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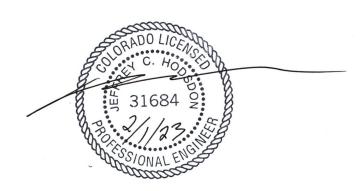
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Colorado Concrete Crushing Transportation Memorandum PCD File No.: PPR2241 (LSC #S224330) January 31, 2023

Traffic Engineer's Statement

This traffic report and supporting information were prepared under my responsible charge and they comport with the standard of care. So far as is consistent with the standard of care, said report was prepared in general conformance with the criteria established by the County for traffic reports.



Developer's Statement

I, the Developer, have read and will comply with all commitments made on my behalf within this report.

Date

Colorado Concrete Crushing Transportation Memorandum

Prepared for: Colorado Concrete Crushing, LLC 20 Boulder Crescent, Suite 100 Colorado Springs, CO 80903

Contact: Mr. Eric S. Howard, Manager

JANUARY 30, 2023

LSC Transportation Consultants Prepared by: Kirstin D. Ferrin, P.E. Reviewed by: Jeffrey C. Hodsdon, P.E.

PCD FILE NO.: PPR2241

LSC #S224330



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Appendix Table 1

Vollmer Road Approved CD

LSC Recommendations for Plan Revisions



LSC TRANSPORTATION CONSULTANTS, INC. 2504 East Pikes Peak Avenue, Suite 304 Colorado Springs, CO 80909 (719) 633-2868 FAX (719) 633-5430

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January 30, 2023

Mr. Eric S. Howard, Manager Colorado Concrete Crushing, LLC 20 Boulder Crescent, Suite 100 Colorado Springs, CO 80903

> RE: Colorado Concrete Crushing Transportation Memorandum El Paso County, Colorado PCD FILE NO.: PPR2241 LSC #S224330

Dear Mr. Howard:

LSC Transportation Consultants, Inc. has prepared this updated transportation memorandum for the asphalt and concrete recycling operation currently located east of Vollmer Road and south of the future extension of Marksheffel Road in El Paso County, Colorado. The site location is shown in Figure 1.

REPORT CONTENTS

The preparation of this report included the following:

- A summary of the existing land use and access;
- The existing roadway and traffic conditions in the site's vicinity, including the roadway widths, surface conditions, lane geometries, traffic controls, and posted speed limits; and in-progress changes to the existing conditions, based on the design plans and construction of Vollmer Road improvements, as shown on the approved Vollmer Road construction plans by Sterling Ranch;
- Existing (2022) traffic-volume data;
- Estimates of projected short-term traffic volumes; the projected average weekday and peak-hour vehicle trips generated by the concrete recycling operation during the design hour;
- The assignment of the estimated design-hour site-generated traffic volumes to the site-access intersection on Vollmer Road;
- The projected short-term total design-hour traffic volumes;

- The projected levels of service at the site-access intersection on Vollmer Road; and
- Recommendations for auxiliary turn lanes at the site access. These recommendations include associated recommendations for modifications to the approved Vollmer Road striping plan and recommendations for the section of Vollmer Road to the south to the Dry Needle Place intersection ("Segment V1" northbound and southbound Short Term) as shown in the Sterling Ranch Improvements Table.

LAND USE AND ACCESS

Land Use

The 32.4263-acre parcel (EPC Parcel No. 5300000743) is currently being used for an asphalt and concrete recycling operation. Operating hours are Monday through Friday from 7:00 a.m. to 5:30 p.m. and one Saturday per month from 7:00 a.m. to noon. The operation currently has four employees but that may increase to up to six in the future.

Tandem trucks and semi-trucks that are owned by third parties transport materials on and off the site throughout the operating hours. No trucks are stored on-site overnight, so each truck load results in one entering truck trip and one exiting truck trip.

LSC was provided with information on the truck operations at the current facility from March 1, 2022, to December 31, 2022. The number of truck loads per day varies throughout the year based on construction activity in the Colorado Springs metropolitan area with the heaviest activity occurring from June to September. The applicant has noted a recent slowdown in demand for recycled materials product due to rising interest rates and reduced housing starts. The applicant anticipates that the summer 2022 traffic likely represents peak demand and resulting production with low probability/potential for future increases in production and associated truck traffic in the foreseeable future.

The maximum number of truck loads on a single day during that time period was 135 (127 tandem trucks and seven semi-trucks). The 85th-percentile weekday (Monday through Friday) number of truck loads was 61 loads per day (47 tandem trucks and 15 semi-trucks).

Access

The site is located just north of the Pioneer Landscape Center. The recycling operation shares the existing Pioneer access to Vollmer Road located about 905 feet southwest of the future Marksheffel alignment in the jurisdiction of the City of Colorado Springs.

In the long-term, this site is planned to be incorporated into the Rhetoric site. See <u>PCD File Number P2216</u> for details.

LSC conducted a site visit to field-check the existing sight distance to the north and south. The existing sight distance exceeds a quarter mile in each direction for passenger vehicles.

Based on the criteria contained in the *El Paso County Engineering Criteria Manual* (ECM) access points are allowed to Minor Arterials as long as they meet the Entering Sight Distance criteria shown in Table 2-35. Based on a posted speed limit of 40 mph, the required intersection sight distance for a multi-unit truck is 765 feet. As shown in Figure 2, the existing access meets this criterion. The sight distance to the south also meets the sight distance requirements contained in the *City Traffic Criteria Manual*.

Currently, vehicles arriving from the south use the right shoulder (or lack thereof) on the approach to the access when completing a northbound right-turn movement.

EXISTING ROAD AND TRAFFIC CONDITIONS

The adjacent streets are shown in Figure 1 and are described below. Copies of the 2016 El Paso County Major Transportation Corridors Plan (MTCP), 2040 Roadway Plan, and 2016 MTCP 2060 Corridor Preservation Plan with the site location identified on them have been attached to this report.

Vollmer Road is currently a five-lane urban street within the City of Colorado Springs limits between Black Forest Road and Cowpoke Road; and a two-lane, rural, paved roadway north of Cowpoke Road extending to north of Hodgen Road. In the southbound direction, Vollmer Road has a posted speed limit of 45 mph. South of the site access, Vollmer Road is within the City limits and has a 40-mph posted speed limit. The *2040 El Paso County Major Transportation Corridors Plan (MTCP)* and the Sterling Ranch master traffic study show Vollmer Road as a four-lane Urban Minor Arterial just north of the site access. South of the site access, Vollmer is classified as a Minor Arterial (including four through lanes, a center turn lane, bicycle lanes in each direction, and a detached sidewalk). The Sterling Ranch development is currently working on improvements to Vollmer Road north of the site access. A copy of the approved construction documents has been attached, which show changes underway. The section south of the site access to Dry Needle Place is a three-lane cross section (two southbound travel lanes and one northbound travel lane) with a striped bicycle lane in the southbound direction. South of Dry Needle Place, the cross section has been completed to the full City cross section.

Existing Traffic Volumes

Figure 2 shows the existing peak-hour traffic volumes at the Pioneer access to Vollmer Road. The traffic volumes shown are based on peak-period traffic counts conducted by LSC on May 24, 2022. The traffic-count sheets are attached. These peak-period counts include the combined traffic from this recycling operation **and** the adjacent Pioneer business. As shown in Appendix Table 1, on that day the operational data showed 24 recorded truck loads, which would have resulted in 24 trucks entering the **recycling operation** site and 24 trucks exiting the site during

the operating hours (Concrete recycling trips only, not including the adjacent Pioneer operation, which also uses the access).

Existing Levels of Service

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection. Level of service is indicated on a scale from "A" to "F." LOS A represents control delay of less than 10 seconds for unsignalized intersections. LOS F represents control delay of more than 50 seconds for unsignalized intersections. Table 1 shows the level of service delay ranges.

Table 1: Intersection Levels of Service Delay Ranges

	Signalized Intersections	Unsignalized Intersections
	Average Control Delay	Average Control Delay (seconds
Level of Service	(seconds per vehicle)	per vehicle) ⁽¹⁾
А	10.0 sec or less	10.0 sec or less
В	10.1-20.0 sec	10.1-15.0 sec
С	20.1-35.0 sec	15.1-25.0 sec
D	35.1-55.0 sec	25.1-35.0 sec
E	55.1-80.0 sec	35.1-50.0 sec
F	80.1 sec or more	50.1 sec or more

⁽¹⁾ For unsignalized intersections, if V/C ratio is greater than 1.0 the level of service is LOS F, regardless of the projected average control delay per vehicle.

The Pioneer access to Vollmer Road has been analyzed based on the unsignalized intersection analysis procedures from the *Highway Capacity Manual, 6th Edition* by the Transportation Research Board. All movements at this stop-sign-controlled intersection are currently operating at LOS B or better during the peak hours.

TRIP GENERATION

LSC conducted the traffic counts at the existing access to Vollmer Road that Colorado Concrete Crushing shares with Pioneer Sand on May 25, 2022. As the count data did not identify the portion related to the site operations, LSC has estimated the number of trips based on the number of employees and operation data provided by Colorado Concrete Crushing. Table 2 shows the trip-generation estimates. The estimated trips on May 24, 2022 due to the employees was based on the number of existing employees and the nationally published trip-generation rates for ITE Land Use 110 – Light Industrial from *Trip Generation*, 11th Edition, 2021 by the Institute of Transportation Engineers (ITE). The number of truck trips during the peak hours was estimated by LSC by assuming that trucks arrive and depart from the site evenly throughout the operating hours.

As shown in Appendix Table 1, the truck activity on the site varies throughout the year with peak activity occurring from July to September. As traffic counts were conducted in May, LSC has selected a "design" day to use for this analysis. The "design" day selected was the 85th percentile from the weekday truck-load data for 2022 provided by Colorado Concrete Crushing. The "design" day also assumes two additional employees in the future. Based on the existing economic conditions, no increases in truck traffic from what was recorded in 2022 are anticipated in the short-term/intermediate-term future. Table 2 shows the projected "design day" traffic volumes and the difference between the May 24, 2022 traffic volumes and the "design day" volumes.

TRIP DISTRIBUTION AND ASSIGNMENT

The directional distribution of the site-generated traffic volumes on the street and roadway system serving the site is one of the most important factors in determining the site's traffic impacts. Based on information provided by Colorado Concrete Crushing, about 95% of the trucks will arrive from and depart to the south on Vollmer Road and 5 percent will arrive from and depart to the north on Vollmer Road. Figure 3 shows the proposed haul route, as well as the "design day" site-generated traffic volume estimate at the shared access point to Vollmer Road.

BACKGROUND TRAFFIC

Background traffic is the traffic estimated to be on the adjacent roadways and at adjacent intersections without the proposed development's trip generation of site-generated traffic volumes. Background traffic includes the through traffic and the traffic generated by nearby developments but assumes zero traffic generated by the site.

Figure 4 shows the projected short-term background traffic volumes. The background traffic volumes are estimates by LSC, based on the existing volumes shown in Figure 2 with the portion of traffic estimated to have been generated by the site on the day of the counts removed (see Table 1) plus increases in through traffic. The short-term increases in through traffic were estimated based on work completed by LSC in the area including Sterling Ranch East Filings 1 and 2, The Village at Sterling Ranch East, and FourSquare at Sterling Ranch.

In the long-term, this site is planned to be incorporated into the Rhetoric site. See <u>PCD File Number P2216</u> for details.

TOTAL TRAFFIC

Figure 5 shows the sum of the short-term background traffic volumes from Figure 4 plus the site-generated traffic volumes from Figure 3.

January 30, 2023 Transportation Memorandum

LEVEL OF SERVICE ANALYSIS

The site access to Vollmer has been analyzed to determine the projected short-term total intersection levels of service based on the unsignalized intersection analysis procedures from the *Highway Capacity Manual 6th Edition*. Figure 5 shows the level of service analysis results. The level of service reports are attached. All movements at this stop-sign-controlled access intersection are projected to operate at LOS D or better during the peak hours, based on the projected short-term total traffic volumes.

FINDINGS & RECOMMENDATIONS

- Please refer to the trip generation of this report for details regarding the estimated site trip-generation estimate used in the access design volumes. The trip-generation estimate has been based on actual daily load data for the concrete recycling operation.
- Colorado Concrete Crushing is currently operating on the site. Truck activity on the site
 varies based on daily demand and overall construction activity in the Colorado Springs
 metropolitan area. Based on current economic conditions it is not anticipated that activity
 will increase significantly from the activity levels in 2022 in the foreseeable future. In the
 long-term, this site is planned to be incorporated into the Rhetoric site. See PCD File
 Number P2216 for details.
- Based on the design volumes, the criteria contained in the City of Colorado Springs Traffic Manual and site-specific requirements by City Traffic Engineering, a northbound right-turn deceleration lane is required on Vollmer Road approaching the existing shared access with Pioneer Sand. This lane should be 155 feet long plus a 160-foot taper.
- Based on the design traffic volumes and the criteria contained in the El Paso County *Engineering Criteria Manual (ECM)*, the City of Colorado Springs Traffic Manual, and site-specific requirements by City Traffic Engineering, a southbound left-turn lane will be required on Vollmer Road approaching the existing site/Pioneer Sand access. This will likely only require striping modifications to the approved CDs for Vollmer Road, however, as Sterling Ranch is currently working on improvements to Vollmer Road just north of the access and the new pavement has not yet been installed. These improvements include the addition of a second southwest-bound through lane for a short section from just north of Alzada Drive to the site access. The proposed additional pavement for the second through lane could be reutilized in the short/intermediate term to provide a southbound left-turn lane for the shared site and Pioneer Sand Access. LSC's recommendations for plan revisions are shown on the attached previously-approved construction documents.
- Per direction from the City of Colorado Springs Traffic Engineering, an outside paved shoulder will need to be added along the east side of Vollmer Road from Dry Needle Place up to the site access. Potentially, the shoulder would only be necessary up to the point of widening for the right-turn lane at the site access. This improvement should not be the responsibility of this applicant, but rather by others. This improvement should be reflected in a modification to Sterling Ranch Improvements Table for

segment V1-Northbound/southbound - Short Term. This assumes that the adjacent Pioneer site does not redevelop with another land use in the foreseeable future. If that occurs, such a redevelopment project would be responsible for the upgrade to the full minor arterial cross section, per city land-use code.

* * * * *

Please contact me if you have any questions regarding this report.

Respectfully submitted,

LSC TRANSPORTATION CONSULTANTS, INC.

