US 160 ELMORE'S CORNER EAST

Modified Ultimate Design Considerations

May 2018

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1 INTRODUCTION

This document has been created to show how the Modified Ultimate Design of US 160 Elmore's Corner East project is consistent with the purpose and need of the October 2006, Final Environmental Impact Statement/ Final Section 4(f) Evaluation for US Highway 160 from Durango to Bayfield, La Plata County, Colorado (EIS).

2 BACKGROUND

In October 2006, the Final Environmental Impact Statement/ Final Section 4(f) Evaluation for US Highway 160 from Durango to Bayfield, La Plata County, Colorado (EIS) was completed. The EIS proposed 16.2 miles of four-lane highway extending from US 160 milepost (MP) 88.0 to MP 104.2.

As part of the EIS, the corridor was divided into four sections to evaluate alternatives. The Elmore's Corner East project is part of the Florida Mesa and Valley section which is east of the Grandview section and leads into the Dry Creek and Gem Village, and Bayfield sections. The purpose of the US 160 Elmore's Corner East project is to correct operational and safety problems that have been identified along US 160 from the intersection of US 160 and SH 172 (Mile Post 91.40) to the intersection of US 160 and La Plata County Road 225 (LPCR 225) (Mile Post 94.05) in La Plata County. The total project length is approximately 2.65 miles.

Due to funding constraints, CDOT is unable to fund all the improvements identified in the EIS as a single project. For the US 160 Elmore's Corner East segment, CDOT has envisioned a project which would address the operational and safety concerns and fit within funding limitations.

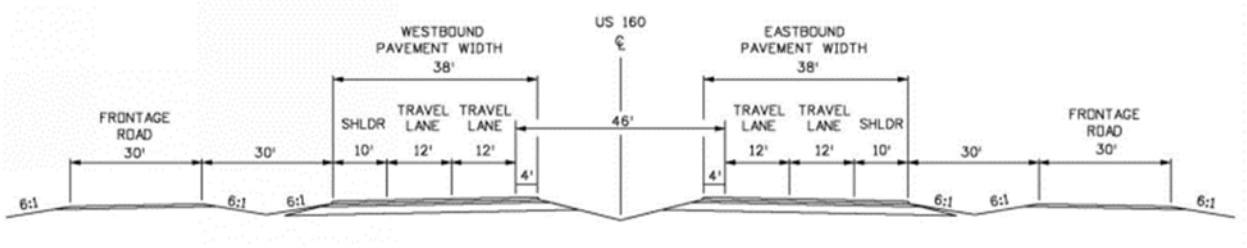
In February 2018, Muller presented a proposed Modified Ultimate Design which includes the widening of US 160 between SH 172 and LPCR 225 to three lanes. Details about the Modified Ultimate Design can be found in the following sections and the history about how it was developed is included in the US 160 Elmore's Corner East, *Conceptual Design Report*, January 2018.

Since the Modified Ultimate Design project is different than what was approved in the EIS, it is important to show how the Modified Ultimate Design would still meet the Purpose and Need of the corridor.

2.1 Preferred Alternative (Full EIS Build-out)

The EIS Preferred Alternative was designed as a four-lane divided highway with frontage roads. The proposed travel lane widths were 12 feet plus an outside shoulder of 10 feet and a 4-foot inside shoulder totaling 38 feet of pavement for each direction of travel. The east and west bound lanes were separated by a 46-foot wide median (38-foot grassy median). The frontage roads are 30 feet of pavement width for each frontage road, with a 30-foot median between the travel lanes and frontage road. The width of this typical section was approximately 234 feet wide.

Figure 1 EIS Preferred Alternative Typical Section with Frontage Roads

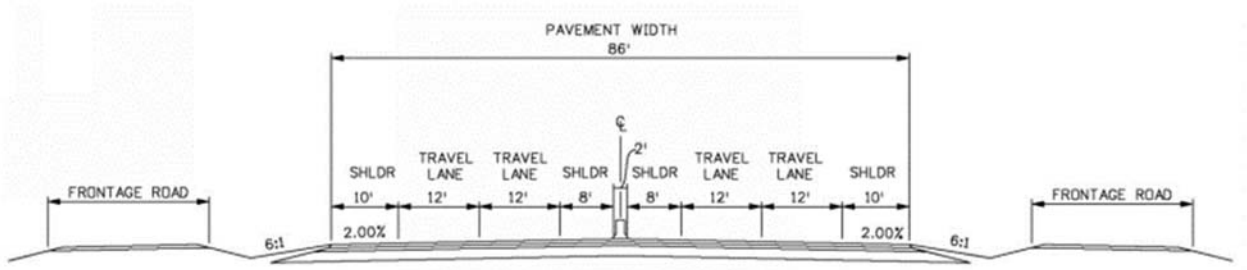


2.2 Modified Ultimate Design

To recommend an alternative that could be phased and accommodate funding constraints, the 2006 EIS Preferred Alternative was examined to determine the extent to which the ultimate EIS alignment could be used in the geometric layout of the current project.

The Modified Ultimate Design is proposed as a four-lane, barrier-separated highway with frontage roads on both sides. The proposed travel lane widths would be 12 feet plus an outside shoulder of 10-feet and an 8 foot inside shoulder. The frontage roads would be 30 feet of pavement width for each frontage road, with a 30-foot median between the travel lanes and frontage road, consistent with the EIS design. The width of this typical section would be approximately 206 feet.

Figure 2 Modified Ultimate Design Typical Section with Frontage Roads



2.3 Interim Phases to build the Modified Ultimate Design

Muller has identified economical phases to incrementally construct the Modified Ultimate Design. This approach minimizes right-of-way, utility, and environmental impacts to meet future capacity demands, safety concerns, and access control issues. A phased approach also allows also allows CDOT to work towards the ultimate build-out through a series of smaller projects which are more likely to be funded in today's fiscally constrained environment.

Phase 1: The first phase of the US 160 Elmore's Corner East segment would build one (1) travel lane each way with an 18-foot continuous two-way left-turn lane (TWLTL) through the west end of the project. A westbound climbing lane would be added on the east end of the project from LPCR 225 to just west of the top of the hill. In addition, shoulders between SH 172 and LPCR 225

would be widened to 10 feet. Wildlife underpasses and extension of wildlife exclusion fencing would also be implemented help mitigate the number of collisions with wild animals.

Phase 2: Phase 2 would add one (1) more travel lane each direction to the outside of the Phase 1 footprint to complete a 4-lane typical section. In this phase, the climbing lane built in Phase 1 would become the second westbound thru lane. The TWLTL would be maintained to facilitate access.

Phase 3: Phase 3 would provide access control to the corridor by removing the TWLTL, adding Type 7 median barrier, and adding frontage roads parallel to the thru lanes along the top of the mesa.

Phase 4: When warranted, Phase 4 would add a grade-separated interchange at SH 172.

Figure 3 shows the difference between the EIS Preferred Alternative and the Modified Ultimate Design typical sections. The yellow highlighting indicates the elements that will be built as part of Phase 1. The purple highlights the Phase 2 and 3 improvements.

3 PURPOSE AND NEED

To justify the Modified Ultimate Design, it needs to meet the Purpose and Need of the Preferred Alternative. As stated in the 2006 EIS, the purpose of the project was to improve the conditions for the traveling public along US 160 in the project corridor. Specifically, the purpose of the project was to:

- Increase travel efficiency/capacity to meet current and future needs
- Improve safety for the traveling public by reducing the number and severity of accidents
- Control access

The need for the project was based on the projected increase in travel demands on highway capacity and efficiency, and the existing substandard design that contributed to accidents associated with roadway deficiencies.

The Modified Ultimate Design meets the Purpose and Need in the following ways:

Increase travel efficiency/capacity to meet current and future needs

To increase capacity in the corridor, the Modified Ultimate Design would widen US 160 to two through lanes in each direction with a future option to add frontage roads. This configuration would provide the same amount of future capacity as the Preferred Alternative.

Improve safety for the traveling public by reducing the number and severity of accidents

Phase 1 of the improvements would create a TWLTL which creates a designated space for left-turning vehicles. Shoulders would also be widened to 10-feet in accordance with current safety standards. The addition of the TWLTL would help mitigate the rear-end accidents caused by drivers slowing down to make turns at the numerous access points. This was identified by the April 2017 TSMO Evaluation as one of the greatest operational and safety problem in this corridor.

