

# APPENDIX I

## 35% DESIGN PLANS



# SOUTHWEST DRIVE CORRIDOR PLAN

## 35% PLANS

OWNER:  
CHEYENNE METROPOLITAN PLANNING ORGANIZATION  
2101 O'NEIL AVE, ROOM 302  
CHEYENNE, WYOMING 82001

ENGINEER:  
BENCHMARK ENGINEERS, PC  
1920 THOMES AVENUE, SUITE 320  
CHEYENNE, WYOMING 82001  
307-634-9064  
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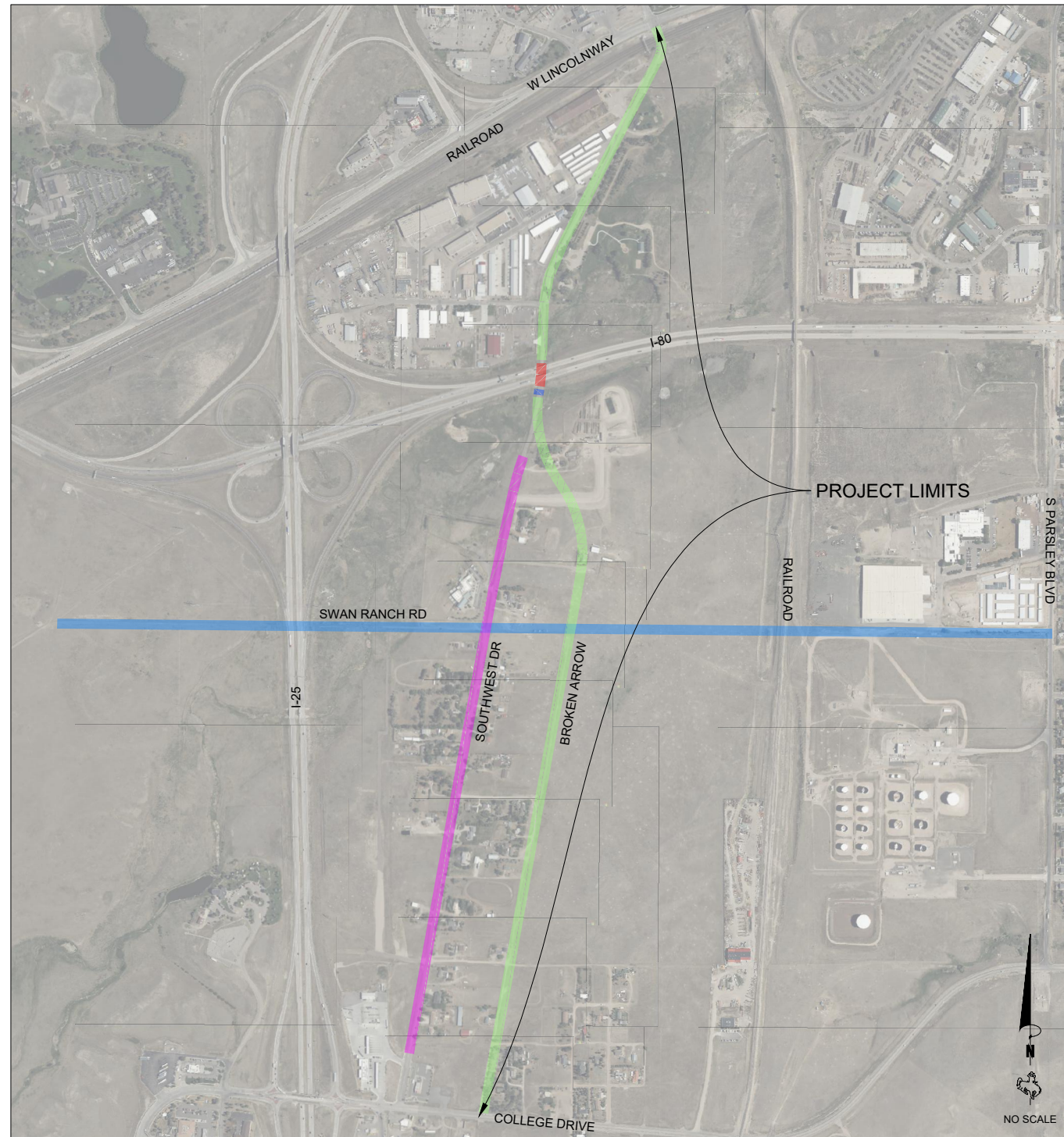
FELSBURG HOLT & ULLEVIG  
CENTENNIAL, COLORADO

AND

GLM DESIGN  
CHEYENNE, WYOMING



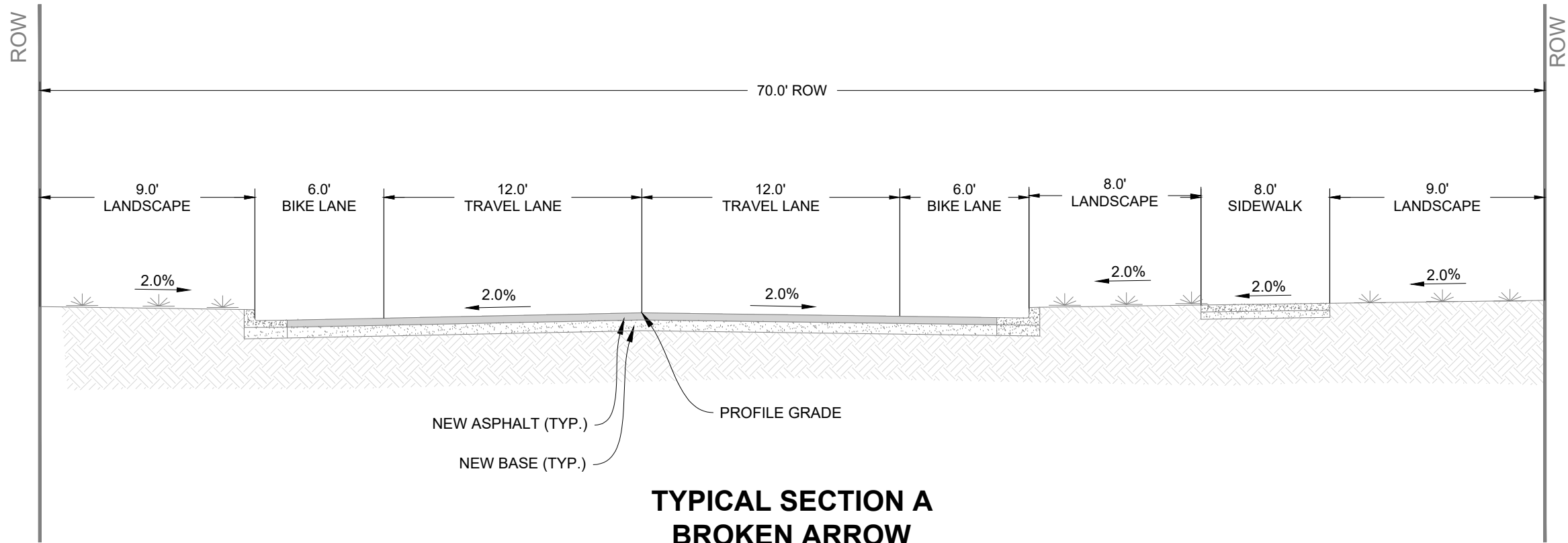
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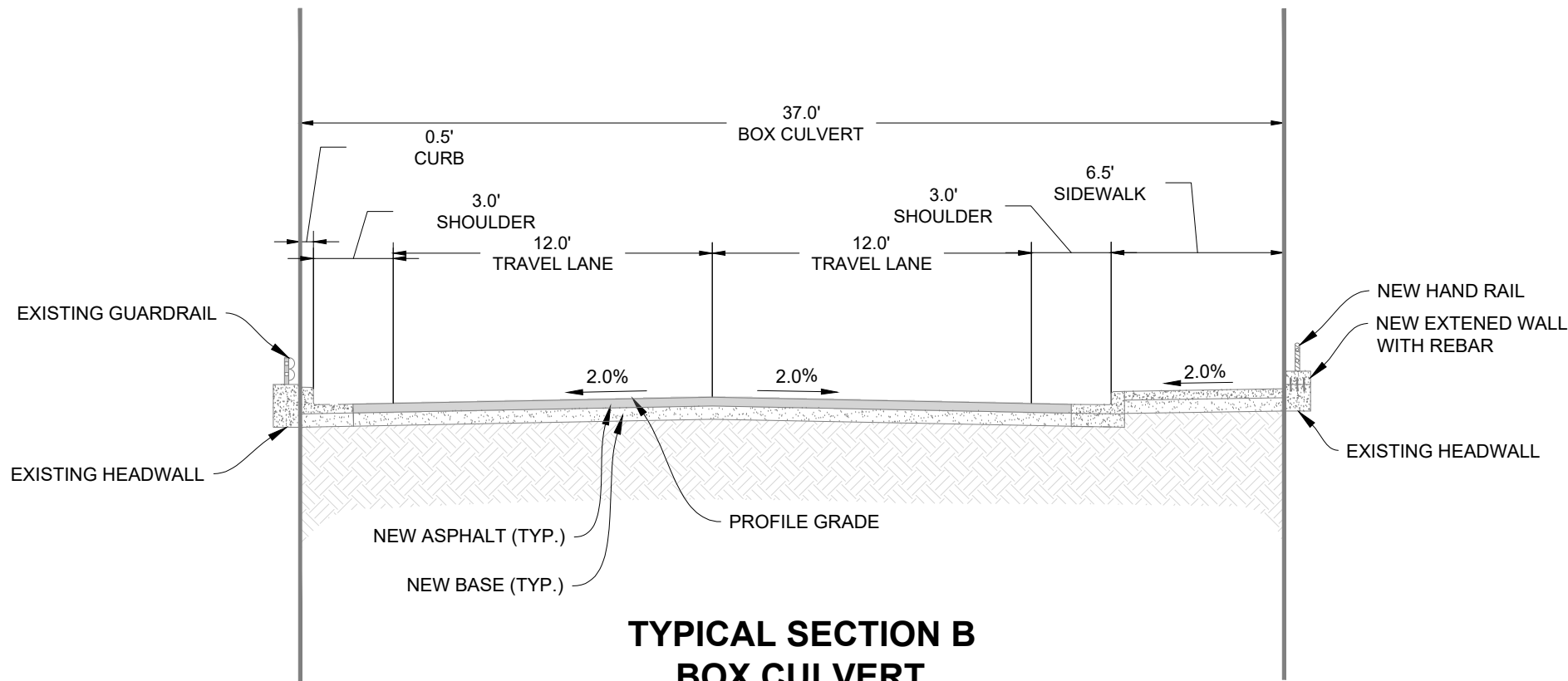
### SHEET INDEX

