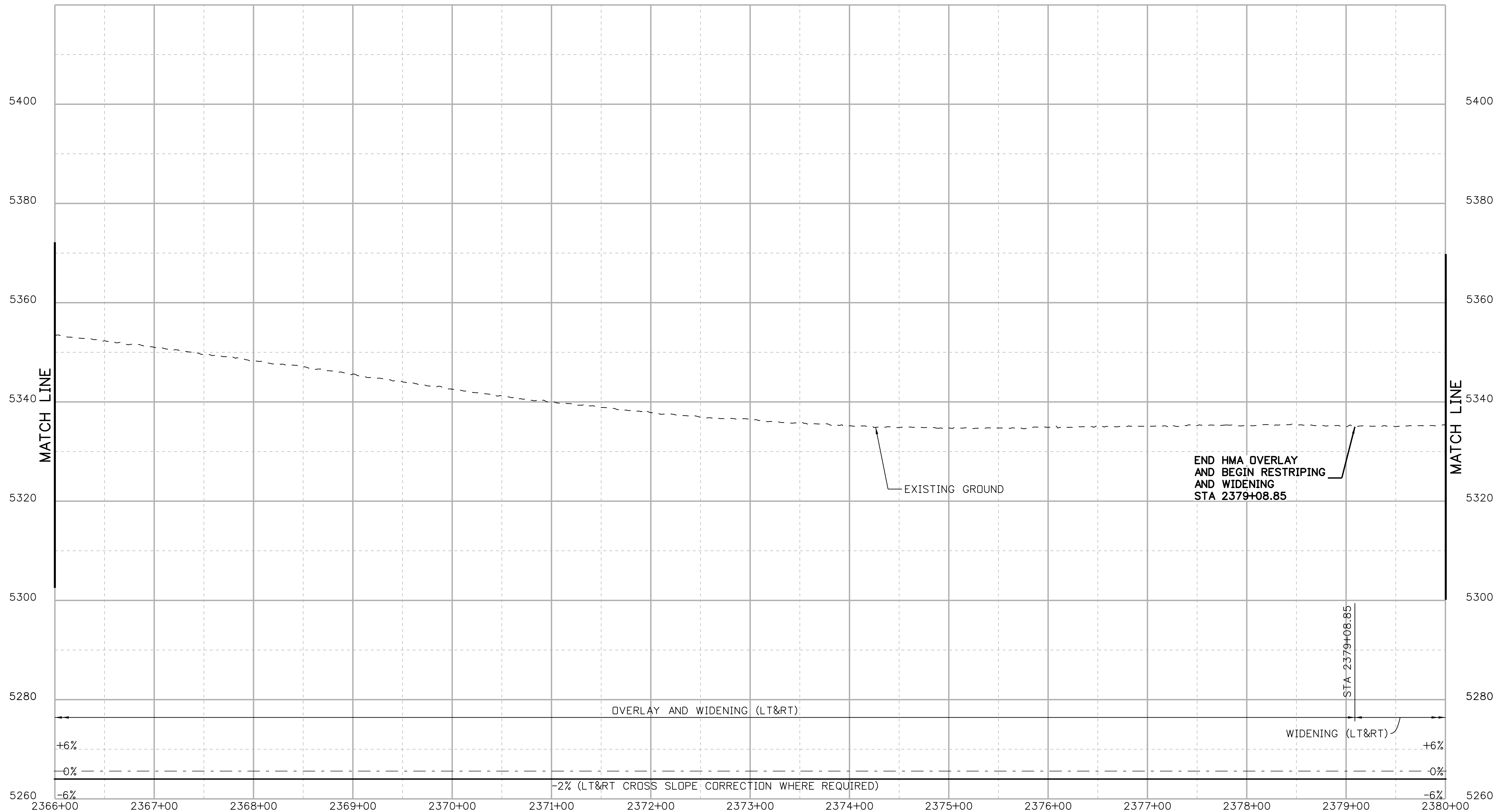
PRELIMINARY	CENTRAL 70 ROADWAY PROFILE I-70 MAINLINE STA 2352+00 TO STA 2366+00
No Revisions:	
Revised:	Designer: / Structure Numbers
Void:	Detailer:
	Sheet Subset: ROAD PROF / Subset Sheets: RPR32 of 136

Project No./Code	
FBR 0704-234	
19631	
Sheet Number	212



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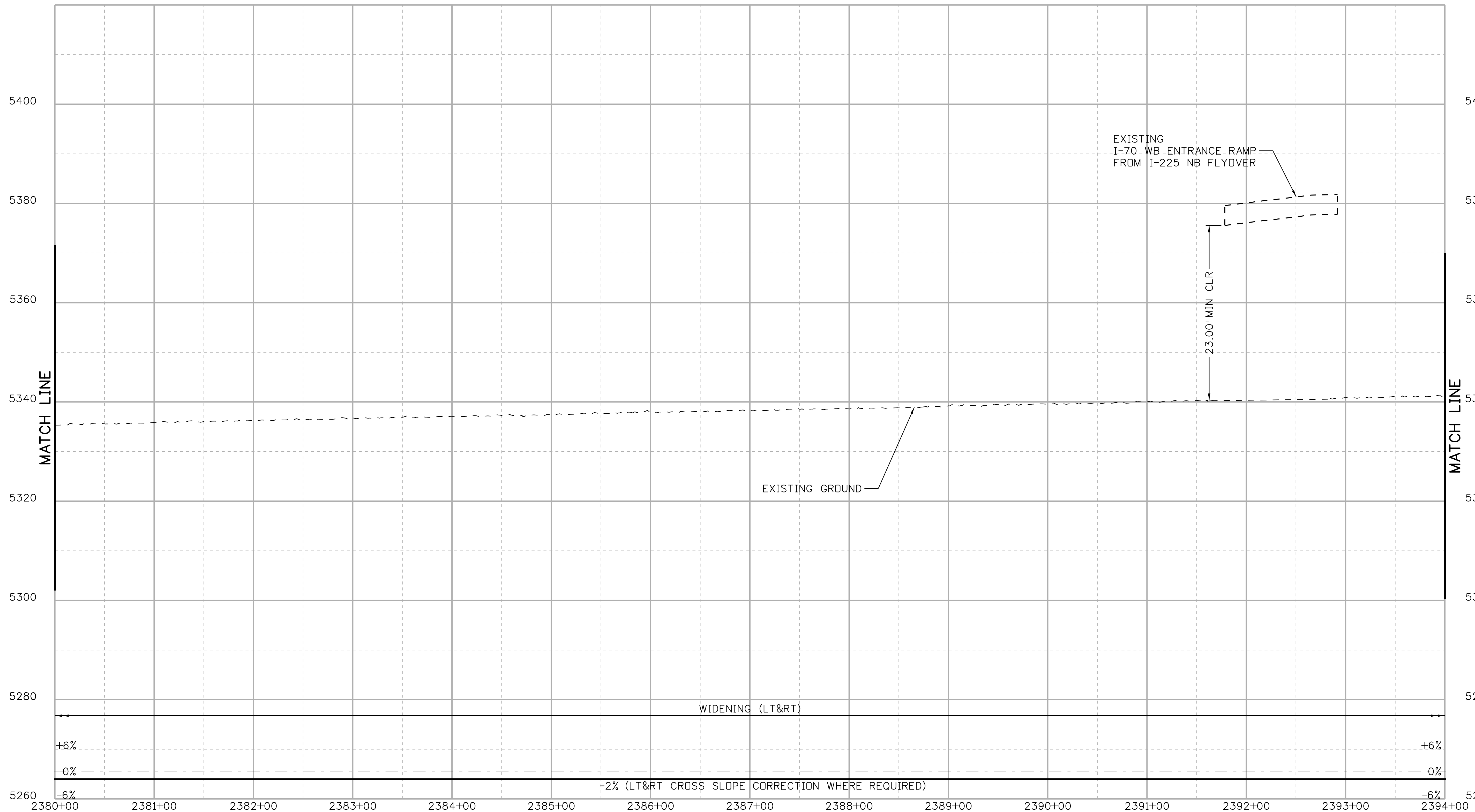
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2366+00 TO STA 2380+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PROF	Subset Sheets: RPR33 of 136	

Project No./Code
FBR 0704-234
19631
Sheet Number 213



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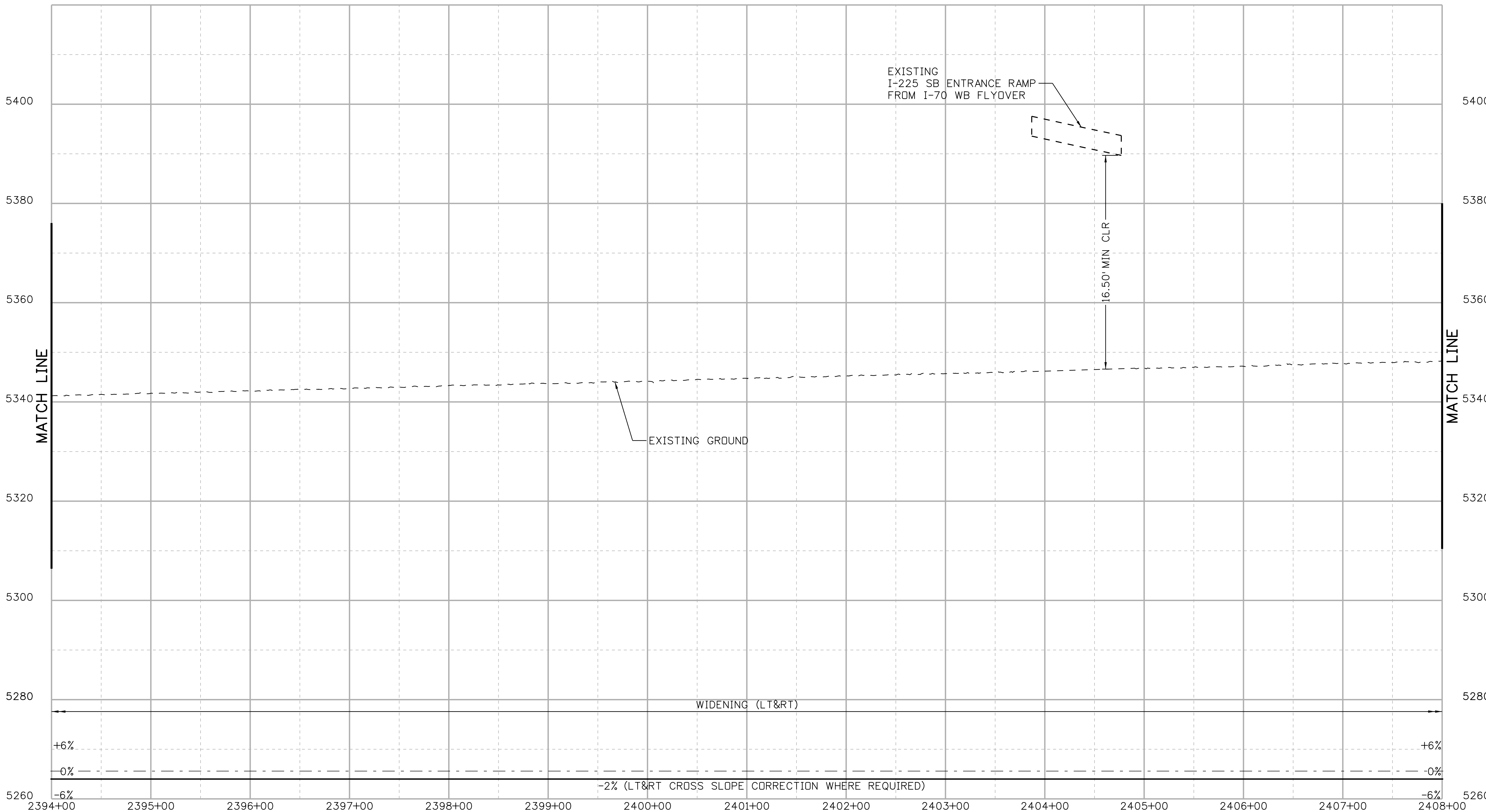
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY	
No Revisions:	
Revised:	
Void:	

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2380+00 TO STA 2394+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PROF		Subset Sheets: RPR34 of 136	

Project No./Code
FBR 0704-234
19631
Sheet Number 214



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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.

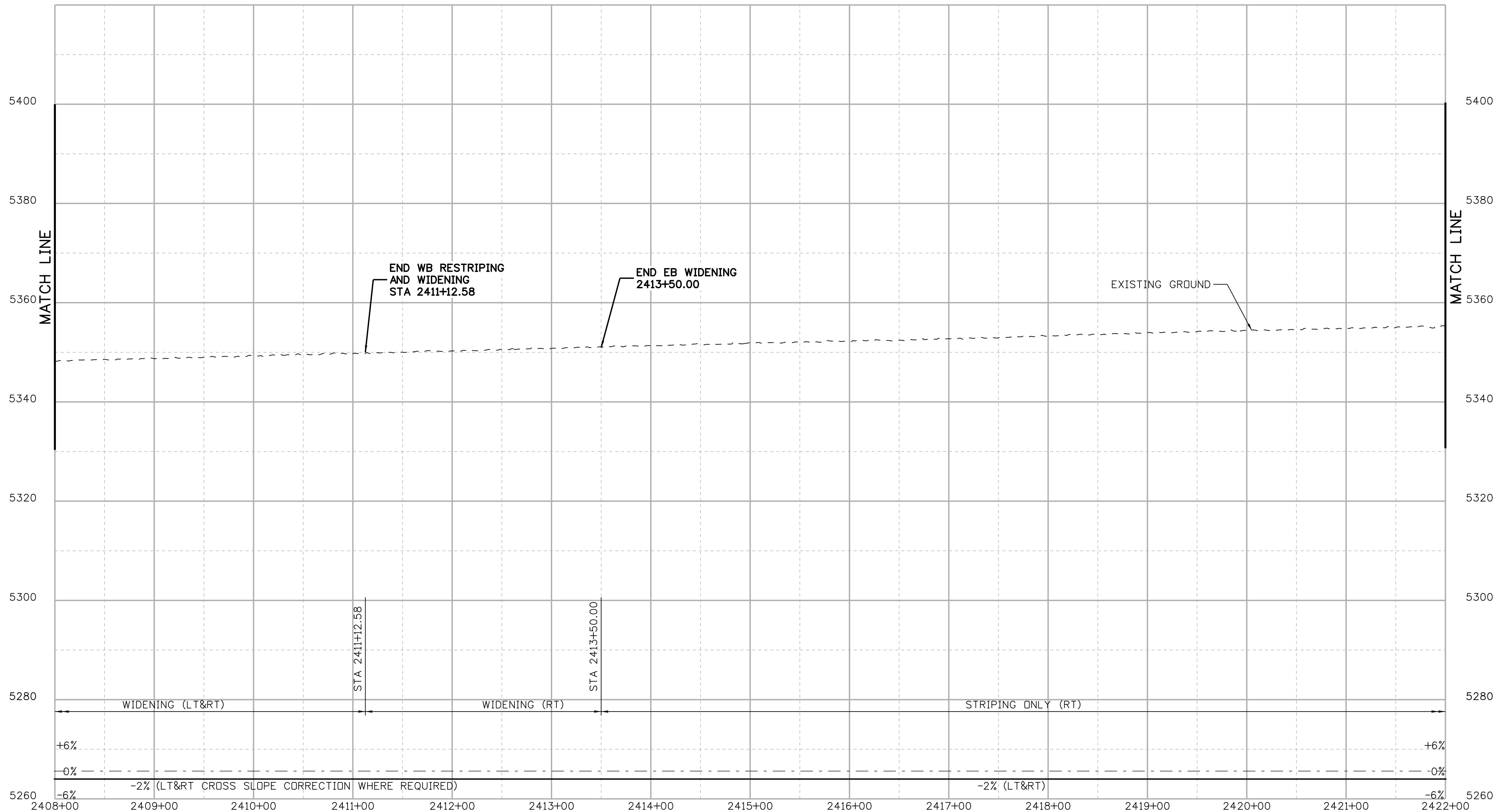
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2394+00 TO STA 2408+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR35 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 215



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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.

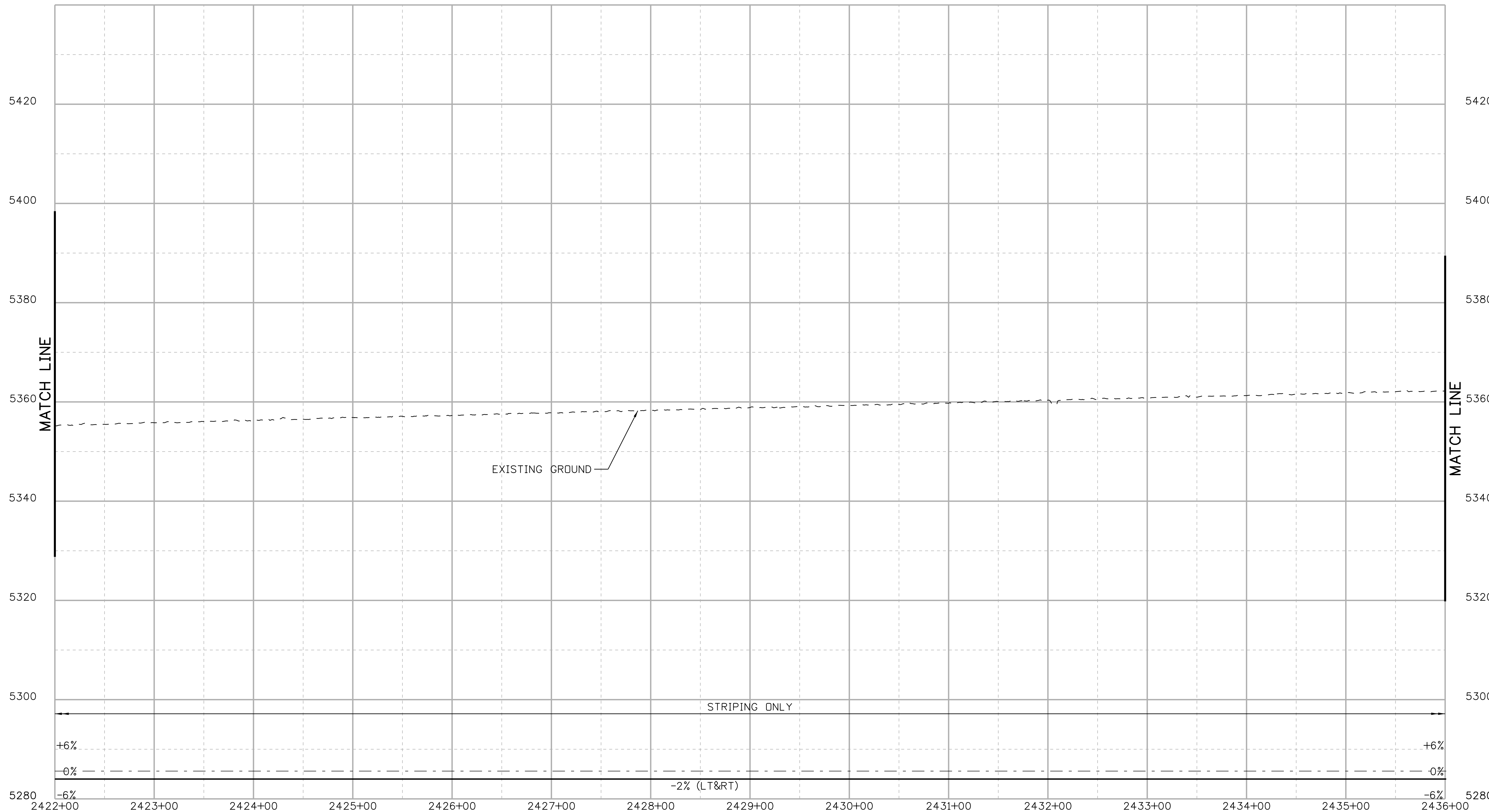
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2408+00 TO STA 2422+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR36 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 216



