

**Preliminary Traffic Assessment**

**Modera Trinity Development  
Dallas, Texas**

**Prepared by:**

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*Z 190-226*

## I. PROJECT DESCRIPTION

*Provide a general description of the project including site location, existing and proposed land uses, building areas, zoning, traffic operation strategies, and any other pertinent information.*

The proposed Modera Trinity development is located at the southeast corner of Commerce Street and Beckley Avenue in Dallas, Texas. The property is zoned Industrial Research (IR) which allows for retail uses, among others, but does not permit residential uses. The site is pursuing zoning which allows for residential and retail uses, bringing the property in line with the areas immediately to the west. The property currently contains an occupied office building site and surface parking. The development as proposed includes multifamily and retail uses. A site vicinity map is provided as **Exhibit 1**.

## II. SITE PLAN

*Briefly describe and/or attach a site plan showing existing and proposed curbs, driveways, adjacent travel lanes, median opening, parking facilities, building and open leasable areas.*

**Exhibit 2** shows the proposed conceptual site plan. The conceptual Trinity Overlook Park plan is attached to the end of this report. The site as proposed includes two driveways which are detailed as follows:

**North Drive** – would be a driveway to Beckley Avenue located approximately 575' south of Commerce Street at the current access point for the Trinity Overlook park. The North Drive would be the primary access point for the retail users of the site and would maintain public access to the park. The North Drive is located on the outside of the curve of Beckley Avenue, providing excellent sight distance. Beckley Avenue elevates upon reaching Commerce Street, but the hill does not obstruct sight distance.

**South Drive** – would be a driveway to Beckley Avenue located approximately 275' south of the North Drive. The South Drive would be the primary access point for the residential users of the site. The South Drive is located on a relatively straight and flat portion of Beckley Avenue and has excellent sight distance.

Pictures captured during a site visit illustrate the sight distance for both driveways.

## III. TRIP GENERATION

*Include a table of a preliminary trip generation including any adjustments or reductions for pass-by, mode split, internal capture, etc. Include source of traffic generation rates.*

Site-generated traffic estimates are determined through a process known as trip generation. Rates and equations are applied to the proposed land use to estimate traffic

intersection with Commerce Street, Beckley Avenue is a four-lane divided street. On the City of Dallas Thoroughfare Plan, Beckley Lane is classified as a four-lane divided Minor Arterial (SPCL 4D). The speed limit near the site is 35 mph. From traffic counts published by TxDOT, which are attached to the end of this report, the 2014 recorded daily traffic was 21,317 vehicles, measured just north of the IH 30 westbound frontage road.

Bike lanes currently begin just south of the current Park driveway, and the Modera Trinity site will preserve or improve the bike lanes adjacent to the site.

**Commerce Street** – is a six-lane divided street that runs east-west from downtown Dallas to west Dallas. Commerce Street is one of the main bridges accessing downtown Dallas across the Trinity River. On the City of Dallas Thoroughfare Plan, Commerce Street is classified as a six-lane divided Principal Arterial (M-6-D(A)) to the east of Beckley Avenue and as a four-lane divided Principal Arterial (SPCL 4D) to the west of Beckley Avenue. The speed limit near the site is 35 mph. From traffic counts published by TxDOT, which are attached to the end of this report, the 2018 recorded daily traffic was 14,026 vehicles, measured just west of the Beckley Avenue.

The intersection of Beckley Avenue and Commerce Street was rebuilt between 2017 and 2018. The rebuild greatly improved the pedestrian conditions by adding crosswalks, pedestrian push buttons with countdown timers, and ADA accessible pedestrian ramps. The pedestrian timing meets the TMUTCD standards. Additionally, the planned expansion of the Trinity Overlook Park through the tunnel under Commerce Street will provide additional pedestrian routes, further connecting the area.

Pictures of the pedestrian features are attached to the end of this memo.

The Cypress West multifamily development was included in the background traffic of this study. Excerpts from the August 2018 TIA done by Lee Engineering for the Cypress West site are attached to the end of this report.