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24	WOODENSHOE DR
25-34	SOUTHWEST DR (SOUTH OF BROKEN ARROW)





**TYPICAL SECTION A  
BROKEN ARROW  
STA. 0+00 TO 59+34**



**TYPICAL SECTION B  
BOX CULVERT  
STA. 59+34 TO 60+20**

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SOUTHWEST DRIVE CORRIDOR PLAN  
TYPICAL SECTIONS 1

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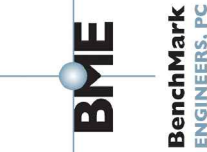
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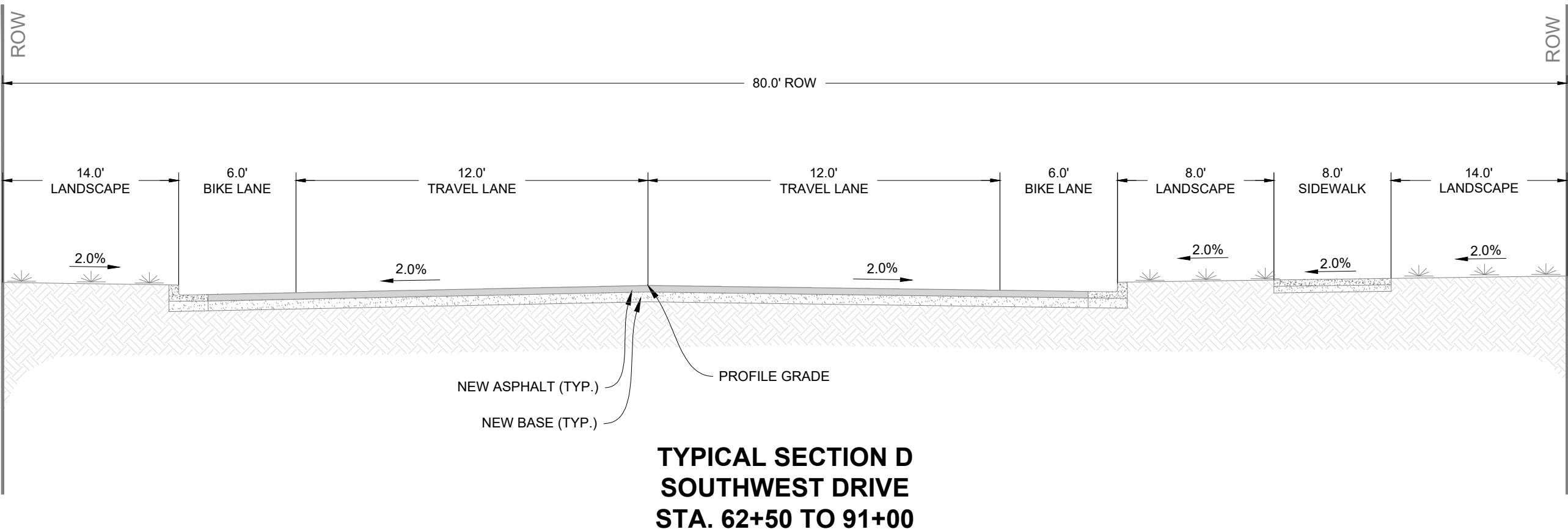
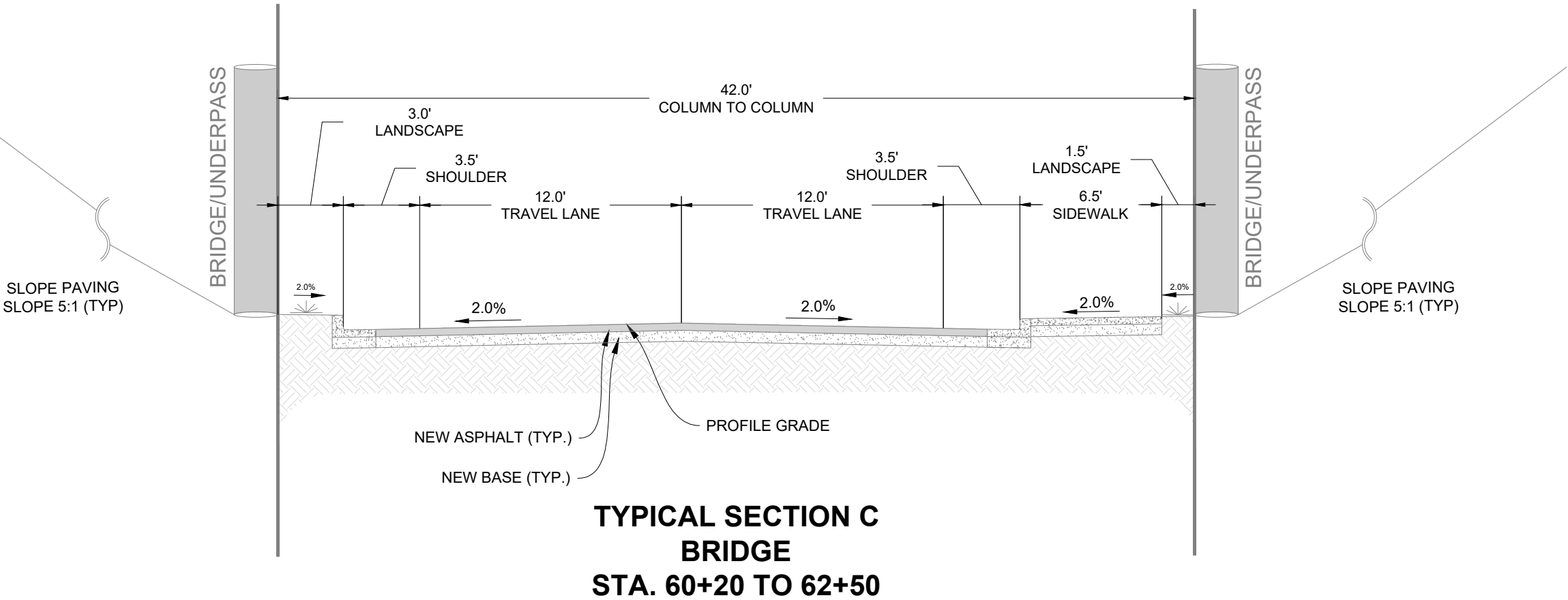
SOUTHWEST DRIVE CORRIDOR PLAN  
TYPICAL SECTIONS 2