By Jeffrey C. Hodsdon, P.E. Principal

JCH/KDF:jas

Enclosures: Table 2

Figures 1-5

Traffic Count Reports Level of Service Reports

Appendix Table 1

Vollmer Road Approved CD

LSC Recommendations for Plan Revisions

Table 2



Table 2 Trip Generation Estimate Colorado Concrete Crushing

	Number of Employees			Trip Genera	tion Rate	e ⁽¹⁾					Total Trips	Generat	ad .		
	or			Trip Genera		rning	After	noon			Total IIIps		rning	Afte	rnoon
	Truck	Avera	ge Weekday	Traffic	Peak	Hour	Peak	Hour	Avera	ge Weekday	Traffic	Peal	Hour	Peak	Hour
Vehicle Type	Loads	ln	Out	Total	ln	Out	ln	Out	ln	Out	Total	In	Out	ln	Out
Estimated site-generated tri	ins on the day tra	affic counts	were condu	cted at the e	existina s	ite acces	s (May 24	2022)							
Passenger Car (employee)	4	1.55	1.55	3.10	0.44	0.09	0.11	0.38	6	6	12	2	0	0	2
Tandem Truck	18	1	1	2	0.10	0.10	0.10	0.10	18	18	36	2	2	2	2
Semi-Truck	6	1	1	2	0.10	0.10	0.10	0.10	6	6	12	1	1	1	1
								Total	30	30	60	5	3	3	5
Estimated site-generated tri	ips on the "desig	ın" day (Wee	kday 85th P	ercentile)											
Passenger Car (employee)	6	1.55	1.55	3.10	0.44	0.09	0.11	0.38	9	9	18	3	1	1	2
Tandem Truck	47	1	1	2	0.10	0.10	0.10	0.10	47	47	94	5	5	5	5
Semi-Truck	15	1	1	2	0.10	0.10	0.10	0.10	15	15	30	2	2	2	2
								Total	71	71	142	10	8	8	9
			Difference b	etween the	"counted	" day and	I the "des	sign" day	41	41	82	5	5	5	4

Notes:

Source: LSC Transportation Consultants, Inc.

⁽¹⁾ Employee trip generation rates were based on the rates for ITE Land Use 110 - General Light Industrial from "Trip Generation, 11th Edition, 2021" by the Institute of Transportation Engineers (ITE)

Truck trip generation rates assume the trucks arrive and exit evenly throughout the operating hours (7:00 am to 5:30 pm)

Figures 1-5





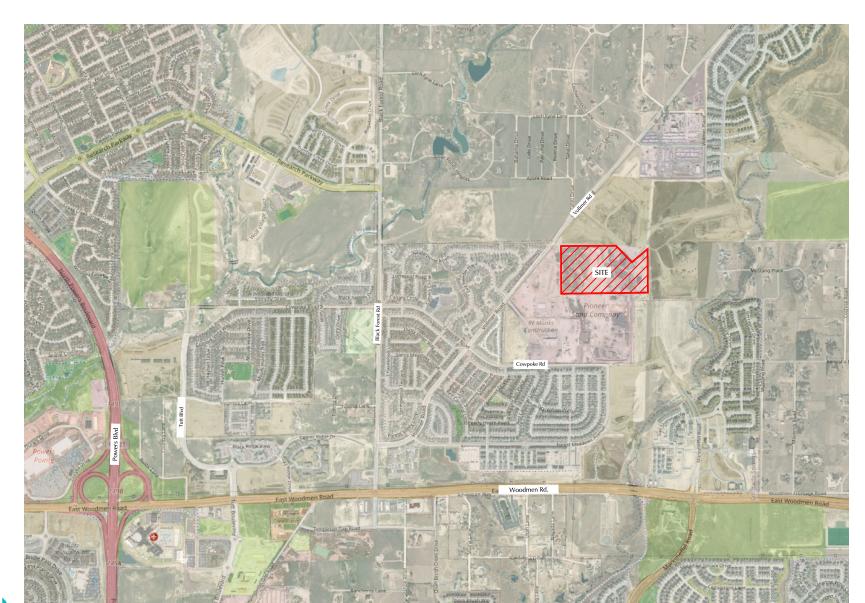
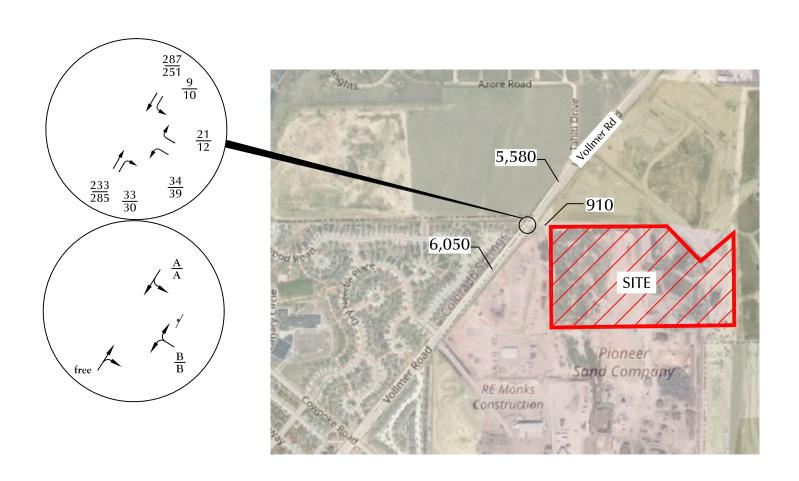


Figure 1 Vicinity Map Colorado Concrete Crushing (LSC# S224330







 $\frac{XX}{XX} = \frac{AM \ \text{Peak-Hour Traffic (veh/hr)}}{PM \ \text{Peak-Hour Traffic (veh/hr)}} \quad \text{Based on counts by LSC} \\ \text{May 24, 2022}$

 $\frac{A}{B} = \frac{AM \ \text{Individual Movement Peak-Hour Level of Service}}{PM \ \text{Individual Movement Peak-Hour Level of Service}}$

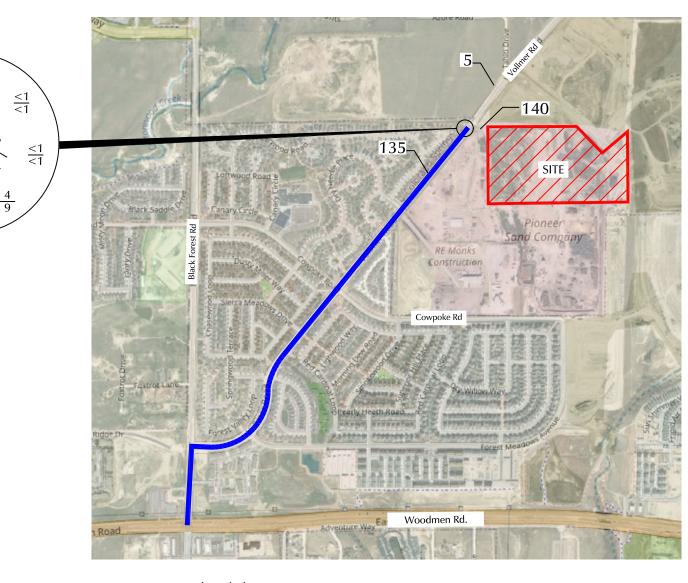
XXX = Average Weekday Traffic (vehicles per day) estimated by LSC

= Stop Sign

Figure 2
Existing Traffic

Colorado Concrete Crushing (LSC# S224330





 $\frac{XX}{XX} = \frac{AM \ Peak-Hour \ Traffic \ (veh/hr)}{PM \ Peak-Hour \ Traffic \ (veh/hr)}$

= Haul Route

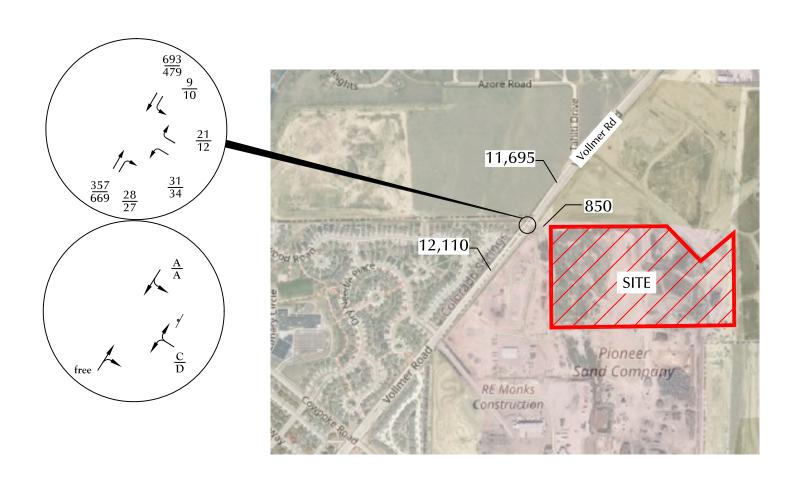
XXX = Average Weekday Traffic (vehicles per day)

"Design Day" Site-Generated Traffic

Colorado Concrete Crushing (LSC# S224330

Figure 3





 $\frac{A}{B} = \frac{AM \ \text{Individual Movement Peak-Hour Level of Service}}{PM \ \text{Individual Movement Peak-Hour Level of Service}}$

XXX = Average Weekday Traffic (vehicles per day)

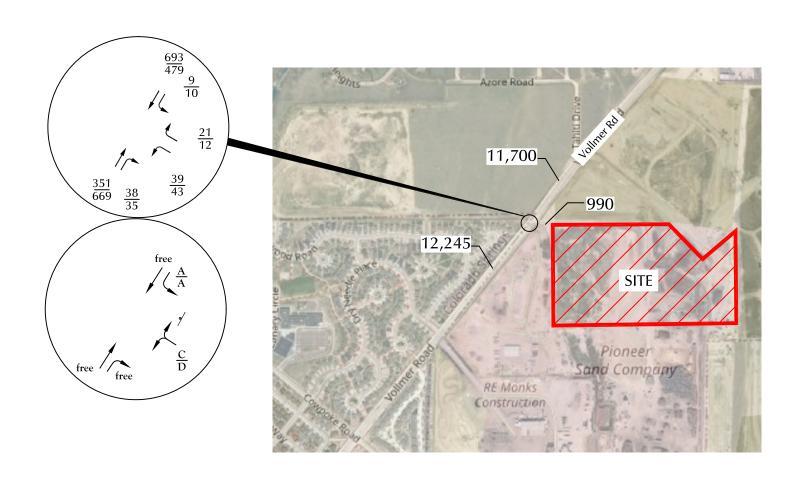
Short-Term Background Traffic

• = Stop Sign

Colorado Concrete Crushing (LSC# S224330







 $\frac{XX}{XX} = \frac{AM \ Peak-Hour \ Traffic \ (veh/hr)}{PM \ Peak-Hour \ Traffic \ (veh/hr)}$

 $\frac{A}{B} = \frac{\text{AM Individual Movement Peak-Hour Level of Service}}{\text{PM Individual Movement Peak-Hour Level of Service}}$

XXX = Average Weekday Traffic (vehicles per day)

= Stop Sign

Short-Term Total Traffic

Colorado Concrete Crushing (LSC# S224330

Traffic Counts



2504 E. Pikes Peak Ave, Suite 304 Colorado Springs, CO 80909 719-633-2868

File Name: Vollmer Rd - Pioneer Sand Trucks AM

Site Code : S22433 Start Date : 5/25/2022

Page No : 1

Passenger Cars/ Pickup-Trucks

Groups Printed- Unshifted

		Vo	ollmer	Rd		F	Pione	r San	d Acc	es		V	ollmei	Rd							
		So	uthbo	und			W	estbo	und			No	rthbo	und			E	astbo	und		
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
06:30	0	49	0	0	49	3	0	2	0	5	13	15	0	0	28	0	0	0	0	0	82
06:45	0	49	3	0	52	1	0	0	0	1	14	26	0	0	40	0	0	0	0	0	93
Total	0	98	3	0	101	4	0	2	0	6	27	41	0	0	68	0	0	0	0	0	175
07:00	0	63	1	0	64	2	0	6	0	8	5	38	0	0	43	0	0	0	0	0	115
07:15	0	68	1	0	69	8	0	8	0	16	7	44	0	0	51	0	0	0	0	0	136
07:30	0	82	2	0	84	3	0	8	0	11	9	57	0	0	66	0	0	0	0	0	161
07:45	0	79	1	0	80	2	0	2	0	4	5	68	0	0	73	0	0	0	0	0	157
Total	0	292	5	0	297	15	0	24	0	39	26	207	0	0	233	0	0	0	0	0	569
08:00	0	58	4	0	62	1	0	8	0	9	7	64	0	0	71	0	0	0	0	0	142
08:15	0	57	1	1	59	1	0	7	0	8	3	52	0	0	55	0	0	0	0	0	122
Grand Total	0	505	13	1	519	21	0	41	0	62	63	364	0	0	427	0	0	0	0	0	1008
Apprch %	0	97.3	2.5	0.2		33.9	0	66.1	0		14.8	85.2	0	0		0	0	0	0		
Total %	0	50.1	1.3	0.1	51.5	2.1	0	4.1	0	6.2	6.2	36.1	0	0	42.4	0	0	0	0	0	

2504 E. Pikes Peak Ave, Suite 304 Colorado Springs, CO 80909 719-633-2868

Passenger Cars/ Pickup-Trucks

File Name: Vollmer Rd - Pioneer Sand Trucks AM

Site Code : S224330 Start Date : 5/25/2022

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			ollmer			F		er San	d Acc und	es			ollme				E	astbo	und		
Start Time	Right				App. Total	Right	Thru		Peds	App. Total	Right	Thru		Peds	App. Total	Right			Peds	App. Total	Int. Total
Peak Hour A	Analys	is Fro	m 6:30	D:00 A	M to 8:	15:00	AM - I	Peak 1	of 1		_					_			•		
Peak Hour f	or Ent	ire Inte	ersect	ion Be	gins at	7:15:0	00 AM														
7:15:00 AM	0	68	1	0	69	8	0	8	0	16	7	44	0	0	51	0	0	0	0	0	136
7:30:00 AM	0	82	2	0	84	3	0	8	0	11	9	57	0	0	66	0	0	0	0	0	161
7:45:00 AM	0	79	1	0	80	2	0	2	0	4	5	68	0	0	73	0	0	0	0	0	157
8:00:00 AM	0	58	4	0	62	1	0	8	0	9	7	64	0	0	71	0	0	0	0	0	142
Total Volume	0	287	8	0	295	14	0	26	0	40	28	233	0	0	261	0	0	0	0	0	596
% App. Total	0	97.3	2.7	0		35	0	65	0		10.7	89.3	0	0		0	0	0	0		
PHF	.000	.875	.500	.000	.878	.438	.000	.813	.000	.625	.778	.857	.000	.000	.894	.000	.000	.000	.000	.000	.925