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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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Denver, CO 80222
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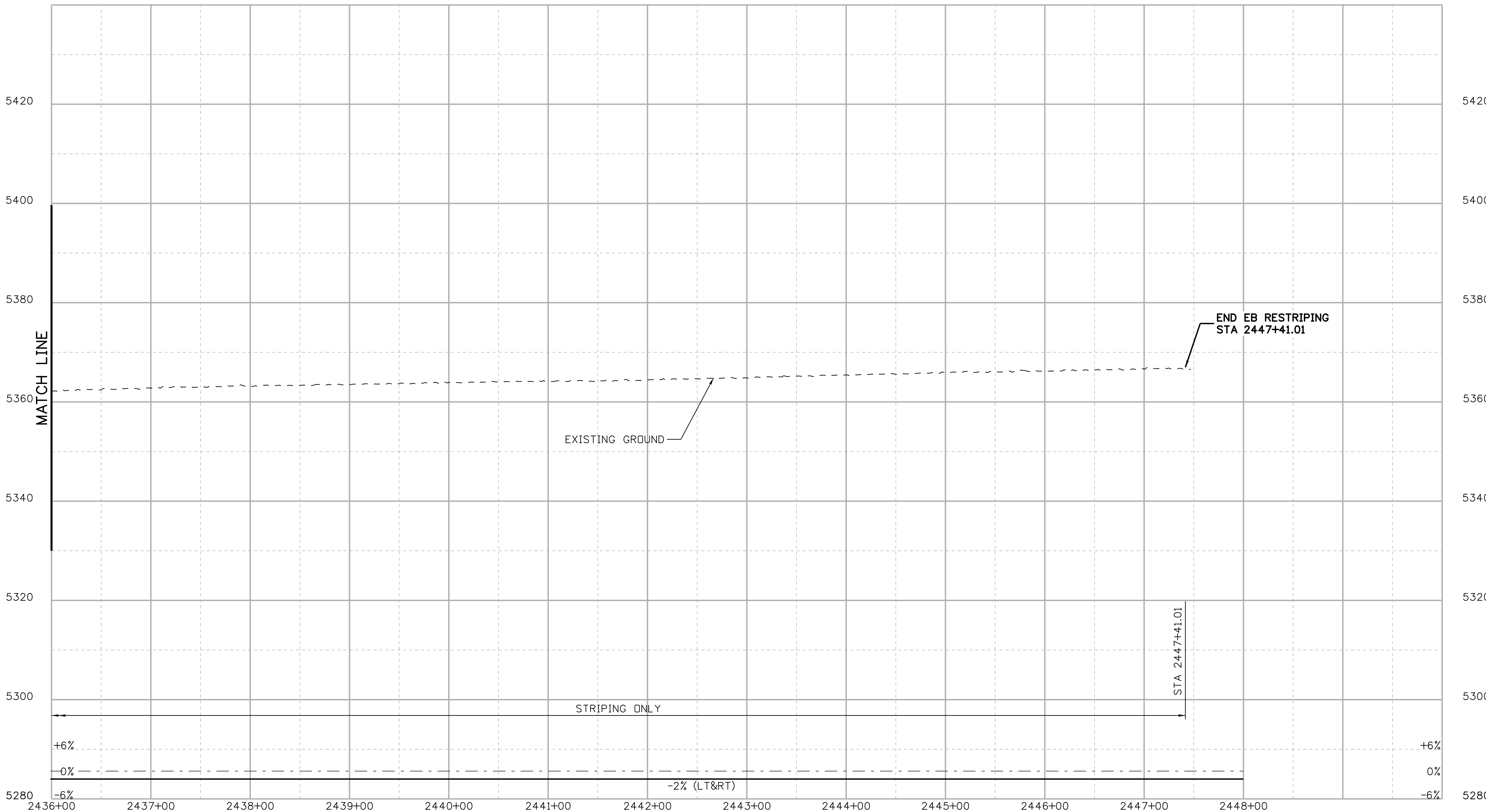
Region 1
KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2422+00 TO STA 2436+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PROF	Subset Sheets: RPR37 of 136	

Project No./Code
FBR 0704-234
19631
Sheet Number 217



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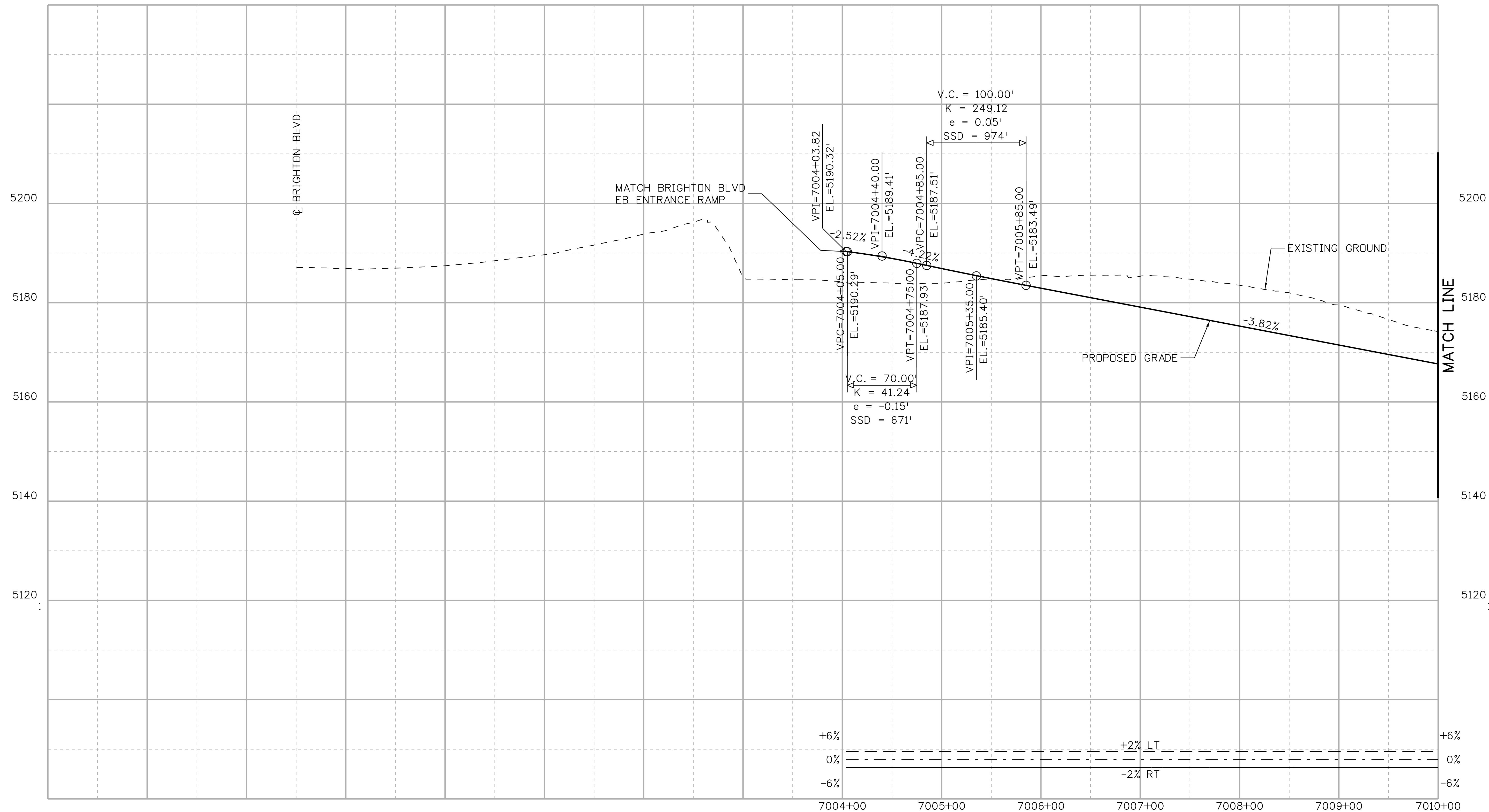
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
I-70 MAINLINE
STA 2436+00 TO STA 2447+50

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR38 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 218



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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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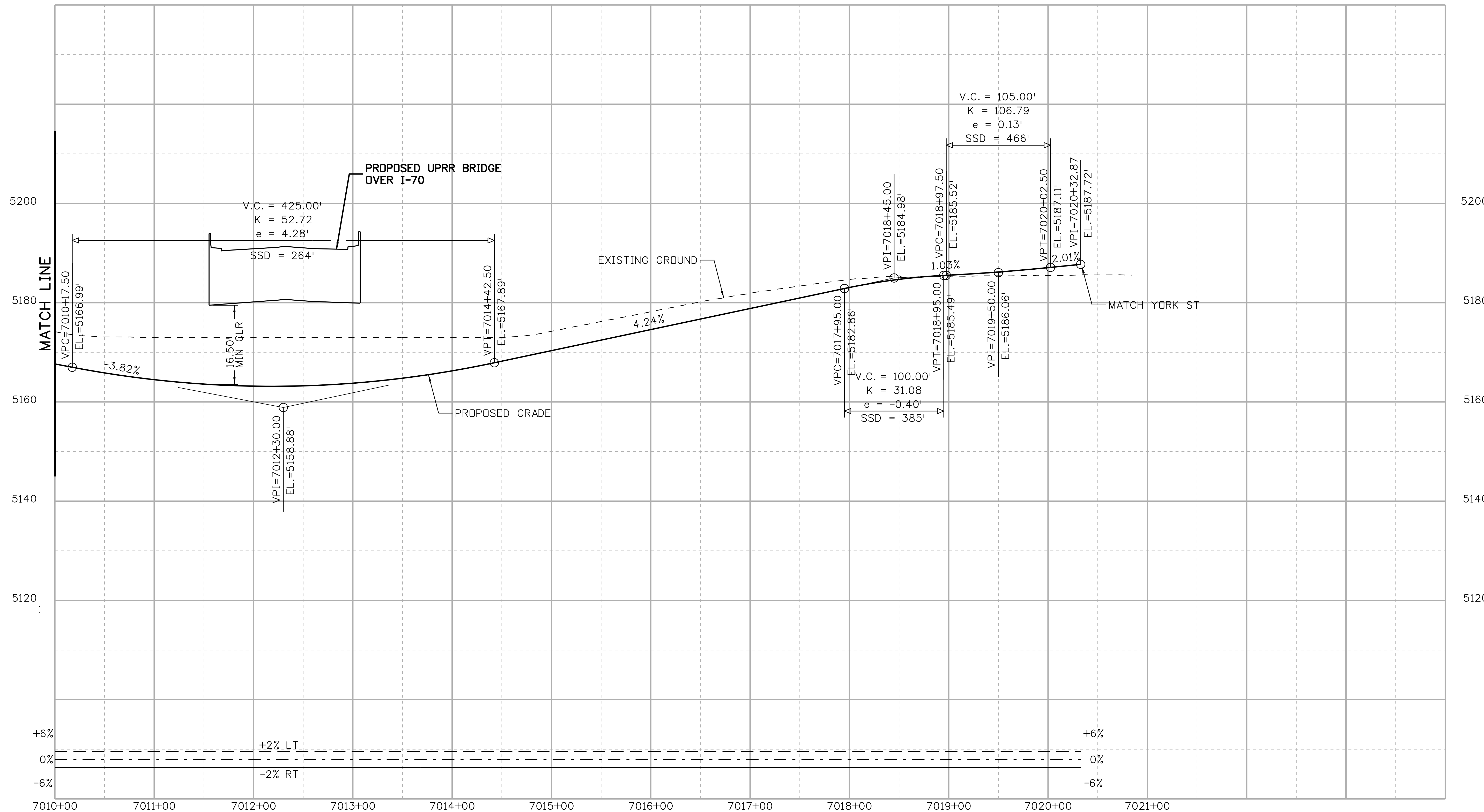
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
46TH AVE S
STA 7004+03.82 TO STA 7010+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PROF		Subset Sheets: RPR39 of 136	

Project No./Code
FBR 0704-234
19631
Sheet Number 219



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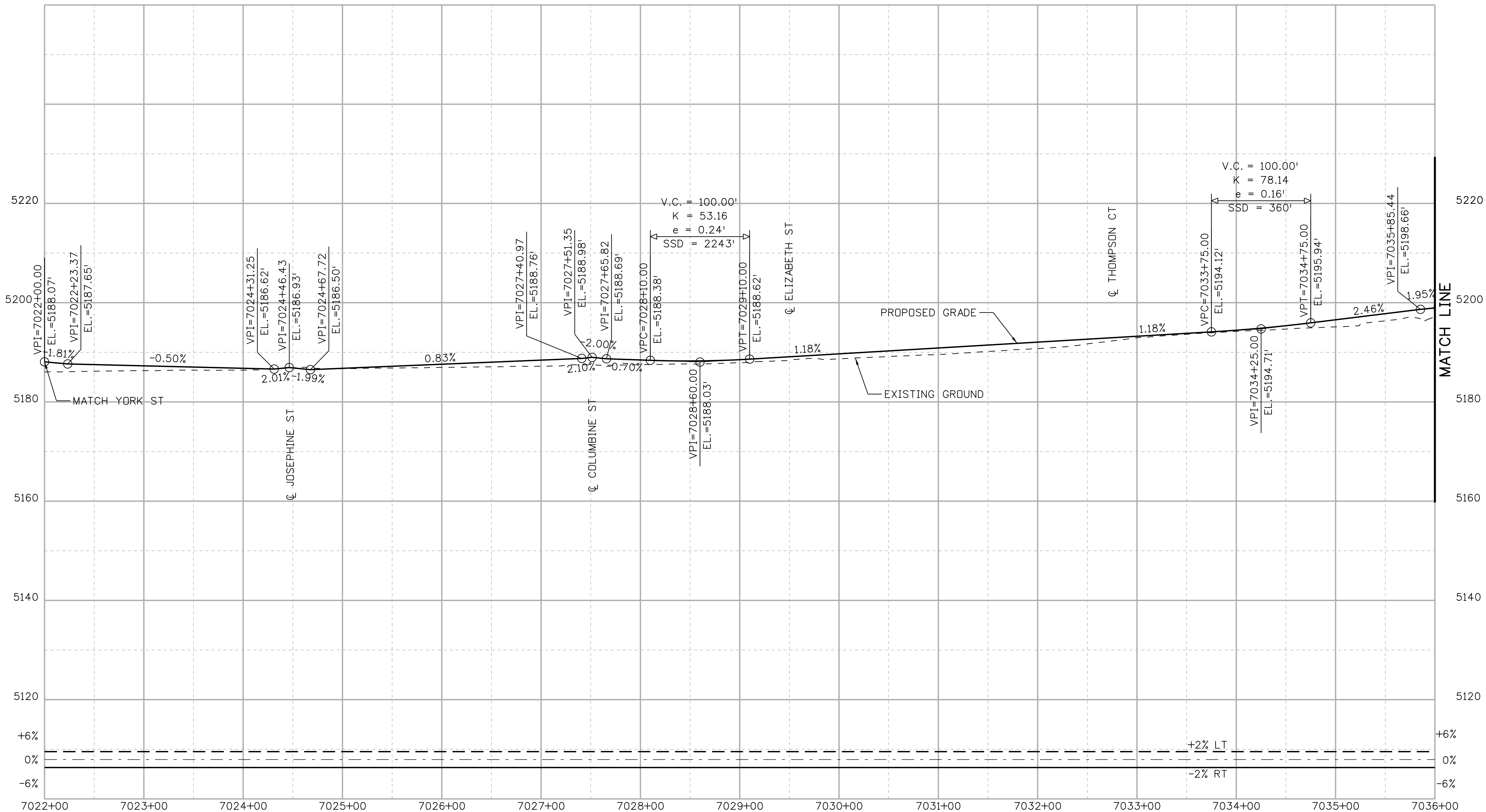
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
46TH AVE S
STA 7010+00 TO STA 7020+32.87

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR40 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 220



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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.

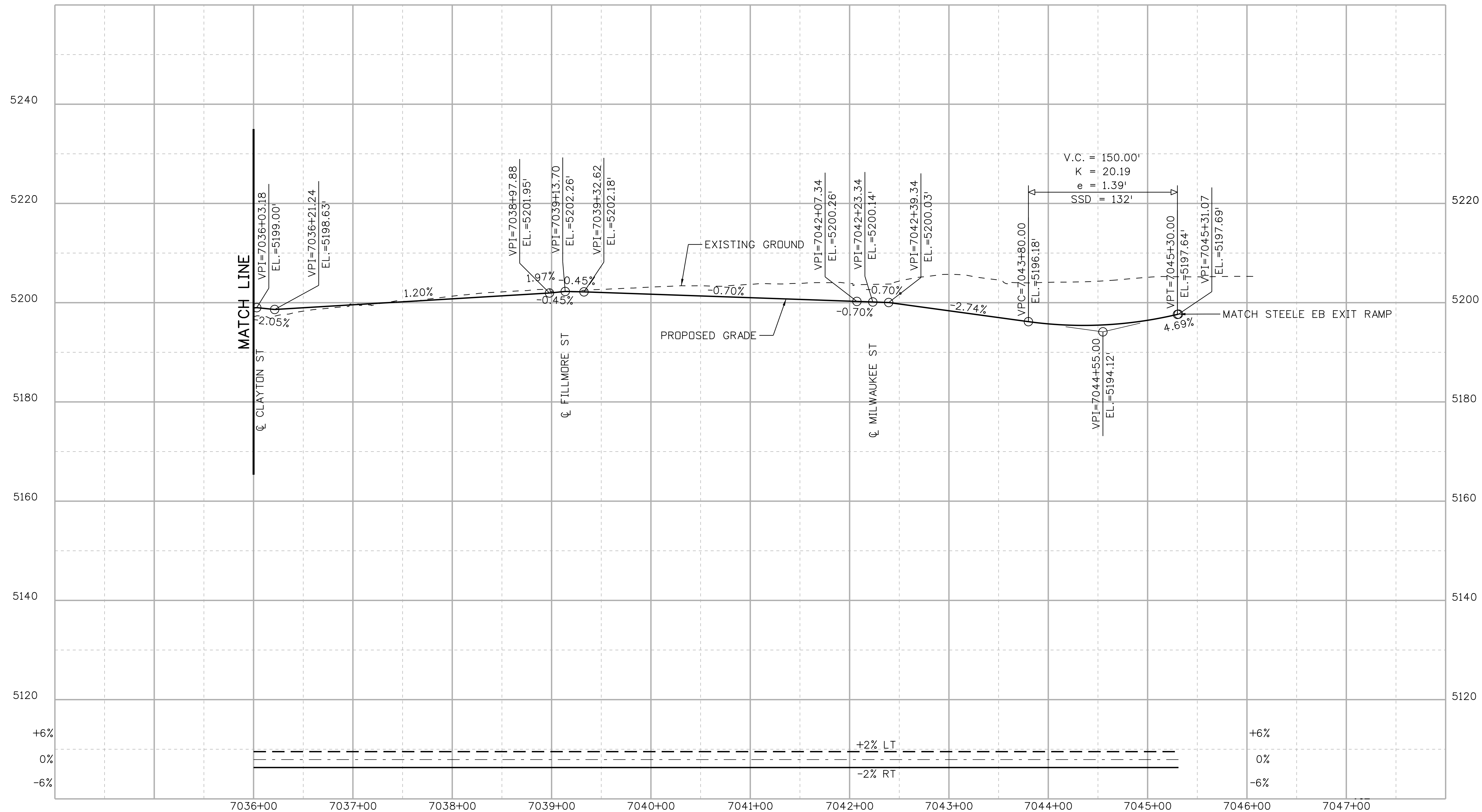
Colorado Department of Transportation
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
46TH AVE S
STA 7022+00 TO STA 7036+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR41 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 221



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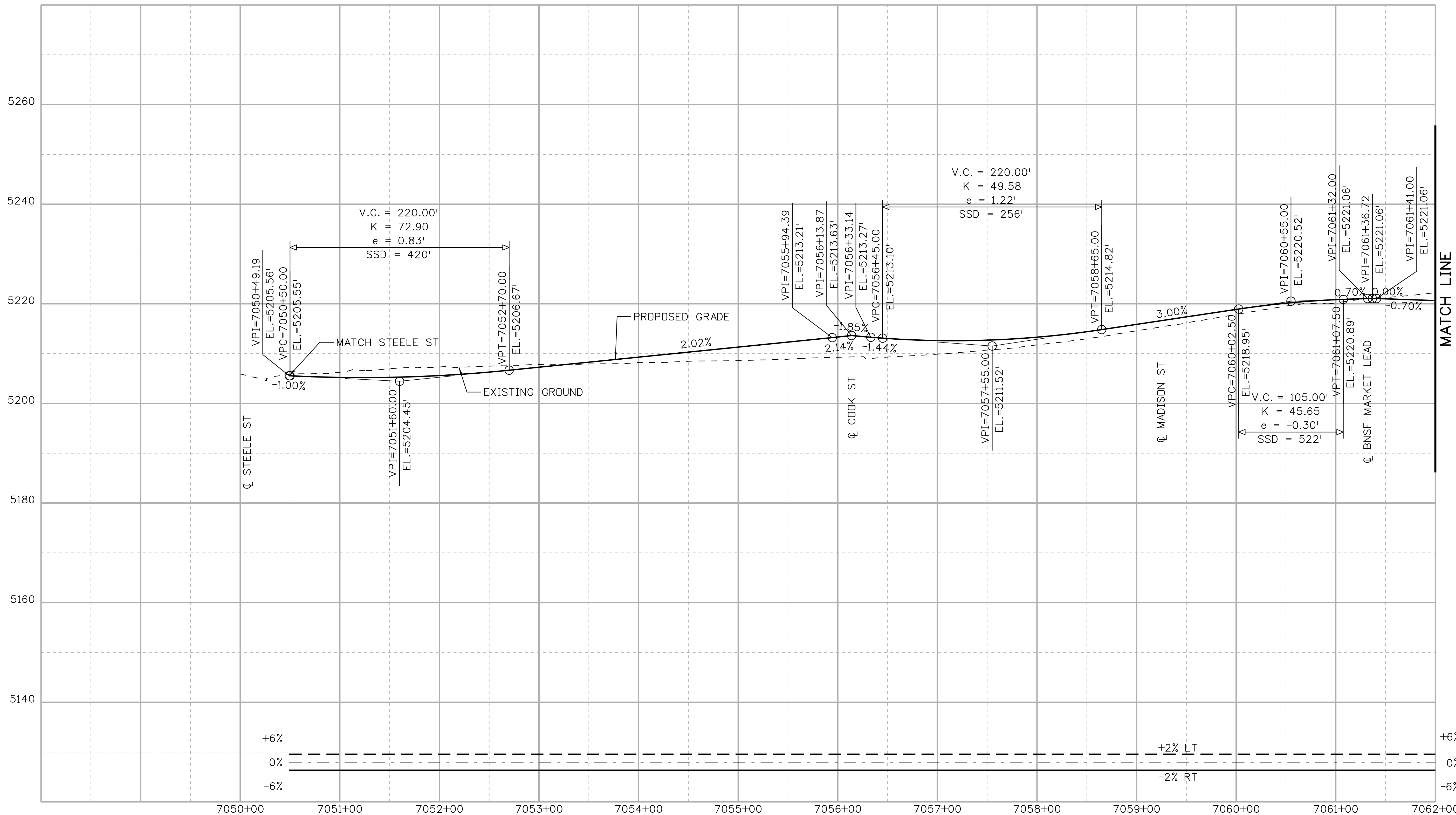
Print Date: 5/19/2017		Sheet Revisions	Colorado Department of Transportation	PRELIMINARY	CENTRAL 70 ROADWAY PROFILE 46TH AVE S STA 7036+00 TO STA 7045+31.07
File Name: File Name: See sheet edge for information		Date: / Comments / Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:	Project No./Code: FBR 0704-234
Front Range Mobility Group	Horiz. Scale: As Noted		Region 1	Revised:	19631
	Vert. Scale: As Noted		KJS	Void:	Designer: / Detailer: / Structure Numbers
	Unit Information				Sheet Subset: ROAD PROF / Subset Sheets: RPR42 of 136
	Unit Leader				Sheet Number 222