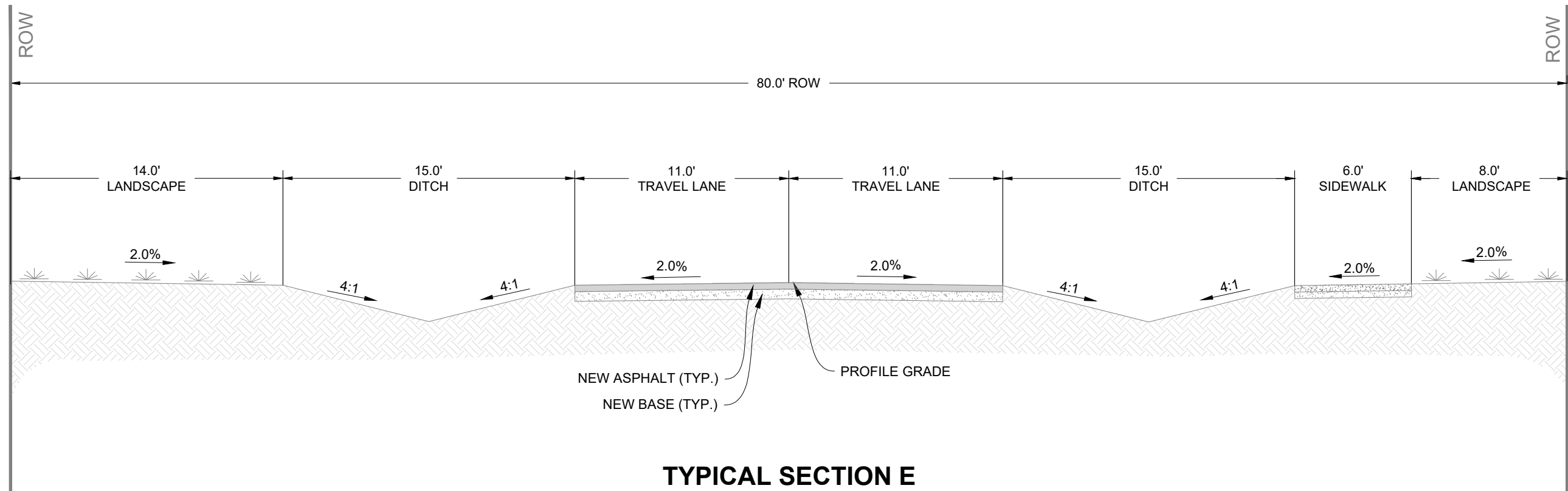
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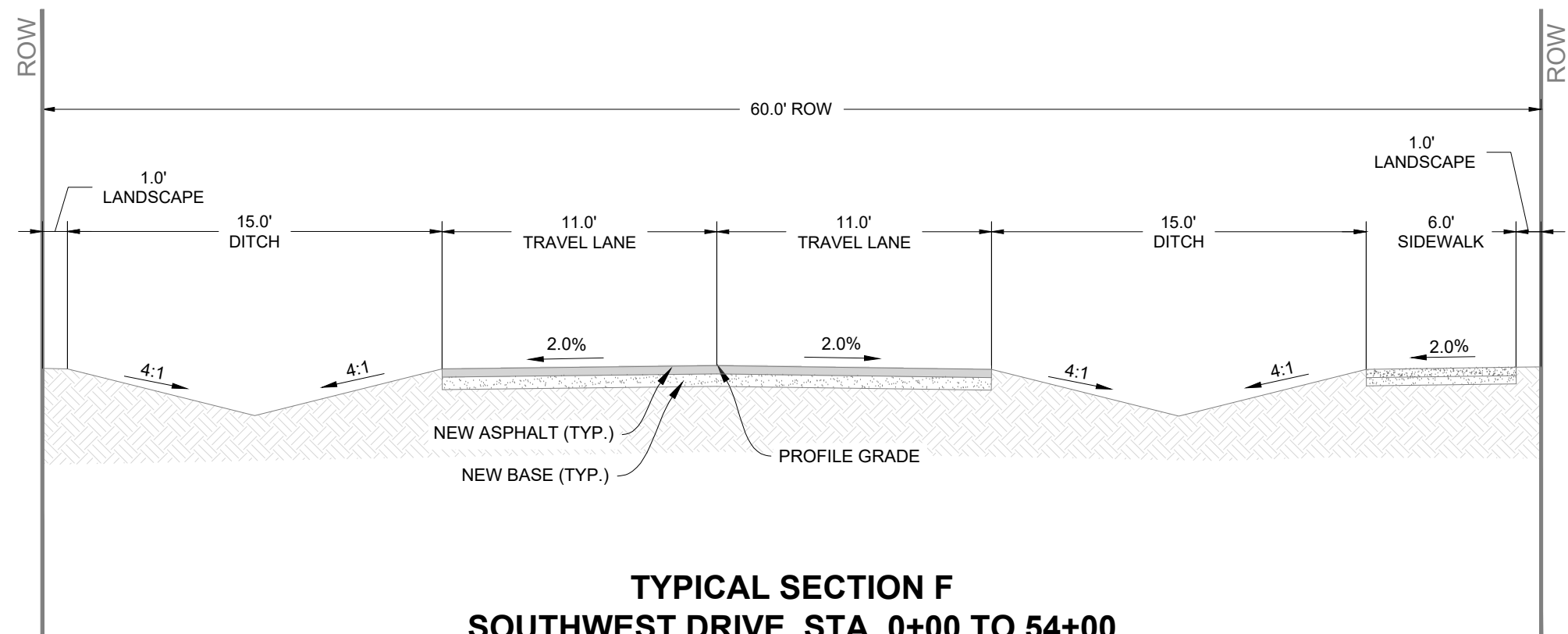
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02