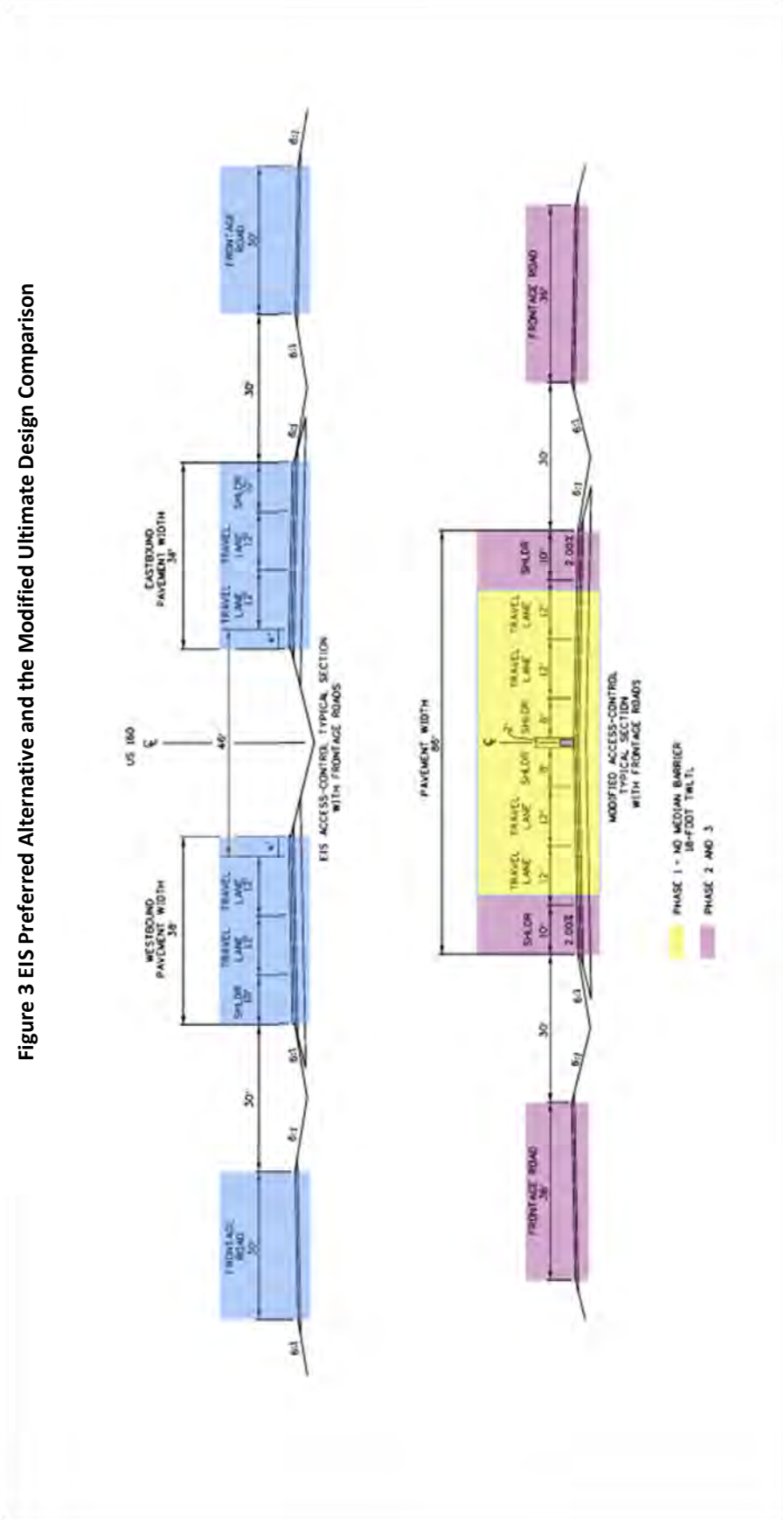


Figure 3 EIS Preferred Alternative and the Modified Ultimate Design Comparison

Phase 1 would also include the addition of wildlife underpasses and extension of wildlife exclusion fencing to minimize collisions with wild animals which was also identified as a safety problem in this corridor.

Phase 2 would add one (1) more travel lane each direction to the outside of the Phase 1 which would provide an additional safety benefit by allowing slower moving vehicles to operate in the right lanes and faster moving vehicles to pass in the left lane. This would reduce the number of dangerous passing maneuvers that are required when there is only one travel lane in each direction.

Phase 3 of the Modified Ultimate Design would remove the TWLTL, add Type 7 median barrier, and add frontage roads parallel to the thru lanes along the top of the mesa. The barrier would improve safety compared to the addition of the TWLTL by lessening the potential for approach turn accidents and head-on accidents. After implementation of Phase 3 of the Modified Ultimate Design, the cross section of the highway would be identical to the Preferred Alternative cross section except for the median type. The Modified Ultimate Design would have a rigid concrete barrier separated from traffic by an 8' inside paved shoulder. The Preferred Alternative would have a 38-foot-wide depressed median with 6:1 slopes and 4-foot inside shoulders.

Continuing research into median safety on rural highways led AASHTO to update the recommendations for median barriers in the 2006 *Roadside Design Guide*. Prior to 2006, the *Roadside Design Guide* suggested considering median barriers only for median widths less than 30 feet. The Preferred Alternative was established prior to 2006 under this guidance. Since 2006, the *Roadside Design Guide* has updated its guidance to suggest that barriers should be installed for median widths up to 50 feet.

NCHRP Report 794: Median Cross-Section Design for Rural Divided Highways, which was published in 2014, made additional findings and recommendations based on further research. Specifically, *NCHRP 794* found that:

- Cross Median Crashes are the most severe type of median crash, followed by Rollover Crashes, with Fixed-Object crashes and other Median-related crashes being much less severe than the first two types.
- 17% of median-related crash fatalities are due to Cross-Median Crashes.
- 57% of median-related crash fatalities are due to Rollover Crashes.
- 12% of median-related crash fatalities are due to Fixed-Object Crashes.
- Installation of a rigid concrete barrier virtually eliminates Cross-Median and Rollover Crashes on rural divided highways. The concrete barrier is designed to withstand the impact forces of a vehicle collision. The safety shape curve of the bottom of the barrier both slows and redirects vehicles away from the barrier, preventing vehicles from overturning in the median or crossing over into oncoming traffic. Because of this preventative safety feature, the Crash Modification Factor (CMF) for Cross-Median Crashes and Rollover Crashes after installation of a rigid concrete barrier is 0.00.

- Total median-related crashes increase with the installation of a rigid barrier due to an increase in Fixed-Object crashes with the barrier itself. The CMF for Fixed-Object fatal and injury median crashes is 1.23, which representing a 23% increase in Fixed Object, median-related, fatal and injury crashes.
- Based on the relationship between median width, cross slopes, and crash types, the report recommends that the *Roadside Design Guide* be updated again to recommend barriers for median widths up to 60 feet and the use of cross slopes of 8:1 or flatter for open medians.

Based on this latest research from NCHRP 794, the Preferred Alternative cross section is less favorable for median width because the 38-foot median is too narrow – it should be widened to 60 feet, including shoulders, to reduce the chances of the very severe Cross-Median crash type. Because this typical section would be 14 feet wider than the one cleared in the EIS, an updated version of the Preferred Alternative that meets current safety guidelines could have the potential for additional impacts not documented in the EIS. Alternatively, installation of a cable rail in the open median could reduce Cross-Median crashes while maintaining the EIS typical section width.

The Modified Ultimate Design would have fewer impacts than the Preferred Alternative or a version of the Preferred Alternative with a 60-foot median. Furthermore, the 23% anticipated increase in fatal and injury Fixed Object crashes with the concrete barrier would be more than offset by the 99%+ anticipated reduction in fatal and injury Cross Median and Rollover Crashes, resulting in a net decrease in fatal and injury crashes.

Overall, based on findings of *NCHRP 794*, the Modified Ultimate Design cross section is anticipated to reduce the number of fatalities and injuries compared to the Preferred Alternative, but with the tradeoff that the number of anticipated property damage only crashes may increase. Therefore the Modified Ultimate Design would likely provide better or equivalent safety.

Control access

Access Control along US 160 would be implemented as part of Phase 3. The proposed center turn lane would be converted to a barrier separated median with 8-foot shoulders throughout the west end of the corridor and a 12-foot left turn lane with a 6-foot median at the frontage road access intersections. While the addition of frontage roads in Phase 3 would require a substantial amount of right-of-way and several relocations, the overall footprint would still be less than the EIS footprint.

Prior to Phase 3, an Access Control Plan could be implemented along this section of US 160 to manage the location and design of future proposed intersections, interchanges, and access points prior to construction of the frontage roads. It would allow local agencies to enforce set-back requirements for new developments to prepare for future improvements along the corridor.

4 OTHER CONSIDERATIONS

4.1 Connectivity at SH 172 and LPCR 225

The Modified Ultimate Design addresses the purpose and need of the corridor for the section of US 160 between SH 172 and LPCR 225. Intersection improvements at SH 172 are not included until Phase 4 of the Modified Ultimate Design, therefore a design was considered that would tie into the existing intersection to the east of the US 160 Elmore's Corner East segment. It is important to understand how the Modified Ultimate Design would accommodate the future connections at both ends of the corridor.

US 160 / SH 172

The EIS included a grade-separated single point diamond interchange at the US 160 / SH 172 intersection. CDOT widened this intersection in 2005 to its current configuration, which includes two travel lanes in each direction on US 160, as well as left and right turn lanes at an at-grade signal-controlled intersection. Intersection improvements at SH 172 are not included in the scope of this project. Therefore, the project would tie into the existing SH 172 intersection on the east leg of the intersection. If future demand warrants, a grade-separated interchanged could be constructed, but the intersection and roadway alignment would need to be altered to accommodate both the horizontal and vertical alignment of US 160 to match the alignment shown in the EIS.

Early indications from a separate intersection study, being conducted by CDOT Region 5 and Fehr and Peers, are that a grade-separated interchange at SH 172 may not be warranted. Additional details will be included in their final study, expected to be completed in June 2018.

US 160 / LPCR 225

At the US 160 / LPCR 225 intersection, CDOT made improvements that follow the EIS layout but did not include the full build-out of two thru lanes in each direction. Additional intersection improvements at LPCR 225 are not included in the scope of this project. Therefore, the project would to tie into the existing LPCR 225 intersection on the west side of the project.

Based on the on-going intersection study by CDOT R5 Traffic, there may be a recommendation to add a left-turn acceleration lane for vehicles traveling northbound on LPCR 225 and turning westbound on to US 160. This addition would address a reported safety condition at this intersection. If this recommendation is carried forward, it will likely require an additional lane on the bridge over the Florida River, in addition to intersection improvements east and west of the existing intersection.

Since the LPCR 225 intersection is already configured to match the EIS, including the future two thru lanes, there would be no need to modify the alignment at this tie in during a future project unless a wider median is desired.

4.2 Wildlife Crossings

The EIS recommended one wildlife crossing in the Florida Mesa and Valley Section of the project to be located at the Florida River crossing or near the well pads just west of the bridge. As a part of their conceptual design analysis, Muller reviewed three separate locations for potential Large Mammal Wildlife Crossings as part of the US 160 Elmore's Corner East, *Conceptual Design Report*, January 2018.

- At the Florida River crossing that would include a new bridge to accommodate the river flows as well as the required clearance for large mammals.
- West of the existing Florida River Bridge near the bottom of the big fill.
- On top of the mesa near the vacant barn on the north side of the highway.

Two locations, at the Florida River Crossing and on top of the Mesa, provide feasible opportunities to incorporate wildlife crossing opportunities as part of the design. The Modified Ultimate Design will add an additional crossing in this section from what was recommended in the EIS. Both locations would be built initially to accommodate the expansion to the full build out of the Modified Ultimate Design. At the Florida River Crossing, the proposed bridge would be based on the lane configuration needed to accommodate the Modified Ultimate Design, so no additional modification would be required at this location.