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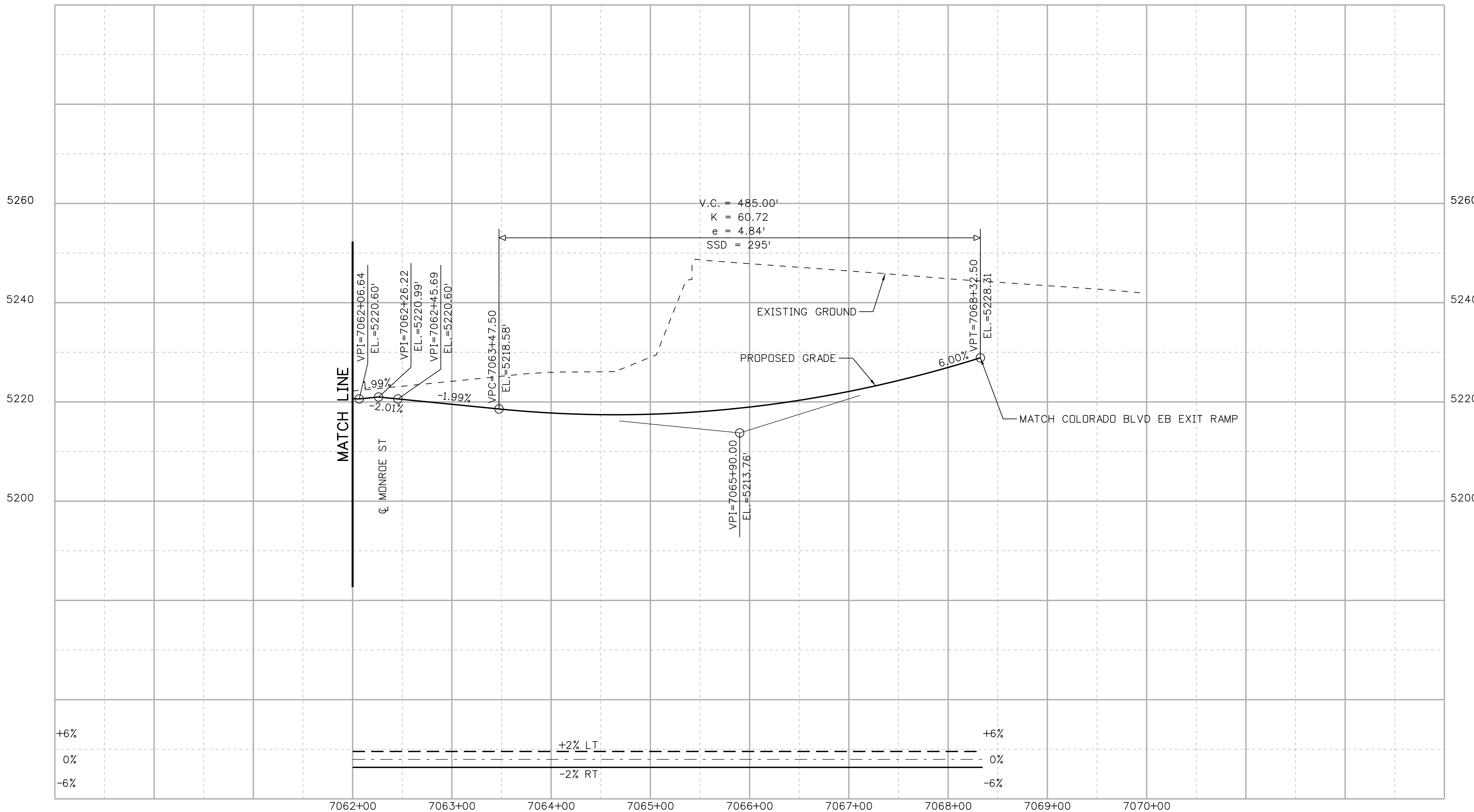
2000 South Holly Street
Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
46TH AVE S
STA 7050+49.19 TO STA 7062+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PROF	Subset Sheets: RPR43 of 136	

Project No./Code
FBR 0704-234
19631
Sheet Number 223



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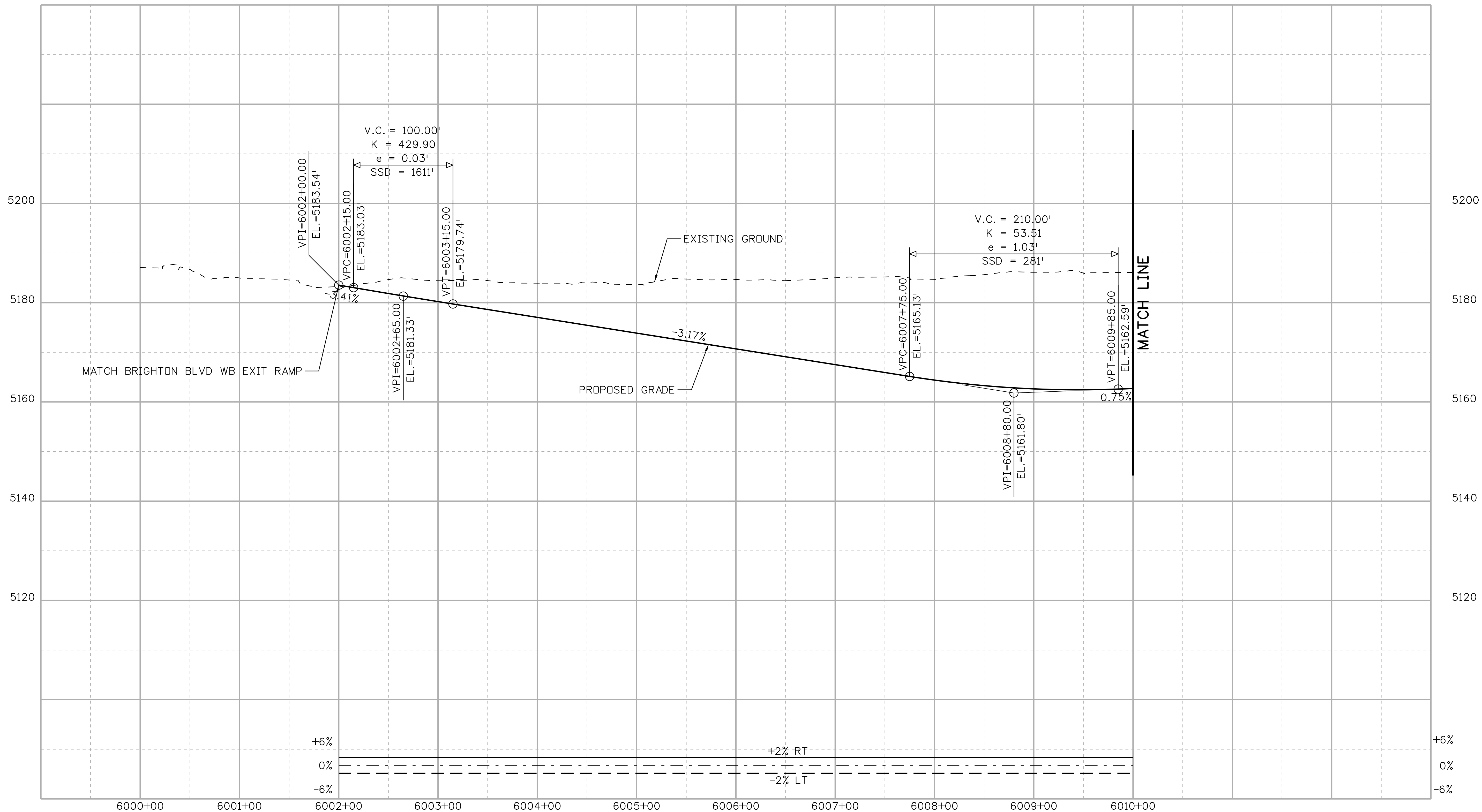
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
46TH AVE S
STA 7062+00 TO STA 7068+32.50

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PROF	Subset Sheets: RPR44 of 136	

Project No./Code
FBR 0704-234
19631
Sheet Number 224



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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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2000 South Holly Street
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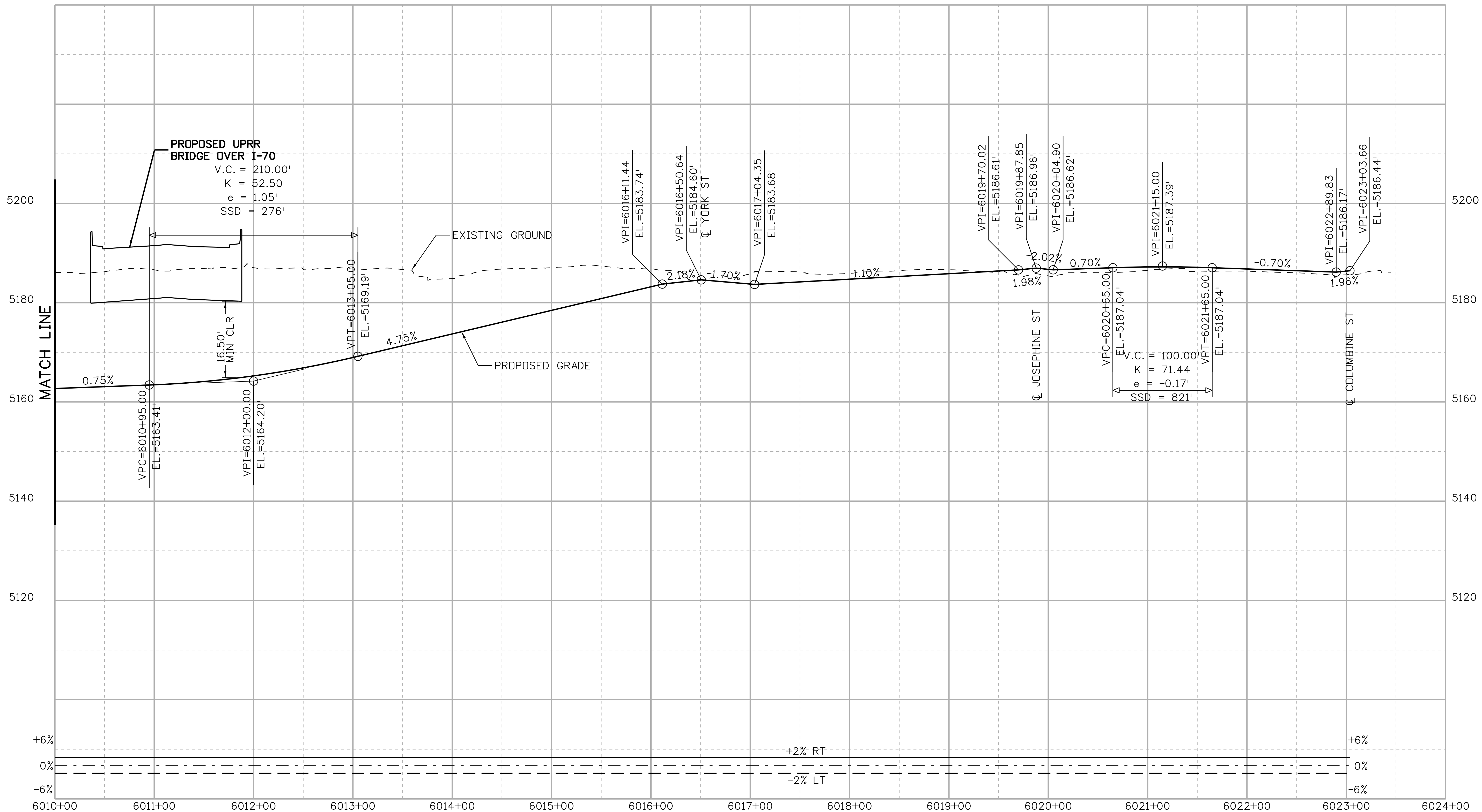
PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
46TH AVE N
STA 6000+00 TO STA 6010+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR45 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 225



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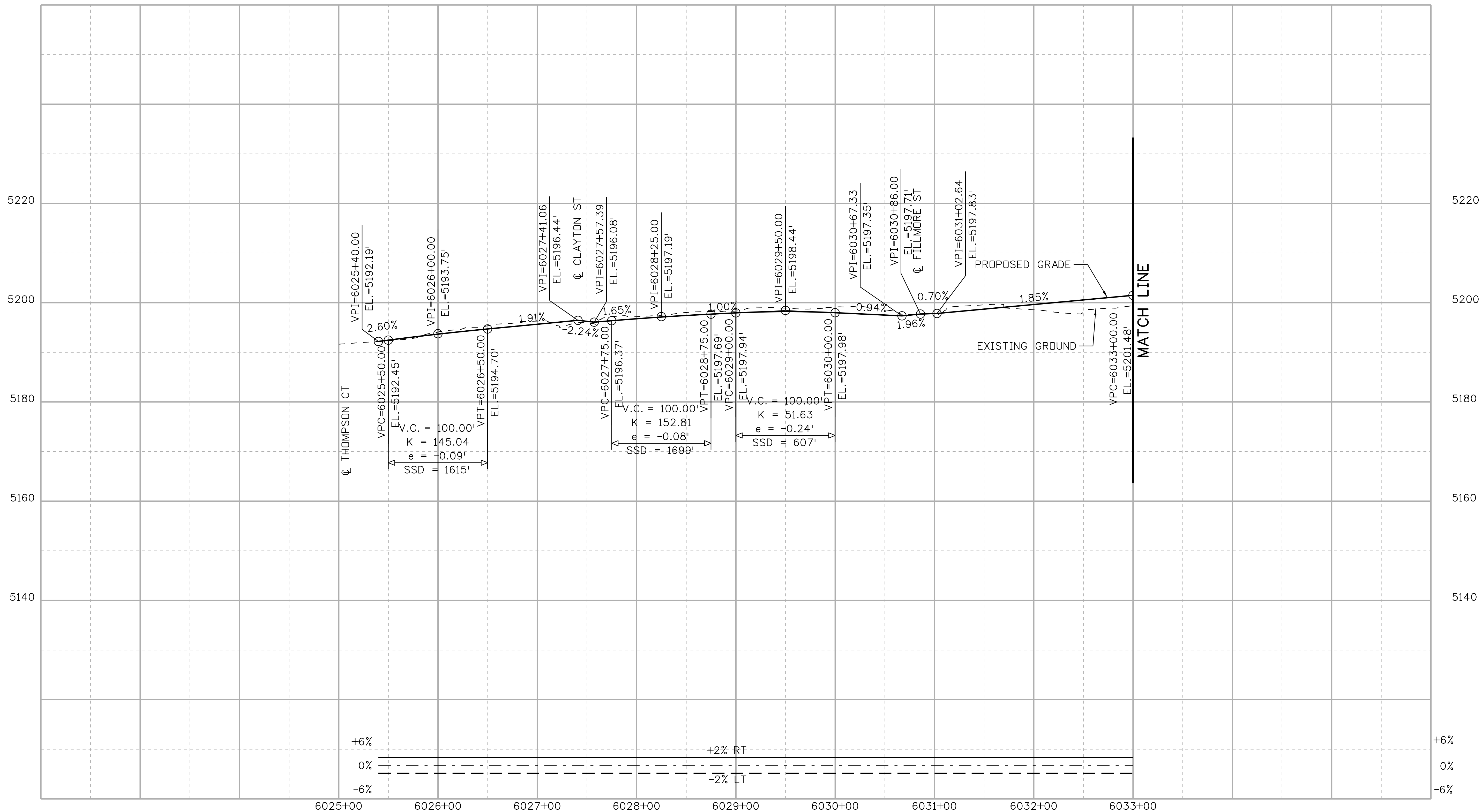
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
46TH AVE N
STA 6010+00 TO STA 6023+03.66

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PROF		Subset Sheets: RPR46 of 136	

Project No./Code
FBR 0704-234
19631
Sheet Number 226



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
46TH AVE N
STA 6025+00 TO STA 6033+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR47 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 227

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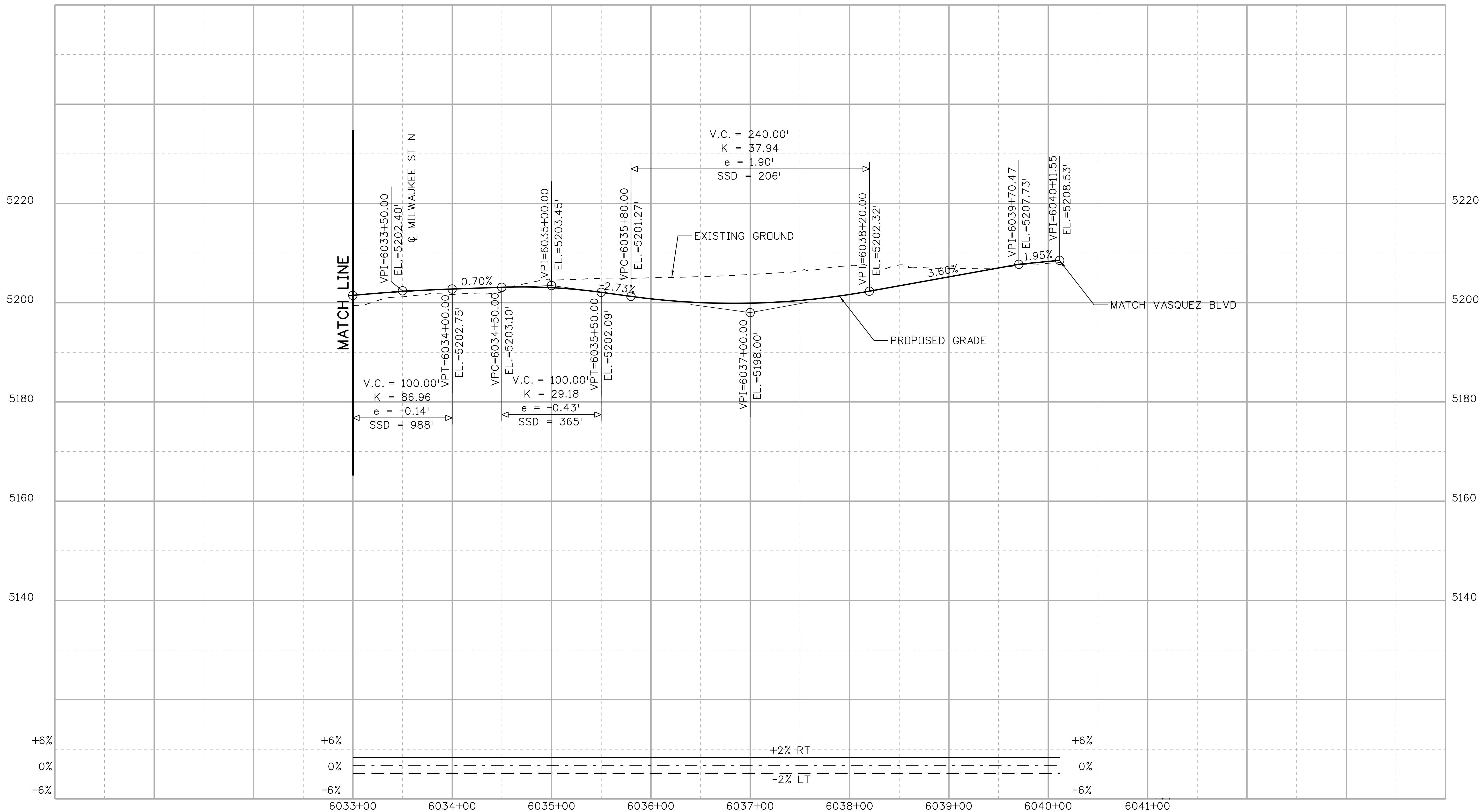