2504 E. Pikes Peak Ave, Suite 304 Colorado Springs, CO 80909 719-633-2868

Trucks

File Name: Vollmer Rd - Pioneer Sand Trucks AM

Site Code : S224330 Start Date : 5/25/2022

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Groups Printed- Bank 1

		Vo	ollmei	r Rd		Р	ionee	r San	d Acc	es		Vo	llmer	r Rd							
		So	uthbo	ound			W	estbo	und			No	rthbo	und			Ea	astbo	und		
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
06:30	0	0	0	0	0	3	0	2	0	5	0	0	0	0	0	0	0	0	0	0	5
06:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	0	1	3	0	2	0	5	0	0	0	0	0	0	0	0	0	0	6
07:00	0	0	0	0	٥	2	0	4	0	6	0	0	0	0	٥	0	0	0	0	0	6
07:15	0	0	0	0	0	6	0	7	0	13	1	0	0	0	1	0	0	0	0	0	14
07:10	0	0	0	0	0	1	0	1	0	2	Ö	0	0	0	Ċ	0	0	0	0	0	2
07:45	0	0	0	0	0	Ö	0	Ö	0	0	2	0	0	0	2	0	0	0	0	0	2
Total	0	0	0	0	0	9	0	12	0	21	3	0	0	0	3	0	0	0	0	0	24
08:00	0	0	1	0	1	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	3
08:15	0	0	1	0	1	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	3
Grand Total	0	0	3	0	3	12	0	16	0	28	5	0	0	0	5	0	0	0	0	0	36
Apprch %	0	0	100	0		42.9	0	57.1	0		100	0	0	0		0	0	0	0		
Total %	0	0	8.3	0	8.3	33.3	0	44.4	0	77.8	13.9	0	0	0	13.9	0	0	0	0	0	1

2504 E. Pikes Peak Ave, Suite 304 Colorado Springs, CO 80909 719-633-2868

Passenger Cars/ Pickup-Trucks

File Name: Vollmer Rd - Pioneer Sand Trucks PM

Site Code : S224330 Start Date : 5/24/2022

Page No : 1

Groups Printed- Unshifted

		Vo	ollmer	r Rd		Р	ionee	r San	d Acc	ees		Vo	ollmei	r Rd							
		So	uthbo	ound			W	estbo	und			No	rthbo	und			Ea	astbo	und		
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
16:00	0	72	1	0	73	2	0	8	0	10	6	69	0	0	75	0	0	0	0	0	158
16:15	0	61	2	0	63	1	0	7	0	8	11	69	0	0	80	0	0	0	0	0	151
16:30	0	64	1	0	65	2	0	8	0	10	6	75	0	0	81	0	0	0	0	0	156
16:45	0	54	2	0	56	6	0	8	0	14	2	72	0	0	74	0	0	0	0	0	144
Total	0	251	6	0	257	11	0	31	0	42	25	285	0	0	310	0	0	0	0	0	609
17:00	0	60	1	0	61	1	0	9	0	10	3	58	0	0	61	0	0	0	0	0	132
17:15	0	65	2	0	67	0	0	5	0	5	1	58	0	0	59	0	0	0	0	0	131
17:30	0	50	0	0	50	2	0	21	0	23	2	68	0	0	70	0	0	0	0	0	143
17:45	0	48	1	0	49	0	0	2	0	2	0	77	0	0	77	0	0	0	0	0	128
Total	0	223	4	0	227	3	0	37	0	40	6	261	0	0	267	0	0	0	0	0	534
Grand Total	۱ ،	474	10	0	484	14	0	68	0	82	31	546	0	0	577	0	0	0	0	0	1143
Apprch %	0	97.9	2.1	0	-70-7	17.1	0	82.9	0	02	5.4	94.6	0	0	511	0	0	0	0	U	1145
Total %	0	41.5	0.9	0	42.3	1.2	0	5.9	0	7.2	2.7	47.8	0	0	50.5	0	0	0	0	0	

2504 E. Pikes Peak Ave, Suite 304 Colorado Springs, CO 80909 719-633-2868

Passenger Cars/ Pickup-Trucks

File Name: Vollmer Rd - Pioneer Sand Trucks PM

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			ollmer			Р		r Sand	d Acce	ees			ollme				E	astbo	und		
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour A	Analys				M to 5:4	45:00	PM - F	Peak 1	of 1												
Peak Hour f	or Ent	ire Inte	ersect	ion Be	gins at	4:00:0	00 PM														
4:00:00 PM	0	72	1	0	73	2	0	8	0	10	6	69	0	0	75	0	0	0	0	0	158
4:15:00 PM	0	61	2	0	63	1	0	7	0	8	11	69	0	0	80	0	0	0	0	0	151
4:30:00 PM	0	64	1	0	65	2	0	8	0	10	6	75	0	0	81	0	0	0	0	0	156
4:45:00 PM	0	54	2	0	56	6	0	8	0	14	2	72	0	0	74	0	0	0	0	0	144
Total Volume	0	251	6	0	257	11	0	31	0	42	25	285	0	0	310	0	0	0	0	0	609
% App. Total	0	97.7	2.3	0		26.2	0	73.8	0		8.1	91.9	0	0		0	0	0	0		
PHF	.000	.872	.750	.000	.880	.458	.000	.969	.000	.750	.568	.950	.000	.000	.957	.000	.000	.000	.000	.000	.964

2504 E. Pikes Peak Ave, Suite 304 Colorado Springs, CO 80909 719-633-2868

Trucks

File Name: Vollmer Rd - Pioneer Sand Trucks PM

Site Code : S224330 Start Date : 5/24/2022

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Groups Printed- Bank 1

		Vo	ollmer	Rd		P	ionee	r San	d Acc	ees		Vo	ollmei	r Rd							
		So	uthbo	und			W	estbo	und			No	rthbo	und			Ea	astbo	und		
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
16:00	0	0	1	0	1	1	0	2	0	3	3	0	0	0	3	0	0	0	0	0	7
16:15	0	0	1	0	1	0	0	2	0	2	5	0	0	0	5	0	0	0	0	0	8
16:30	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	4
16:45	0	0	2	0	2	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	3_
Total	0	0	4	0	4	1	0	4	0	5	13	0	0	0	13	0	0	0	0	0	22
17:00	0	0	1	0	1	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	3
17:15	0	0	2	0	2	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	5
17:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
17:45	0	0	1_	0	1	0	0	1_	0	1_	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	4	0	4	0	0	3	0	3	4	0	0	0	4	0	0	0	0	0	11
Grand Total Apprch % Total %	0 0 0	0 0 0	8 100 24.2	0 0 0	8 24.2	1 12.5 3	0 0 0	7 87.5 21.2	0 0 0	8 24.2	17 100 51.5	0 0 0	0 0 0	0 0 0	17 51.5	0 0 0	0 0 0	0 0 0	0 0 0	0	33

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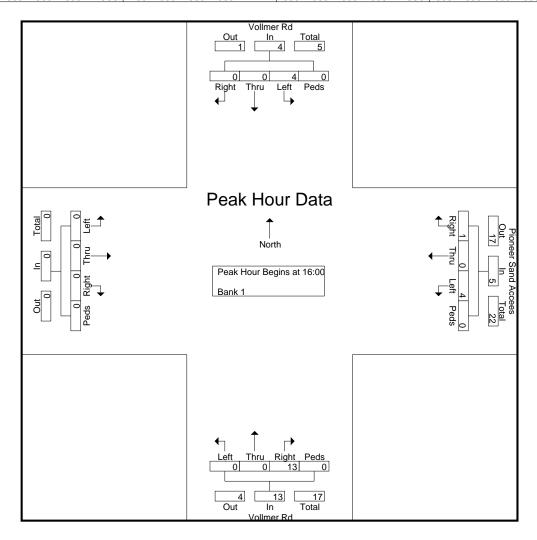
Trucks

File Name: Vollmer Rd - Pioneer Sand Trucks PM

Site Code : S224330 Start Date : 5/24/2022

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		Vo	ollmer	Rd		Р	ionee	r Sand	d Acce	ees		V	ollmer	Rd							
		So	uthbo	und			W	estbo	und			No	rthbo	und			Ea	astbo	und		
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour /	Analys	is Fro	m 4:00	0:00 P	M to 5:	45:00	PM - F	Peak 1	of 1												
Peak Hour f	or Ent	ire Int	ersect	ion Be	gins at	4:00:0	00 PM														
4:00:00 PM	0	0	1	0	1	1	0	2	0	3	3	0	0	0	3	0	0	0	0	0	7
4:15:00 PM	0	0	1	0	1	0	0	2	0	2	5	0	0	0	5	0	0	0	0	0	8
4:30:00 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	4
4:45:00 PM	0	0	2	0	2	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	3
Total Volume	0	0	4	0	4	1	0	4	0	5	13	0	0	0	13	0	0	0	0	0	22
% App. Total	0	0	100	0		20	0	80	0		100	0	0	0		0	0	0	0		
PHF	.000	.000	.500	.000	.500	.250	.000	.500	.000	.417	.650	.000	.000	.000	.650	.000	.000	.000	.000	.000	.688



Levels of Service



Intersection						
Int Delay, s/veh	1.5					
Movement	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations	WDL	אטוז	<u>NE1</u>	NER	SVVL	<u>3₩1</u>
Traffic Vol, veh/h	T 34	21	233	33	9	287
Future Vol, veh/h	34	21	233	33	9	287
	0	0	233	0	0	0
Conflicting Peds, #/hr			Free	Free	Free	Free
Sign Control RT Channelized	Stop -	Stop	riee -		riee -	None
		None -	-			None
Storage Length	0		-	-	-	_
Veh in Median Storage		-	0	-	-	0
Grade, %	0	- 70	0	- 07	-	0
Peak Hour Factor	78	78	87	87	88	88
Heavy Vehicles, %	24	33	2	15	11	2
Mvmt Flow	44	27	268	38	10	326
Major/Minor	Minor1	N	Major1		Major2	
Conflicting Flow All	633	287	0	0	306	0
Stage 1	287	-	-	_	-	-
Stage 2	346	_	_	_	_	_
Critical Hdwy	6.64	6.53	_	_	4.21	_
Critical Hdwy Stg 1	5.64	-	_	_	- 1.2	_
Critical Hdwy Stg 2	5.64	_	_	_	_	_
Follow-up Hdwy	3.716		_	_	2.299	_
Pot Cap-1 Maneuver	411	684	_		1205	_
Stage 1	714	-		_	1200	_
Stage 2	670	-	-	-	-	-
Platoon blocked, %	070	-	-	-	-	_
	407	684	-	-	1205	_
Mov Cap-1 Maneuver	407		-	-		-
Mov Cap-2 Maneuver	407	-	-	-	-	-
Stage 1	714	-	-	-	-	-
Stage 2	663	-	-	-	-	-
Approach	WB		NE		SW	
HCM Control Delay, s	13.8		0		0.2	
HCM LOS	В					
J 200						
N 42 1 /2 4 1 7 1		NICT	NIES:	MDL 1	0) * "	0147
Minor Lane/Major Mvm	ıt .	NET		VBLn1	SWL	SWT
Capacity (veh/h)		-	-		1205	-
HCM Lane V/C Ratio		-		0.147		-
HCM Control Delay (s)		-	-		8	0
HCM Lane LOS		-	-	В	Α	Α
HCM 95th %tile Q(veh		-	-	0.5	0	-

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations	¥		1			4
Traffic Vol, veh/h	39	12	285	30	10	251
Future Vol, veh/h	39	12	285	30	10	251
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-		-	
Storage Length	0	-	-	-	-	-
Veh in Median Storage,		-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	71	71	87	87	88	88
Heavy Vehicles, %	21	8	2	17	40	2
Mvmt Flow	55	17	328	34	11	285
Major/Minor N	/linor1	N	Major1		Major2	
	652	345	0	0	362	0
Conflicting Flow All	345			U		
Stage 1	307	- -	-	-	-	-
Stage 2	6.61	6.28	-	-	4.5	_
Critical Hdwy	5.61		-	-		-
Critical Hdwy Stg 1	5.61	-	-	-	-	_
Critical Hdwy Stg 2	3.689	2 272	-	-	2.56	-
' '			-	-		-
Pot Cap-1 Maneuver	404	684	-	-	1014	-
Stage 1	677	-	-	-	-	-
Stage 2	705	-	-	-	-	-
Platoon blocked, %	200	C0.4	-	-	1014	-
Mov Cap-1 Maneuver	399	684	-	-	1014	-
Mov Cap-2 Maneuver	399	-	-	-	-	-
Stage 1	677	-	-	-	-	-
Stage 2	696	-	-	-	-	-
Approach	WB		NE		SW	
HCM Control Delay, s	14.7		0		0.3	
HCM LOS	В				3.0	
TOW LOO	U					
Minor Lane/Major Mvmt		NIET	NED	MDL 4	0\4/	OME
Number Land/Major M/Mm	l	NET		VBLn1	SWL	SWT
			_	442	1014	-
Capacity (veh/h)		-				
Capacity (veh/h) HCM Lane V/C Ratio		-	-	0.163		-
Capacity (veh/h) HCM Lane V/C Ratio HCM Control Delay (s)		- -	-	0.163 14.7	8.6	0
Capacity (veh/h) HCM Lane V/C Ratio		- - -	-	0.163		

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations	WBL	וטא	1NE 1	NLI	OVVL	<u>उग्ग</u>
Traffic Vol, veh/h	1 31	21	351	28	9	693
	31	21	351	28		
Future Vol, veh/h					9	693
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage		-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	87	85	85	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	25	403	33	11	788
Major/Minor I	Minor1	N	/lajor1		Major2	
						^
Conflicting Flow All	1230	420	0	0	436	0
Stage 1	420	-	-	-	-	-
Stage 2	810	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy		3.318	-	-	2.218	-
Pot Cap-1 Maneuver	196	633	-	-	1124	-
Stage 1	663	-	-	-	-	-
Stage 2	438	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	193	633	-	-	1124	-
Mov Cap-2 Maneuver	193	-	-	-	-	-
Stage 1	663	-	-	_	-	-
Stage 2	431	_	_	_	_	_
Approach	WB		NE		SW	
HCM Control Delay, s	22.4		0		0.1	
HCM LOS	С					
Minor Lane/Major Mym	nt	NET	NEDV	VBLn1	SWL	SWT
Minor Lane/Major Mvmt		INCI	INLIXV			SVVI
Capacity (veh/h)		-	-	268	1124	-
HCM Cartest Dalay (2)		-		0.228		-
		-	-	22.4	8.2	0
HCM Control Delay (s)				^	Α.	Α.
HCM Lane LOS HCM 95th %tile Q(veh		-	-	C 0.9	A 0	A -

Intersection						
Int Delay, s/veh	1.3					
		WED	NIET	NED	0)4//	OVA/T
Movement	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations	Y	4.0	4			र्स
Traffic Vol, veh/h	34	12	669	27	10	479
Future Vol, veh/h	34	12	669	27	10	479
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storag	e, # 0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	87	85	85	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	14	769	32	12	544
N.A ' /N.A'	N 4"		1.1.4		1	
	Minor1		//ajor1		Major2	
Conflicting Flow All	1353	785	0	0	801	0
Stage 1	785	-	-	-	-	-
Stage 2	568	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	165	393	-	-	822	-
Stage 1	449	-	-	-	-	-
Stage 2	567	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	162	393	_	_	822	_
Mov Cap-2 Maneuver		-	_	_	-	_
Stage 1	449	_	_	_	_	_
Stage 2	555	_			_	_
Olaye Z	555			-	-	
Approach	WB		NE		SW	
HCM Control Delay, s	31.1		0		0.2	
HCM LOS	D					
Minor Long/Maior M	4	NET	NED	MDI 4	CVAII	CVA/T
Minor Lane/Major Mvr	TIC .	NET		VBLn1	SWL	SWT
Capacity (veh/h)		-	-		822	-
HCM Lane V/C Ratio		-		0.283		-
HCM Control Delay (s)	-	-	~	9.4	0
HCM Lane LOS		-	-	D	Α	Α
HCM 95th %tile Q(veh	1)	-	-	1.1	0	-