A wildlife crossing on top of the mesa is the second location and would accommodate Phase 1 and Phase 2 of the Modified Ultimate Design. During 30% design, the structure selection report would determine if it was more cost effective to build the full-length underpass or allow for an addition to the structure during Phase 2. Phase 3 would provide access control to the corridor by removing the TWLTL, adding Type 7 median barrier, and adding frontage roads parallel to the thru lanes along the top of the mesa. By the time Phase 3 is implemented, the animals will be accustomed to using the crossing at this location, so there will be minimal impact to adding the median barrier. With the addition of the frontage road, there would be no change to the length of the culvert under US 160 because it is anticipated that the animals would cross the lower speed frontage road, similar to the US 550 design south of US 160.

In both locations, wildlife exclusion fencing would be installed in association with underpasses to help guide deer and elk to crossing areas. Fenced areas will incorporate one-way earthen escape ramps to prevent animals from becoming trapped on the wrong side of the fence.

4.3 Minimize Resource Impacts

The Modified Ultimate Design alignment was created by analyzing the impacts described in the EIS and shifting the alignment in specific areas to balance impacts to right-of-way (ROW), existing intersections, utilities, wetlands, and major irrigation facilities. By shifting the alignment and narrowing the footprint, several resources would benefit by reducing the amount of acreage to be acquired. Table 1 below compares resource impacts between the Preferred Alternative and Modified Ultimate Design.

Table 1 Comparison of Environmental Resource Impacts

Resources	EIS Preferred Alternative	Modified Ultimate Design
Land Use (ROW acquisition)	61.02 acres	40.38 acres [1]
Land Use (structures)	9	7
Farmlands	55.5	Less with smaller footprint
Recreation	No resources identified	No resources identified
Air Quality	Lower emissions than No Action	Expected to decreased congestion and decreased idling times resulting in similar air quality results as Preferred Alternative
Traffic Noise	1 noise receptor	Re-evaluate with new developments
Wetlands (jurisdictional)	0.43 acres	0.47 acres [2]
Waters - Florida River Crossing	Two bridges	Design could accommodate two bridges or one bridge depending on final median configuration
Vegetation	Riparian woodlands at Florida River	Less with smaller footprint
Wildlife - Crossings	One crossing proposed	Opportunity for comprehensive look – potentially two locations
Threatened and Endangered Species	Bald Eagle, Yellow-billed Cuckoo, Southwestern Willow Flycatcher	Bald Eagle, Yellow-billed Cuckoo, Southwestern Willow Flycatcher, and the New Mexico Jumping Mouse (NMJM) has been identified and would be assessed with Florida River bridge replacement.
Hazardous Materials	No resources identified	No resources identified
Historic	Florida Canal, McClure Murray Ditch, Griffith Ditch	Evaluate with revised AP
Visual	Dominance of highway to increase substantially	Opportunity to evaluate with changing land use

[1] Phases 1 and 2 would be constructed with even fewer impacts to ROW. The only structures impacted by the first two phases are an abandoned house and barn on the north side of US 160 east of CR 229.

[2] EIS numbers need to be revisited for consistency. Avoidance /minimization measures to be considered when wetland mapping efforts are complete.

Attachment A shows the Modified Ultimate Design overlaid with the EIS full build-out to easily compare the proposed alignment differences and impacts of each alternative.

4.4 Corridor Aesthetics/Visual Impacts

Design elements that impact the aesthetic nature of the highway would need to be considered early in the design process to ensure that the vision for the corridor is maintained. The Preferred Alternative included a depressed median which has been modified to a Type 7 median barrier as part of the Modified Ultimate Design. This would introduce a noticeable change in physical characteristics of the existing environment.

There are a couple of options that could be considered to better mitigate visual impacts to both travelers and neighboring property owners. The typical section carried forward from the Grandview section of the US 160 EIS recommended a raised median between 16 and 25 feet wide. With the changing conditions and potential development proposed for the Florida Mesa area, this option could be evaluated and carried forward as US 160 moves from the Grandview section into the Florida Mesa section of the corridor. It would be consistent with driver expectations but may require a reduction in the speed limit to meet design requirements.

As the corridor moves from the Florida Mesa section into the Florida River valley, there would be an opportunity to widen back to a grassy median. As discussed previously, this design could be updated to meet the current Roadside Design Guide recommendations for median widths.

Determining the desired median width in the Florida River valley section as part of the current Elmore's Corner East Project is important because it drives the geometry for the Florida River crossing. If a divided median is the preferred option, twin structures should be constructed across the river. If a narrower barrier separated median is chosen, the river crossing could be accommodated with a single, wider structure. The existing bridge is in poor condition, and replacing the bridge is a priority for CDOT. Also potentially impacting the bridge geometry is the current intersection study at LPCR 225. If a northbound to westbound left-turn acceleration lane is recommended, it would likely require additional width on the bridge to accommodate this extra lane.

5 RECOMMENDATION

The Modified Ultimate Design would provide the best option to meet the immediate needs of the corridor. There are several economic, social, and environmental benefits to the Modified Ultimate Design:

- Meets Purpose and Need – The Modified Ultimate Design meets the Purpose and Need of the EIS Preferred Alternative by increasing travel efficiency/capacity to meet current and future needs and improving safety for the traveling public by reducing the number of cross median accidents.
- Provides a Phased Approach – A phased approach allows CDOT to work towards the ultimate build-out through a series of smaller projects which are more likely to be funded in this current environment of limited funding and constrained budgets.
- Reduces Corridor Footprint – This approach minimizes the amount of right-of-way needed, limits impacts to existing structures, and reduces the utility impacts needed to construct the Modified Ultimate Design.
- Minimizes Environmental Impacts – By shifting the alignment and narrowing the footprint, resources would benefit by reducing the amount of impacts, especially to vegetation and wildlife. Phase 1 of the Modified Ultimate Design would include the two wildlife underpasses and extension of wildlife exclusion fencing to minimize collisions with wild animals.

Muller recommends moving forward with the Modified Ultimate Design by constructing in a four-phased approach. The Modified Ultimate Design provides a less impactful and financially feasible solution for US Highway 160.

6 REFERENCES

Colorado Department of Transportation. TSMO. April 2017. *US 160 Safety Evaluation*

Colorado Department of Transportation. October 2006. *Final Environmental Impact Statement/ Final Section 4(f) Evaluation for US Highway 160* from Durango to Bayfield, La Plata County, Colorado (EIS).

Muller Engineering Company. 2018. *US 160 Elmore's Corner East, Conceptual Design Report*, Durango, Colorado.

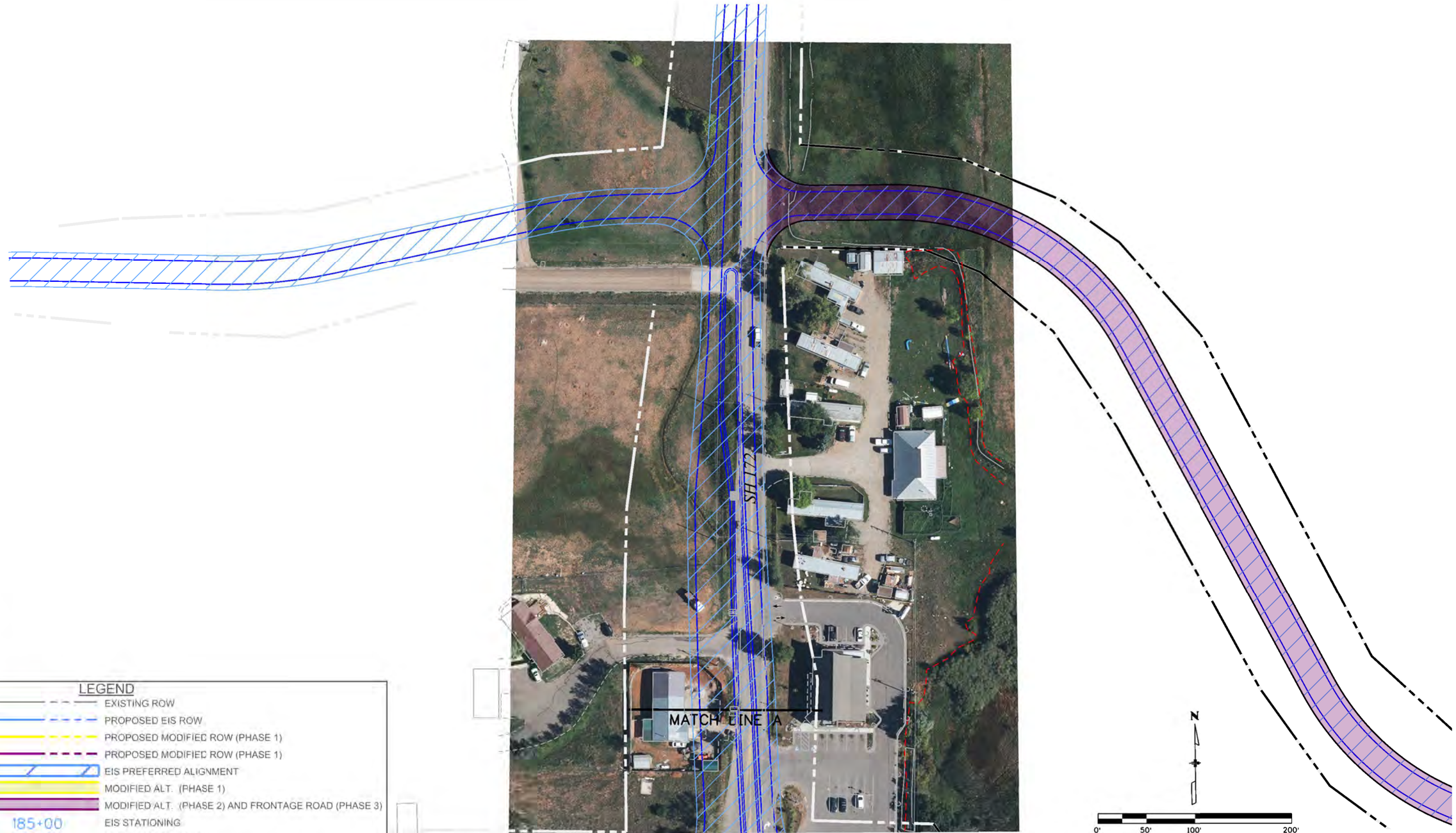
National Cooperative Highway Research Program Report, 2014. *Report 794: Median Cross Section Design for Rural Highways*