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Print Date: 5/19/2017		Sheet Revisions		
File Name: File Name: See sheet edge for information		Date:	Comments	Init.
Front Range Mobility Group	Horiz. Scale: As Noted			
	Vert. Scale: As Noted			
	Unit Information			
	Unit Leader			

Colorado Department of Transportation
2000 South Holly Street
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Phone: 303-757-9934 FAX: 303-757-9907
Region 1
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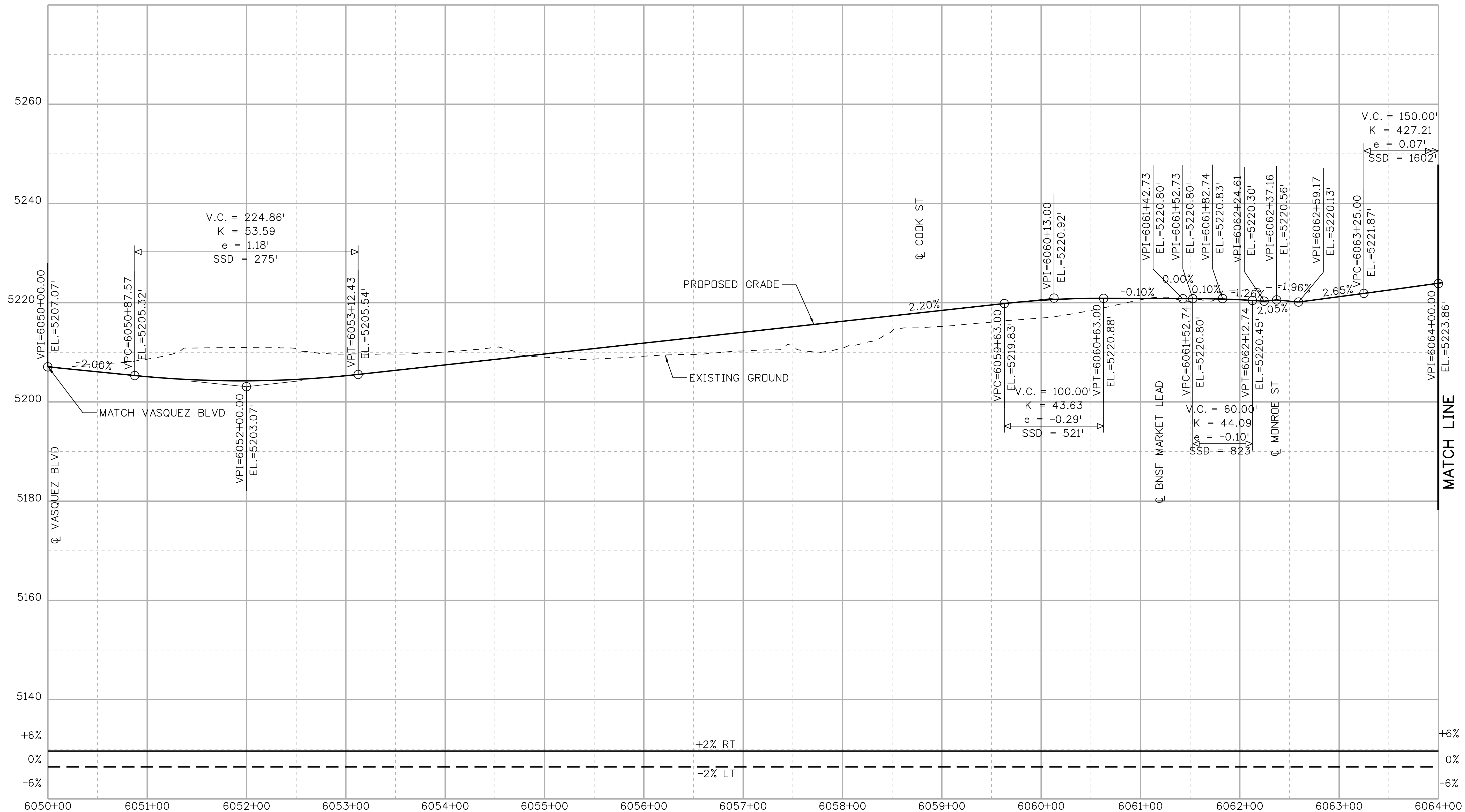
PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
46TH AVE N
STA 6033+00 TO STA 6040+11.55

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PROF	Subset Sheets: RPR48 of 136	

Project No./Code
FBR 0704-234
19631
Sheet Number 228



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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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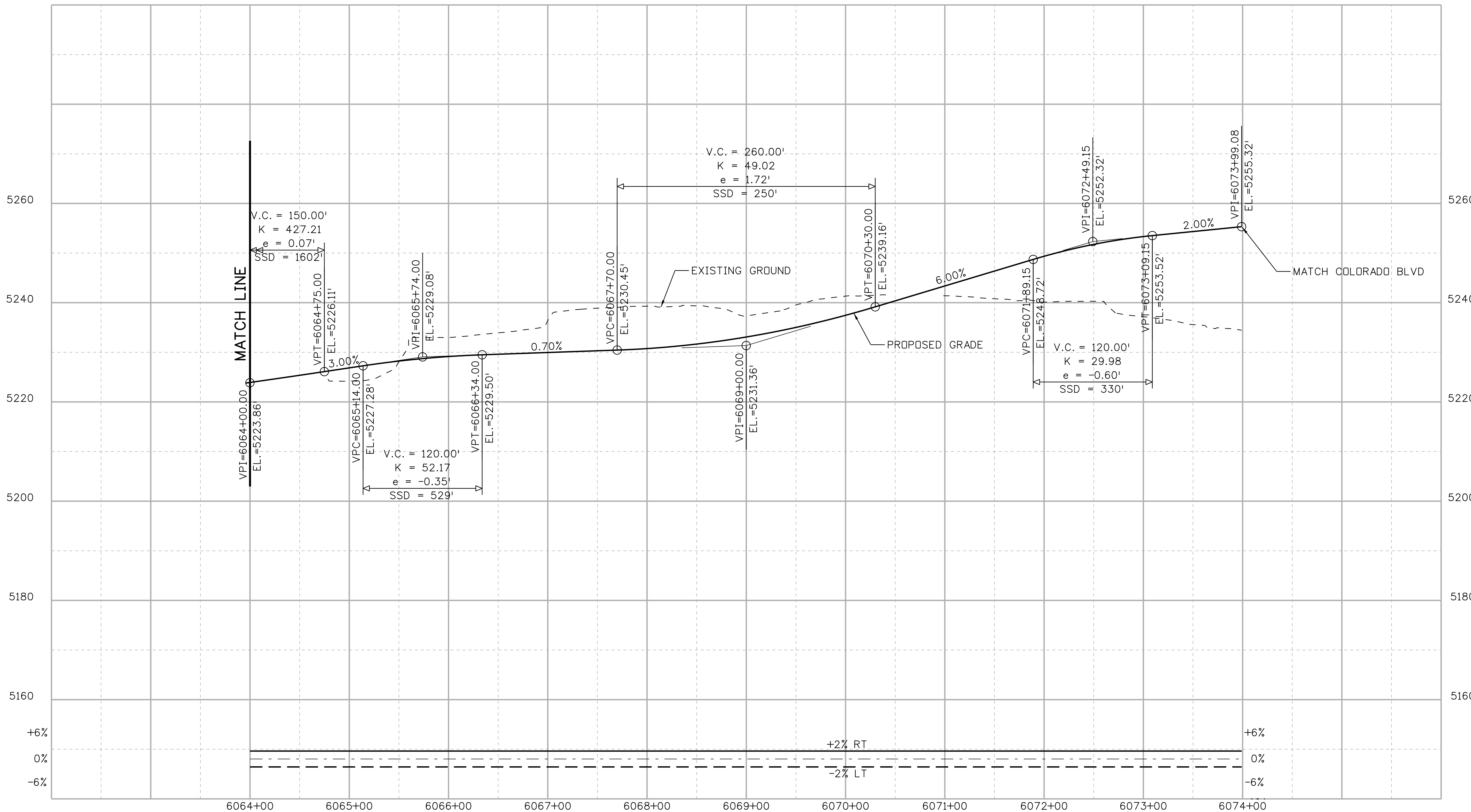
PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
46TH AVE N
STA 6050+00 TO STA 6064+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PROF	Subset Sheets: RPR49 of 136	

Project No./Code
FBR 0704-234
19631
Sheet Number 229



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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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Phone: 303-757-9934 FAX: 303-757-9907
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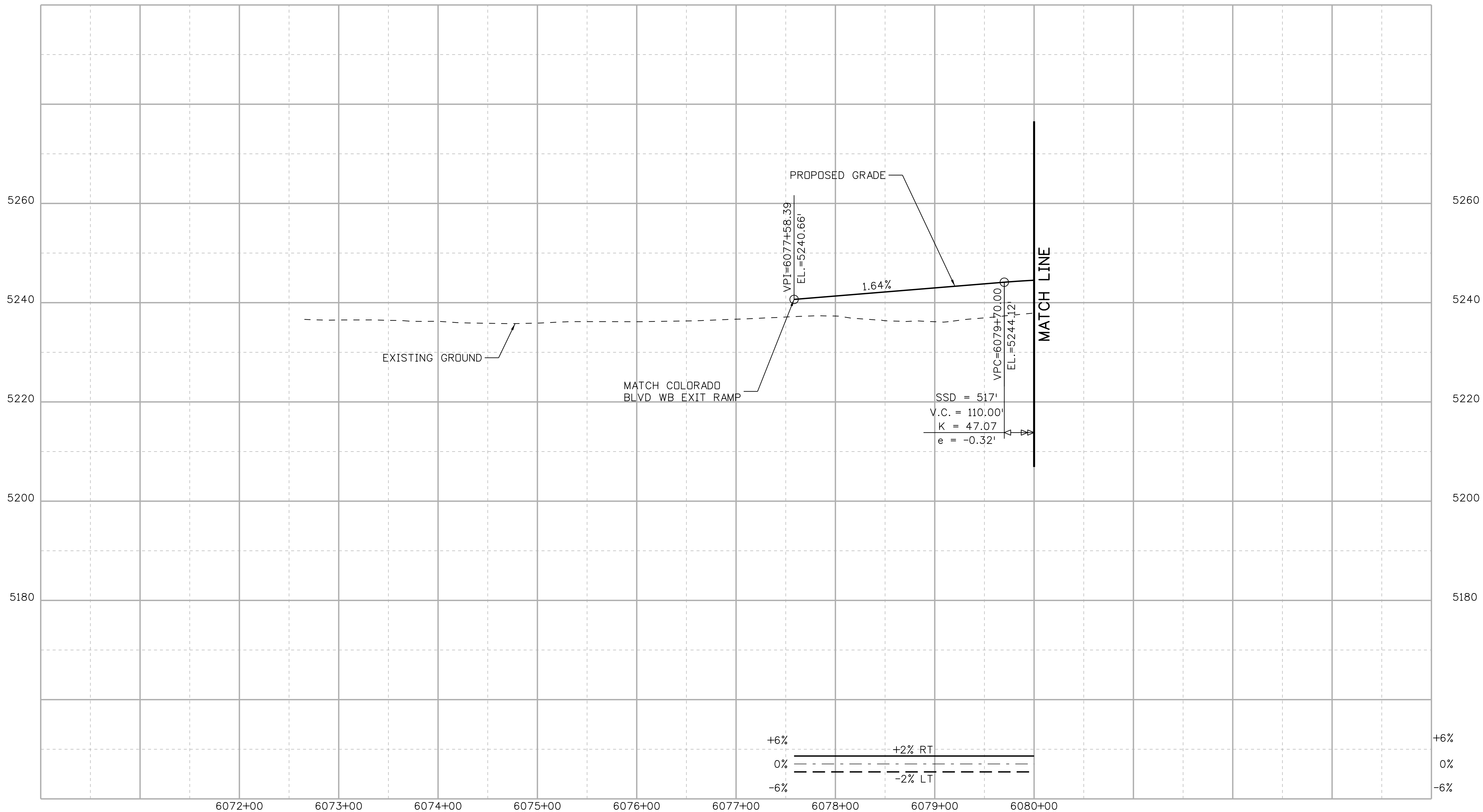
PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
46TH AVE N
STA 6064+00 TO STA 6073+99.08

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR50 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 230



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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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No Revisions:
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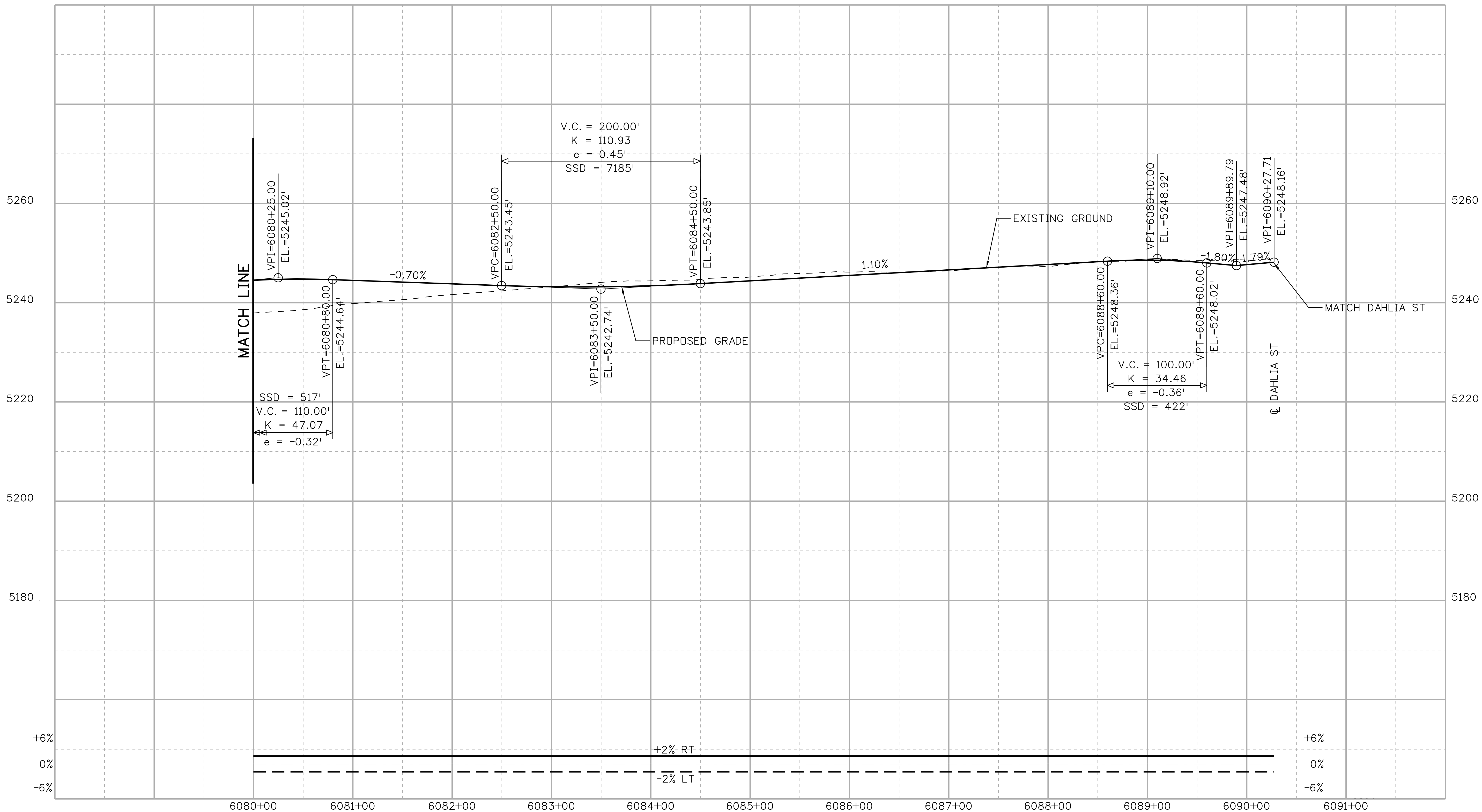
CENTRAL 70
ROADWAY PROFILE
STAPLETON DR N
STA 6072+65 TO STA 6080+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PROF	Subset Sheets: RPR51 of 136	

Project No./Code
FBR 0704-234
19631
Sheet Number 231



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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
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No Revisions:
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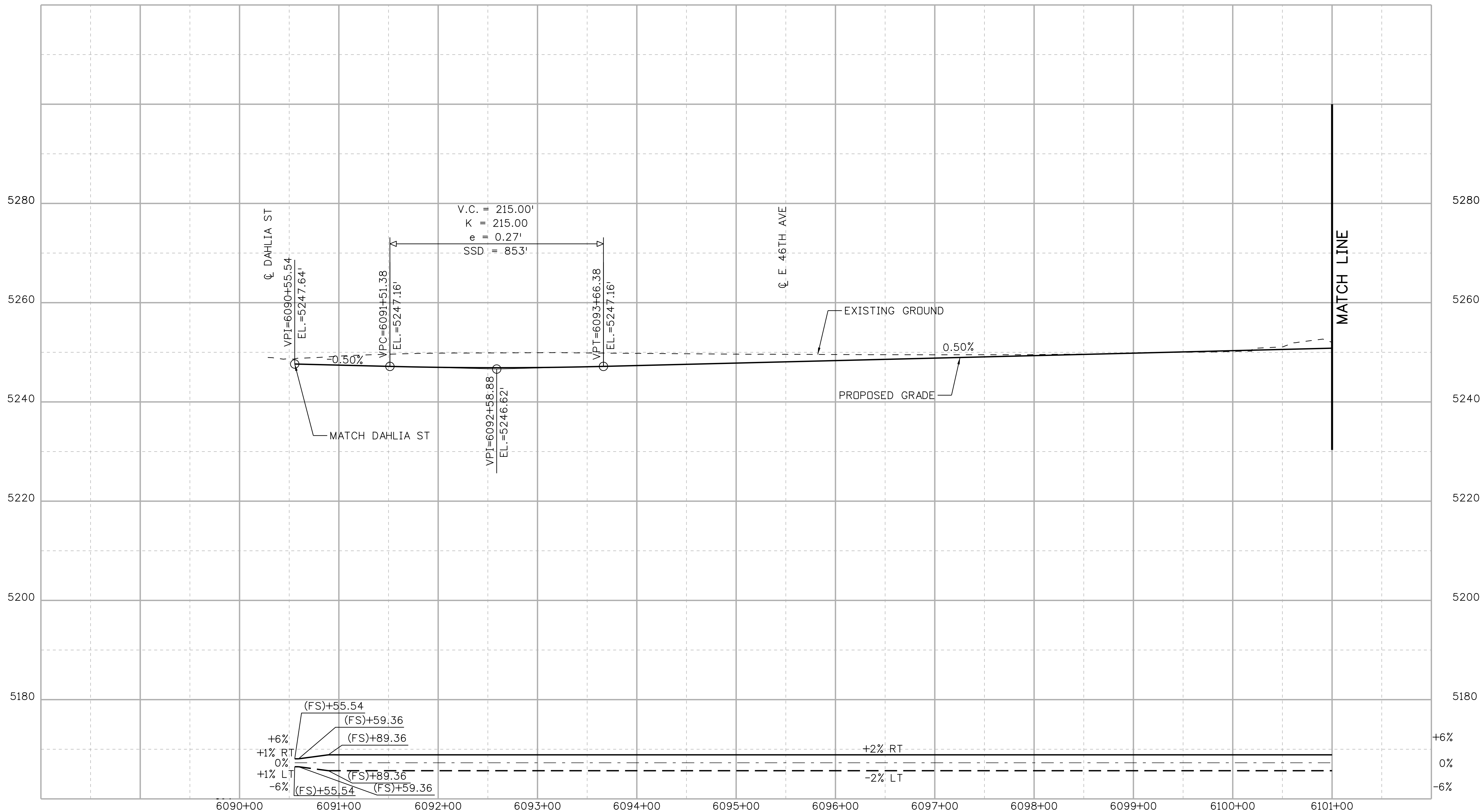
Void:

CENTRAL 70
ROADWAY PROFILE
STAPLETON DR N
STA 6080+00 TO STA 6090+28

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PROF	Subset Sheets: RPR52 of 136	

Project No./Code
FBR 0704-234
19631
Sheet Number 232



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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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Denver, CO 80222
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No Revisions:

Revised:

Void:

CENTRAL 70
ROADWAY PROFILE
STAPLETON DR N
STA 6090+55.54 TO STA 6101+00

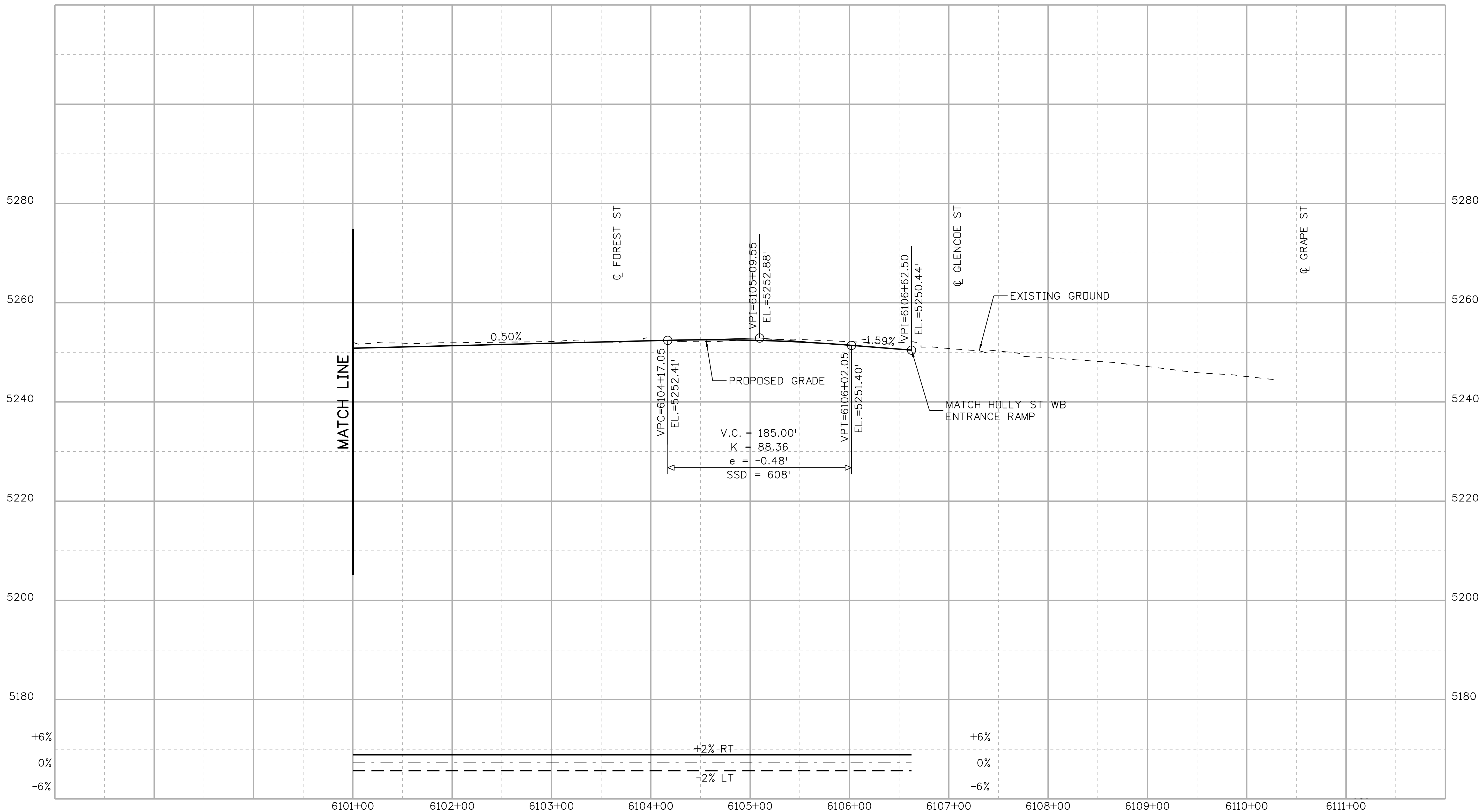
Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PROF		Subset Sheets: RPR53 of 136	

Project No./Code

FBR 0704-234

19631

Sheet Number 233



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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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Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
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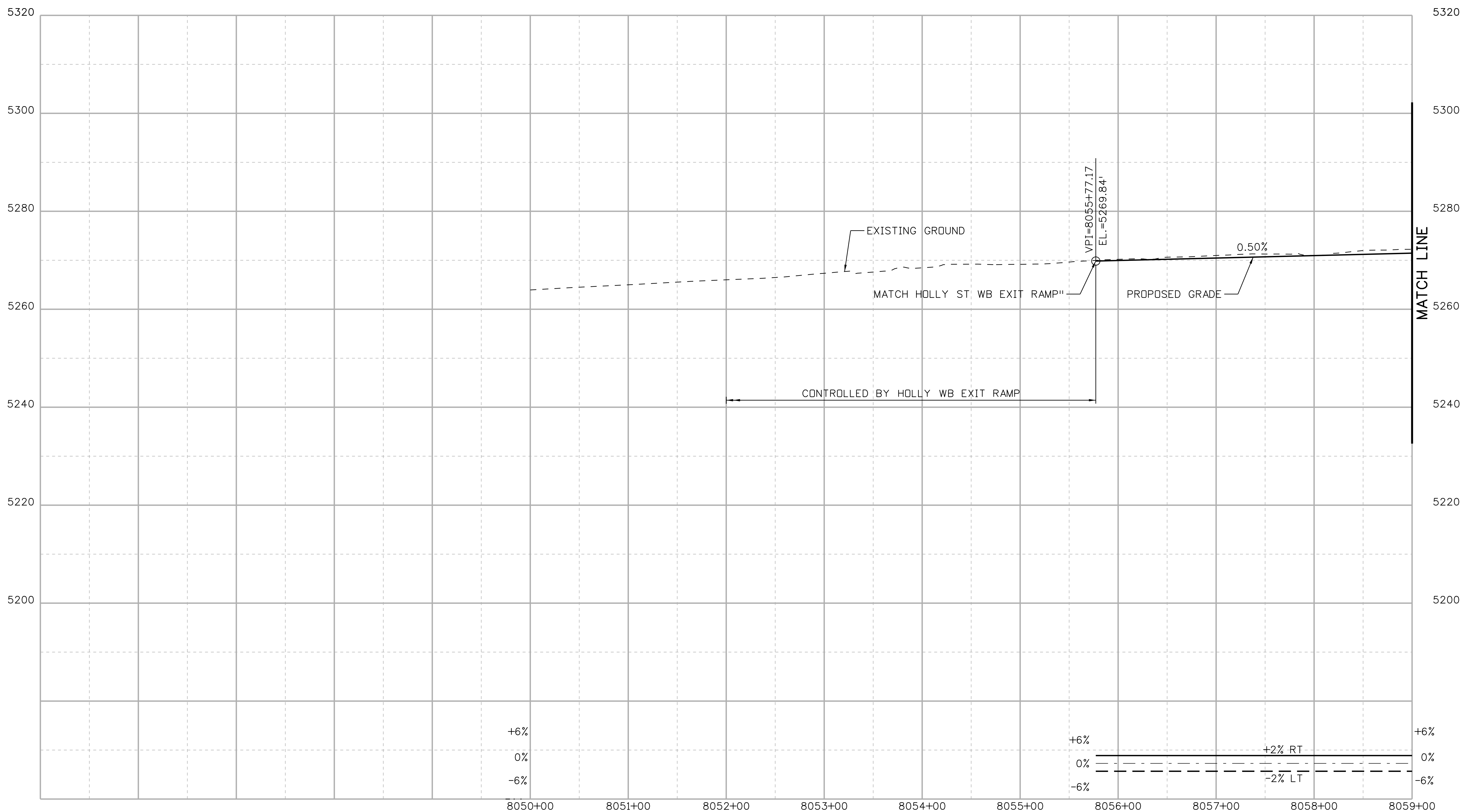
PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
STAPLETON DR N
STA 6101+00 TO STA 6106+62.50

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR54 of 136

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



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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

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PRELIMINARY

No Revisions:

Revised:

Void:

CENTRAL 70
ROADWAY PROFILE
STAPLETON DR N
STA 8050+00 TO STA 8059+00

Designer:

Detailer:

Structure Numbers

Sheet Subset: ROAD PROF

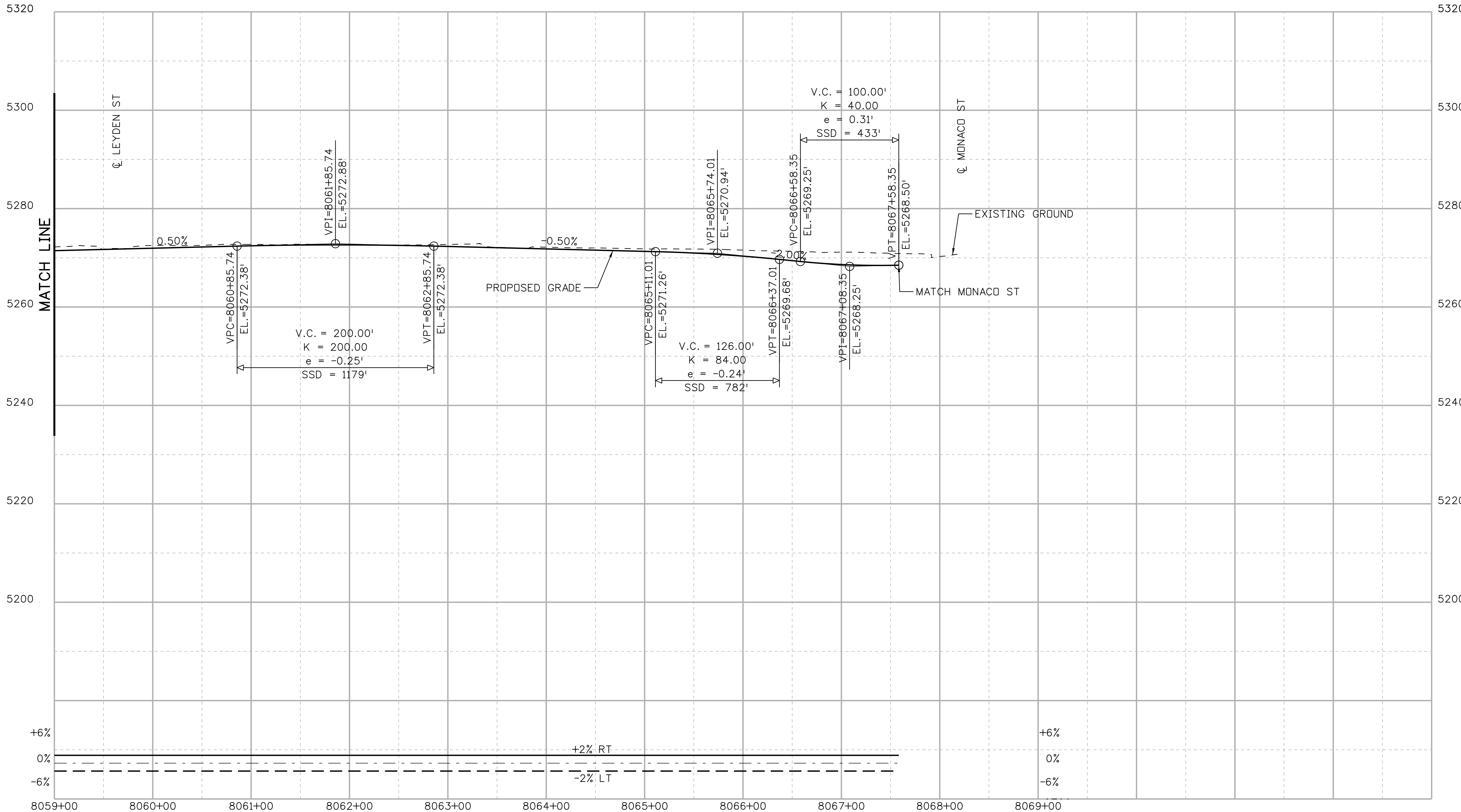
Subset Sheets: RPR55 of 136

Project No./Code

FBR 0704-234

19631

Sheet Number 235



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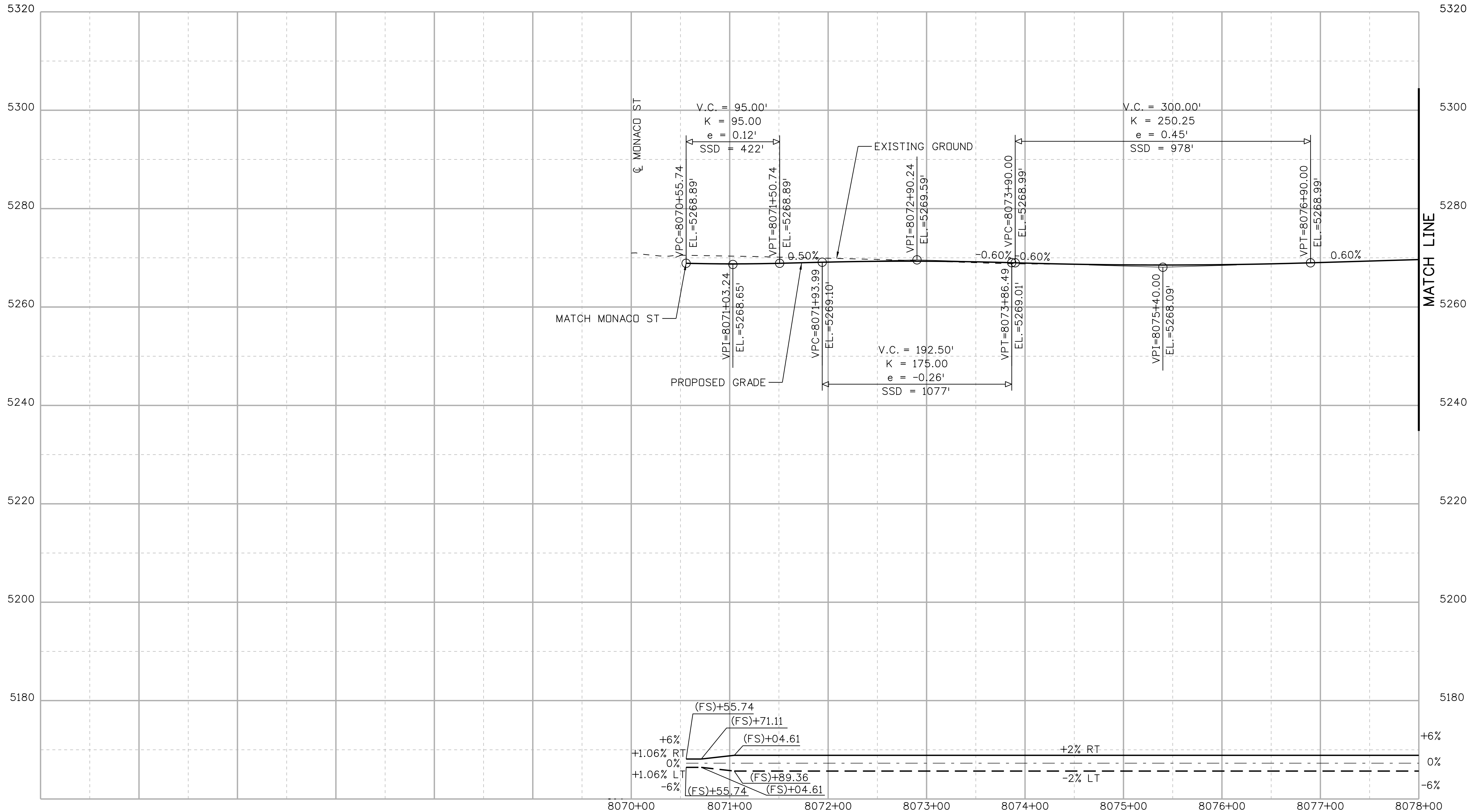
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
STAPLETON DR N
STA 8059+00 TO STA 8067+58.35

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR56 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 236



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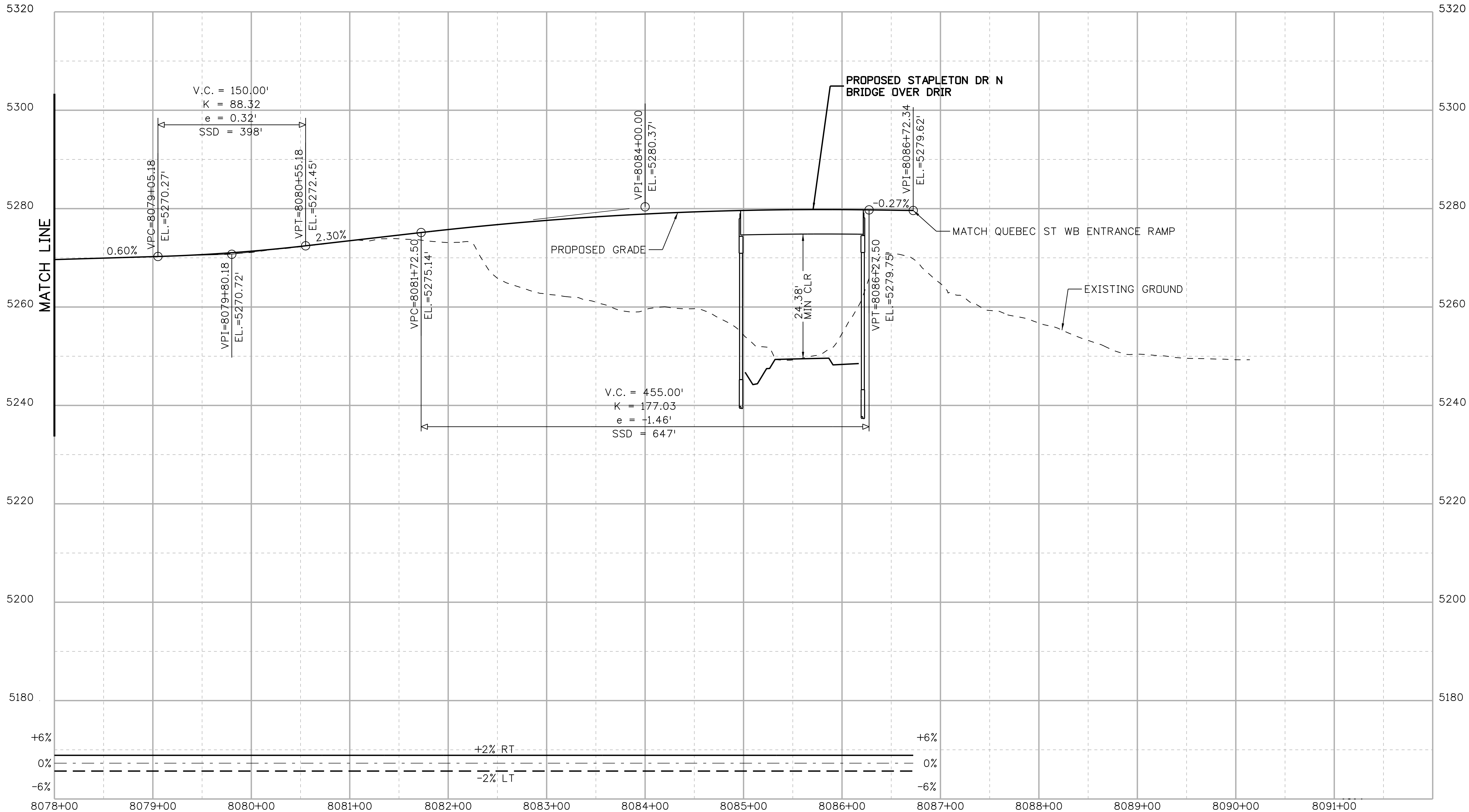
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
STAPLETON DR N
STA 8070+55.74 TO STA 8078+00

Designer:	Structure Numbers	
Detailer:		
Sheet Subset: ROAD PROF	Subset Sheets: RPR57 of 136	