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations	WDL	אטוי	<u>NEI</u>	INER	SVVL	<u>SW1</u>
Traffic Vol, veh/h	T 39	21	T 351	38	9	T 693
	39	21	351	38	9	693
Future Vol, veh/h		0				
Conflicting Peds, #/hr	0		0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-		-	None
Storage Length	0	-	-	100	0	-
Veh in Median Storage		-	0	-	-	0
Grade, %	0	-	0	_	_	0
Peak Hour Factor	85	85	87	85	85	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	25	403	45	11	788
Major/Minor I	Minor1	N	Major1		Major2	
Conflicting Flow All	1213	403	0	0	448	0
Stage 1	403	-	_	_	-	-
Stage 2	810	<u>-</u>	_	_	_	_
Critical Hdwy	6.42	6.22	_	_	4.12	_
Critical Hdwy Stg 1	5.42	-	_	_	7.12	_
Critical Hdwy Stg 2	5.42	_	_	_	_	_
Follow-up Hdwy		3.318	_	_	2.218	_
Pot Cap-1 Maneuver	201	647	_	_	4440	_
Stage 1	675	- 047	_	_	1112	_
	438		-	_	_	
Stage 2 Platoon blocked, %	430	-	-	-	-	-
	400	C 4 7	-	-	4440	-
Mov Cap-1 Maneuver	199	647	-	-	1112	-
Mov Cap-2 Maneuver	199	-	-	_	_	-
Stage 1	675	-	-	-	-	-
Stage 2	434	-	-	-	-	-
Approach	WB		NE		SW	
HCM Control Delay, s	23.6		0		0.1	
HCM LOS	C		U		0.1	
TIONI EGO	J					
Minor Lane/Major Mvm	<u>it</u>	NET	NERV	VBLn1	SWL	SWT
Capacity (veh/h)		-	-	_00	1112	-
HCM Lane V/C Ratio		-	-	0.268	0.01	-
HCM Control Delay (s)		-	-		8.3	-
HCM Lane LOS		-	-	С	Α	-
HCM 95th %tile Q(veh)		-	-	1.1	0	-

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations	W		^	7	*	
Traffic Vol, veh/h	43	12	669	35	10	479
Future Vol, veh/h	43	12	669	35	10	479
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	100	0	-
Veh in Median Storage, #		-	0	-	-	0
Grade, %	e, # 0 0	-	0	_	_	0
Peak Hour Factor	85	85	87	85	85	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	51	14	769	41	12	544
WWW.CT IOW	O I	• •	100	• • •	12	011
		_				
	Minor1		Major1	1	Major2	
Conflicting Flow All	1337	769	0	0	810	0
Stage 1	769	-	-	-	-	-
Stage 2	568	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	169	401	-	-	816	-
Stage 1	457	-	-	-	-	-
Stage 2	567	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	166	401	-	-	816	-
Mov Cap-2 Maneuver	166	-	-	-	-	-
Stage 1	457	_	_	-	_	_
Stage 2	558	_	-	_	_	_
Approach	WB		NE		SW	
HCM Control Delay, s	33.4		0		0.2	
HCM LOS	D					
Minor Lane/Major Mvm	nt	NET	NFRV	VBLn1	SWL	SWT
Capacity (veh/h)		-	-	190	816	-
HCM Lane V/C Ratio		<u>-</u>		0.341		<u>-</u>
HCM Control Delay (s)		<u>-</u>	_	33.4	9.5	<u>-</u>
HCM Lane LOS		_		55.4 D	9.5 A	_
HCM 95th %tile Q(veh)	\	<u>-</u>	_	1.4	0	<u>-</u>
HOW JOHN JOHNE Q(VEII))	_	_	1.7	U	_

Appendix Table 1



DATE 3/6/2022	Day of the Week Sunday	Tandem 0	Semi 0		g Truck Operations o Concrete Crushing DATE 5/23/2022	Day of the Week Monday	Tandem 19	Semi 4	TOTAL LOADS
3/6/2022 3/13/2022 3/20/2022 3/27/2022	Sunday Sunday Sunday Sunday	0 0 0	0 0 0	0 0 0	10/17/2022 11/3/2022 9/30/2022	Monday Monday Thursday Friday	19 19 17 17	4 4 6 6	23 23 23 23
4/3/2022 4/10/2022	Sunday Sunday	0	0	0	5/24/2022 10/13/2022	Tuesday Thursday	18 20	6 4	24 24
4/17/2022 4/24/2022 5/1/2022	Sunday Sunday Sunday	0 0	0 0	0 0	10/21/2022 9/17/2022 5/2/2022	Friday Saturday Monday	18 23 25	6 1 0	24 24 25
5/8/2022 5/15/2022 6/12/2022	Sunday Sunday Sunday	0 0	0 0	0 0	11/21/2022 12/6/2022 10/6/2022	Monday Tuesday Thursday	17 23 12	8 2 13	25 25 25
6/19/2022 6/26/2022 7/3/2022	Sunday Sunday Sunday	0 0 0	0 0 0	0 0 0	10/27/2022 12/29/2022 5/27/2022	Thursday Thursday Friday	21 25 17	4 0 8	25 25 25
7/10/2022 7/17/2022 7/24/2022	Sunday Sunday Sunday	0 0	0 0 0	0 0	12/2/2022 10/31/2022 8/16/2022	Friday Monday Tuesday	20 18 26	5 8 0	25 26 26
7/31/2022 8/7/2022 8/14/2022	Sunday Sunday Sunday	0 0	0 0 0	0 0	10/12/2022 3/3/2022 6/30/2022	Wednesday Thursday Thursday	20 21 17	6 5 9	26 26 26
8/21/2022 9/4/2022 9/11/2022	Sunday Sunday Sunday	0 0	0 0 0	0 0	9/1/2022 10/18/2022 10/19/2022	Thursday Tuesday Wednesday	18 21 21	8 6 6	26 27 27
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10/9/2022 10/16/2022 10/23/2022	Sunday Sunday Sunday	0 0	0 0 0	0 0	11/17/2022 12/1/2022 6/3/2022	Thursday Thursday Friday	13 18 25	15 11 4	28 29 29
10/30/2022 11/6/2022 11/13/2022	Sunday Sunday Sunday	0 0	0 0 0	0 0	4/12/2022 5/31/2022 12/14/2022	Tuesday Tuesday Wednesday	15 23 30	15 7 0	30 30 30
11/20/2022 11/27/2022 12/4/2022	Sunday Sunday Sunday	0 0 0	0 0 0	0 0 0	8/4/2022 7/1/2022 12/20/2022	Thursday Friday Tuesday	8 14 28	22 16 3	30 30 31
12/11/2022 12/18/2022 12/25/2022	Sunday Sunday Sunday	0 0 0	0 0 0	0 0 0	5/6/2022 12/5/2022 12/19/2022	Friday Monday Monday	31 28 29	0 4 3	31 32 32
3/21/2022 7/4/2022 7/11/2022	Monday Monday Monday	0 0 0	0 0 0	0 0	12/7/2022 8/25/2022 6/10/2022	Wednesday Thursday Friday	26 17 29	6 15 3	32 32 32
9/5/2022 10/3/2022 11/28/2022	Monday Monday Monday	0 0	0 0 0	0 0	5/17/2022 6/15/2022 8/30/2022	Tuesday Wednesday Tuesday	32 27 10	1 6 24	33 33 34
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8/31/2022 3/10/2022 3/17/2022	Wednesday Thursday Thursday	0 0	0 0 0	0 0	5/18/2022 4/28/2022 11/24/2022	Wednesday Thursday Thursday	26 34 25	8 0 9	34 34 34
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4/1/2022 4/22/2022 11/18/2022	Friday Friday Friday	0 0	0 0	0 0	3/15/2022 10/4/2022 5/20/2022	Tuesday Tuesday Friday	29 28 27	6 7 8	35 35 35 35
11/25/2022 12/23/2022 12/30/2022	Friday Friday Friday	0 0	0 0	0 0	6/24/2022 5/11/2022 6/9/2022	Friday Wednesday Thursday	24 36 34	11 0 2	35 36 36
3/5/2022 4/2/2022 4/9/2022	Saturday Saturday Saturday	0 0	0 0	0 0	3/4/2022 9/9/2022 6/6/2022	Friday Friday Monday	36 26 24	0 10 13	36 36 37
4/16/2022 4/23/2022 4/30/2022	Saturday Saturday Saturday	0 0	0 0	0 0	10/24/2022 10/11/2022 3/2/2022	Monday Tuesday Wednesday	28 31 29	11 8 10	39 39 39
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6/18/2022 6/25/2022 7/2/2022	Saturday Saturday Saturday	0 0	0 0	0 0	9/6/2022 3/14/2022 6/1/2022	Tuesday Monday Wednesday	30 36 43	10 5 0	40 41 43
7/16/2022 7/23/2022 7/30/2022	Saturday Saturday Saturday	0 0	0 0	0 0	8/17/2022 9/22/2022 6/27/2022	Wednesday Thursday Monday	41 37 40	6 4	43 43 44
8/13/2022 9/10/2022 10/8/2022	Saturday Saturday Saturday	0 0	0 0	0 0	8/12/2022 7/25/2022 8/15/2022	Friday Monday Monday	30 36 22	14 9 23	44 45 45
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11/12/2022 11/19/2022 11/26/2022	Saturday Saturday Saturday	0 0	0 0	0 0	7/13/2022 5/12/2022 8/8/2022	Wednesday Thursday Monday	32 47 28	14 0 20	46 47 48
12/3/2022 12/10/2022 12/17/2022	Saturday Saturday Saturday	0 0	0 0	0 0	10/10/2022 6/14/2022 7/20/2022	Monday Tuesday Wednesday	35 39 40	13 9 8	48 48 48
12/24/2022 12/31/2022 3/7/2022	Saturday Saturday Monday	0 0 1	0 0	0 0 1	9/16/2022 9/7/2022 9/2/2022	Friday Wednesday Friday	40 39 49	8 10 0	48 49 49
5/4/2022 11/30/2022 10/28/2022	Wednesday Wednesday Friday	3 0 3	0 3 0	3 3 3	8/28/2022 9/12/2022 7/26/2022	Sunday Monday Tuesday	43 50 25	7 0 25	50 50 50
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5/30/2022 5/30/2022 4/19/2022 11/22/2022	Monday Tuesday Tuesday	10 10 4	0 0 6	10 10 10	7/21/2022 7/27/2022 8/29/2022 9/13/2022	Wednesday Monday Tuesday	45 32 46	8 22 9	53 54 55
11/22/2022 12/13/2022 3/9/2022 11/23/2022	Tuesday Tuesday Wednesday Wednesday	10 10 3	0 0 7	10 10 10 10	9/23/2022 9/23/2022 6/20/2022 6/22/2022	Friday Monday Wednesday	47 56 48	8 0 8	55 56 56
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3/11/2022 3/18/2022 11/11/2022	Friday Friday Friday Friday	11 11 11 3	0 0 8	11 11 11	9/19/2022 6/23/2022 6/28/2022	Monday Thursday Tuesday	53 45 53	6 14 7	59 59 60
4/18/2022 5/3/2022 10/1/2022	Monday Tuesday Saturday	12 12 3	0 0 9	12 12 12	8/9/2022 7/6/2022 8/3/2022	Tuesday Tuesday Wednesday Wednesday	48 38 38	12 23 23	60 61 61
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12/15/2022 9/27/2022 3/16/2022	Thursday Tuesday Wednesday	13 12 8	0 2 6	13 14 14	8/24/2022 9/14/2022 7/22/2022	Wednesday Wednesday Friday	53 56 53	10 7 10	63 63 63
4/20/2022 12/12/2022 11/1/2022	Wednesday Monday Tuesday	14 11 15	0 4 0	14 15 15	11/8/2022 5/10/2022 7/28/2022	Tuesday Tuesday Tuesday Thursday	26 66 51	39 0 15	65 66 66
3/24/2022 8/20/2022 11/7/2022	Thursday Saturday Monday	15 9 7	0 6 9	15 15 15	8/23/2022 3/1/2022 8/18/2022	Tuesday Tuesday Thursday Thursday	50 64 47	18 6 23	68 70 70
12/21/2022 4/15/2022 12/16/2022	Wednesday Friday Friday	12 16 16	4 0 0	16 16 16	7/29/2022 11/4/2022 9/26/2022	Friday Friday Monday	43 44 67	27 27 6	70 71 73
11/14/2022 11/15/2022 10/14/2022	Monday Tuesday Friday	9 11 13	8 6 4	17 17 17	6/7/2022 3/28/2022 7/5/2022	Tuesday Monday Tuesday	65 13 65	8 62 10	73 73 75 75
3/23/2022 9/8/2022 6/17/2022	Wednesday Thursday Friday	13 12 10 18	6 8 0	17 18 18 18	8/10/2022 6/2/2022 8/19/2022	Wednesday Thursday Friday	47 72 59	29 4 17	76 76 76
9/24/2022 3/8/2022 9/29/2022	Saturday Tuesday Thursday	18 13 20 20	6 0 0	18 19 20 20	8/19/2022 3/31/2022 5/9/2022 7/18/2022	Thursday Monday Monday	16 79 66	61 0 13	76 77 79 79
9/29/2022 10/20/2022 11/10/2022 4/29/2022	Thursday Thursday Thursday Friday	12 12 12 20	8 8 0	20 20 20 20	3/29/2022 8/11/2022 8/1/2022	Tuesday Thursday Monday	17 81 75	68 8 24	85 89 99
4/29/2022 4/5/2022 10/26/2022 8/27/2022	Tuesday Wednesday	13 14 21	8 7	20 21 21 21	8/1/2022 7/9/2022 7/12/2022 7/7/2022	Saturday Tuesday	91 94 71	12 12 12 37	103 106 108
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10/7/2022	Friday	18	4	22	7/8/2022	Friday Maximum	128 128	7 68	135 135

Vollmer Road Approved CD



STERLING RANCH - VOLLMER ROAD FILING 2

COUNTY OF EL PASO, STATE OF COLORADO

STREET IMPROVEMENT PLAN

MARCH 2022 CDR 20-005

AGENCIES

OWNER/DEVELOPER:

20 BOULDER CRESCENT, SUITE 201 COLORADO SPRINGS, CO 80903 JAMES F. MORLEY (719) 471-1742

CIVIL ENGINEER:

JR ENGINEERING, LLC 5475 TECH CENTER DRIVE

COLORADO SPRINGS, CO 80919 MIKE BRAMLETT P.E. (303) 267-6240

COUNTY ENGINEERING:

EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910

JEFF RICE, P.E. (719) 520-6300

TRAFFIC ENGINEERING:

EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS 3275 AKERS DRIVE

COLORADO SPRINGS, CO 80922 JENNIFER IRVINE, P.E. (719) 520-6460

STERLING RANCH METRO DISTRICT ENGINEERS WATER RESOURCES:

JDS-HYDRO CONSULTANTS 545 E. PIKES PEAK AVE., SUITE 300 COLORADO SPRINGS, CO 80903

JOHN MCGINN (719) 668-8769

BLACK FOREST FIRE PROTECTION DISTRICT FIRE DISTRICT:

11445 TEACHOUT ROAD COLORADO SPRINGS, CO 80908 CHIEF BRYAN JACK (719) 495-4300

GAS DEPARTMENT:

COMMUNICATIONS:

COLORADO SPRINGS UTILITIES 7710 DURANT DR.