US Department of Transportation, FHWA. 2017. *Proven Safety Countermeasures*
https://safety.fhwa.dot.gov/provencountermeasures/median_barrier/

Appendix A

EIS and Modified Ultimate Design Alternatives

Attachment A



LEGEND

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- PROPOSED MODIFIED ROW (PHASE 1)
- PROPOSED MODIFIED ROW (PHASE 1)
- EIS PREFERRED ALIGNMENT
- MODIFIED ALT. (PHASE 1)
- MODIFIED ALT. (PHASE 2) AND FRONTAGE ROAD (PHASE 3)
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EIS ALTERNATIVE AND MODIFIED FRONTAGE ROAD ALTERNATIVE

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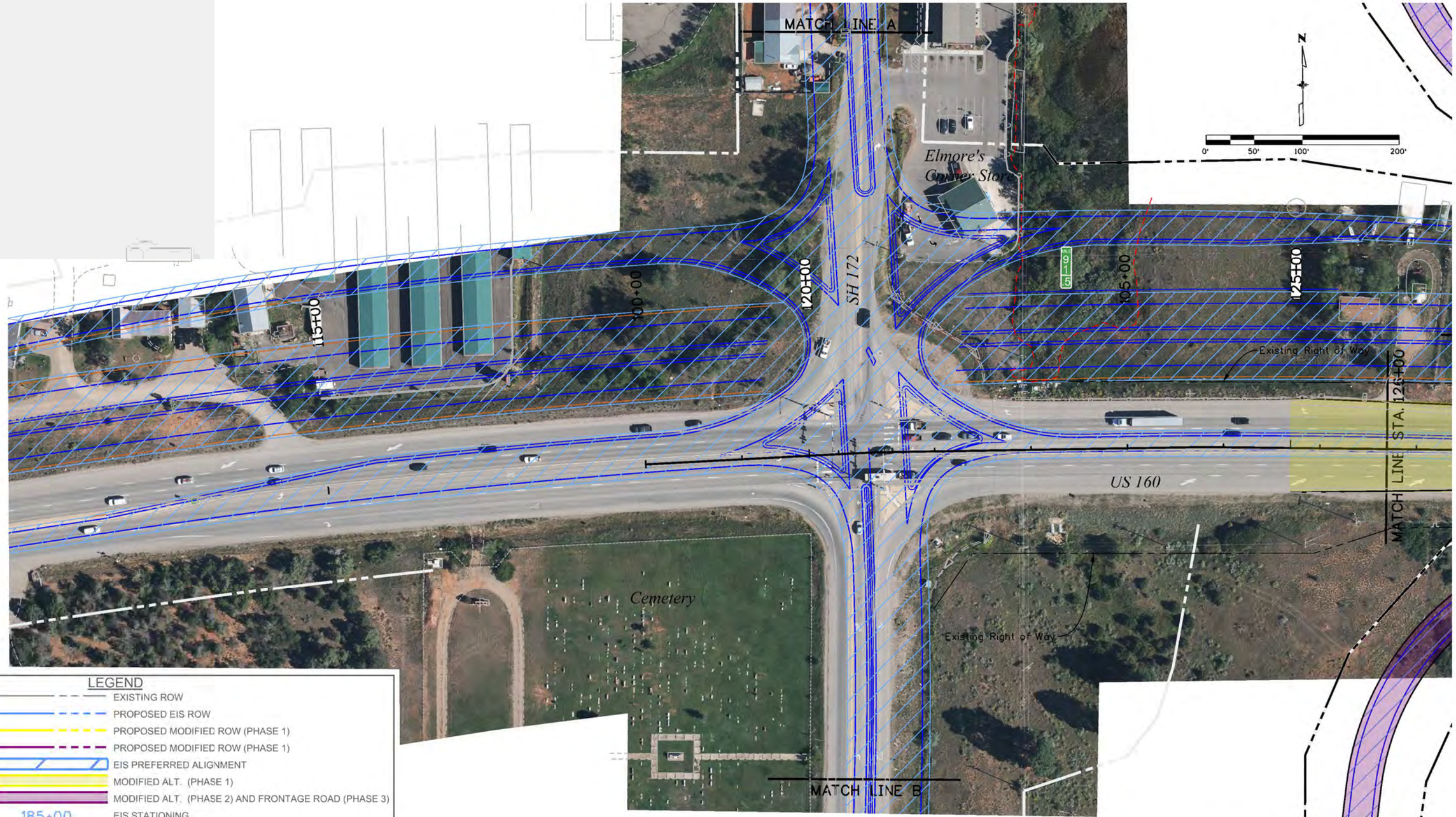
Attachment A



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- MODIFIED ALT. (PHASE 1)
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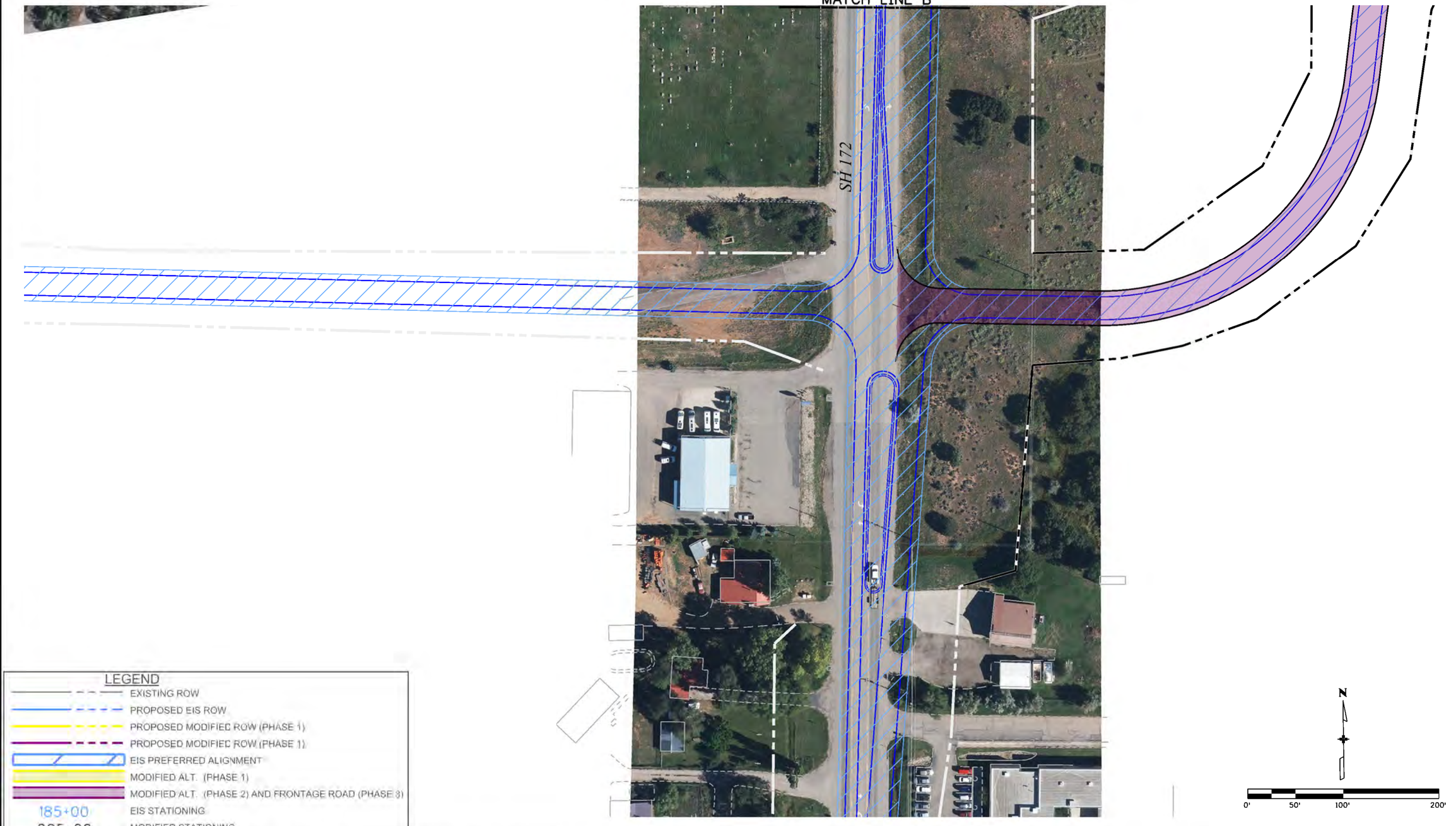