Project No./Code
FBR 0704-234
19631
Sheet Number 237



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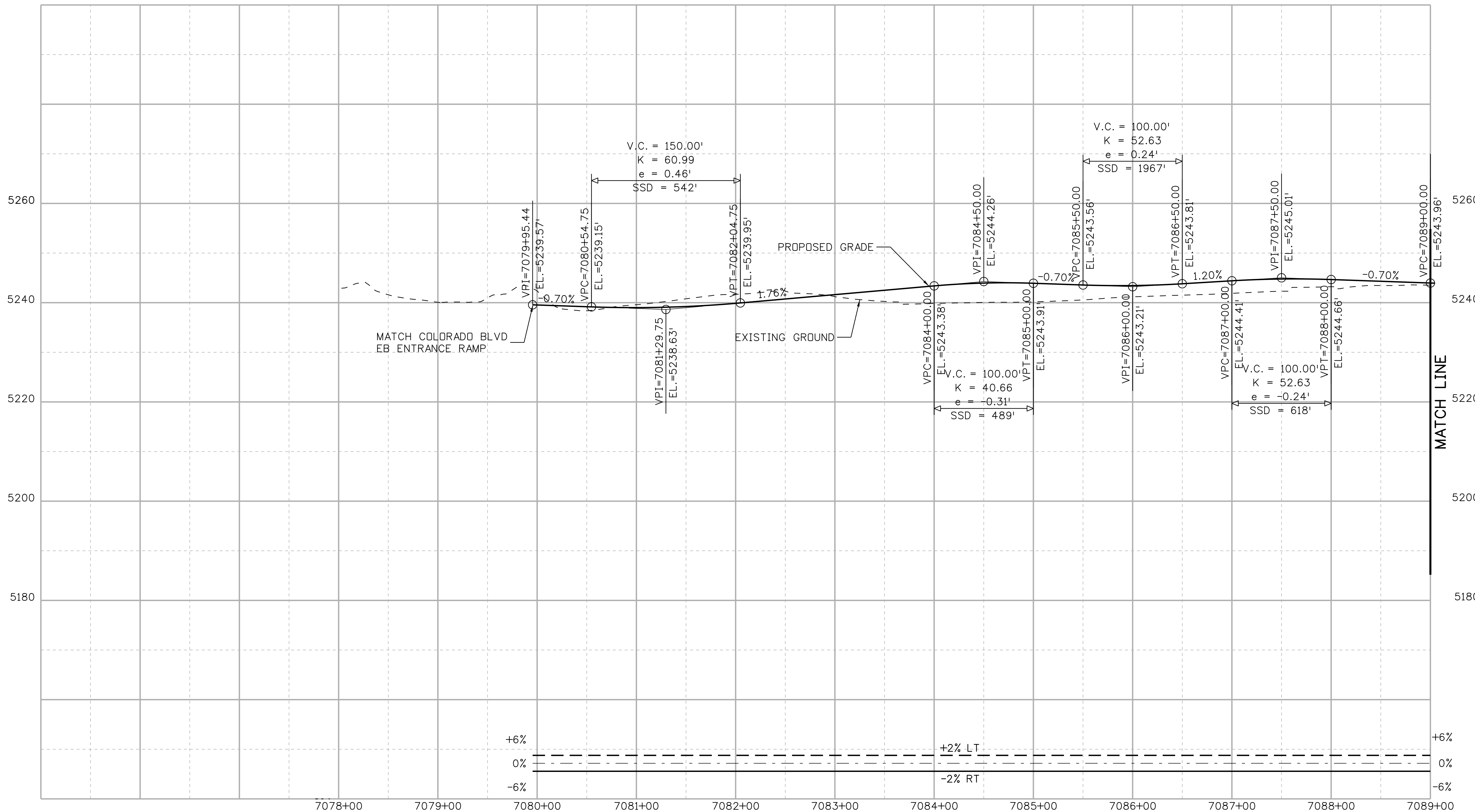
Print Date: 5/19/2017		Sheet Revisions			Colorado Department of Transportation	PRELIMINARY	CENTRAL 70 ROADWAY PROFILE STAPLETON DR N STA 8078+00 TO STA 8086+72.34	Project No./Code
File Name: File Name: See sheet edge for information		Date:	Comments	Init.	2000 South Holly Street Denver, CO 80222 Phone: 303-757-9934 FAX: 303-757-9907	No Revisions:	Designer: / Structure Numbers	FBR 0704-234
Front Range Mobility Group	Horiz. Scale: As Noted					Revised:	Detailer:	19631
	Vert. Scale: As Noted							
	Unit Information				Region 1 KJS	Void:	Sheet Subset: ROAD PROF / Subset Sheets: RPR58 of 136	Sheet Number 238
	Unit Leader							



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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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Denver, CO 80222
Phone: 303-757-9934 FAX: 303-757-9907
Region 1
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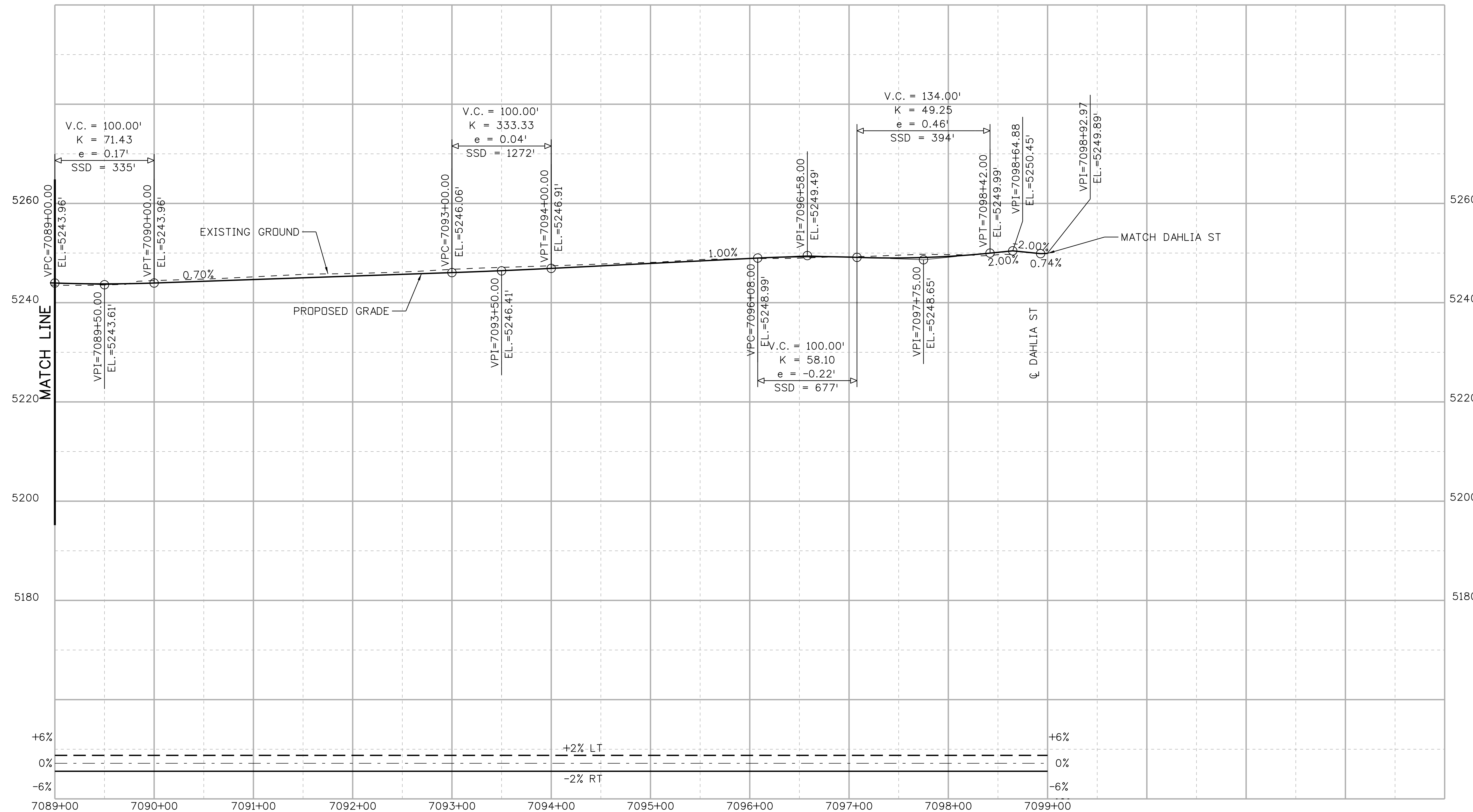
PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
STAPLETON DR S
STA 7078+00 TO STA 7089+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR59 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 239



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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
STAPLETON DR S
STA 7089+00 TO STA 7099+00

Designer:

Detailer:

Structure Numbers

Sheet Subset: ROAD PROF

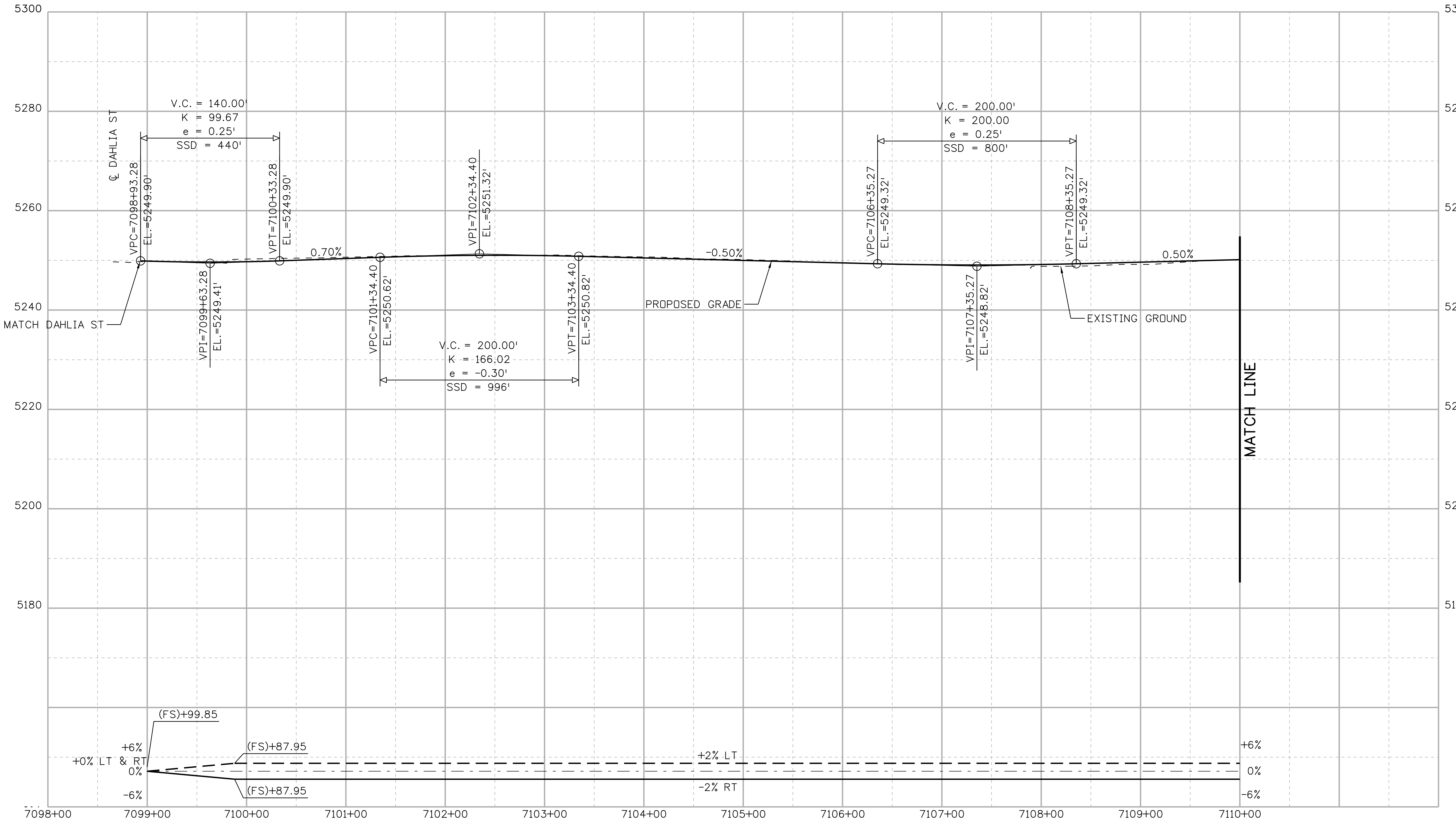
Subset Sheets: RPR60 of 136

Project No./Code

FBR 0704-234

19631

Sheet Number 240



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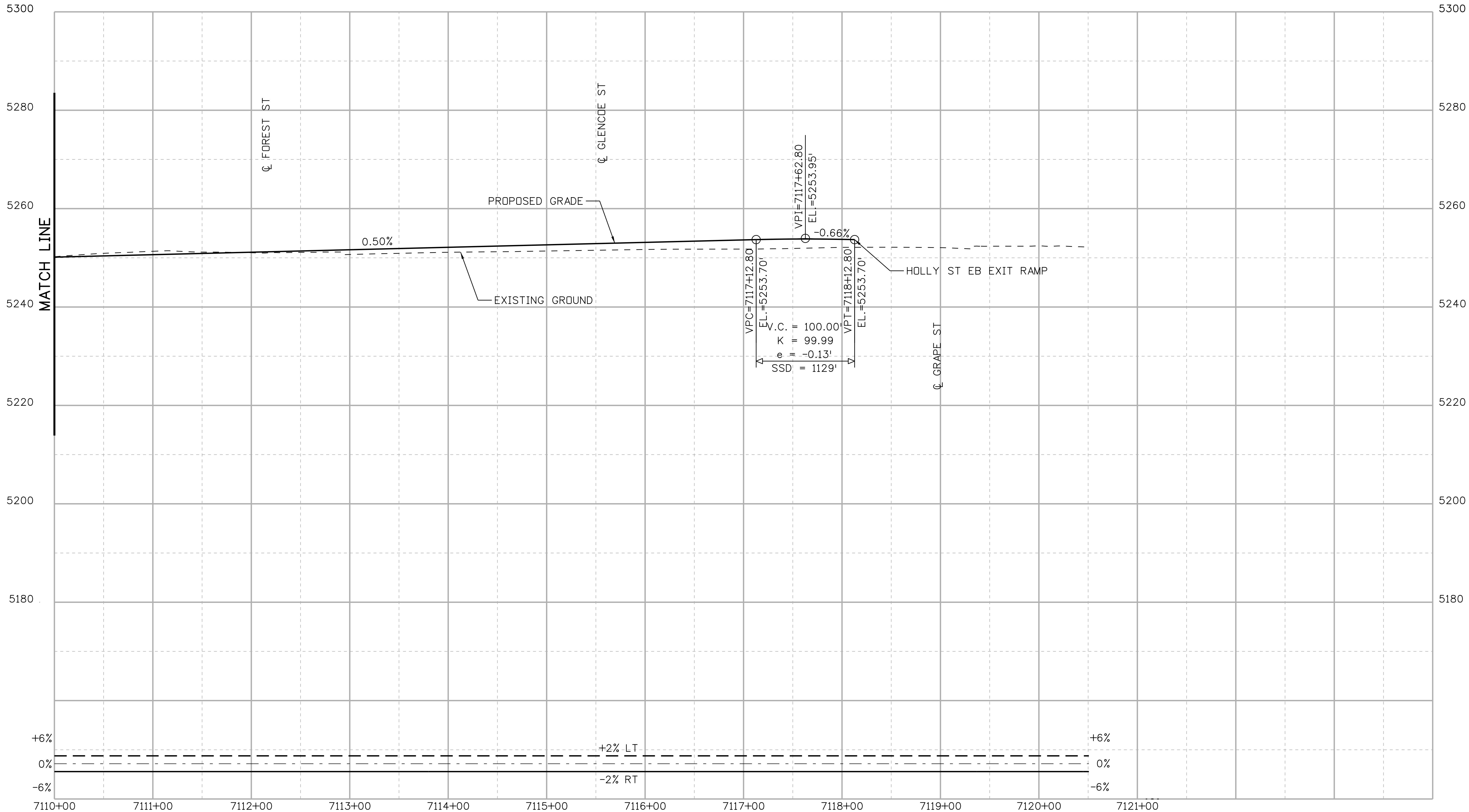
Phone: 303-757-9934 FAX: 303-757-9907
Region 1 KJS

PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
STAPLETON DR S
STA 7098+00 TO STA 7110+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PROF	Subset Sheets: RPR61 of 136	

Project No./Code
FBR 0704-234
19631
Sheet Number 241



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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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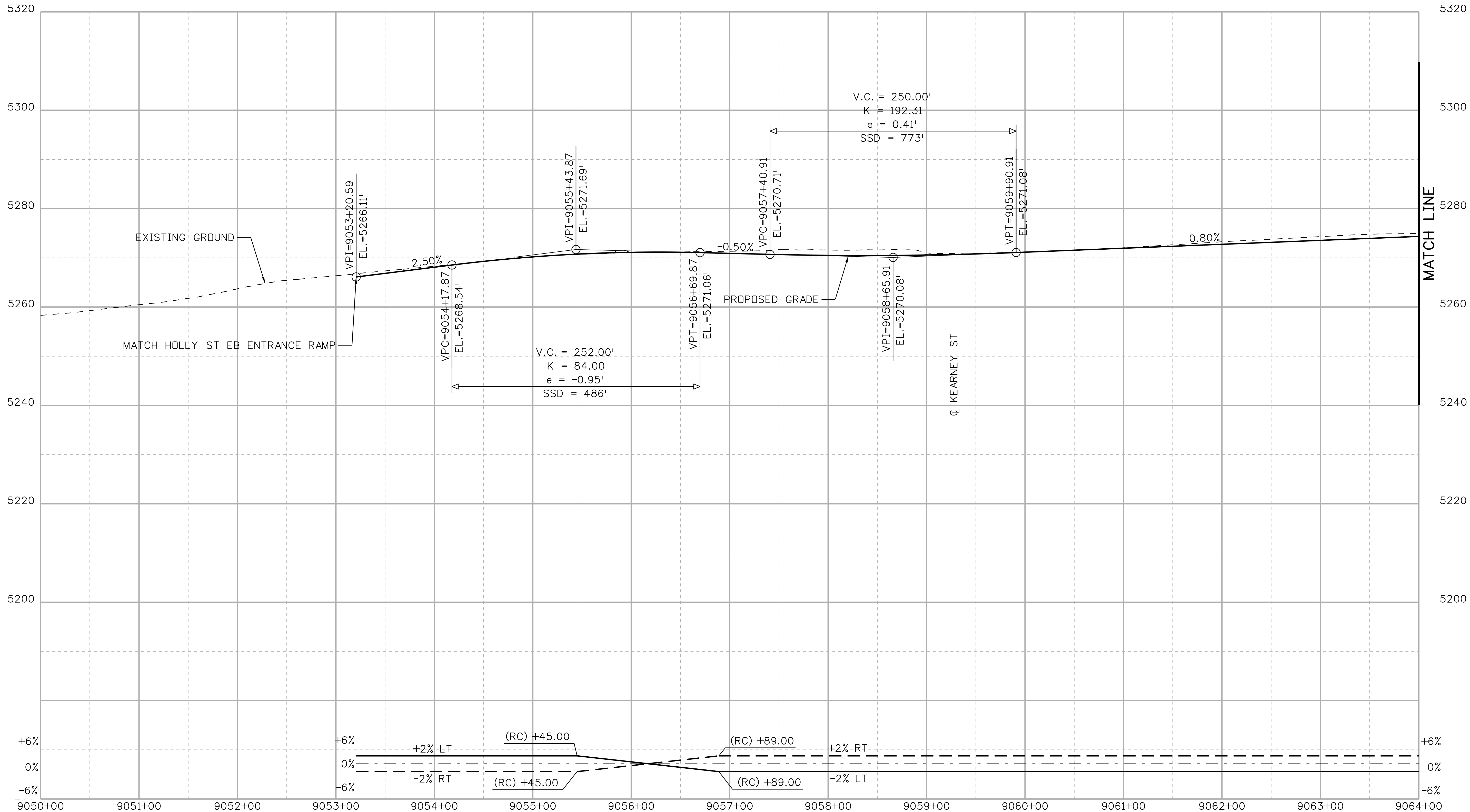
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
STAPLETON DR S
STA 7110+00 TO STA 7118+12.80

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR62 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 242



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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PRELIMINARY
No Revisions:
Revised:
Void:

CENTRAL 70
ROADWAY PROFILE
STAPLETON DR S
STA 9050+00 TO STA 9064+00

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PROF	Subset Sheets: RPR63 of 136	

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19631
Sheet Number 243

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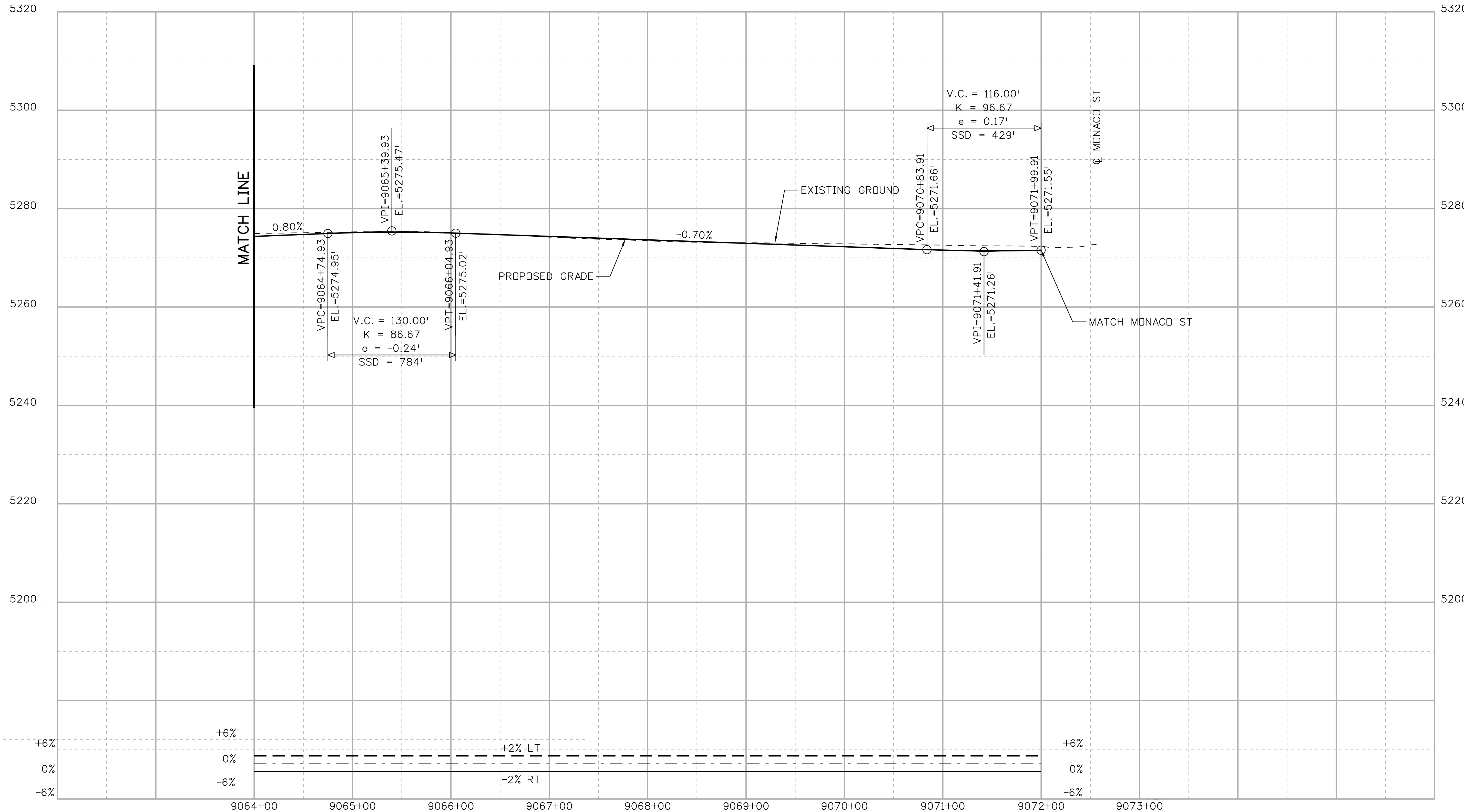

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Print Date: 5/19/2017	
File Name: File Name: See sheet edge for information	
Front Range Mobility Group	Horiz. Scale: As Noted
	Vert. Scale: As Noted
	Unit Information
	Unit Leader

Sheet Revisions

Date:	Comments	Init.