## VI. EVALUATION OF TRAFFIC OPERATIONS

*Summarize an evaluation of existing and proposed traffic operations, site access, adjacent intersections, crash analysis, anticipated trip distribution, etc. Identify any potential traffic related issues required to address internal constraints.*

The distribution of the site-generated traffic volumes in to and out of the site driveways and onto the street system was based on the area street system characteristics, existing traffic patterns, relative land use density, and the locations of the proposed driveway access to/from the site.

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Avenue and Commerce Street was 0.983 during the AM peak and 0.968 during the PM peak. Using 0.92 will provide for a more conservative analysis.

## B. Analysis Results

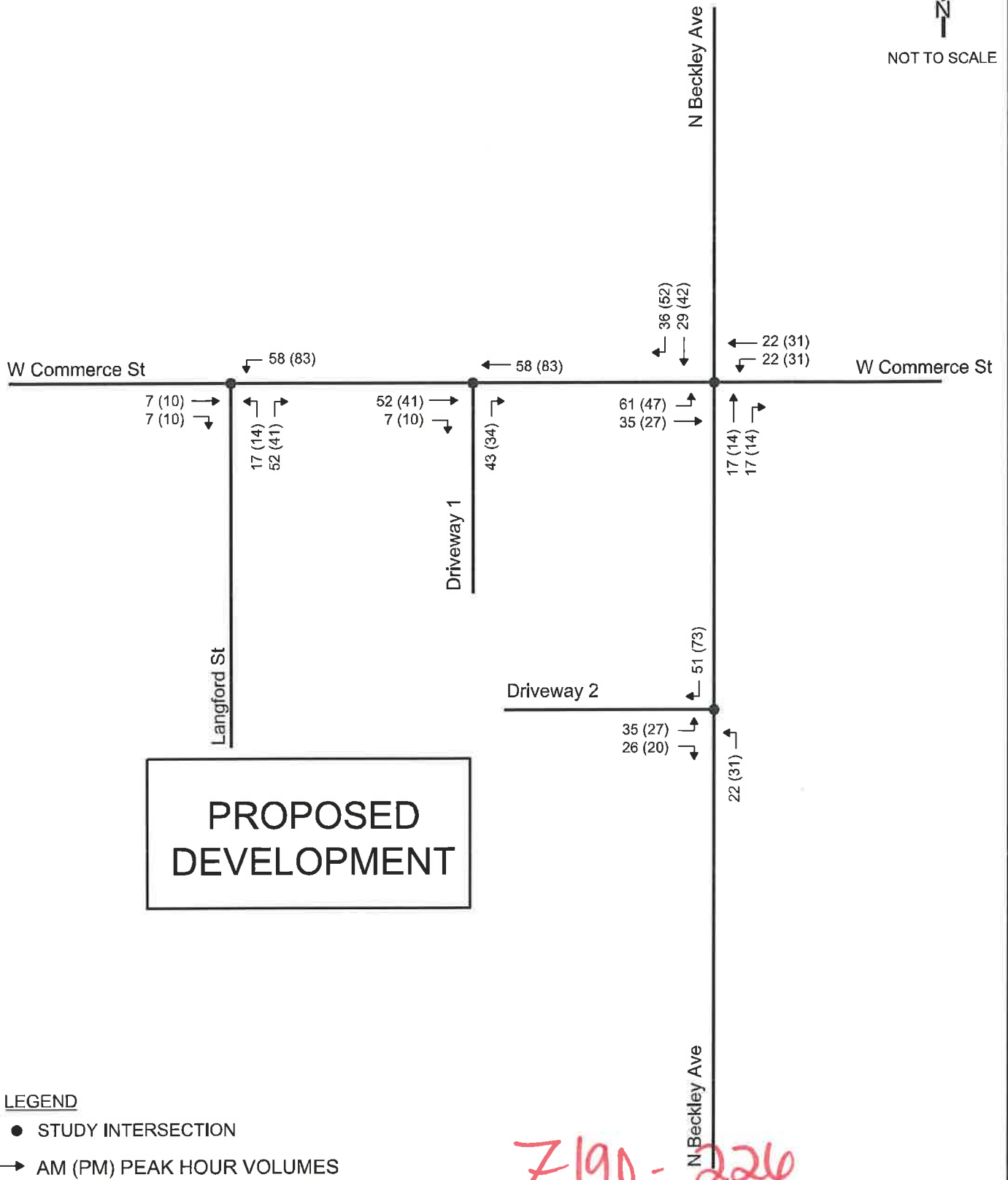
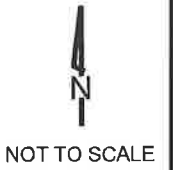
**Table 2** shows the intersection operational results for the weekday AM and PM peak hours. After the site-generated traffic is added to the roadway network, each approach operates at LOS D or better during both the AM and PM peak hours, which is acceptable according to the City of Dallas standards. This means that it is easy to turn into and out of each driveway during the busiest times of the day, and the drivers can leave in either direction without experiencing excess delays. The center two-way left-turn lane serves the site's South Drive well and is not expected to interfere with through traffic at all.