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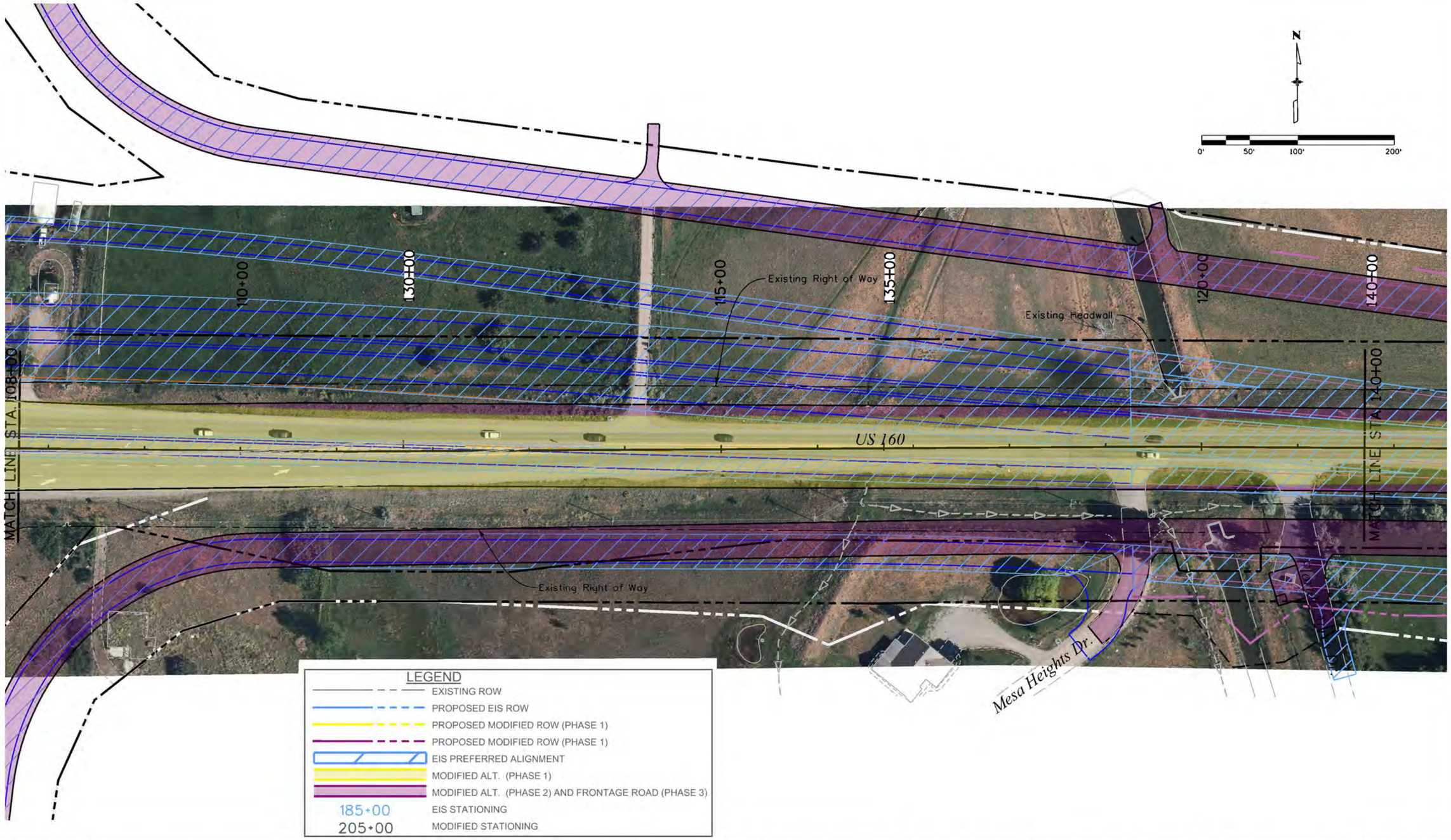

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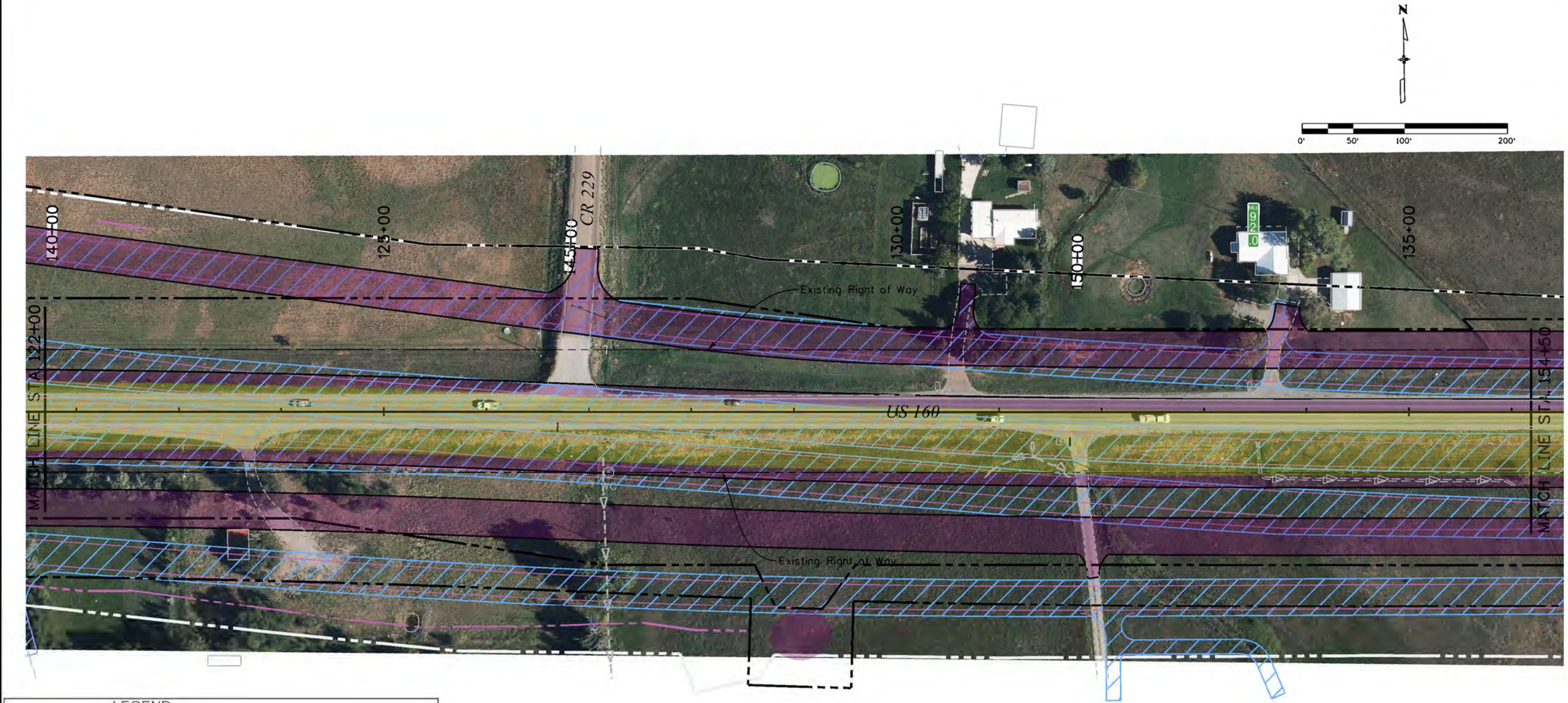
Attachment A



LEGEND

- EXISTING ROW
- PROPOSED EIS ROW
- PROPOSED MODIFIED ROW (PHASE 1)
- PROPOSED MODIFIED ROW (PHASE 1)
- EIS PREFERRED ALIGNMENT
- MODIFIED ALT. (PHASE 1)
- MODIFIED ALT. (PHASE 2) AND FRONTAGE ROAD (PHASE 3)
- 185+00 EIS STATIONING
- 205+00 MODIFIED STATIONING

Print Date: 3/8/2018	Sheet Revisions	Colorado Department of Transportation	As Constructed
Drawing File Name: 20980DES_Plan05 MEC Exhibit.dgn	Date: / Comments / Init.	3803 North Main Avenue, Suite 200, Durango, CO 81301	No Revisions:
Horiz. Scale: 1:100 Vert. Scale: As Noted		Phone: 970-385-1440 FAX: 970-385-8365	Revised:
Unit Information Unit Leader Initials		Region 5 DRV	Void:
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EIS ALTERNATIVE AND MODIFIED FRONTAGE ROAD ALTERNATIVE			Project No./Code
Designer: SDB	Structure Numbers		NHPP 1602-157
Detailer: CLJ			20980
Sheet Subset: PLAN	Subset Sheets: 5 of 13		Sheet Number

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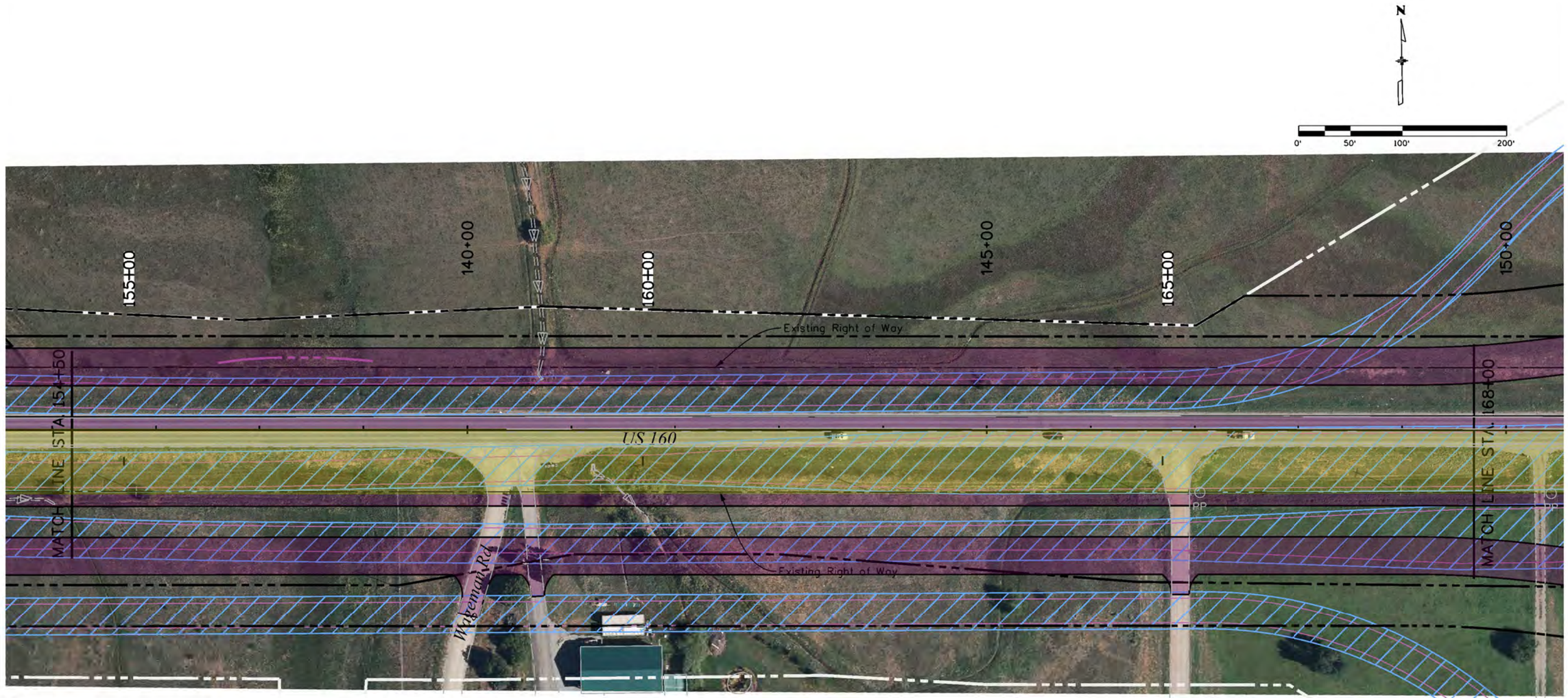
Attachment A