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No Revisions:
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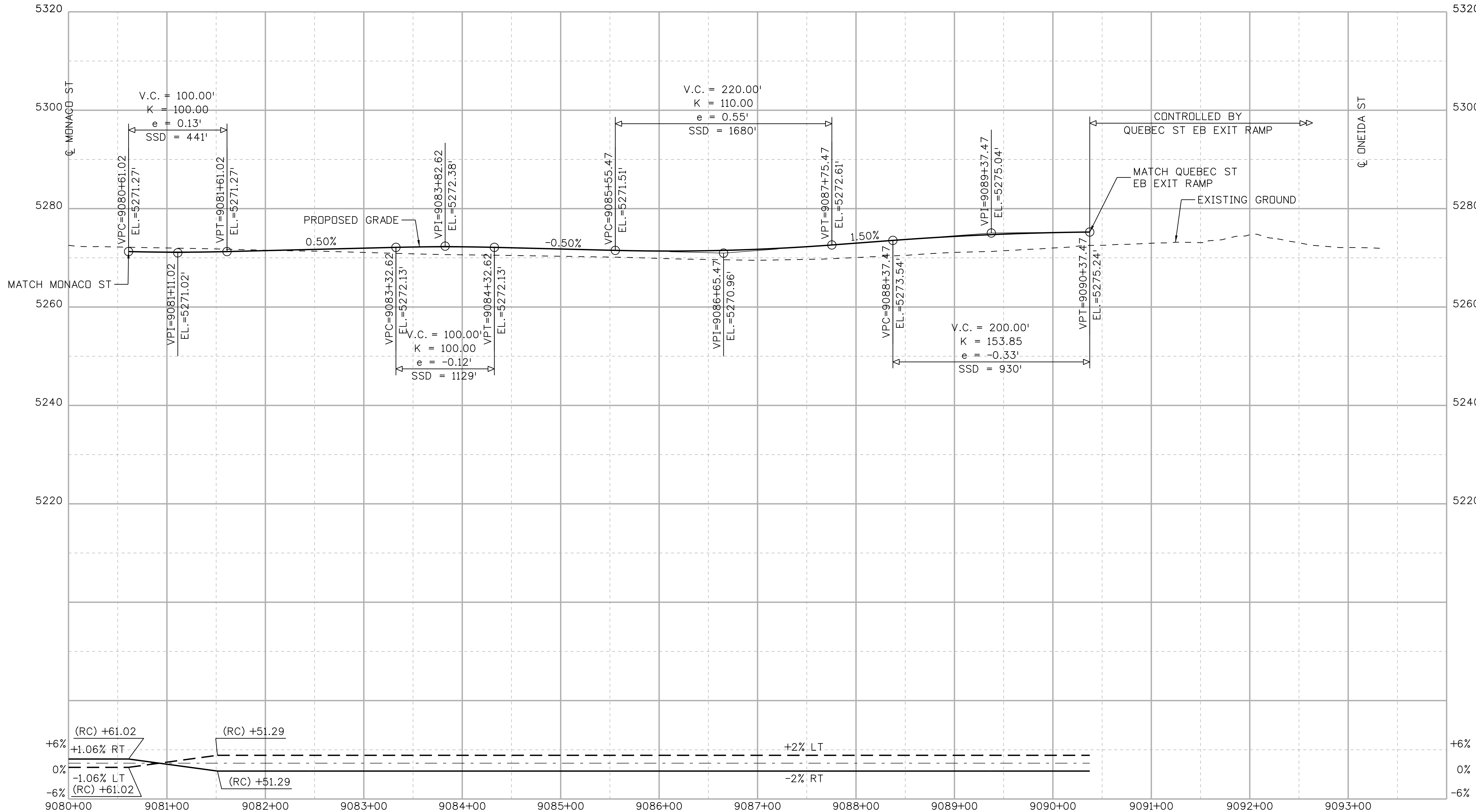
Void:

CENTRAL 70
ROADWAY PROFILE
STAPLETON DR S
STA 9064+00 TO STA 9071+99.91

Designer:		Structure Numbers	
Detailer:			
Sheet Subset:	ROAD PROF	Subset Sheets: RPR64 of 136	

Project No./Code
FBR 0704-234
19631
Sheet Number 244



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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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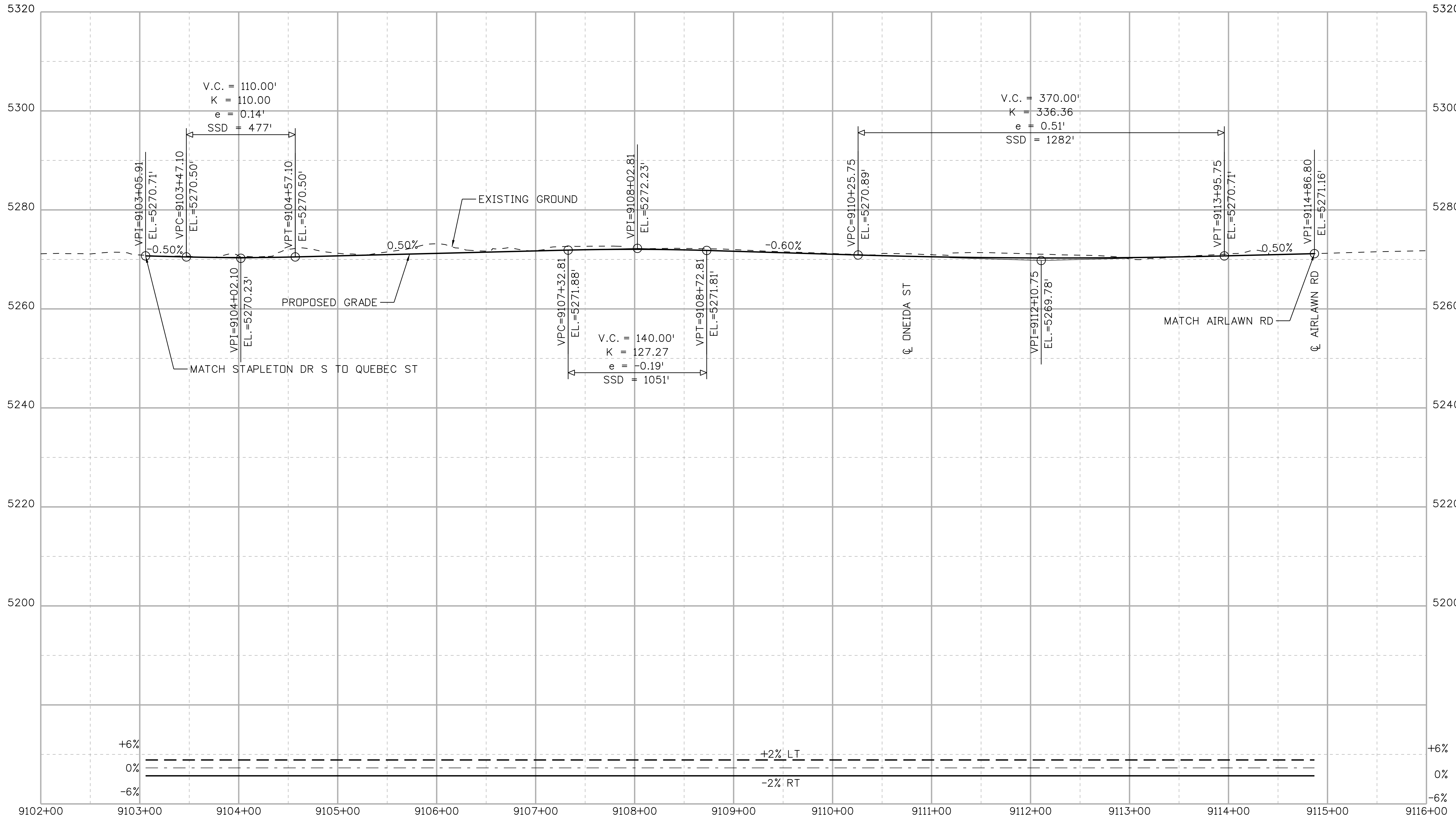
CENTRAL 70
ROADWAY PROFILE
STAPLETON DR S
STA 9080+00 TO STA 9093+37.47

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR65 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 245



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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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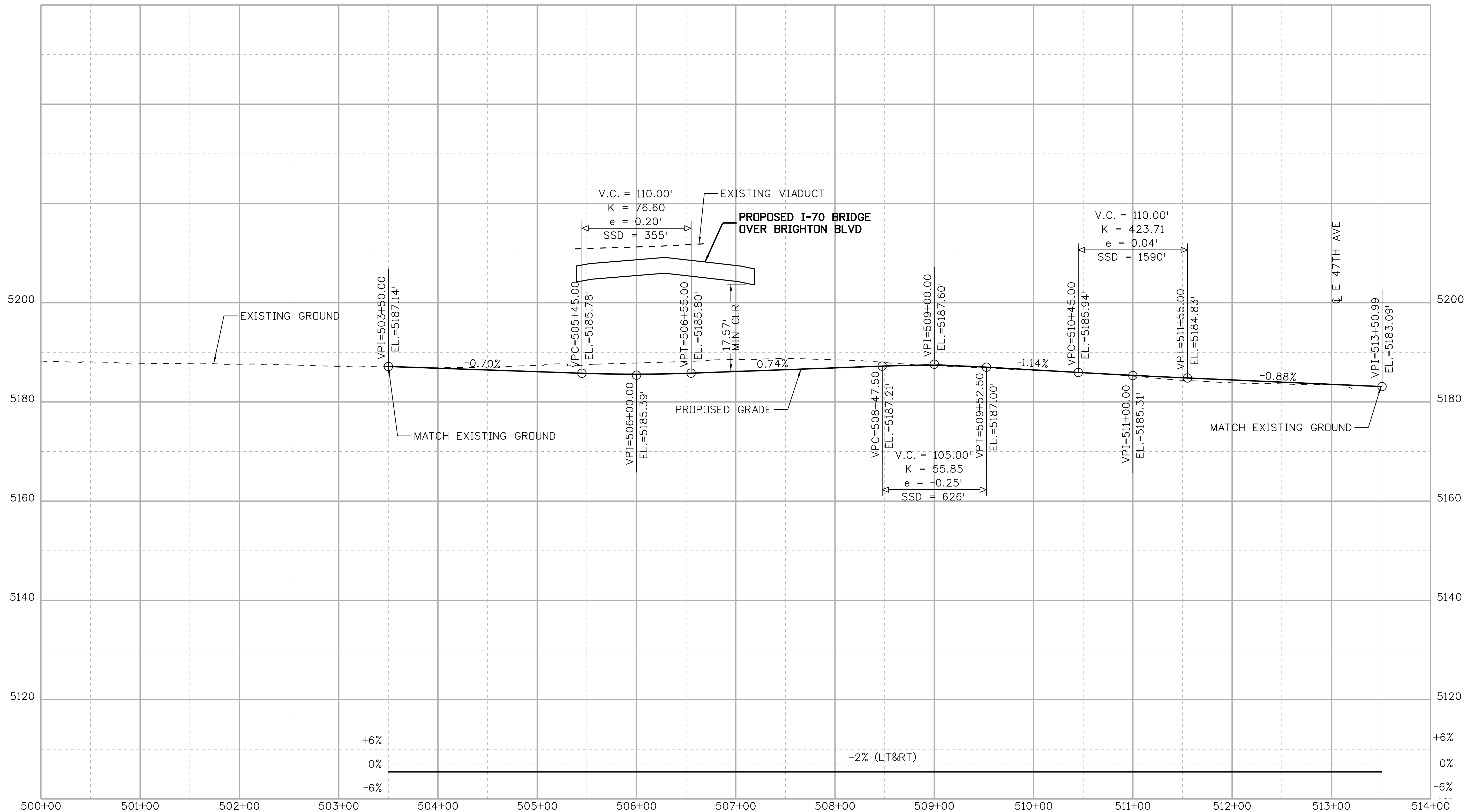
CENTRAL 70
ROADWAY PROFILE
STAPLETON DR S
STA 9102+00 TO STA 9116+00

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR66 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 246



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			

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No Revisions:			FBR 0704-234
Revised:	Designer:	Structure Numbers	19631
	Detailer:		
Void:	Sheet Subset: ROAD PROF	Subset Sheets: RPR67 of 136	Sheet Number 247

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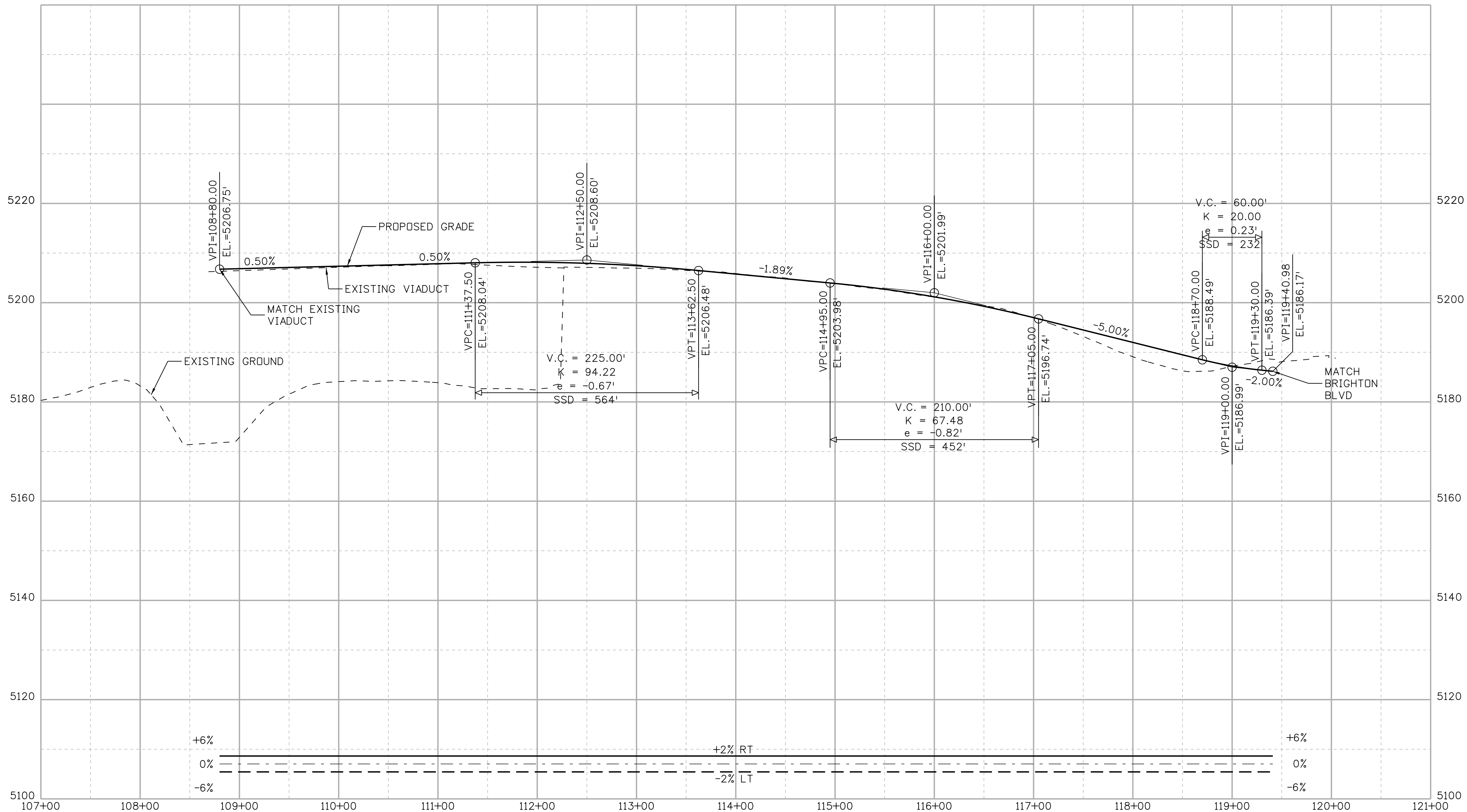

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Print Date: 5/19/2017
File Name: File Name: See sheet edge for information

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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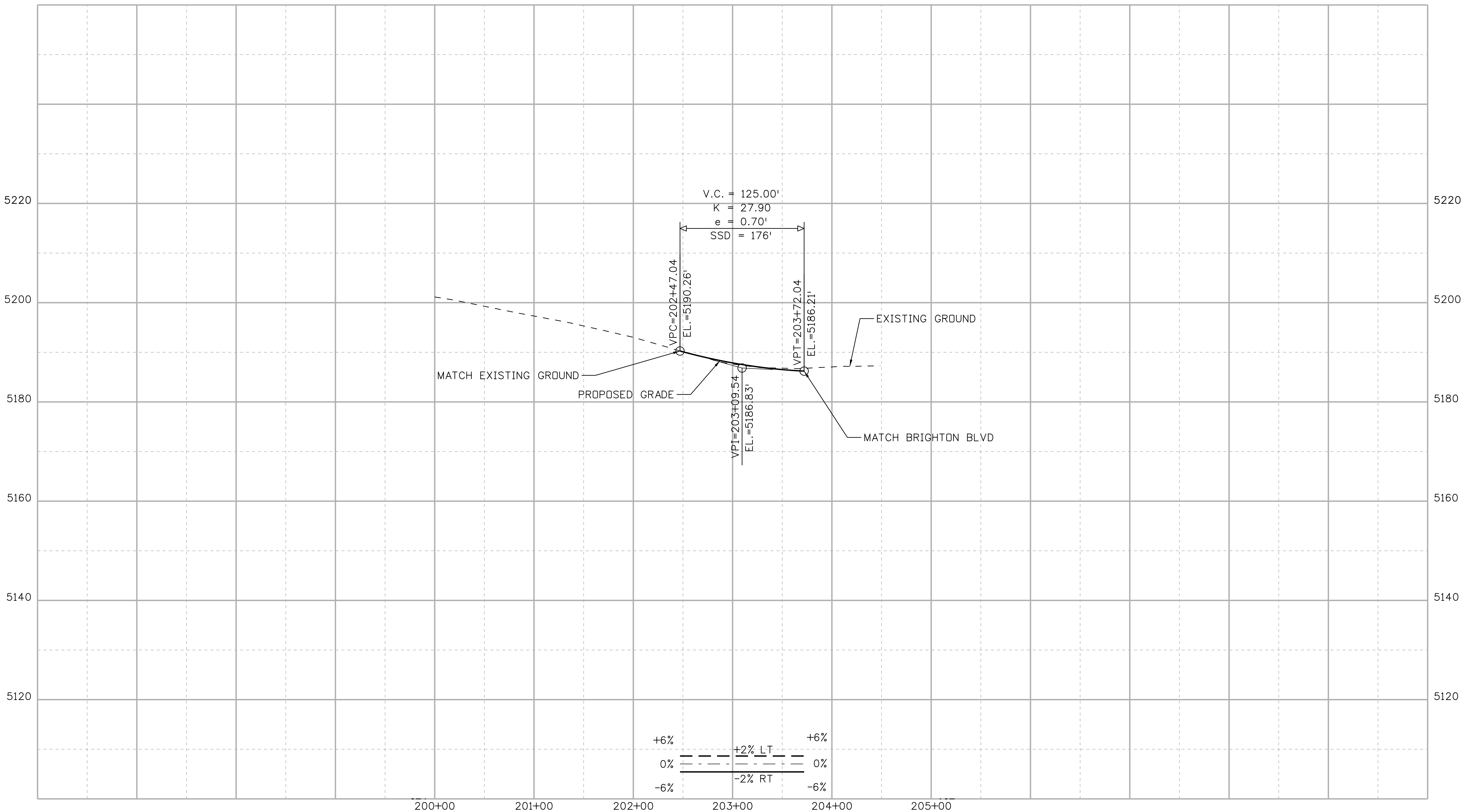
CENTRAL 70
ROADWAY PROFILE
BRIGHTON BLVD WB ENTRANCE RAMP