**Table 2 – Traffic Operational Results**

INTERSECTION	APPROACH	Background plus Site Traffic		Background plus Site Traffic	
		AM Peak Hour		PM Peak Hour	
		DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS
Beckley Avenue @ North Drive	WB*	18.2	C	15.7	C
	SBL	11.0	B	9.1	A
Beckley Avenue @ South Drive	WB*	30.0	D	33.0	D
	SBL	11.0	B	9.3	A

\* Stop-Controlled Approach

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## Pedestrian Feature Pictures



Figure 1 – Northeast Corner of Commerce Street and Beckley Avenue



Figure 2 - Northwest Corner of Commerce Street and Beckley Avenue

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**Figure 5 – Crosswalk across the southern leg of Beckley Avenue. Note the mid-street pedestrian push button.**

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Figure 8 – Sight Distance looking south from South Drive



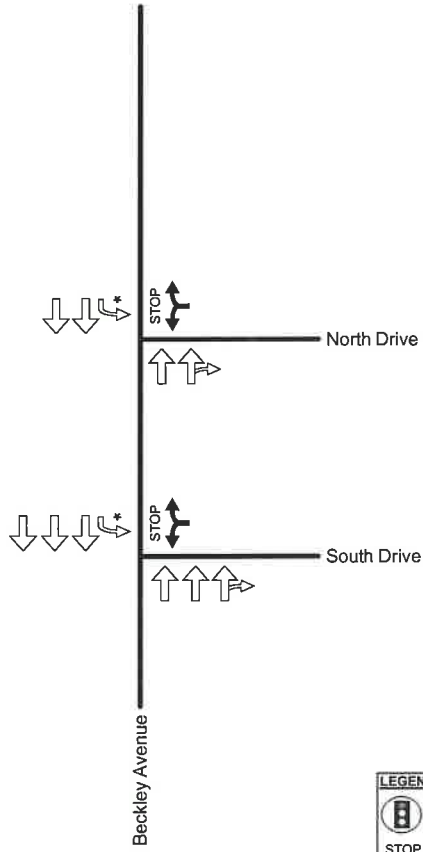
Figure 9 – Sight Distance looking north from South Drive