LEGEND

- EXISTING ROW
- PROPOSED EIS ROW
- PROPOSED MODIFIED ROW (PHASE 1)
- PROPOSED MODIFIED ROW (PHASE 1)
- EIS PREFERRED ALIGNMENT
- MODIFIED ALT. (PHASE 1)
- MODIFIED ALT. (PHASE 2) AND FRONTAGE ROAD (PHASE 3)
- 185+00 EIS STATIONING
- 205+00 MODIFIED STATIONING

Print Date: 3/8/2018	
Drawing File Name: 20980DES_Plan06 MEC Exhibit.dgn	
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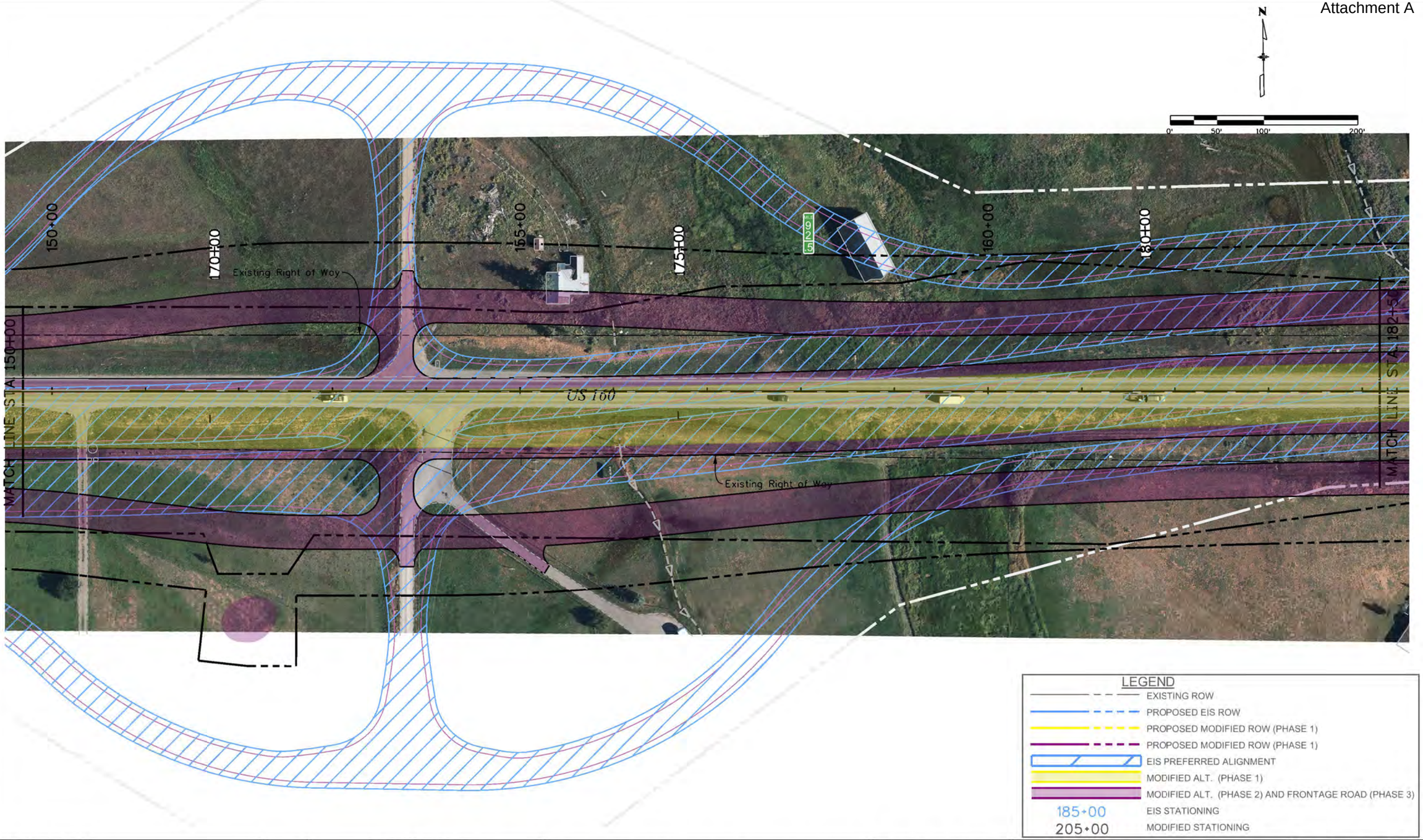
EIS ALTERNATIVE AND MODIFIED FRONTAGE ROAD ALTERNATIVE

Designer:	SDB	Structure Numbers	
Detailer:	CLJ		
Sheet Subset:	PLAN	Subset Sheets:	6 of 13

Project No./Code
NHPP 1602-157
20980
Sheet Number

Attachment A



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Drawing File Name:	20980DES_Plan07 MEC Exhibit.dgn
Horiz. Scale:	1:100
Vert. Scale:	As Noted
Unit Information	Unit Leader Initials

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Date:	Comments	Init.

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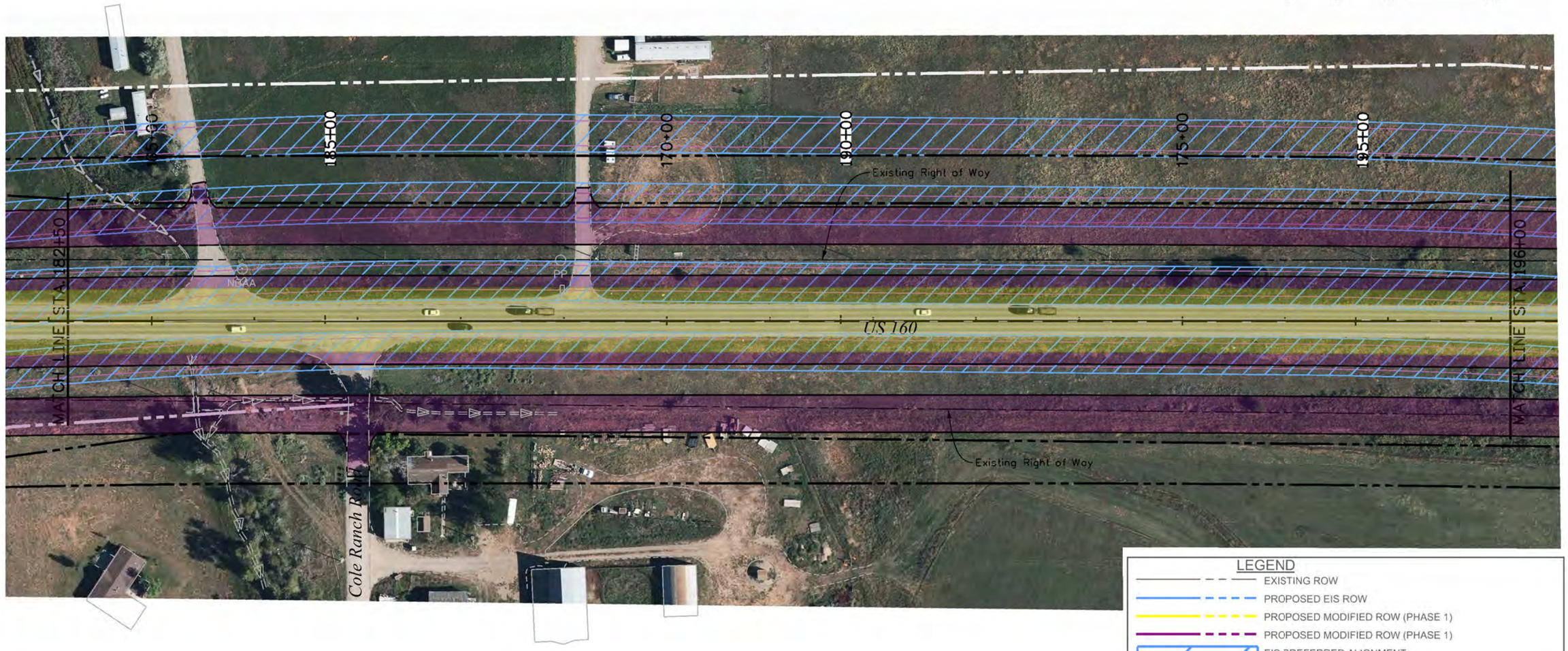
EIS ALTERNATIVE AND MODIFIED FRONTAGE ROAD ALTERNATIVE

Designer:	SDB	Structure Numbers	
Detailer:	CLJ		
Sheet Subset:	PLAN	Subset Sheets:	7 of 13

Project No./Code
NHPP 1602-157
20980
Sheet Number

Attachment A



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Print Date: 3/8/2018
Drawing File Name: 20980DES_Plan08 MEC Exhibit.dgn
Horiz. Scale: 1:100 Vert. Scale: As Noted
Unit Information Unit Leader Initials