COLORADO SPRINGS, CO 80947 TIM WENDT (719) 668-3556

ELECTRIC DEPARTMENT:

BENCHMARKS

NORTHING = 411416.273EASTING = 235167.071ELEVATION = 7023.42

NORTHING = 410095.404EASTING = 235052.131

NORTHING = 411399.962

EASTING = 233849.817ELEVATION = 7030.82

ELEVATION = 7000.40

1. THE TOP OF AN ALUMINUM SURVEYORS CAP,

2. THE TOP OF A RED PLASTIC SURVEYORS CAP,

3. THE TOP OF A RED PLASTIC SURVEYORS CAP, STAMPED "38141", AT THE SOUTHWEST

BOUNDARY CORNER OF BARBARICK SUBDISION

CORNER OF PAWNEE RANCHEROS SUBDIVISION

ILLEGIBLE, AT THE NORTHWEST BOUNDARY

CORNER OF BARBARICK SUBDIVISION

STAMPED "9853", AT THE SOUTHEAST BOUNDARY

11140 E. WOODMEN ROAD FALCON, CO 80831 (719) 495-2283

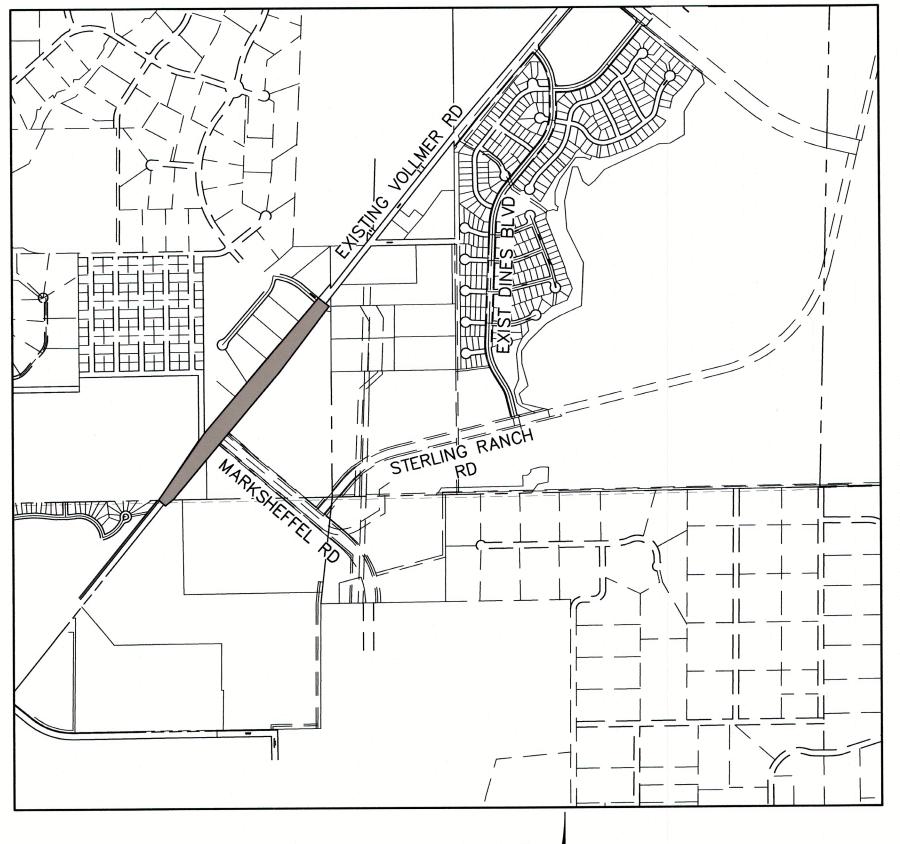
MOUNTAIN VIEW ELECTRIC

QWEST COMMUNICATIONS

(U.N.C.C. LOCATORS) (800) 922-1987 AT&T (LOCATORS) (719) 635-3674

CITY STORMWATER: 30 S. NEVADA AVENUE, SUITE 401

COLORADO SPRINGS, CO 80903 (719) - 385 - 5918



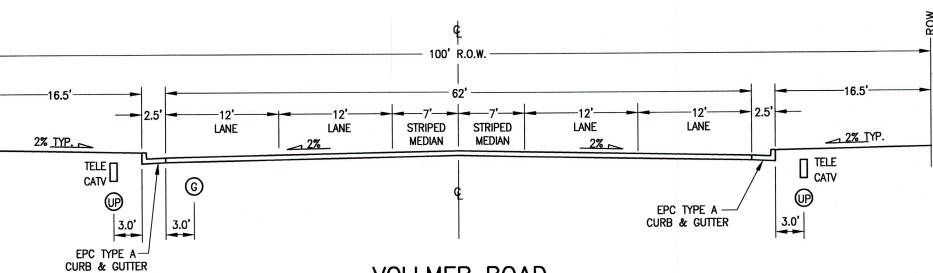
VICINITY MAP

SHEET INDEX

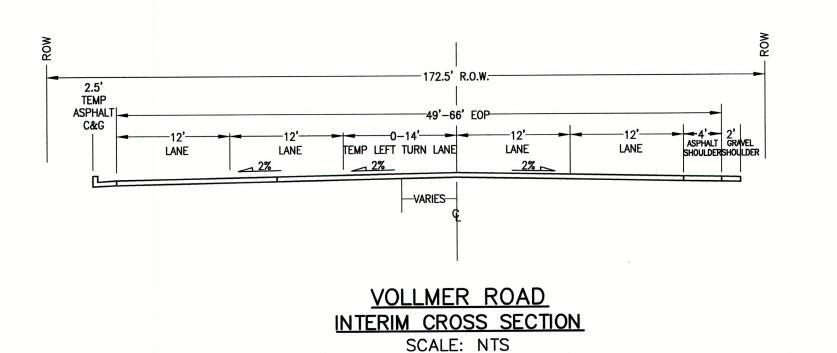
CROSS SECTIONS

INTERSECTION DETAIL

COVER SHEET NOTES AND DETAILS - VOLLMER ROAD (SOUTH) STA 10+00 TO 23+50 - VOLLMER ROAD (SOUTH) STA 23+50 TO 37+00 PLAN & PROFILE PLAN & PROFILE MEDIAN DETAILS SIGNAGE & STRIPING



VOLLMER ROAD (MODIFIED) URBAN MINOR ARTERIAL CROSS SECTION SCALE: NTS ULTIMATE STA: 14+00.00 - 34+00.00



INTERIM STA: 29+76.26 - 34+00.93

2' 4' 12-21' 12-21' SHOULDERSHOULDER & BEGIN TAPER 12' 4' 2'
RIGHT TURN LANE SHOULDERSHOULDER

VOLLMER ROAD INTERIM CROSS SECTION SCALE: NTS INTERIM STA: 34+00.93 - 35+76.70

Know what's below.

Call before you dig.

OWNER/DEVELOPER STATEMENT

THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH ALL OF THE REQUIREMENTS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS.

SR LAND, LLC 20 BOULDER CRESCENT, SUITE 201 COLORADO SPRINGS, CO 80903

EL PASO COUNTY STATEMENT

COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTORS DISCRETION.

> **APPROVED Engineering Department** 04/05/2022 1:10:30 PM dsdnijkamp EPC Planning & Communi Development Departmen

JENNIFER IRVINE, P.E.

COUNTY ENGINEER/ECM ADMINISTRATOR

ENGINEER'S STATEMENT

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECT SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLAN AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

MIKE A. BRAMLETT, P.E. COLORADO P.E. 32314 FOR AND ON BEHALF OF JR ENGINEERING

DISTRICT APPROVALS

THESE DOCUMENTS HAVE BEEN REVIEWED AND APPROVED FOR STORM DRAIN AND ASSOCIATED UTILITY SERVICE CONSTRUCTION.

STERLING RANCH — VOLLMER ROAD FILING

SHEET 1 OF 11

JOB NO. 25188.01

GENERAL CONSTRUCTION NOTES:

- 1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ALONG THE ROUTE OF THE WORK. THE OMISSION FROM OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NONEXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- 2. THE CONTRACTOR WILL TAKE THE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES FROM DAMAGE DUE TO THIS OPERATION. ANY DAMAGE TO THE UTILITIES WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, AND ANY SERVICE DISRUPTION WILL BE SETTLED BY THE CONTRACTOR.
- 3. ADDITIONAL EROSION CONTROL STRUCTURES MAY BE REQUIRED AT THE TIME OF CONSTRUCTION.
- 4. ALL BACKFILL, SUB-BASE, AND/OR BASE COURSE (CLASS 6) MATERIAL SHALL BE COMPACTED PER THE SOILS ENGINEER'S RECOMMENDATIONS. AND APPROVED BY EL PASO COUNTY PCD.
- 5. ALL STATIONING IS CENTERLINE OF IMPROVEMENTS UNLESS OTHERWISE INDICATED. ALL ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE INDICATED AS TOP BACK OF CURB (TBC), ASPHALT (ASP), OR TOP OF INLET OR BOX (TOB).
- 6. ALL DISTURBED PAVEMENT EDGES SHALL BE CUT TO NEAT LINES. REPAIR SHALL CONFORM TO EPC ECM APPENDIX K 1.2C.
- 7. ALL INTERSECTION ACCESSES TO BE CONSTRUCTED WITH A 25 FOOT SIGHT VISIBILITY TRIANGLES EXCEPT [VOLLMER ROAD, MARKSHEFFEL ROAD, BRAIRGATE PARKWAY] WHICH IS AN ARTERIAL AND A 50 FOOT SIGHT VISIBILITY TRIANGLE IS REQUIRED AND THERE SHALL BE NO OBSTRUCTIONS GREATER THAN 18" IN THIS AREA.
- 8. ALL CULVERTS AND STORM DRAIN PIPES SHALL BE SMOOTH INTERIOR CORRUGATED POLYETHYLENE PIPE (HDPE), REINFORCED CONCRETE PIPE (RCP). ALL CULVERTS SHALL BE PLACED COMPLETE WITH FLARED END SECTIONS. ADEQUACY OF MATERIAL THICKNESS FOR ANY CSP INSTALLED SHALL BE VERIFIED BY OWNER'S GEOTECHNICAL ENGINEER TO SUPPORT MINIMUM 50 YEAR DESIGN LIFE. CULVERTS MUST CONFORM TO EPC ECM SECTION 3.32 - CULVERTS.
- 9. ASPHALT THICKNESS AND BASE COURSE THICKNESS (COMPACTED) FOR ROADS SHALL BE PER DESIGN REPORT BY OWNER'S GEOTECHNICAL ENGINEER. OWNER'S GEOTECHNICAL ENGINEER TO BE ON SITE AT THE TIME OF ROAD CONSTRUCTION TO EVALUATE SOIL CONDITIONS AND DETERMINE IF ADDITIONAL MEASURES ARE NECESSARY TO ASSURE STABILITY OF THE NEW ROADS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT ENGINEERING DIVISION PRIOR TO CONSTRUCTION.

SIGNING AND STRIPING NOTES:

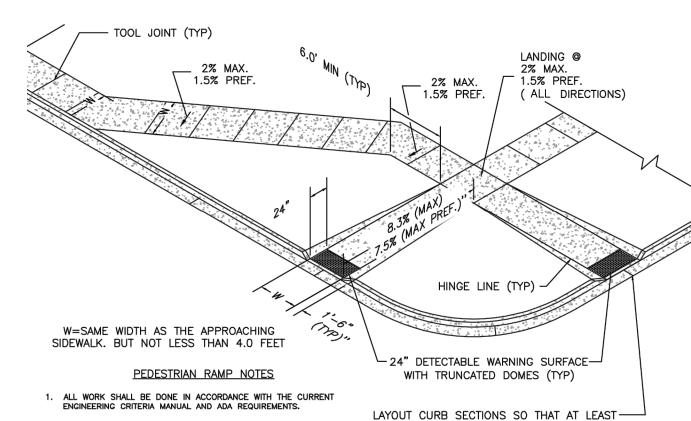
- 1. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- 2. REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED BY A METHOD THAT DOES NOT MATERIALLY DAMAGE THE PAVEMENT. THE PAVEMENT MARKINGS SHALL BE REMOVED TO THE EXTENT THAT THEY WILL NOT BE VISIBLE UNDER DAY OR NIGHT CONDITIONS. AT NO TIME WILL IT BE ACCEPTABLE TO PAINT OVER EXISTING PAVEMENT MARKINGS.
- 3. ANY DEVIATION FROM THE STRIPING AND SIGNING PLAN SHALL BE APPROVED BY EL PASO COUNTY PCD.
- 4. ALL SIGNS SHOWN ON THE SIGNING AND STRIPING PLAN SHALL BE NEW SIGNS. EXISTING SIGNS MAY REMAIN OR BE REUSED IF THEY MEET CURRENT EL PASO COUNTY AND MUTCD STANDARDS.
- 5. STREET NAME AND REGULATORY STOP SIGNS SHALL BE ON THE SAME POST AT INTERSECTIONS.
- 6. ALL REMOVED SIGNS SHALL BE DISPOSED OF IN A PROPER MANNER BY THE CONTRACTOR.
- 7. ALL STREET NAME SIGNS SHALL HAVE "D" SERIES LETTERS, WITH LOCAL ROADWAY SIGNS BEING 4" UPPER-LOWER CASE LETTERING ON 8" BLANK AND NON-LOCAL ROADWAY SIGNS BEING 6" LETTERING, UPPER-LOWER CASE ON 12" BLANK, WITH A WHITE BORDER THAT IS NOT RECESSED. MULTI-LANE ROADWAYS WITH SPEED LIMITS OF 40 MPH OR HIGHER SHALL HAVE 8" UPPER-LOWER CASE LETTERING ON 18" BLANK WITH A WHITE BORDER THAT IS NOT RECESSED. THE WIDTH OF THE NON-RECESSED WHITE BORDERS SHALL MATCH PAGE 255 OF THE 2012 MUTCD "STANDARD HIGHWAY SIGNS"
- 8. ALL TRAFFIC SIGNS SHALL HAVE A MINIMUM HIGH INTENSITY PRISMATIC GRADE SHEETING.
- 9. ALL LOCAL RESIDENTIAL STREET SIGNS SHALL BE MOUNTED ON A 1.75" X 1.75" SQUARE TUBE SIGN POST AND STUB POST BASE. FOR OTHER APPLICATIONS, REFER TO THE CDOT STANDARD S-614-8 REGARDING USE OF THE P2 TUBULAR STEEL POST SLIPBASE DESIGN.
- 10. ALL SIGNS SHALL BE SINGLE SHEET ALUMINUM WITH 0.100" MINIMUM THICKNESS.
- 11. ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS SHALL BE A MINIMUM 125 MIL THICKNESS PREFORMED THERMOPLASTIC PAVEMENT MARKINGS WITH TAPERED LEADING EDGES PER CDOT STANDARD S-627-1. WORD AND SYMBOL MARKINGS SHALL BE THE NARROW TYPE. STOP BARS SHALL BE 24" IN WIDTH. CROSSWALKS LINES SHALL BE 12" WIDE AND 8' LONG PER CDOT S-627-1.
- 12. ALL LONGITUDINAL LINES SHALL BE A MINIMUM 15MIL THICKNESS EPOXY PAINT. ALL NON-LOCAL RESIDENTIAL ROADWAYS SHALL INCLUDE BOTH RIGHT AND LEFT EDGE LINE STRIPING AND ANY ADDITIONAL STRIPING AS REQUIRED BY CDOT S-627-1.
- 13. THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (719) 520—6819 PRIOR TO AND UPON COMPLETION OF SIGNING AND STRIPING.
- 14. THE CONTRACTOR SHALL OBTAIN A WORK IN THE RIGHT OF WAY PERMIT FROM THE EL PASO COUNTY PCD PRIOR TO ANY SIGNAGE OR STRIPING WORK WITHIN AN EXISTING EL PASO COUNTY ROADWAY.

STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS:

- 1. ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.
- 2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD NOTIFICATION OF ALL EXISTING UTILITIES. WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC).
- 3. CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOILS AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
- a. EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM) b. CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2 c. COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
- 4. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
- 5. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
- 6. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PCD INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.
- 7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.
- 8. CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
- 9. ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY PCD.

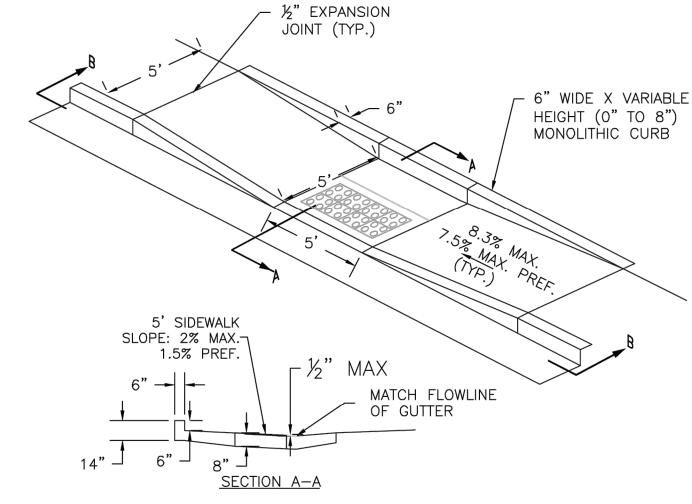
d. CDOT M & S STANDARDS

- 10. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.
- 11. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
- 12. SIGHT VISIBILITY TRIANGLES AS IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED WITHIN SIGHT TRIANGLES.
- 13. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY PCD AND MUTCD CRITERIA. [IF APPLICABLE, ADDITIONAL SIGNING AND STRIPING NOTES WILL BE PROVIDED.
- 14. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY PCD, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
- 15. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE DISTURBANCE, GRADING, OR CONSTRUCTION.



- 8 HOURS PRIOR TO CONCRETE PLACEMENT.
- 3. PEDESTRIAN CURB RAMP CONSTRUCTION SHALL BE A MINIMUM 4,500 PSI CONCRETE, MINIMUM 4" THICK, NON-COLORED, NON-SCORED, COARSE BROOM FINISH.
- 4. PEDESTRIAN CURB RAMP LOCATION AND LENGTH MAY REQUIRE MODIFICATION TO MAINTAIN THE 8.3% MAXIMUM RUNNING RAMP SLOPE
- DUE TO STREET INTERSECTION GRADES AND/OR ALIGNMENTS. SEE ECM SECTION 6.3.6 FOR PEDESTRIAN PUSHBUTTON LOCATION REQUIREMENTS
- 5. DETECTABLE WARNING SURFACE SHALL START A MINIMUM OF 6" BUT NOT MORE THAN 8" FROM THE FLOWLINE OF THE CURB
- 6. DETECTABLE WARNING SURFACE SHALL BE PREFABRICATED, CAST IRON (PATINA NATURAL FINISH) AND IN ACCORDANCE WITH ECM CHAPTER 6 AND SD_2-42. THERMOPLASTIC TRUNCATED DOMES AND PAVERS WILL
- 7. THE DETECTABLE WARNING SURFACE SHALL BE 24" IN LENGTH AND THE FULL WIDTH OF THE RAMP.
- 8. PEDESTRIAN CURB RAMP WIDTH REQUIRED IS SAME AS APPROACHING
- ALL PEDESTRIAN CURB RAMPS WILL BE PERPENDICULAR TO TRAFFIC WITH THE EXCEPTION OF MID-BLOCK OR TERMINAL RAMPS WHICH MAY BE PARALLEL SUBJECT TO APPROVAL.
- DRAINAGE STRUCTURES, TRAFFIC SIGNAL/SIGNAGE, UTILITIES/JUNCTION BOXES, OR OTHER OBSTRUCTIONS WITHIN PROPOSED PEDESTRIAN CURB RAMP AREAS AND LANDINGS ARE PROHIBITED.
- 11. THE COUNTER SLOPE OF THE GUTTER OR ROAD AT THE FOOT OF A RAMP

PEDESTRIAN INTERSECTION RAMP (SD 2-41)



ONE TOOL JOINT IS WITHIN RAMP THROAT

GENERAL NOTES

1. WHERE THE 1'-6" FLARED SIDE(S) OF A PERPENDICULAR CURB RAMP

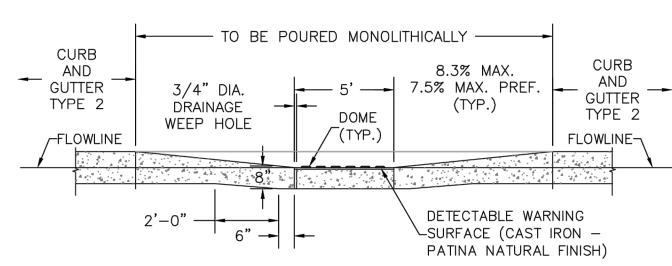
IS (ARE) CONTIGUOUS WITH A PEDESTRIAN OR HARD SURFACE AREA

(PEDESTRIAN CIRCULATION PATH), THE MAXIMUM FLARE SLOPE SHALL

PEDESTRIAN WALKWAY (PEDESTRIAN ACCESS ROUTE) AND/OR LOCATION OF EXISTING OR FUTURE PEDESTRIAN RAMPS ON OPPOSITE CORNERS

SHALL BE REVIEWED BEFORE CONSTRUCTING NEW RAMPS.

3. AT MARKED PEDESTRIAN CROSSINGS, THE BOTTOM OF THE RAMPS EXCLUSIVE OF THE FLARE SIDES, SHALL BE TOTALLY CONTAINED



SECTION B-B

SCALE: NOT TO SCALE

Know what's **below**.

Call before you dig.

ADO JAMI

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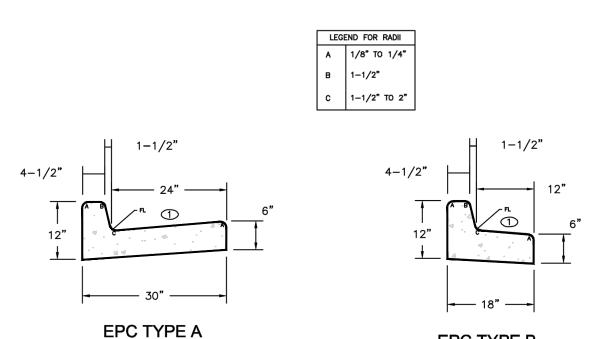
PARALLEL PEDESTRIAN RAMP DETAIL (SD 2-50) SCALE: NTS

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ENGINEER'S STATEMENT STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PRQJECT. 32314 MIKE A. BRAMLETT, P.E. COLORADO P.E. 32314 FOR AND ON BEHALF OF JR ENGINEERING

EXPANSION JOINT (FULL DEPTH) OF CURB **CURB ENDING**

TYPICAL CURB & GUTTER ENDING DETAIL (CS 6B) SCALE: NTS



TYPICAL CURB & GUTTER DETAILS DETAIL (SD 2-20)

SCALE: NTS

(REVERSE SLOPE OF PAN FOR SPILL CURB)

EPC TYPE B

PAID FOR AS

CURB AND GUTTER

DOME SPACING

CURB

TRANSITION T

5% MAX.

CONFORMING TO AASHTO M 284 AT 18 IN. SPACING DETECTABLE WARNING SURFACE DETAILS (SD 2-42) SCALE: NTS

P.J.= PERMISSABLE JOINT WITH EPOXY-COATED DEFORMED NO. 4 BARS

TRUNCATED DOME DETAILS

1.6" MIN - 2.4" MAX

(EQUAL BOTH DIRECTIONS

DETECTABLE WARNING SURFACE AREA

FLARED SIDE OR

RETURN CURB

THE TRUNCATED DOMES SHALL BE 50%-65% OF

ELEVATION VIEW

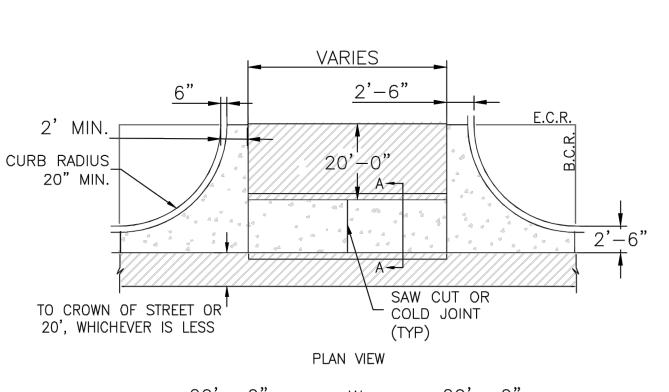
TRUNCATED DOME PLATE(S)

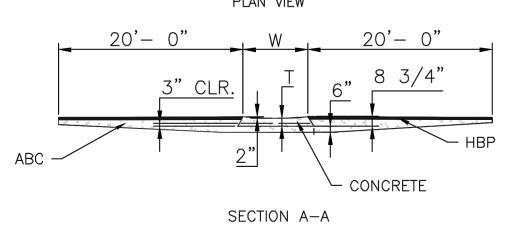
-(CAST IRON - PATINA

PAID FOR AS CONCRETE CURB RAMP.

NATURAL FINISH)

TO BE POURED MONOLITHICALLY





NOTES

1. W - WIDTH SHALL BE 6' FOR LOCAL, 8' FOR COLLECTORS, AND 10' FOR ARTERIAL ROADS.

2. T - SQUARED-OFF RETURN TO BE POURED MONOLITHICALLY, 8" PCC FOR LOCAL ROADS, 9" FOR COLLECTORS WITH 6x6 - 4.4 W.W.F. OR #4 REINFORCING BAR @ 18" EACH WAY.

3. MINIMUM ASPHALT DEPTH (2 LIFTS).

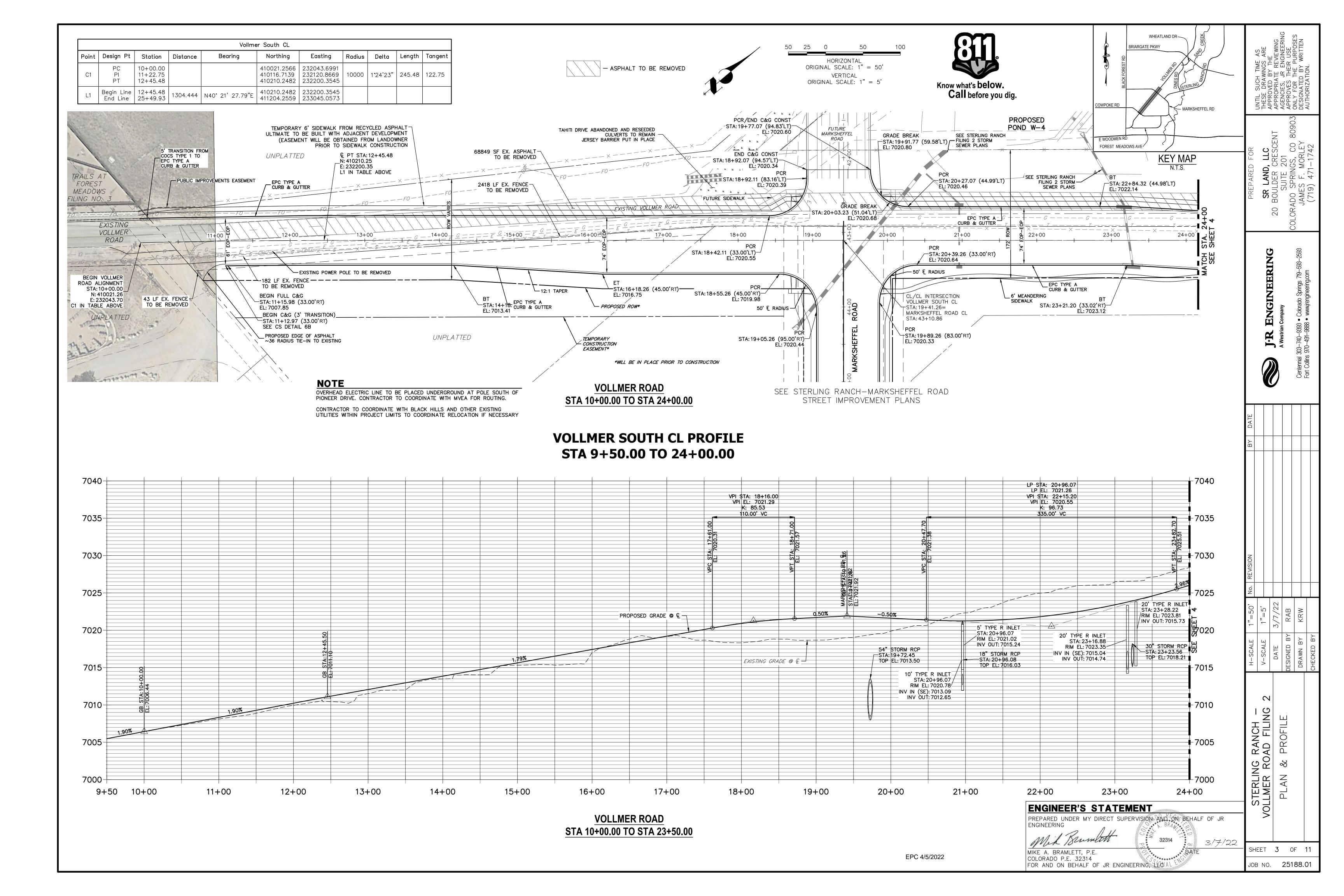
4. DESIGN TO SPECIFY ELEVATIONS AT PL AND PCR.