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### EXHIBIT 3

Lane Assignment and Intersection Control



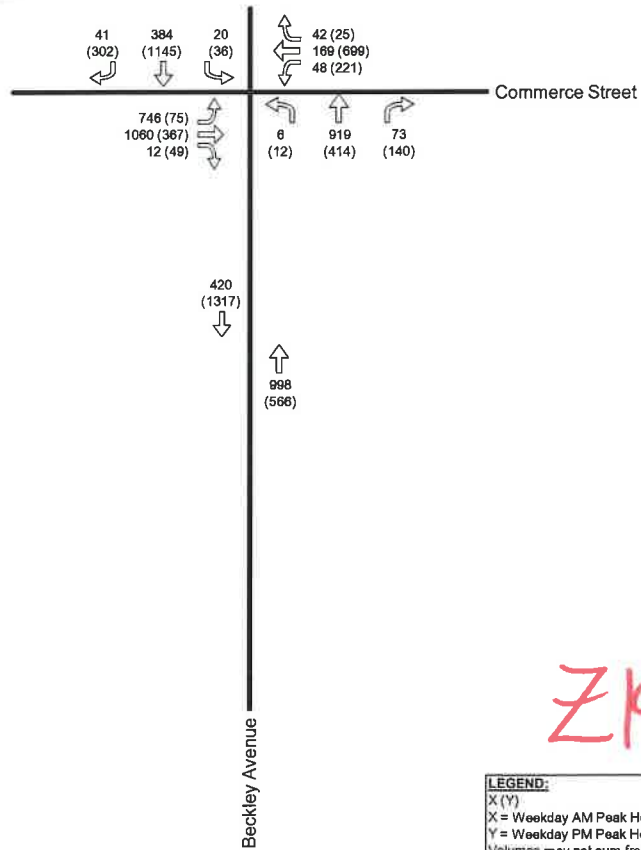
**LEGEND:**

- = Signalized Intersection
- = Stop-Controlled Approach
- = Travel Lane
- = Turn Bay
- = Driveway Lanes or Off-Site Improvements
- = Two-Way Left Turn Lane

North  
↑  
Not To Scale

### EXHIBIT 4

2018 Existing Traffic Volumes



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**LEGEND:**

- X (Y)
- X = Weekday AM Peak Hour Turning Movements
- Y = Weekday PM Peak Hour Turning Movements
- Volumes may not sum from point to point due to rounding and presence of smaller driveways not included in analysis.

North  
↑  
Not To Scale

# Kimley»Horn

Beckley Avenue 10/14/2014 INTERVAL:15-MIN					
Time	15-min Interval				Hourly Count
	1st	2nd	3rd	4th	
0:00-1:00	47	30	22	28	127
1:00-2:00	20	13	16	26	75
2:00-3:00	12	20	13	7	52
3:00-4:00	8	9	14	19	50
4:00-5:00	15	26	35	40	116
5:00-6:00	43	77	132	196	448
6:00-7:00	275	419	495	504	1,693
7:00-8:00	503	630	666	604	2,403
8:00-9:00	576	531	488	480	2,075
9:00-10:00	345	273	287	260	1,165
10:00-11:00	221	234	286	278	1,019
11:00-12:00	260	287	332	389	1,268
12:00-13:00	414	381	410	428	1,633
13:00-14:00	376	333	350	317	1,376
14:00-15:00	320	321	403	348	1,392
15:00-16:00	394	390	419	420	1,623
16:00-17:00	468	552	536	568	2,124
17:00-18:00	559	562	551	571	2,243
18:00-19:00	539	481	391	309	1,720
19:00-20:00	273	254	243	190	960
20:00-21:00	178	146	164	129	617
21:00-22:00	126	132	116	122	496
22:00-23:00	117	125	76	75	393
23:00-24:00	93	79	63	64	299
<b>Total</b>					25,367
<b>AADT</b>					21,317
<b>AM Peak</b>	07:15-08:15 2,476				
<b>PM Peak</b>	17:00-18:00 2,243				

Commerce Street 8/20/2018 INTERVAL:15-MIN					
Time	15-min Interval				Hourly Count
	1st	2nd	3rd	4th	
0:00-1:00	28	19	25	26	98
1:00-2:00	15	14	17	13	59
2:00-3:00	21	17	21	14	73
3:00-4:00	12	10	0	2	24
4:00-5:00	10	26	33	29	98
5:00-6:00	52	52	77	101	282
6:00-7:00	159	227	266	316	968
7:00-8:00	330	348	327	363	1,368
8:00-9:00	326	364	318	278	1,286
9:00-10:00	209	213	204	169	795
10:00-11:00	161	126	154	162	603
11:00-12:00	149	164	190	155	658
12:00-13:00	166	173	184	204	727
13:00-14:00	180	188	180	172	720
14:00-15:00	189	200	206	202	797
15:00-16:00	243	224	256	239	962
16:00-17:00	249	258	315	311	1,133
17:00-18:00	313	335	449	315	1,412
18:00-19:00	322	261	237	236	1,056
19:00-20:00	190	184	147	135	656
20:00-21:00	139	144	121	107	511
21:00-22:00	126	104	96	78	404
22:00-23:00	85	53	75	54	267
23:00-24:00	59	40	45	32	176
<b>Total</b>					15,133
<b>AADT</b>					14,026
<b>AM Peak</b>	07:30-08:30 1,380				
<b>PM Peak</b>	17:15-18:15 1,421				

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# GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013  
817.265.8968

Count Name: COMMERCE ST  
@ BECKLEY AVE  
Site Code:  
Start Date: 05/16/2018  
Page No: 3