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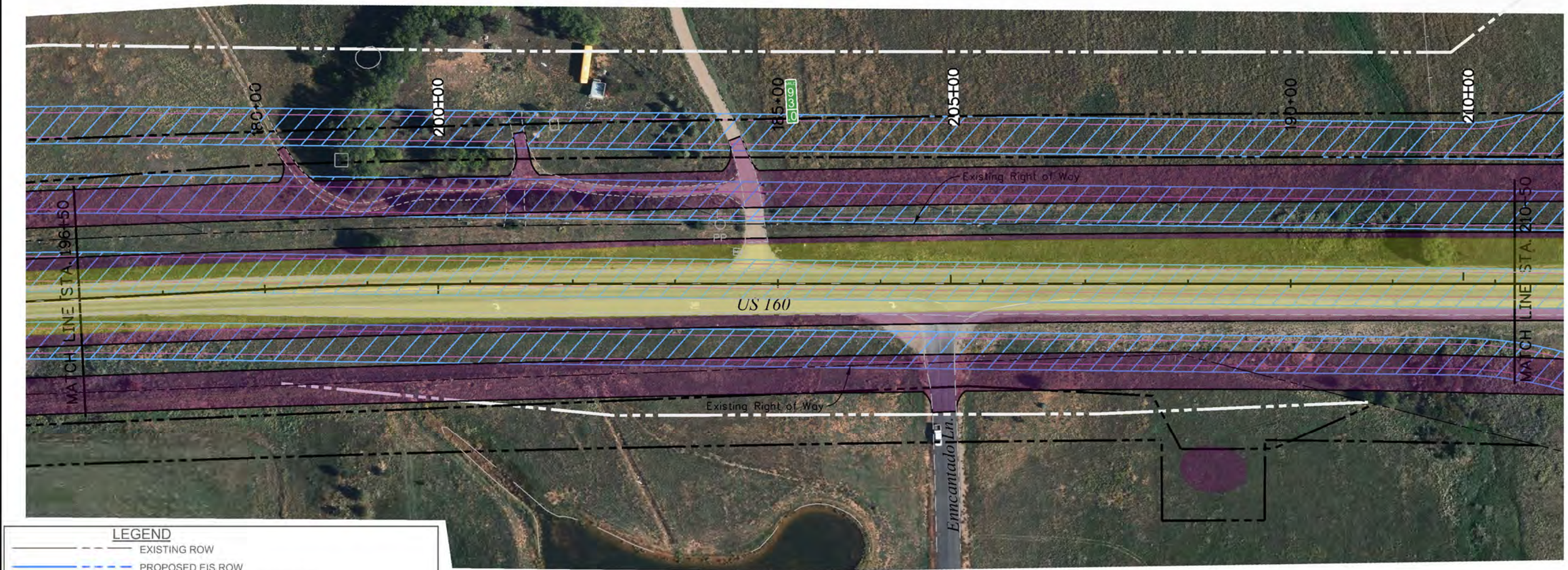
Designer:	SDB	Structure Numbers	
Detailer:	CLJ		
Sheet Subset:	PLAN	Subset Sheets:	8 of 13

Project No./Code
NHPP 1602-157
20980
Sheet Number

Attachment A



LEGEND

- EXISTING ROW
- PROPOSED EIS ROW
- PROPOSED MODIFIED ROW (PHASE 1)
- PROPOSED MODIFIED ROW (PHASE 1)
- EIS PREFERRED ALIGNMENT
- MODIFIED ALT. (PHASE 1)
- MODIFIED ALT. (PHASE 2) AND FRONTAGE ROAD (PHASE 3)
- 185+00 EIS STATIONING
- 205+00 MODIFIED STATIONING

Print Date: 3/8/2018	Sheet Revisions		
Drawing File Name: 20980DES_Plan09 MEC Exhibit.dgn	Date:	Comments	Init.
Horiz. Scale: 1:100 Vert. Scale: As Noted			
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No Revisions:	Designer: SDB	Structure Numbers		NHPP 1602-157
Revised:	Detailer: CLJ			20980
Void:	Sheet Subset: PLAN	Subset Sheets:	9 of 13	Sheet Number

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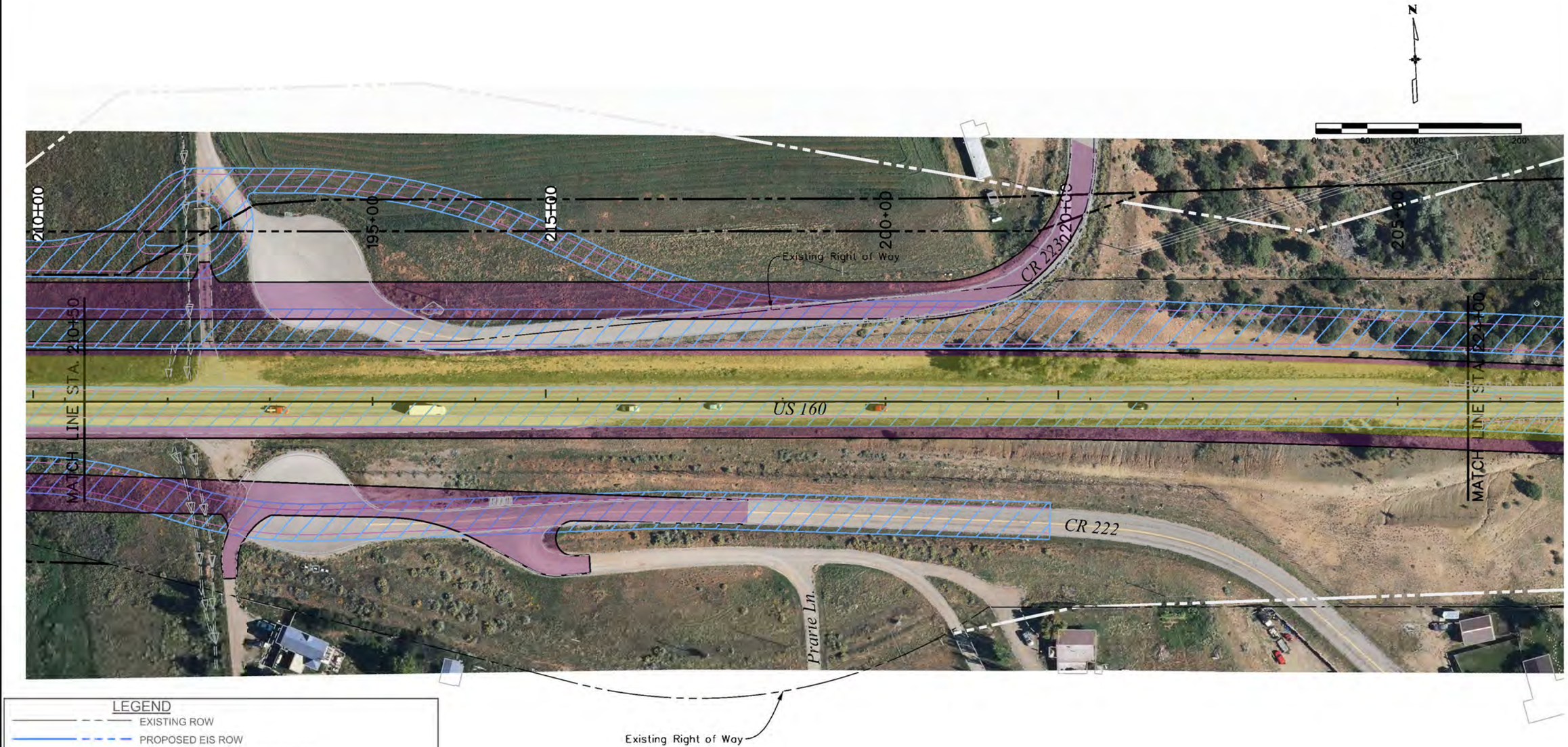
Attachment A



LEGEND

- EXISTING ROW
- PROPOSED EIS ROW
- PROPOSED MODIFIED ROW (PHASE 1)
- PROPOSED MODIFIED ROW (PHASE 1)
- EIS PREFERRED ALIGNMENT
- MODIFIED ALT. (PHASE 1)
- MODIFIED ALT. (PHASE 2) AND FRONTAGE ROAD (PHASE 3)
- 185+00 EIS STATIONING
- 205+00 MODIFIED STATIONING

Print Date:	3/8/2018
Drawing File Name:	20980DES_Plan10 MEC Exhibit.dgn
Horiz. Scale:	1:100
Vert. Scale:	As Noted
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EIS ALTERNATIVE AND MODIFIED FRONTAGE ROAD ALTERNATIVE

Designer:	SDB	Structure Numbers	
Detailer:	CLJ		
Sheet Subset:	PLAN	Subset Sheets:	10 of 13

Project No./Code
NHPP 1602-157
20980
Sheet Number

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3/8/2018 CDOT-DefaultPrinter_V8i.pltcfg CDOT-PenTable.tbl

Attachment A

LEGEND

- EXISTING ROW
- PROPOSED EIS ROW
- PROPOSED MODIFIED ROW (PHASE 1)
- PROPOSED MODIFIED ROW (PHASE 1)
- EIS PREFERRED ALIGNMENT
- MODIFIED ALT. (PHASE 1)
- MODIFIED ALT. (PHASE 2) AND FRONTAGE ROAD (PHASE 3)
- 185+00 EIS STATIONING
- 205+00 MODIFIED STATIONING

Print Date: 3/8/2018	Sheet Revisions	Colorado Department of Transportation	As Constructed
Drawing File Name: 20980DES_Plan11 MEC Exhibit.dgn	Date: / Comments / Init.	3803 North Main Avenue, Suite 200, Durango, CO 81301	No Revisions:
Horiz. Scale: 1:100 Vert. Scale: As Noted		Phone: 970-385-1440 FAX: 970-385-8365	Revised:
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EIS ALTERNATIVE AND MODIFIED FRONTAGE ROAD ALTERNATIVE			Project No./Code
Designer: SDB	Structure Numbers		NHPP 1602-157
Detailer: CLJ			20980
Sheet Subset: PLAN	Subset Sheets:	11 of 13	Sheet Number