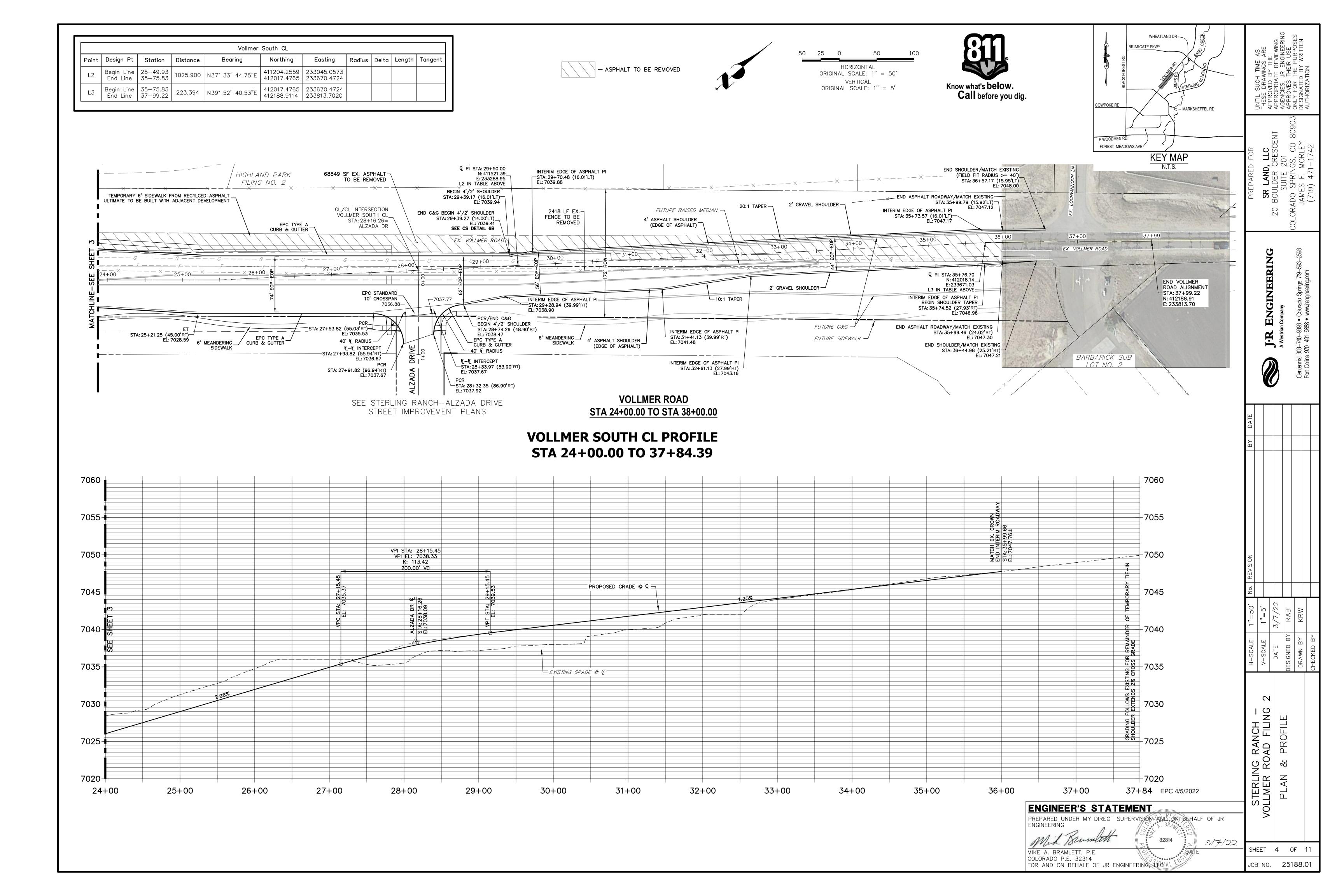
TYPICAL CROSS PAN LAYOUT DETAIL (SD 2-26) SCALE: NTS

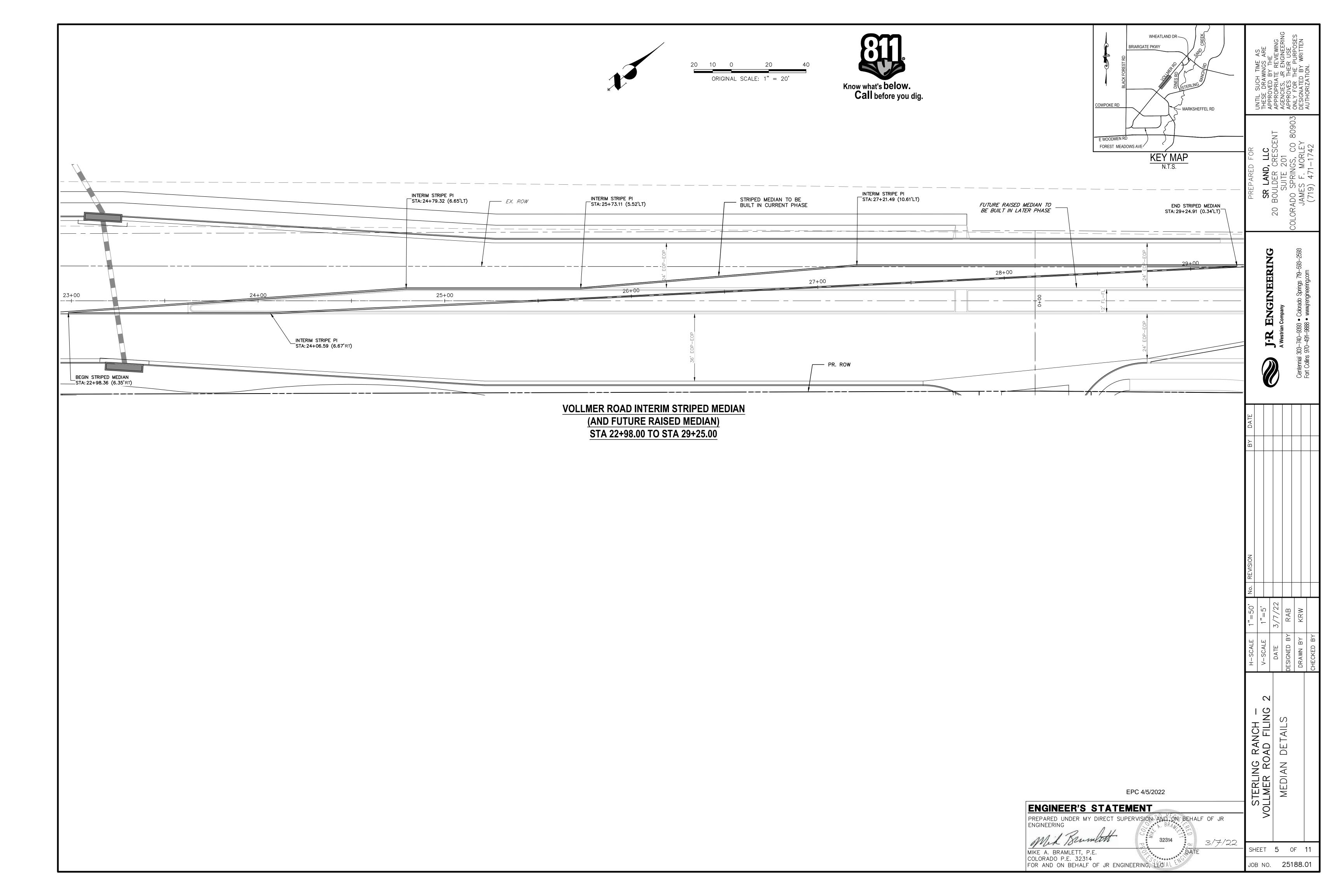
RANCH -

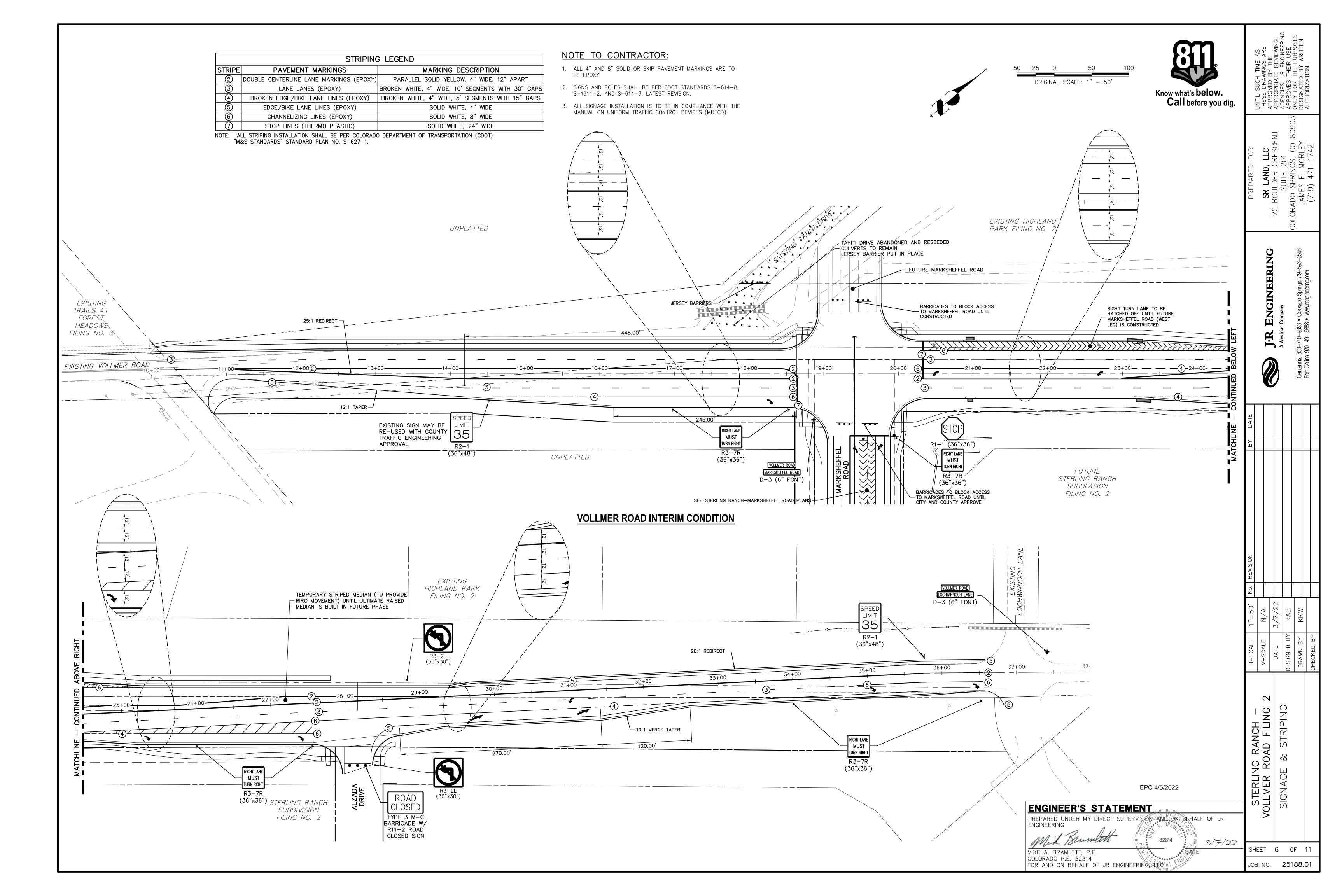
STERLING F VOLLMER ROA

SHEET 2 OF 11 JOB NO. **25188.01**

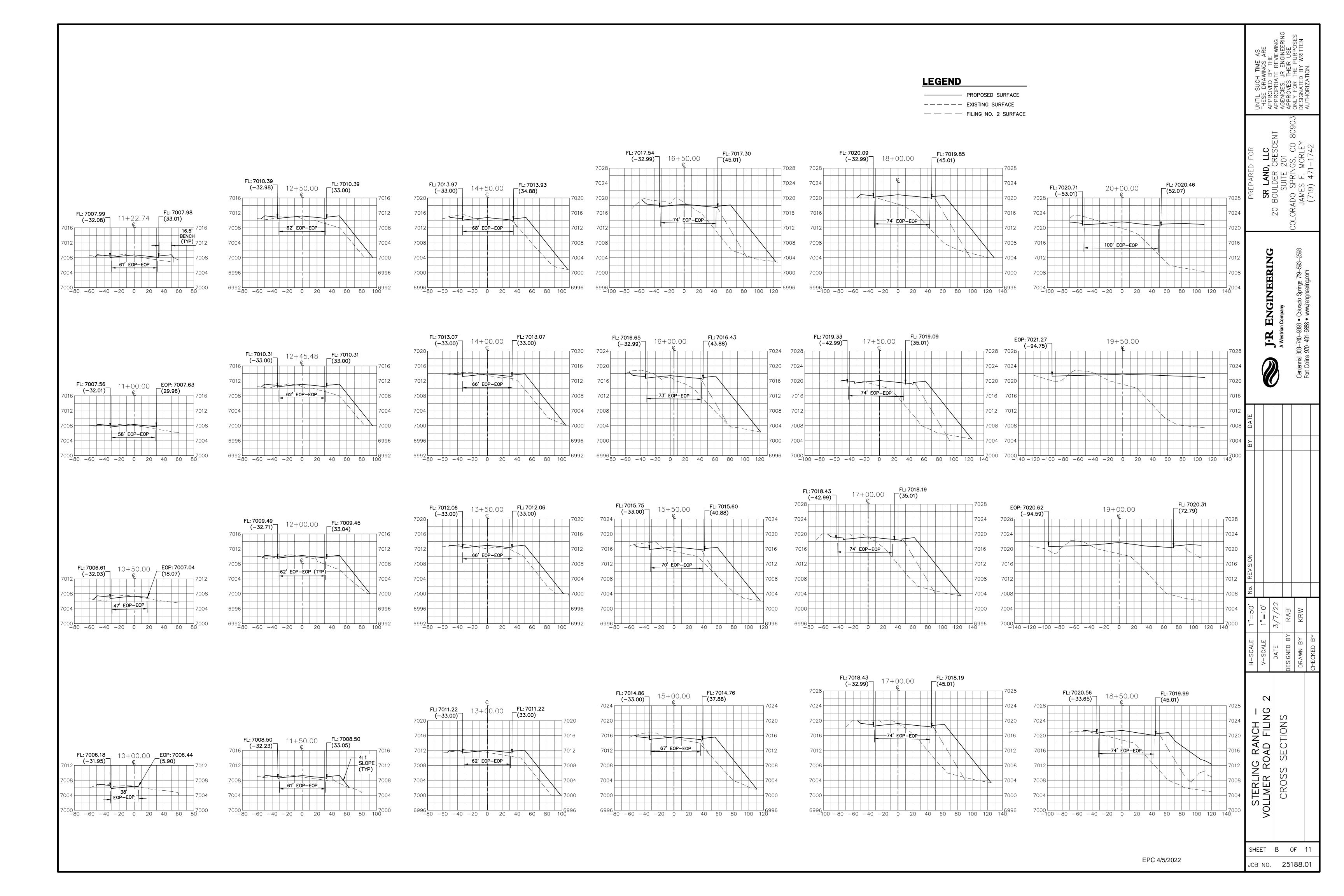


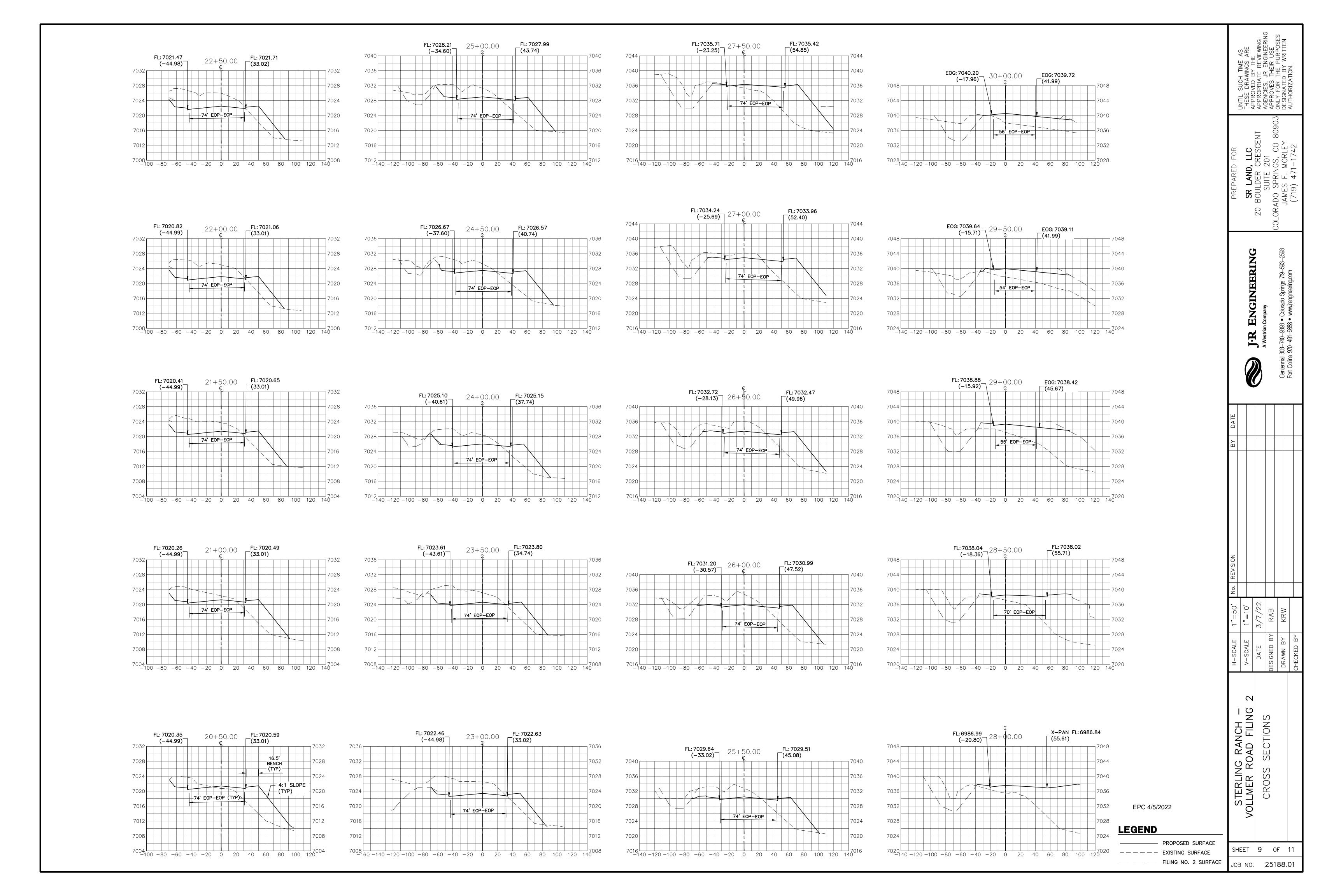


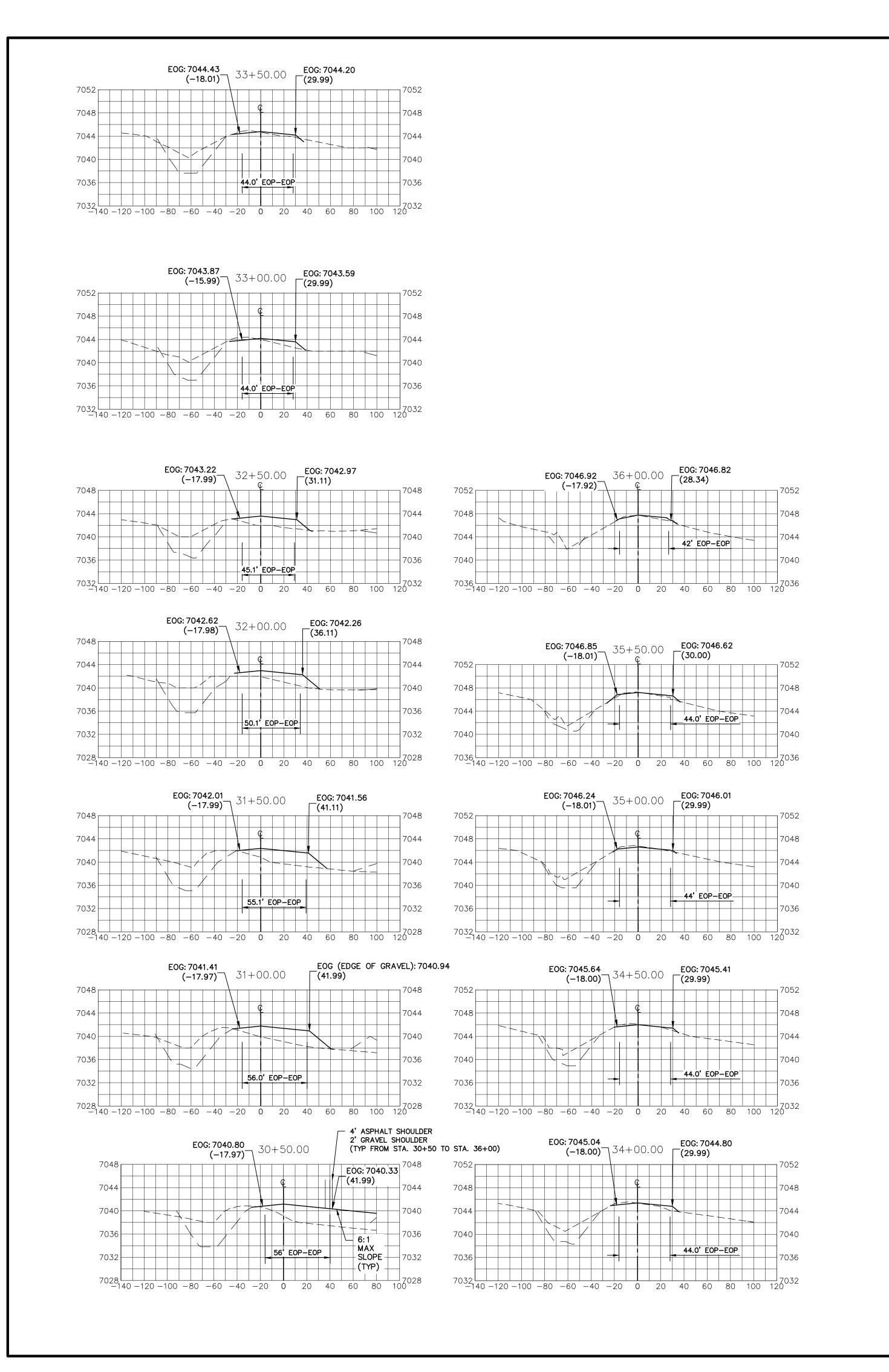




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STRIPING LEGEND NOTE TO CONTRACTOR:	BRIARGATE PKWY ON F WIN ON SE UNSE UNSE WRITTE
STRIPE PAVEMENT MARKINGS MARKING DESCRIPTION 1. ALL 4" AND 8" SOLID OR SKIP PAVEMENT MARKINGS ARE TO BE EPOXY. 1. ALL 4" AND 8" SOLID OR SKIP PAVEMENT MARKINGS ARE TO BE EPOXY.	A FINE REY THE REY TH
ORIGINAL SCALE: 1" = 20'	DCH SRAW S
LANE LANES (EPOXY) BROKEN WHITE, 4" WIDE, 10' SEGMENTS WITH 30" GAPS BROKEN WHITE, 4" WIDE, 10' SEGMENTS WITH 30" GAPS BROKEN WHITE, 4" WIDE, 5' SEGMENTS WITH 15" GAPS BROKEN WHITE, 4" WIDE, 5' SEGMENTS WITH 15" GAPS SOLID WHITE, 4" WIDE SOLID WHITE, 4" WIDE, 10' SEGMENTS WITH 30" GAPS SOLID WHITE, 4" WIDE, 10' SEGMENTS WITH 30" GAPS SOLID WHITE, 4" WIDE, 10' SEGMENTS WITH 30" GAPS SOLID WHITE, 4" WIDE, 10' SEGMENTS WITH 15" GAPS SOLID WHITE, 4" WIDE, 10' SEGMENTS W	SE DE
5 EDGE/BIKE LANE LINES (EPOXY) SOLID WHITE, 8" WIDE 3. ALL SIGNAGE INSTALLATION IS TO BE IN COMPLIANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).	MARKSHEFFEL RD MARKSHEFFEL RD MARKSHEFFEL RD