## Turning Movement Peak Hour Data (7:30 AM)

Start Time	BECKLEY AVE Southbound					COMMERCE ST Westbound					BECKLEY AVE Northbound					COMMERCE ST Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
7:30 AM	5	91	12	0	108	13	41	8	0	62	2	240	15	0	257	181	286	1	0	468	895
7:45 AM	4	102	12	0	118	6	38	14	0	58	2	229	17	0	248	195	269	3	0	467	891
8:00 AM	5	96	8	0	109	13	40	12	0	65	1	201	19	0	221	207	263	5	0	475	870
8:15 AM	6	95	9	0	110	16	50	8	0	74	1	249	22	0	272	163	242	3	0	408	864
<b>Total</b>	<b>20</b>	<b>384</b>	<b>41</b>	<b>0</b>	<b>445</b>	<b>48</b>	<b>169</b>	<b>42</b>	<b>0</b>	<b>259</b>	<b>6</b>	<b>919</b>	<b>73</b>	<b>0</b>	<b>998</b>	<b>746</b>	<b>1060</b>	<b>12</b>	<b>0</b>	<b>1818</b>	<b>3520</b>
<b>Approach %</b>	<b>4.5</b>	<b>86.3</b>	<b>9.2</b>	<b>0.0</b>	<b>-</b>	<b>18.5</b>	<b>65.3</b>	<b>16.2</b>	<b>0.0</b>	<b>-</b>	<b>0.6</b>	<b>92.1</b>	<b>7.3</b>	<b>0.0</b>	<b>-</b>	<b>41.0</b>	<b>58.3</b>	<b>0.7</b>	<b>0.0</b>	<b>-</b>	<b>-</b>
<b>Total %</b>	<b>0.6</b>	<b>10.9</b>	<b>1.2</b>	<b>0.0</b>	<b>12.6</b>	<b>1.4</b>	<b>4.8</b>	<b>1.2</b>	<b>0.0</b>	<b>7.4</b>	<b>0.2</b>	<b>26.1</b>	<b>2.1</b>	<b>0.0</b>	<b>28.4</b>	<b>21.2</b>	<b>30.1</b>	<b>0.3</b>	<b>0.0</b>	<b>51.6</b>	<b>-</b>
<b>PHF</b>	<b>0.833</b>	<b>0.941</b>	<b>0.854</b>	<b>0.000</b>	<b>0.943</b>	<b>0.750</b>	<b>0.845</b>	<b>0.750</b>	<b>0.000</b>	<b>0.875</b>	<b>0.750</b>	<b>0.923</b>	<b>0.830</b>	<b>0.000</b>	<b>0.917</b>	<b>0.901</b>	<b>0.927</b>	<b>0.600</b>	<b>0.000</b>	<b>0.957</b>	<b>0.983</b>
<b>Lights</b>	<b>19</b>	<b>375</b>	<b>39</b>	<b>0</b>	<b>433</b>	<b>46</b>	<b>155</b>	<b>42</b>	<b>0</b>	<b>243</b>	<b>5</b>	<b>904</b>	<b>71</b>	<b>0</b>	<b>980</b>	<b>736</b>	<b>1029</b>	<b>11</b>	<b>0</b>	<b>1776</b>	<b>3432</b>
<b>% Lights</b>	<b>95.0</b>	<b>97.7</b>	<b>95.1</b>	<b>-</b>	<b>97.3</b>	<b>95.8</b>	<b>91.7</b>	<b>100.0</b>	<b>-</b>	<b>93.8</b>	<b>83.3</b>	<b>98.4</b>	<b>97.3</b>	<b>-</b>	<b>98.2</b>	<b>98.7</b>	<b>97.1</b>	<b>91.7</b>	<b>-</b>	<b>97.7</b>	<b>97.5</b>
<b>Mediums</b>	<b>1</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>9</b>	<b>2</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>1</b>	<b>12</b>	<b>2</b>	<b>0</b>	<b>15</b>	<b>9</b>	<b>24</b>	<b>1</b>	<b>0</b>	<b>34</b>	<b>70</b>
<b>% Mediums</b>	<b>5.0</b>	<b>1.8</b>	<b>2.4</b>	<b>-</b>	<b>2.0</b>	<b>4.2</b>	<b>5.9</b>	<b>0.0</b>	<b>-</b>	<b>4.6</b>	<b>16.7</b>	<b>1.3</b>	<b>2.7</b>	<b>-</b>	<b>1.5</b>	<b>1.2</b>	<b>2.3</b>	<b>8.3</b>	<b>-</b>	<b>1.9</b>	<b>2.0</b>
<b>Articulated Trucks</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>18</b>
<b>% Articulated Trucks</b>	<b>0.0</b>	<b>0.5</b>	<b>2.4</b>	<b>-</b>	<b>0.7</b>	<b>0.0</b>	<b>2.4</b>	<b>0.0</b>	<b>-</b>	<b>1.5</b>	<b>0.0</b>	<b>0.3</b>	<b>0.0</b>	<b>-</b>	<b>0.3</b>	<b>0.1</b>	<b>0.7</b>	<b>0.0</b>	<b>-</b>	<b>0.4</b>	<b>0.5</b>