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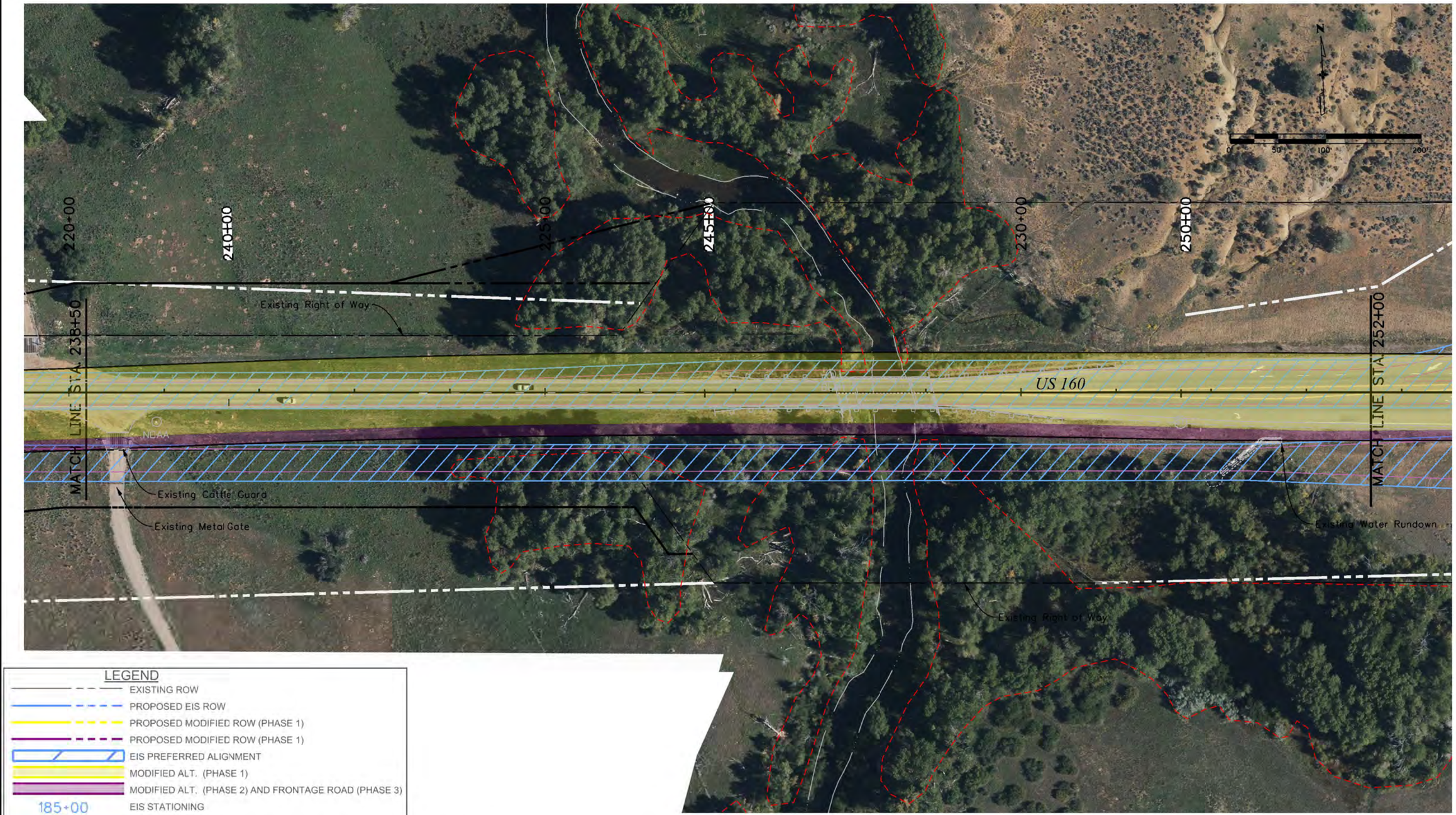
Attachment A



LEGEND

- EXISTING ROW
- PROPOSED EIS ROW
- PROPOSED MODIFIED ROW (PHASE 1)
- PROPOSED MODIFIED ROW (PHASE 1)
- EIS PREFERRED ALIGNMENT
- MODIFIED ALT. (PHASE 1)
- MODIFIED ALT. (PHASE 2) AND FRONTAGE ROAD (PHASE 3)
- 185+00 EIS STATIONING
- 205+00 MODIFIED STATIONING

Print Date: 3/8/2018	Sheet Revisions		
Drawing File Name: 20980DES_Plan12 MEC Exhibit.dgn	Date:	Comments	Init.
Horiz. Scale: 1:100 Vert. Scale: As Noted			
Unit Information Unit Leader Initials			
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As Constructed	EIS ALTERNATIVE AND MODIFIED FRONTAGE ROAD ALTERNATIVE			Project No./Code
No Revisions:	Designer: SDB	Structure Numbers		NHPP 1602-157
Revised:	Detailer: CLJ			20980
Void:	Sheet Subset: PLAN	Subset Sheets:	12 of 13	Sheet Number

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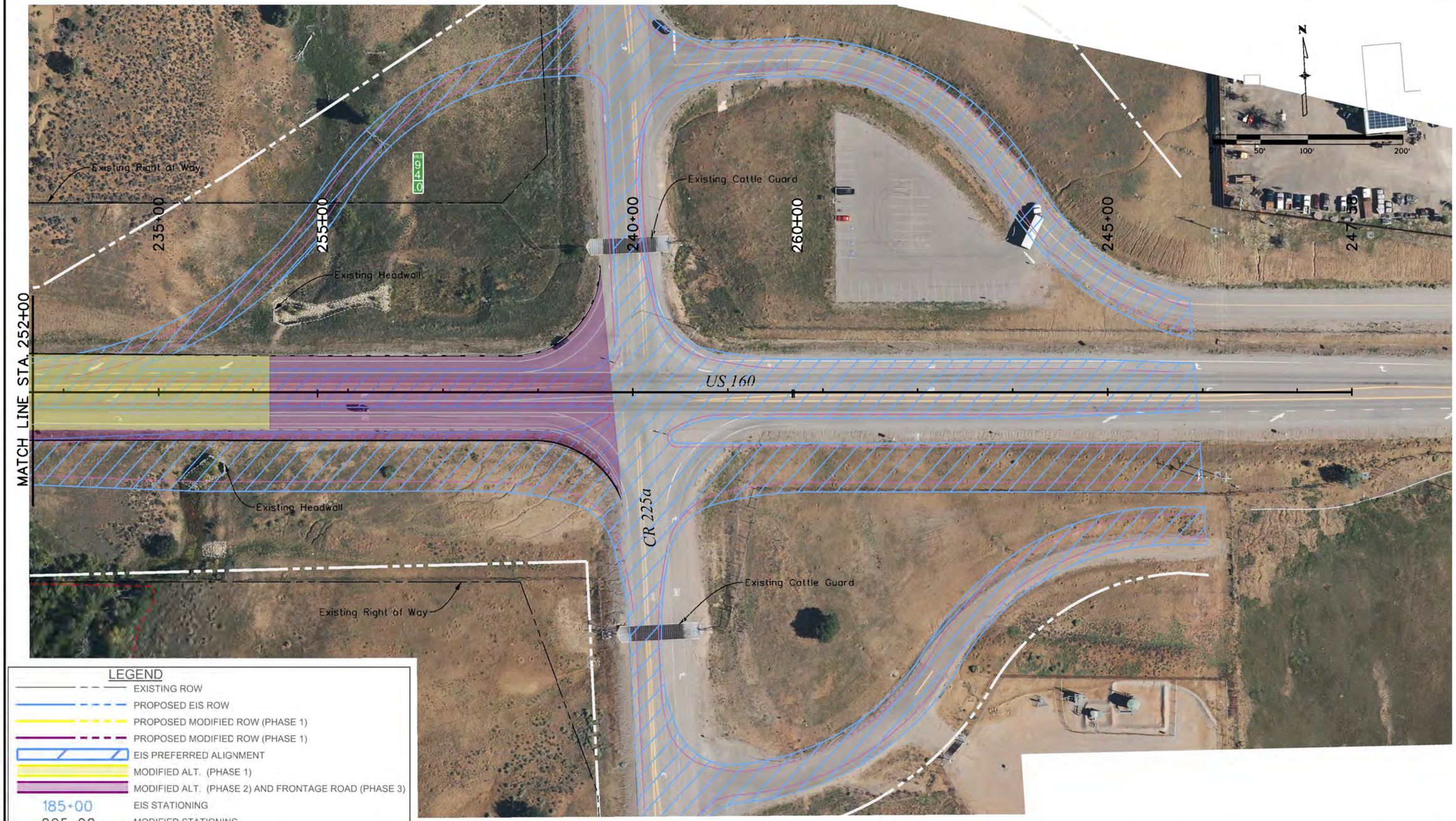
Attachment A



LEGEND

- EXISTING ROW
- PROPOSED EIS ROW
- PROPOSED MODIFIED ROW (PHASE 1)
- PROPOSED MODIFIED ROW (PHASE 1)
- EIS PREFERRED ALIGNMENT
- MODIFIED ALT. (PHASE 1)
- MODIFIED ALT. (PHASE 2) AND FRONTAGE ROAD (PHASE 3)
- 185+00 EIS STATIONING
- 205+00 MODIFIED STATIONING

Print Date: 3/8/2018	Sheet Revisions		
Drawing File Name: 20980DES_Plan13 MEC Exhibit.dgn	Date:	Comments	Init.
Horiz. Scale: 1:100 Vert. Scale: As Noted			
Unit Information Unit Leader Initials			
MULLER ENGINEERING COMPANY			

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Durango, CO 81301
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As Constructed	EIS ALTERNATIVE AND MODIFIED FRONTAGE ROAD ALTERNATIVE			Project No./Code
No Revisions:	Designer: SDB	Structure Numbers		NHPP 1602-157
Revised:	Detailer: CLJ			20980
Void:	Sheet Subset: PLAN	Subset Sheets: 13 of 13		Sheet Number