**TYPICAL SECTION E**  
**SOUTHWEST DRIVE, STA. 0+00 TO 54+00**  
**WOODENSHOE DRIVE STA. 0+00 TO 7+70**



**TYPICAL SECTION F**  
**SOUTHWEST DRIVE, STA. 0+00 TO 54+00**  
**LINDBLOM CT, 0+00 TO 7+70**

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 TYPICAL SECTIONS 3

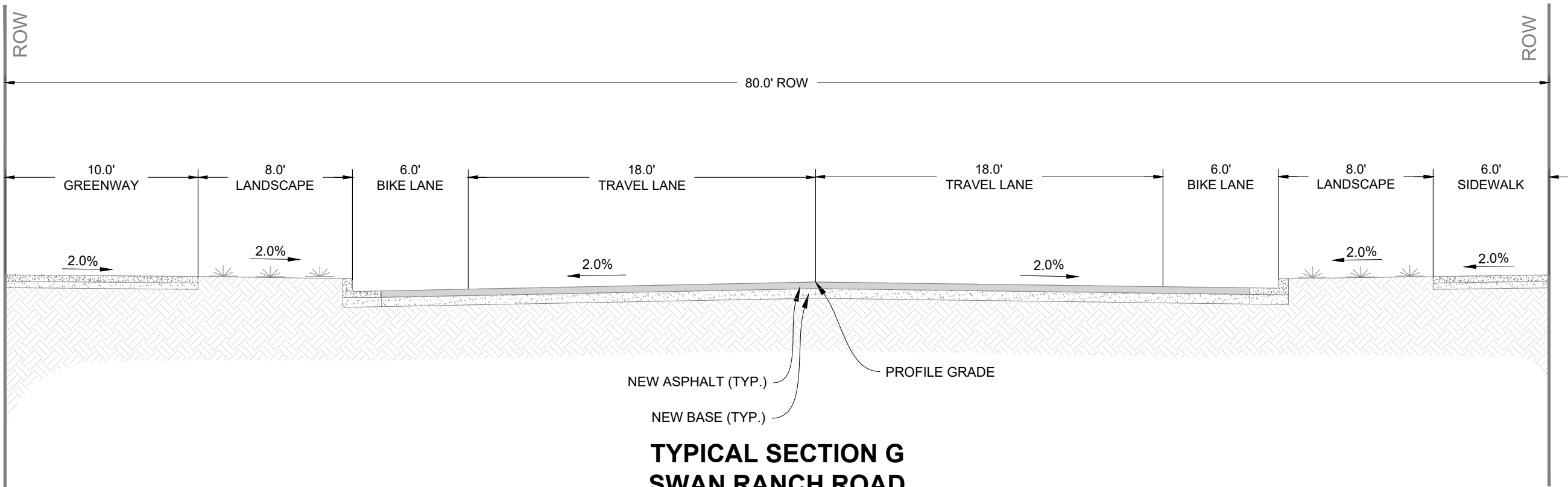
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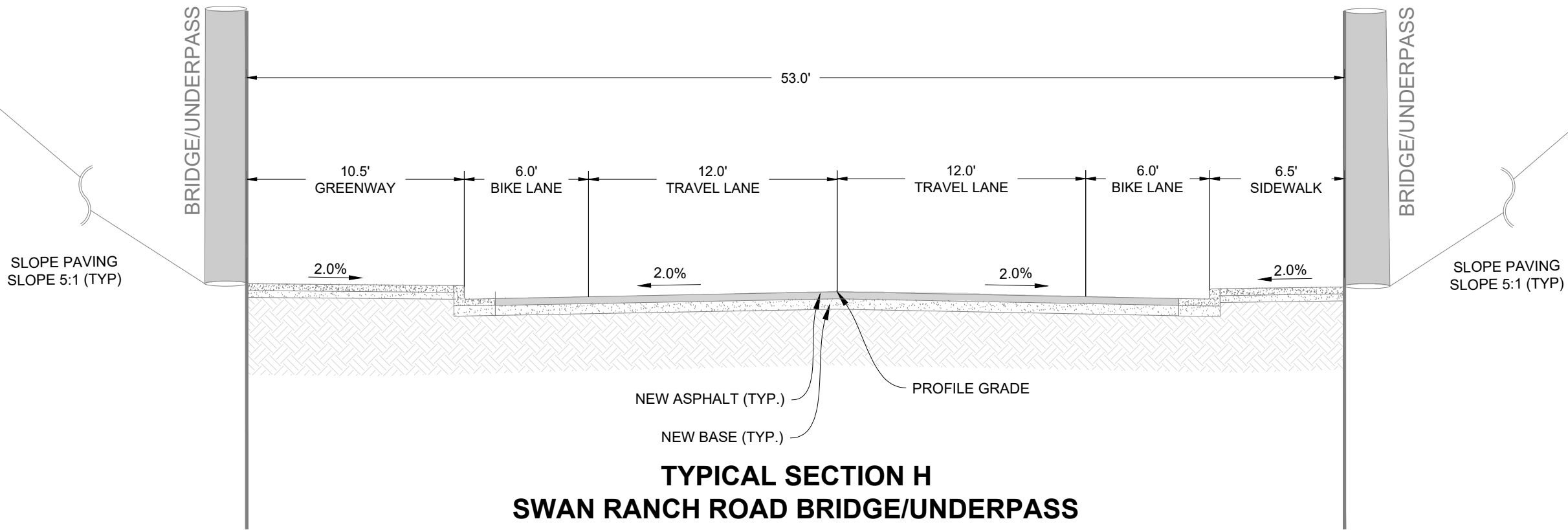
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**TYPICAL SECTION G**  
**SWAN RANCH ROAD**  
**STA. 0+00 TO 71+00**