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR68 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 248



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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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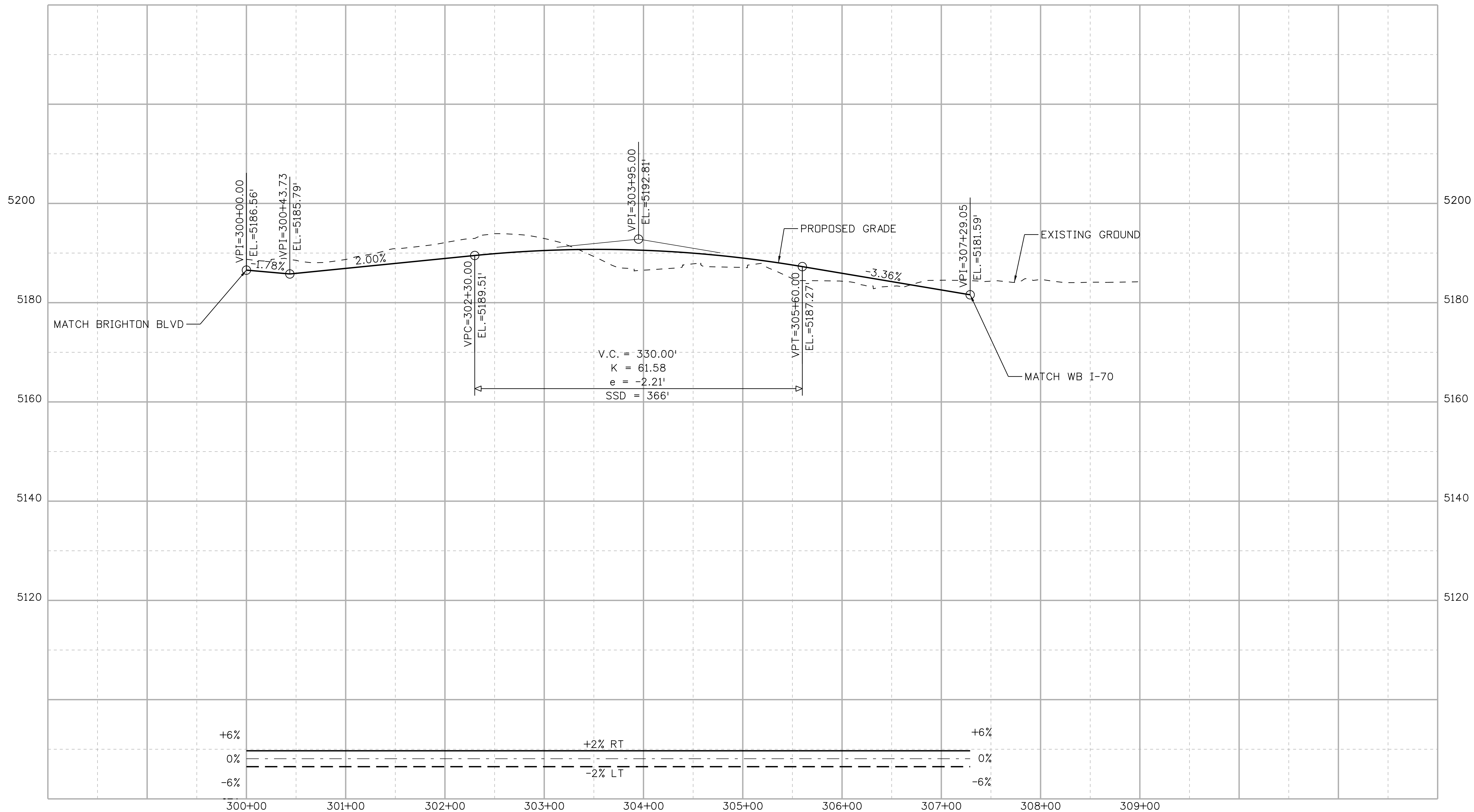
CENTRAL 70
ROADWAY PROFILE
BRIGHTON BLVD EB EXIT RAMP

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR69 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 249



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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

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CENTRAL 70
ROADWAY PROFILE
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Detailer:

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Sheet Subset: ROAD PROF

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Project No./Code

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Sheet Number 250

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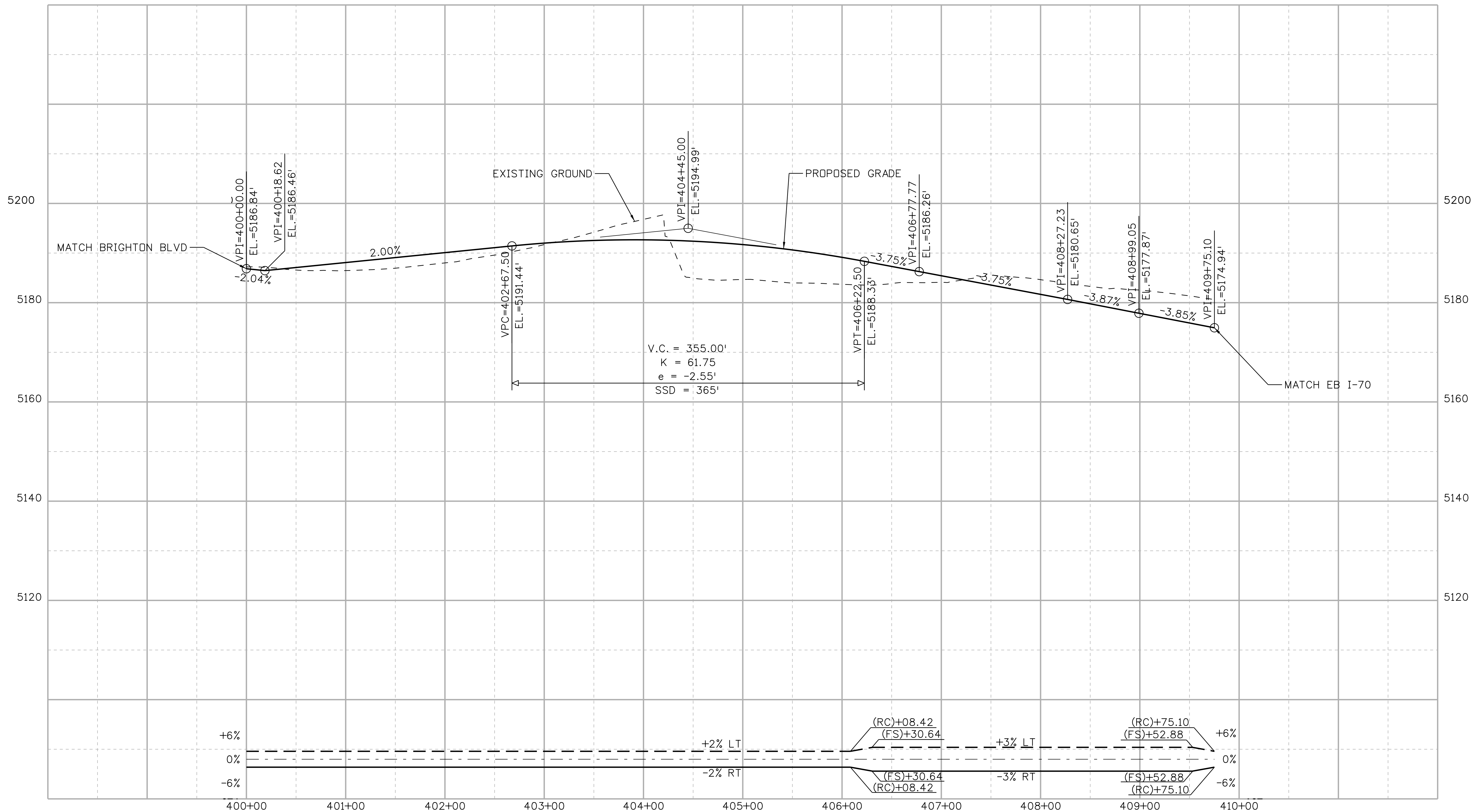

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Print Date: 5/19/2017	
File Name: File Name: See sheet edge for information	
Front Range Mobility Group	Horiz. Scale: As Noted
	Vert. Scale: As Noted
	Unit Information
	Unit Leader

Sheet Revisions		
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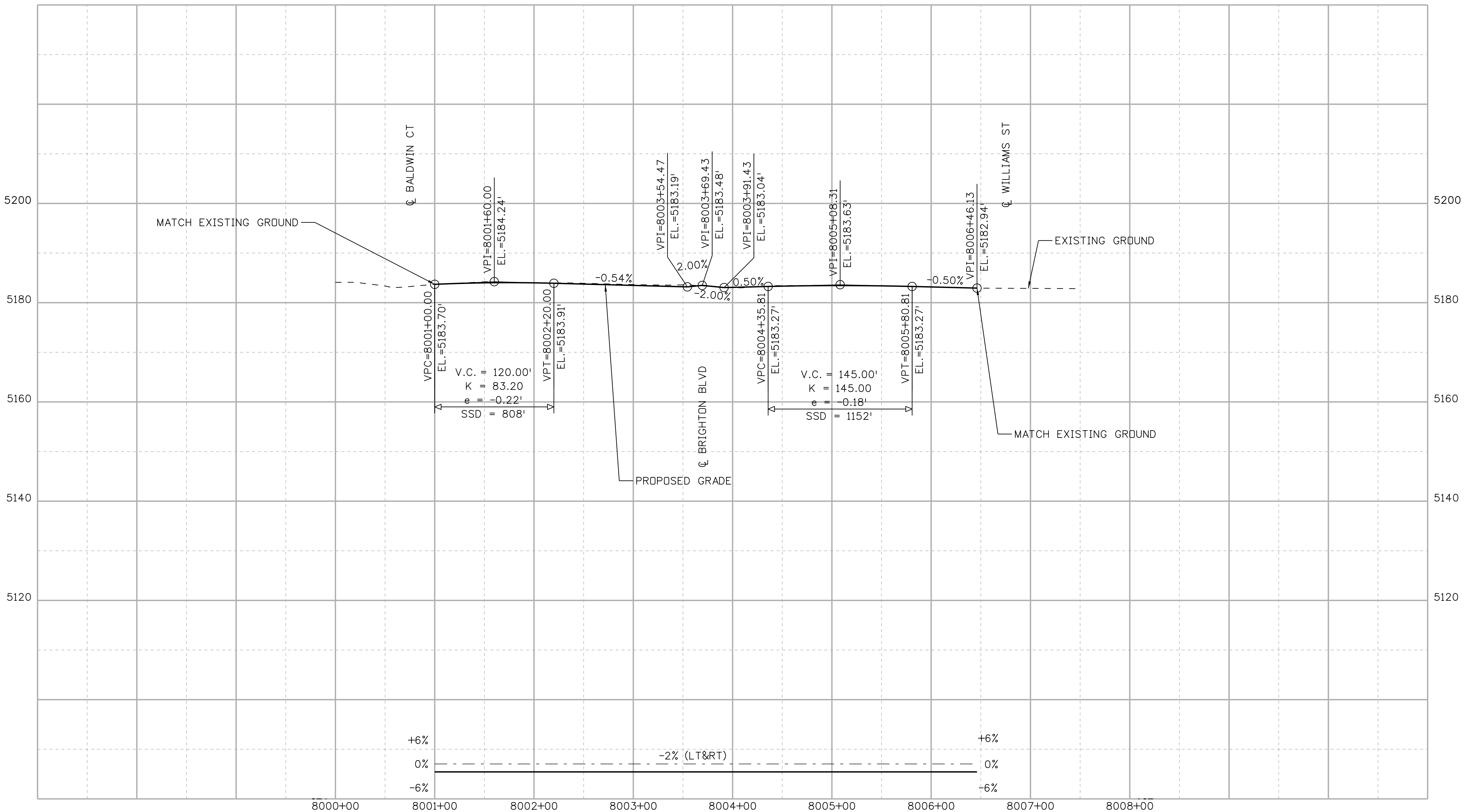
CENTRAL 70
ROADWAY PROFILE
BRIGHTON BLVD EB ENTRANCE RAMP

Designer:		Structure Numbers	
Detailer:			
Sheet Subset: ROAD PROF		Subset Sheets: RPR71 of 136	

Project No./Code
FBR 0704-234
19631
Sheet Number 251



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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

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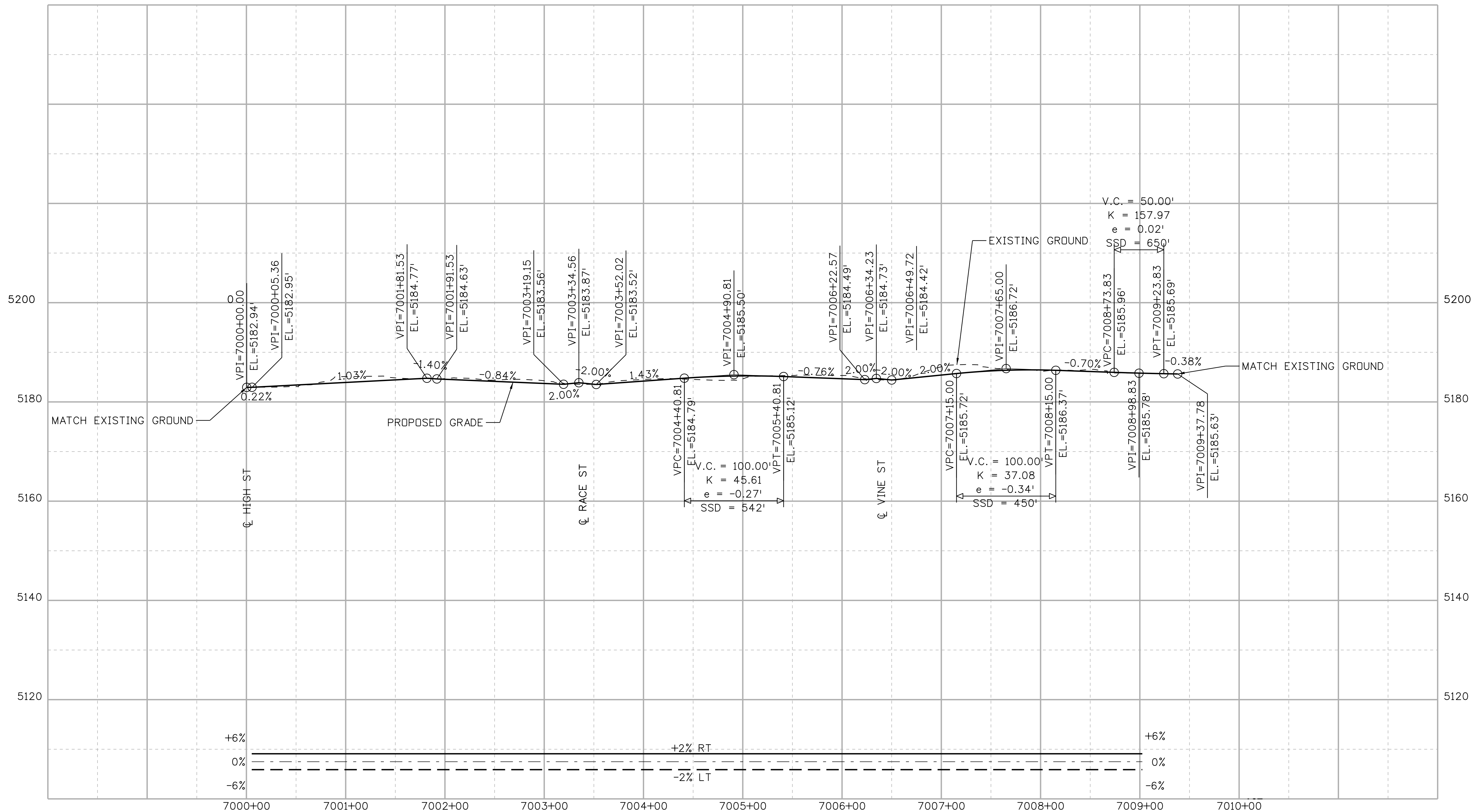
CENTRAL 70
ROADWAY PROFILE
E 47TH AVE

Designer:
Detailer:
Sheet Subset: ROAD PROF
Structure Numbers
Subset Sheets: RPR72 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 252



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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CENTRAL 70
ROADWAY PROFILE
LOCAL RD 1

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR73 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 253

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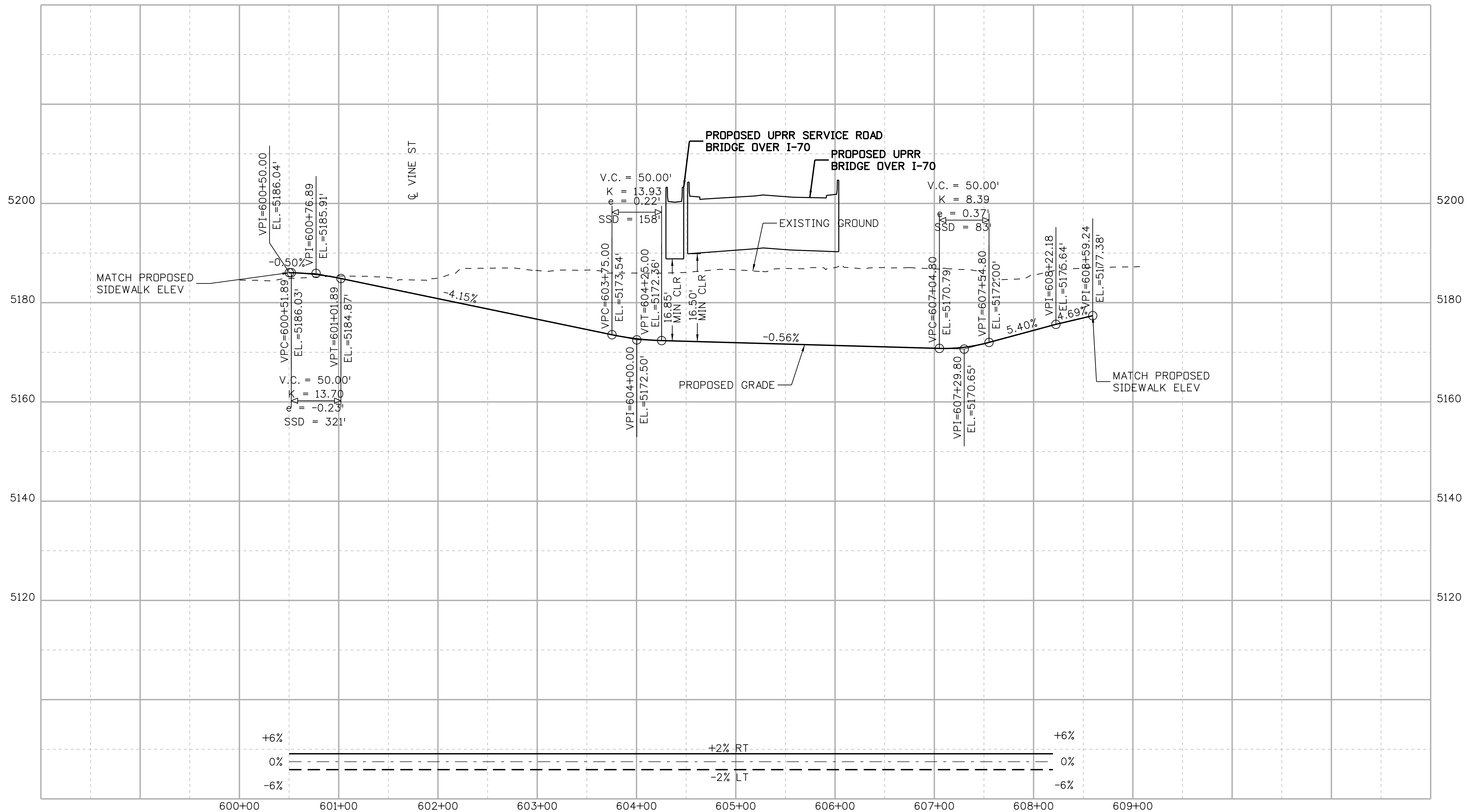

Print Date: 5/19/2017
File Name: File Name: See sheet edge for information

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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CENTRAL 70
ROADWAY PROFILE
UPRR WB SIDEWALK

Designer:
Detailer:
Structure Numbers
Sheet Subset: ROAD PROF
Subset Sheets: RPR74 of 136

Project No./Code
FBR 0704-234
19631
Sheet Number 254

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