CHANNELIZING LINES (EPOXT)	<u>8</u>
The stop lines (thermo plastic) Solid White, 24" Wide Note: All striping installation shall be per colorado department of transportation (cdot)	EN S
NOTE: ALL STRIPING INSTALLATION SHALL BE PER COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) "M&S STANDARDS" STANDARD PLAN NO. S-627-1. FOREST N	DOWS AVE SO SO STATE OF STATE
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LANES MATCH INTO EXISTING ROADWAY	
EXISTING CENTER LINE (PARTIALLY REMOVED TO TIE-IN — — — — — — — — — — — — — — — — — — —	
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SEE TRAILS AT FOREST MEADOWS FINING NO. 3 PLANS BY M&S	
(5)	
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FROM LOCAL STREET	<u>.</u>
EDGE OF ASPHALT TIE-IN	
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PREPARED UNDER MY DIRECT	PERVISION AND BEHALF OF JR
ENGINEERING 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A. DKAMI CASI
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MIKE A. BRAMLETT, P.E. COLORADO P.E. 32314 FOR AND ON BEHALF OF JR EN	NEERING, SOLAL EMILIE JOB NO. 25188.01







EPC 4/5/2022

 PROPOSED SURFACE			
 EXISTING SURFACE			
 FILING NO. 2 SURFACE			

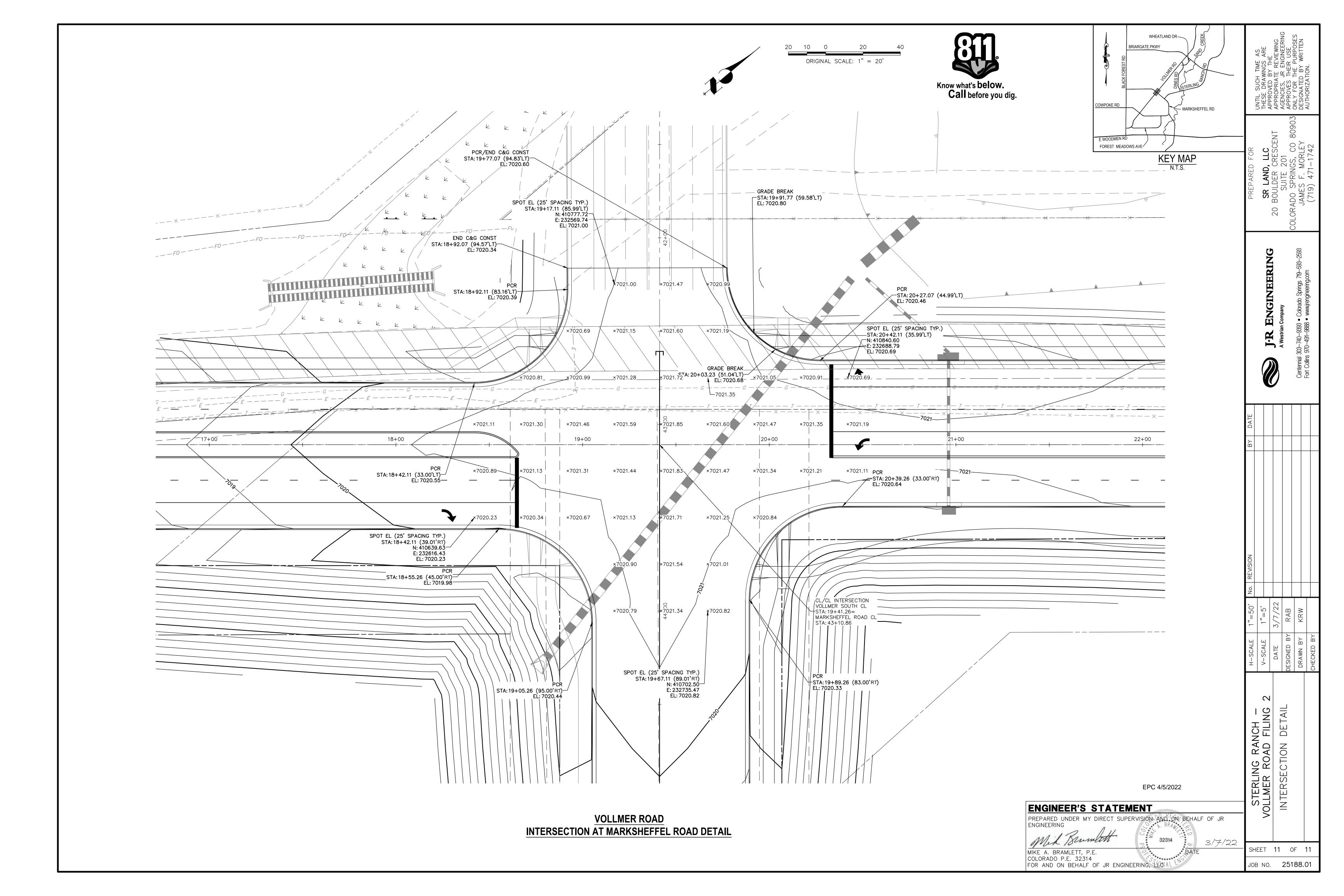
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STERLING RANCH VOLLMER ROAD FILING
CROSS SECTIONS

20

ENGINEERING



LSC Recommendations for Plan Revisions