**TYPICAL SECTION H**  
**SWAN RANCH ROAD BRIDGE/UNDERPASS**  
**STA. 47+00 TO 49+50**

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TYPICAL SECTIONS 4

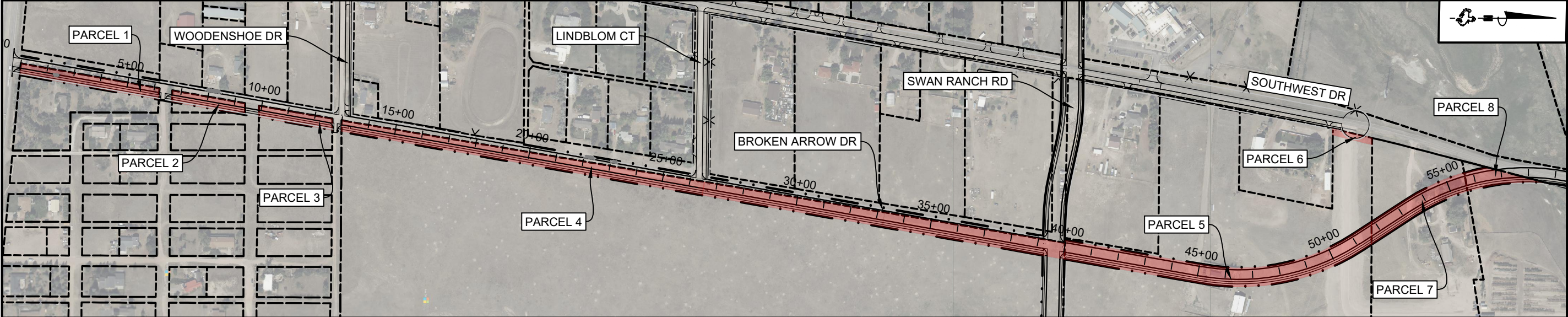
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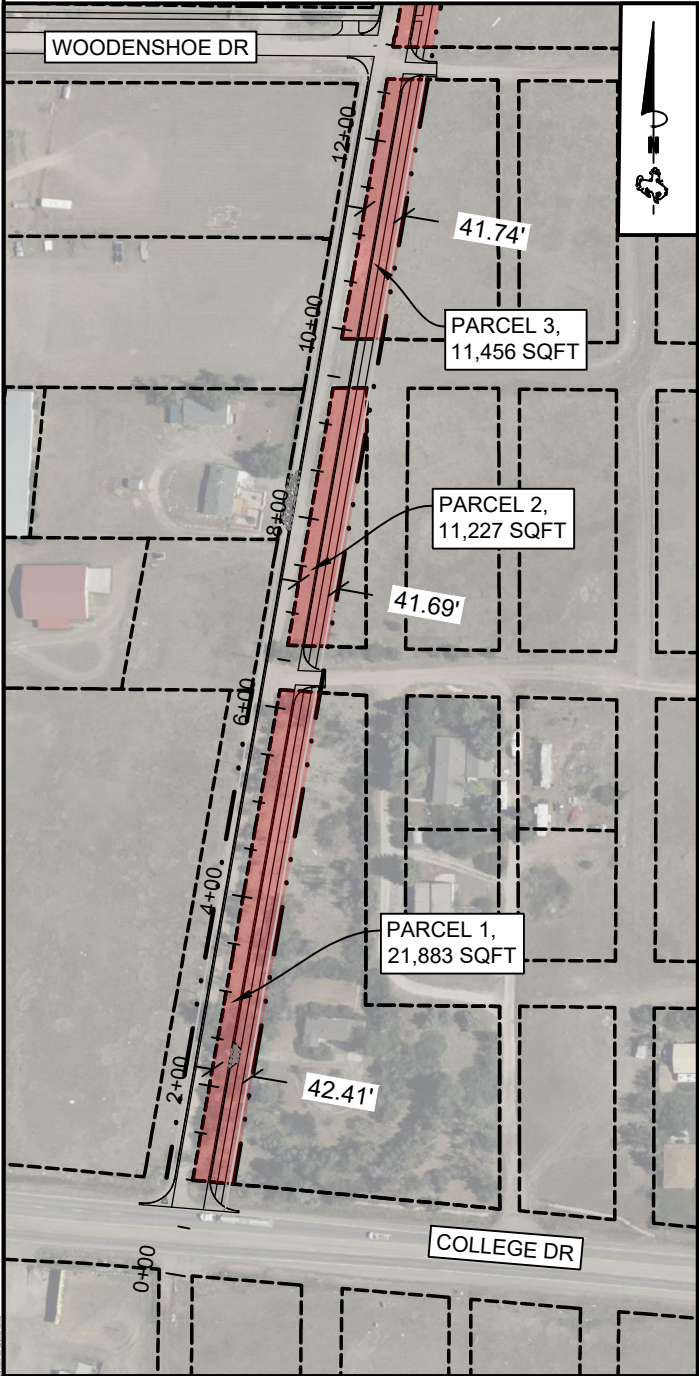
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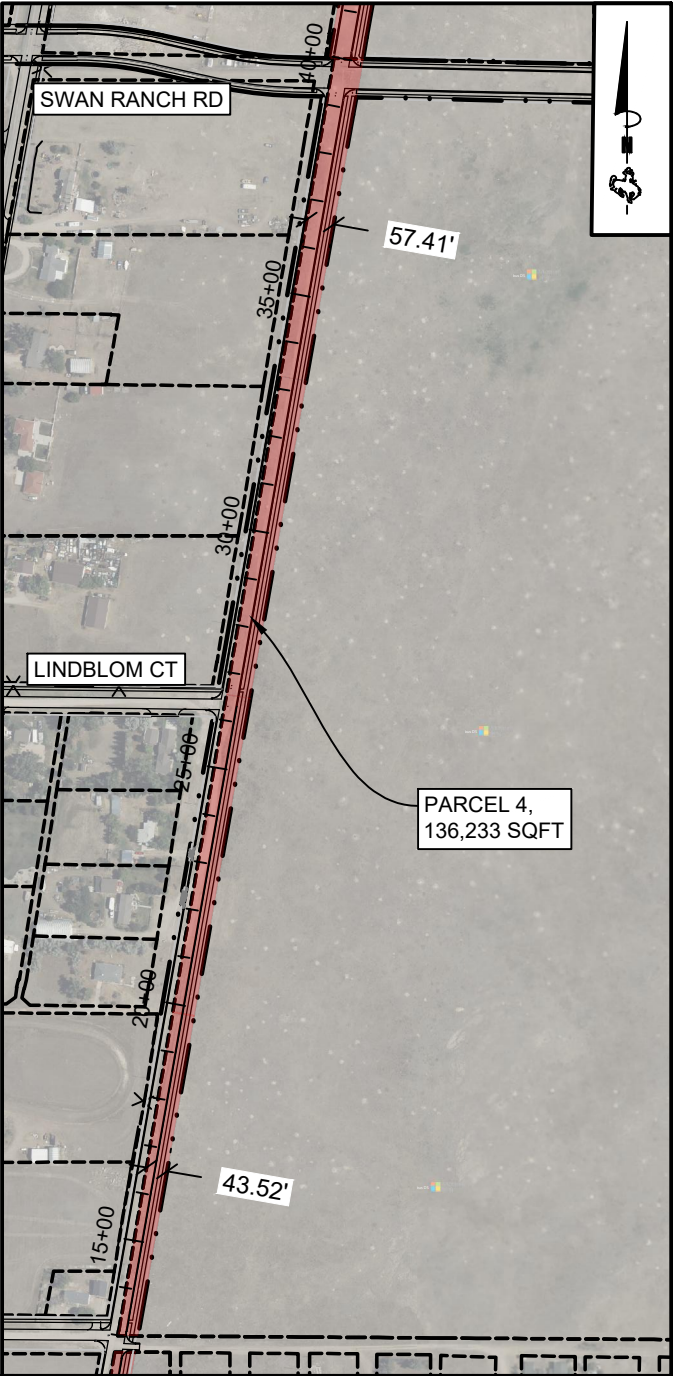




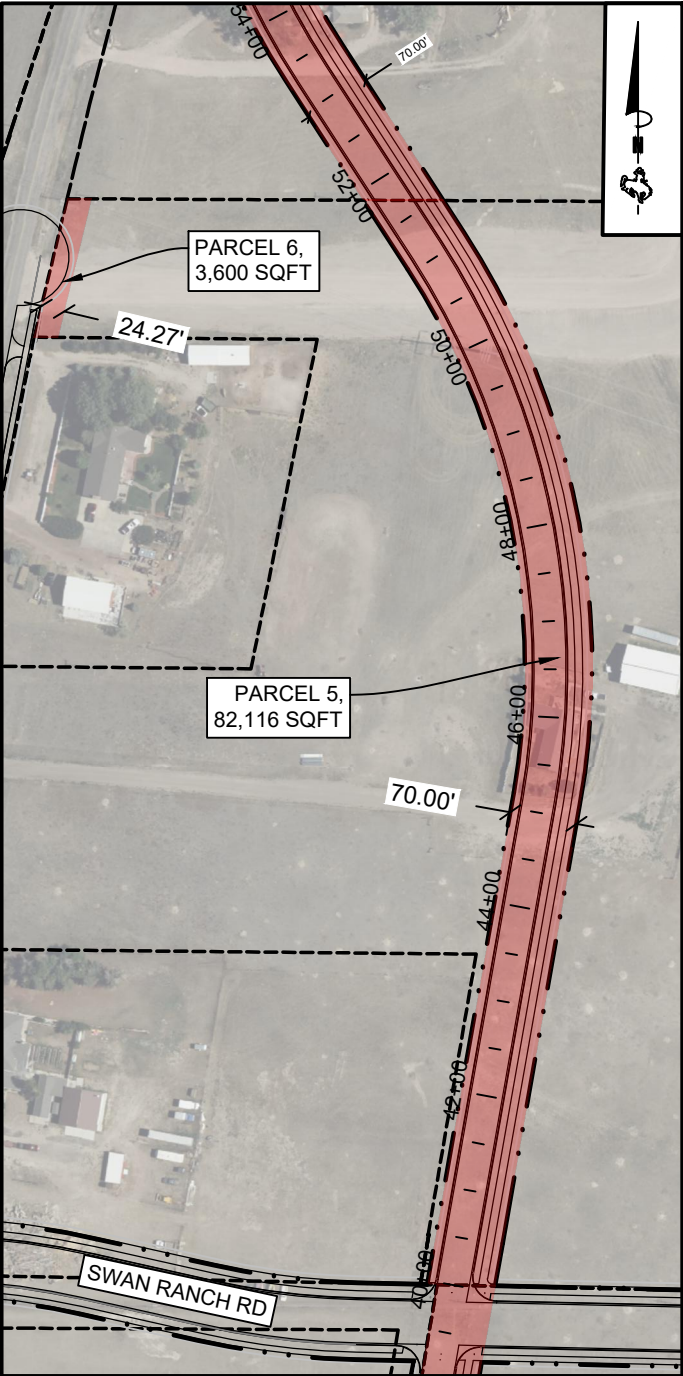
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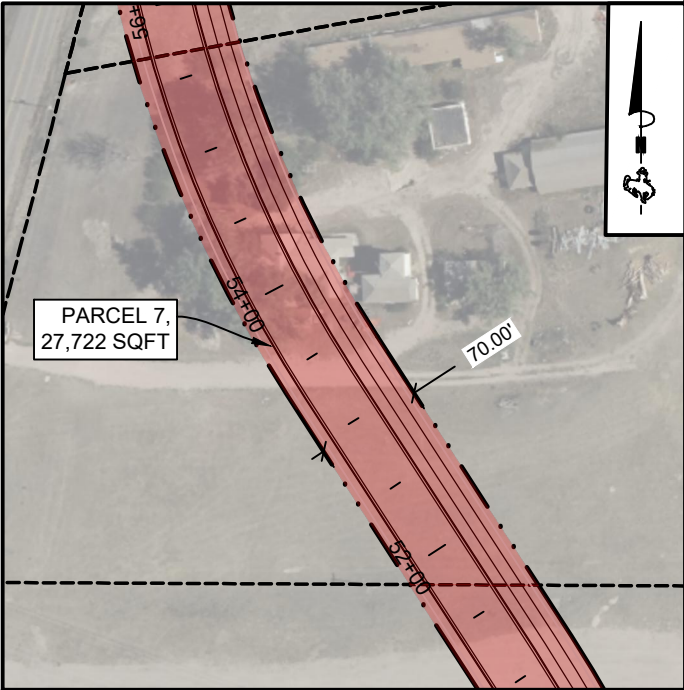
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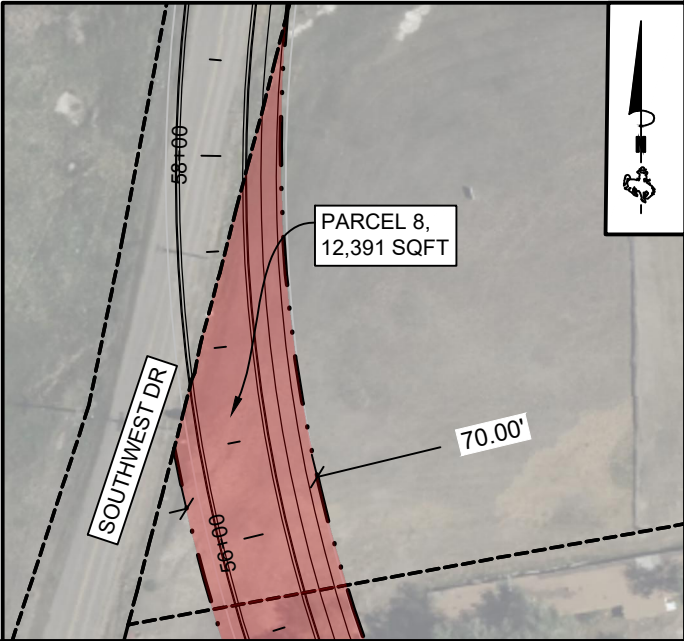
ROW PARCELS 5 & 6, 1" = 200'