Modera Trinity TIA  
 HCM 6th TWSC  
 Background + Site - AM  
 2. Beckley & North Drive

Intersection									
Int Delay, s/veh	0.3								
Movement	WBL	WBR	NBT	NBR	SBL	SBT			
Lane Configurations	W	W	W	W	W	W	W	W	W
Traffic Vol, veh/h	12	12	1047	5	5	458			
Future Vol, veh/h	12	12	1047	5	5	458			
Conflicting Peds, #/hr	0	0	0	0	0	0			
Sign Control	Stop			Free	Free	Free	Free	Free	Free
RT Channelized	None			None	None	None			
Storage Length	0			-	-	75			
Veh in Median Storage, #	0			-	-	0			
Grade, %	0			-	-	0			
Peak Hour Factor	92	92	92	92	92	92			
Heavy Vehicles, %	2	2	2	2	2	2			
Mvmt Flow	13	13	1138	5	5	498			

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1400	572	0
Stage 1	1141	-	-
Stage 2	259	-	-
Critical Hdwy	6.84	6.94	-
Critical Hdwy Stg 1	5.84	-	4.14
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	-
Pot Cap-1 Maneuver	131	463	-
Stage 1	267	-	607
Stage 2	761	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	130	463	-
Mov Cap-2 Maneuver	221	-	607
Stage 1	267	-	-
Stage 2	755	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.2	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	299	607	-
HCM Lane V/C Ratio	-	-	0.067	0.009	-
HCM Control Delay (s)	-	-	18.2	11	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %ile Q(veh)	-	-	0.3	0	-

720-0216

Modera Trinity TIA  
 HCM 6th TWSC  
 Background + Site - AM  
 3. Beckley & South Drive

Intersection									
Int Delay, s/veh	1.1								
Movement	WBL	WBR	NBT	NBR	SBL	SBT			
Lane Configurations	W	W	W	W	W	W	W	W	W
Traffic Vol, veh/h	27	27	1025	12	12	458			
Future Vol, veh/h	27	27	1025	12	12	458			
Conflicting Peds, #/hr	0	0	0	0	0	0			
Sign Control	Stop			Free	Free	Free	Free	Free	Free
RT Channelized	None			None	None	None			
Storage Length	0			-	-	50			
Veh in Median Storage, #	0			-	-	0			
Grade, %	0			-	-	0			
Peak Hour Factor	92	92	92	92	92	92			
Heavy Vehicles, %	2	2	2	2	2	2			
Mvmt Flow	29	29	1114	13	13	498			

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1396	564	0
Stage 1	1121	-	-
Stage 2	275	-	-
Critical Hdwy	6.84	6.94	-
Critical Hdwy Stg 1	5.84	-	4.14
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	-
Pot Cap-1 Maneuver	132	469	-
Stage 1	273	-	616
Stage 2	747	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	129	469	-
Mov Cap-2 Maneuver	129	-	616
Stage 1	273	-	-
Stage 2	731	-	-

Approach	WB	NB	SB
HCM Control Delay, s	30	0	0.3
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	202	616	-
HCM Lane V/C Ratio	-	-	0.291	0.021	-
HCM Control Delay (s)	-	-	30	11	-
HCM Lane LOS	-	-	D	B	-
HCM 95th %ile Q(veh)	-	-	1.2	0.1	-