ROW PARCEL 7, 1" = 200'





ROW PARCEL 8, 1" = 100'



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SOUTHWEST DRIVE CORRIDOR PLAN  
ROW ACQUISITION

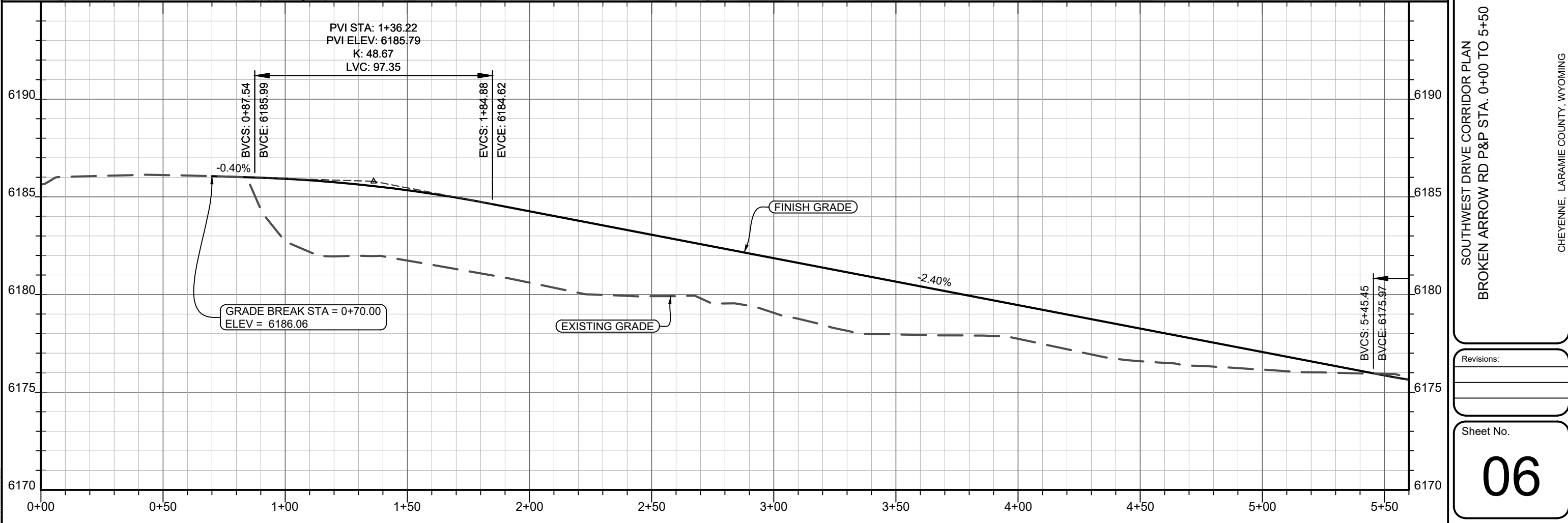
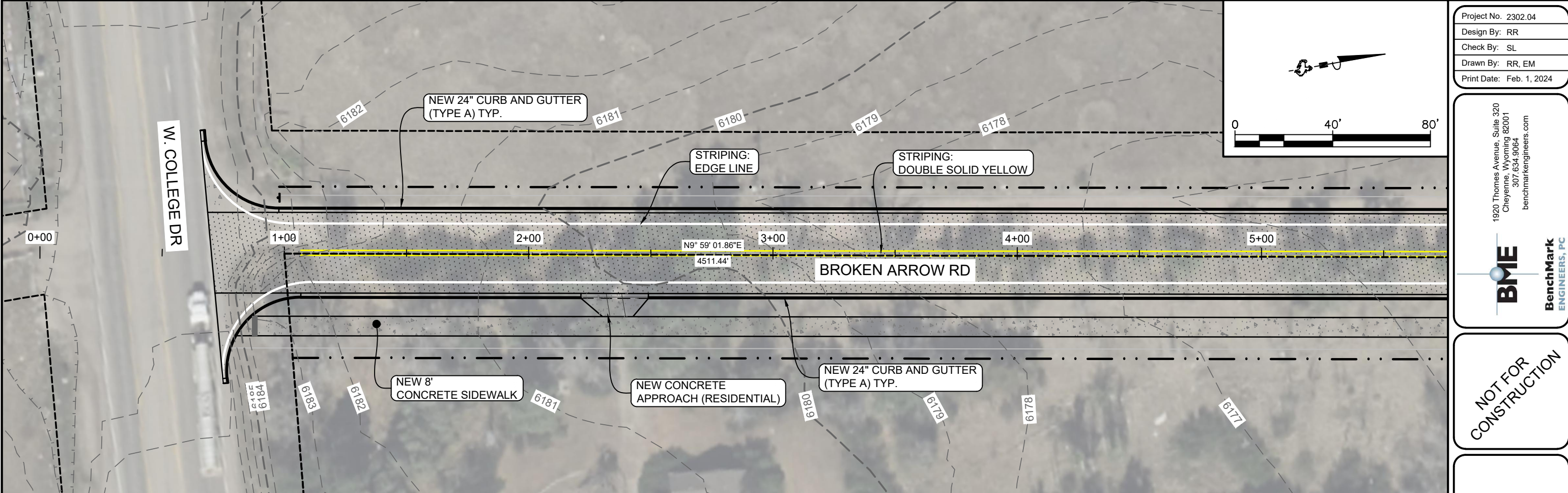
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BROKEN ARROW RD P&P STA. 0+00 TO 5+50

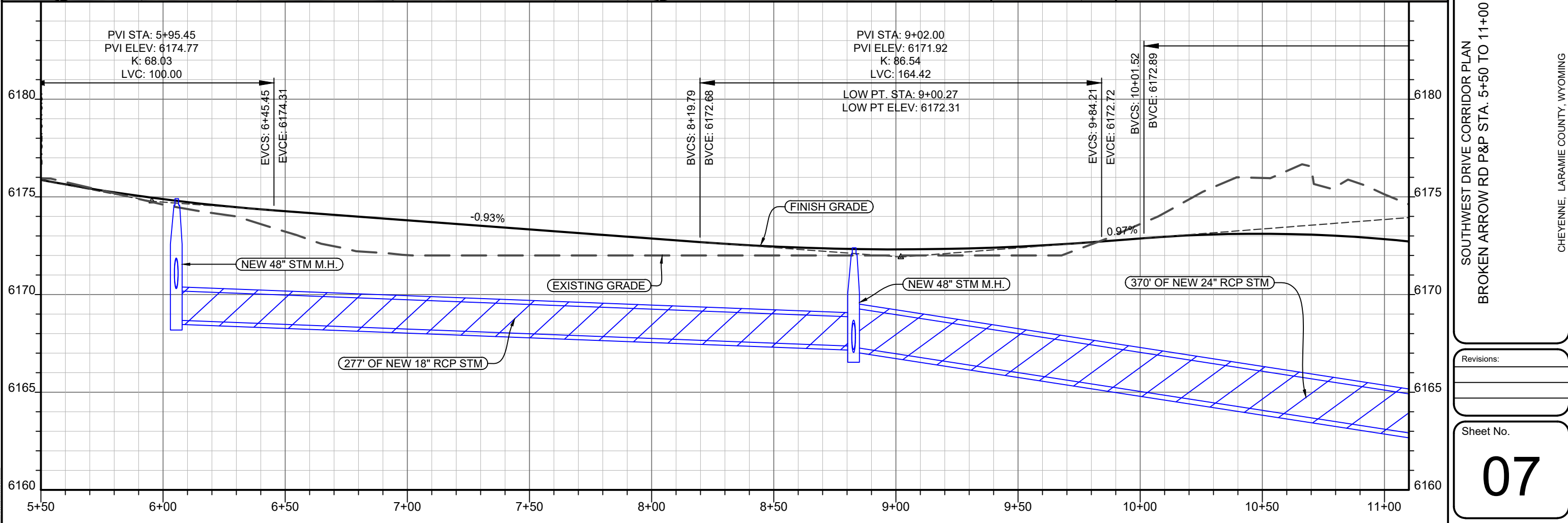
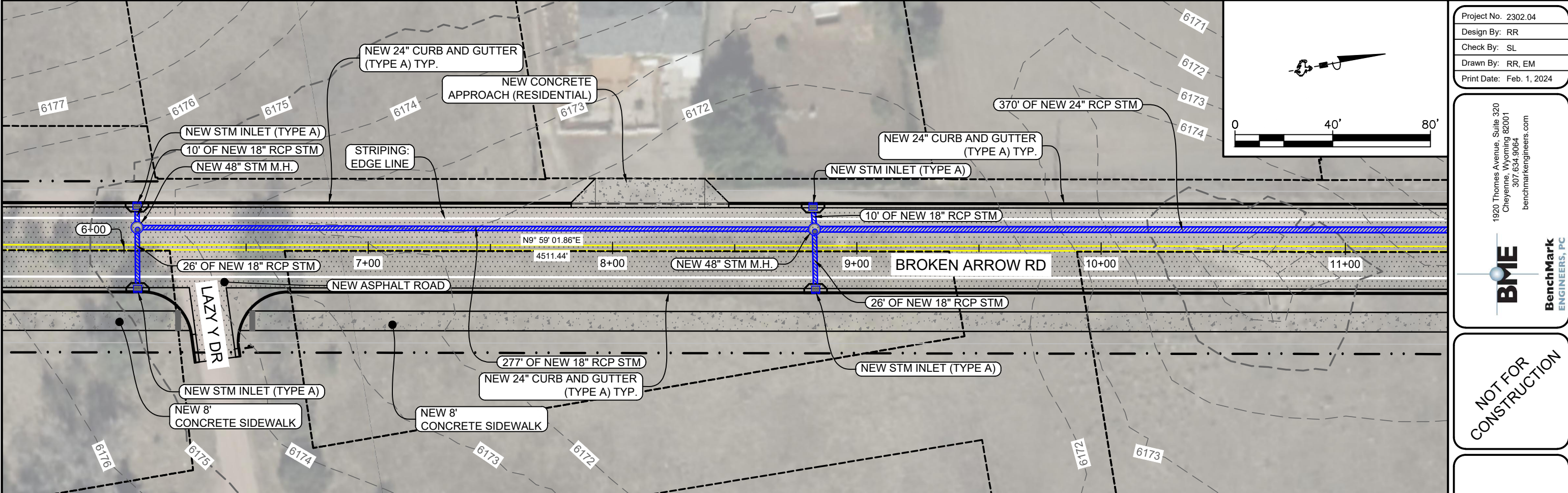
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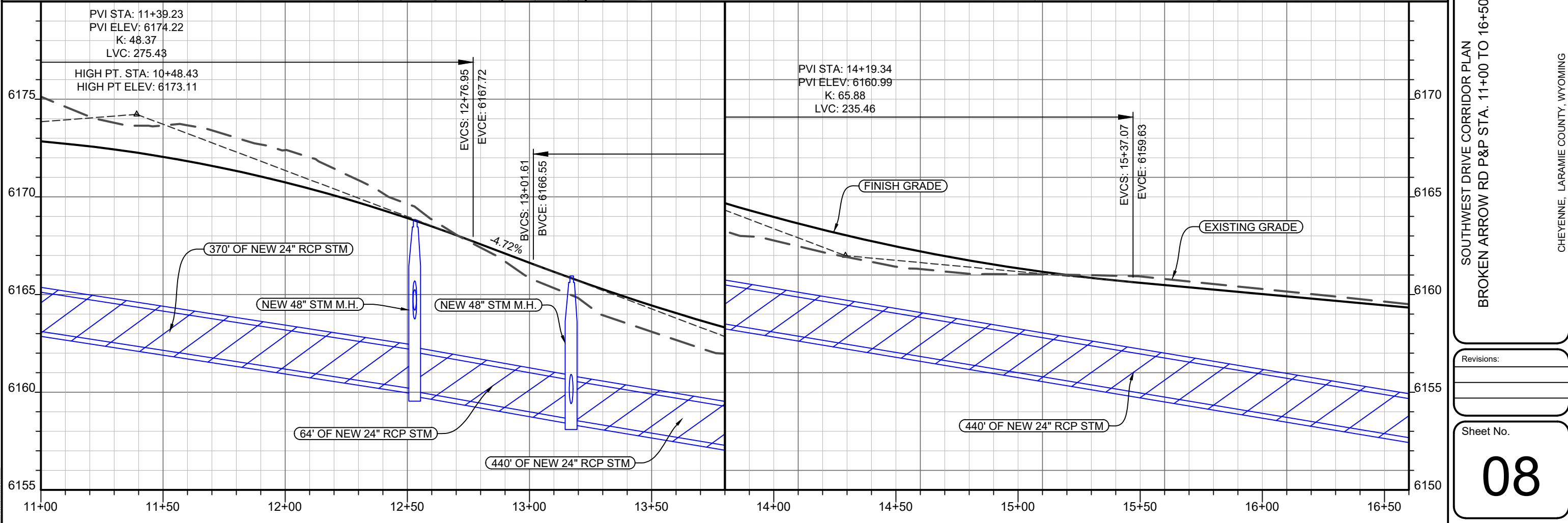
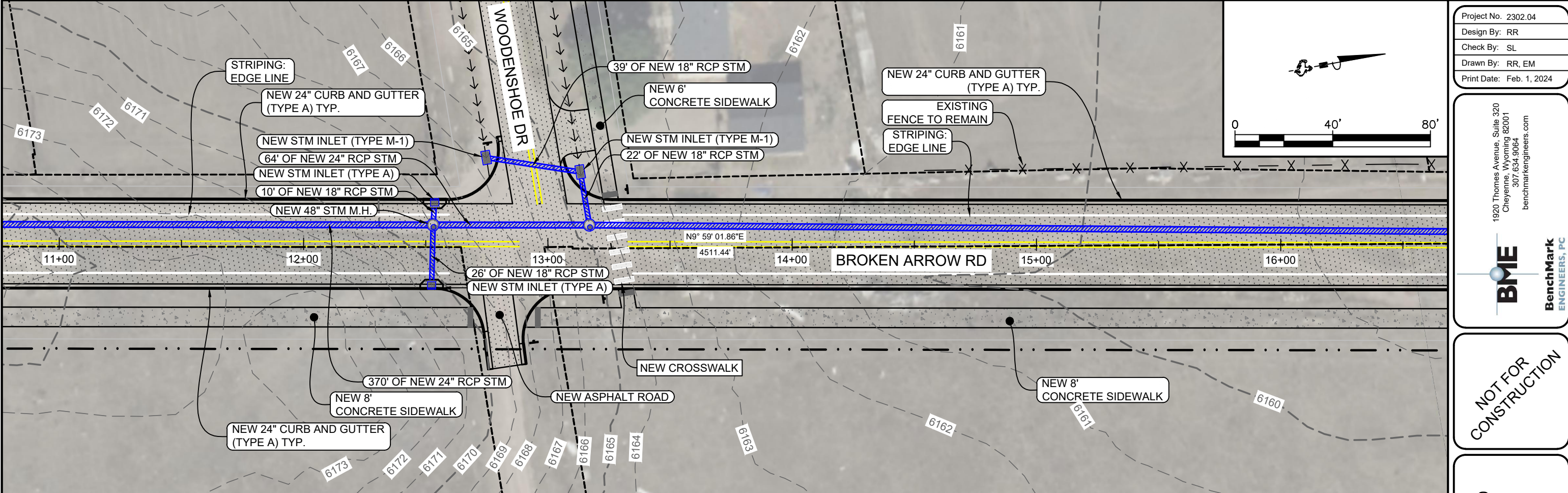
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SOUTHWEST DRIVE CORRIDOR PLAN  
BROKEN ARROW RD P&P STA. 5+50 TO 11+00

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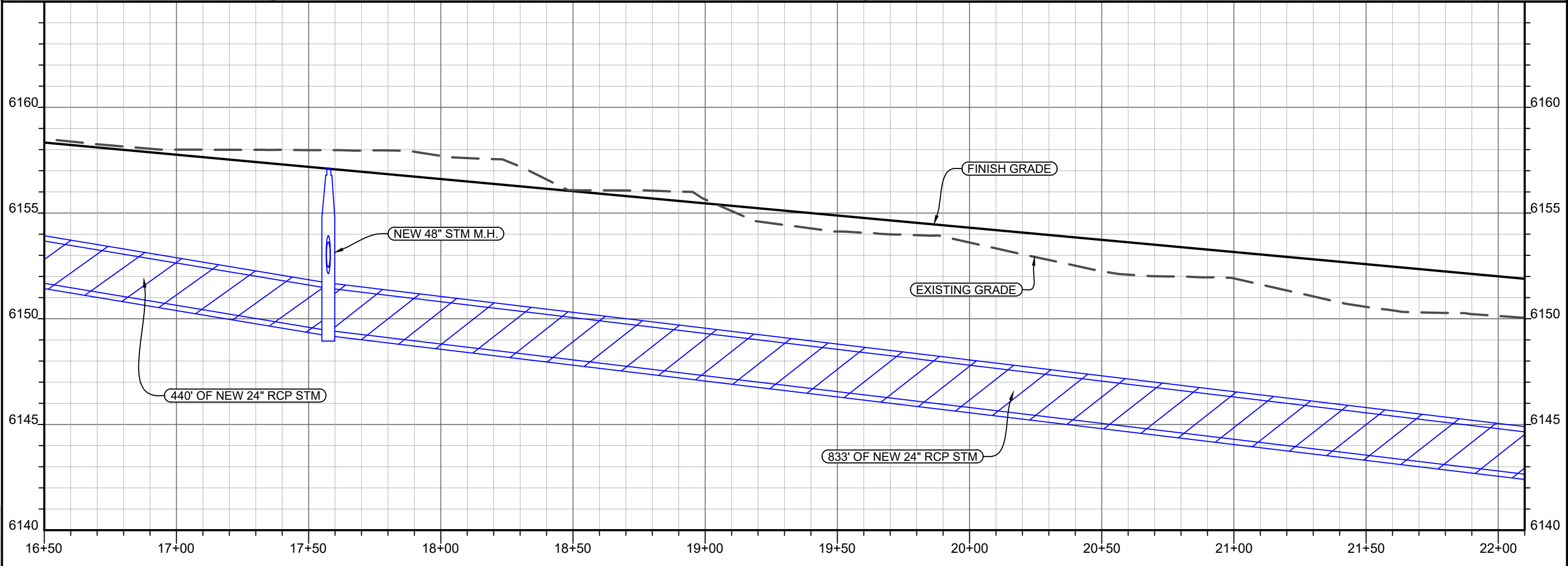
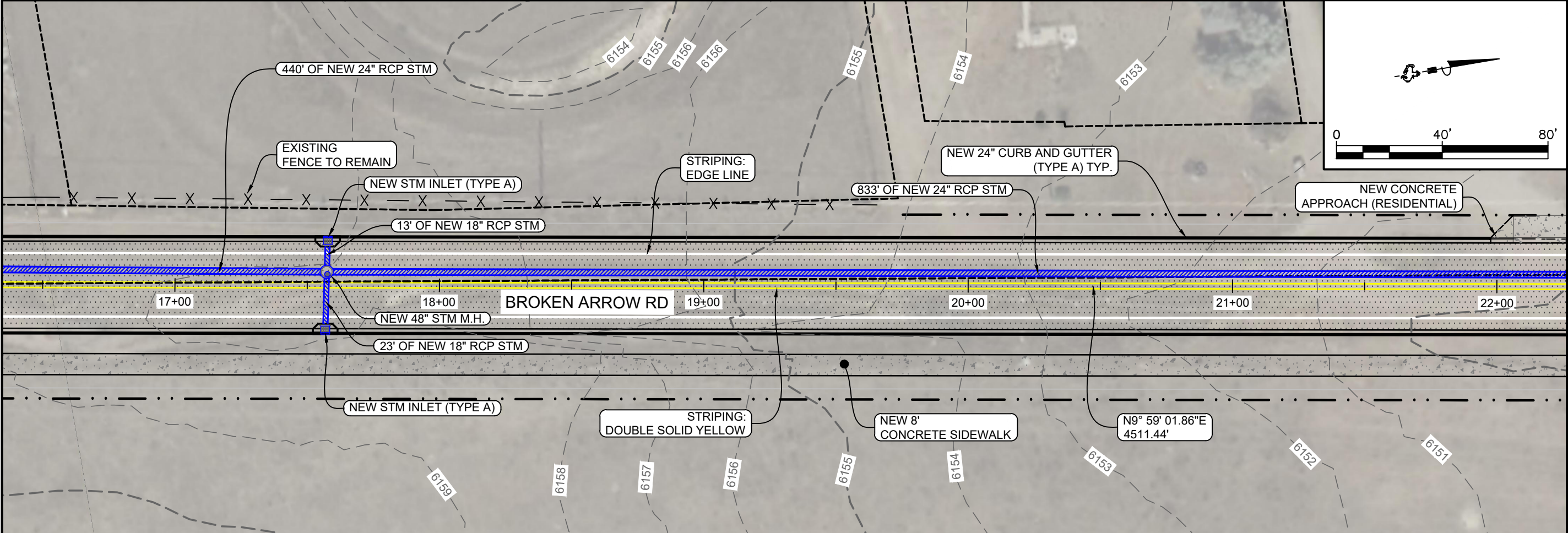
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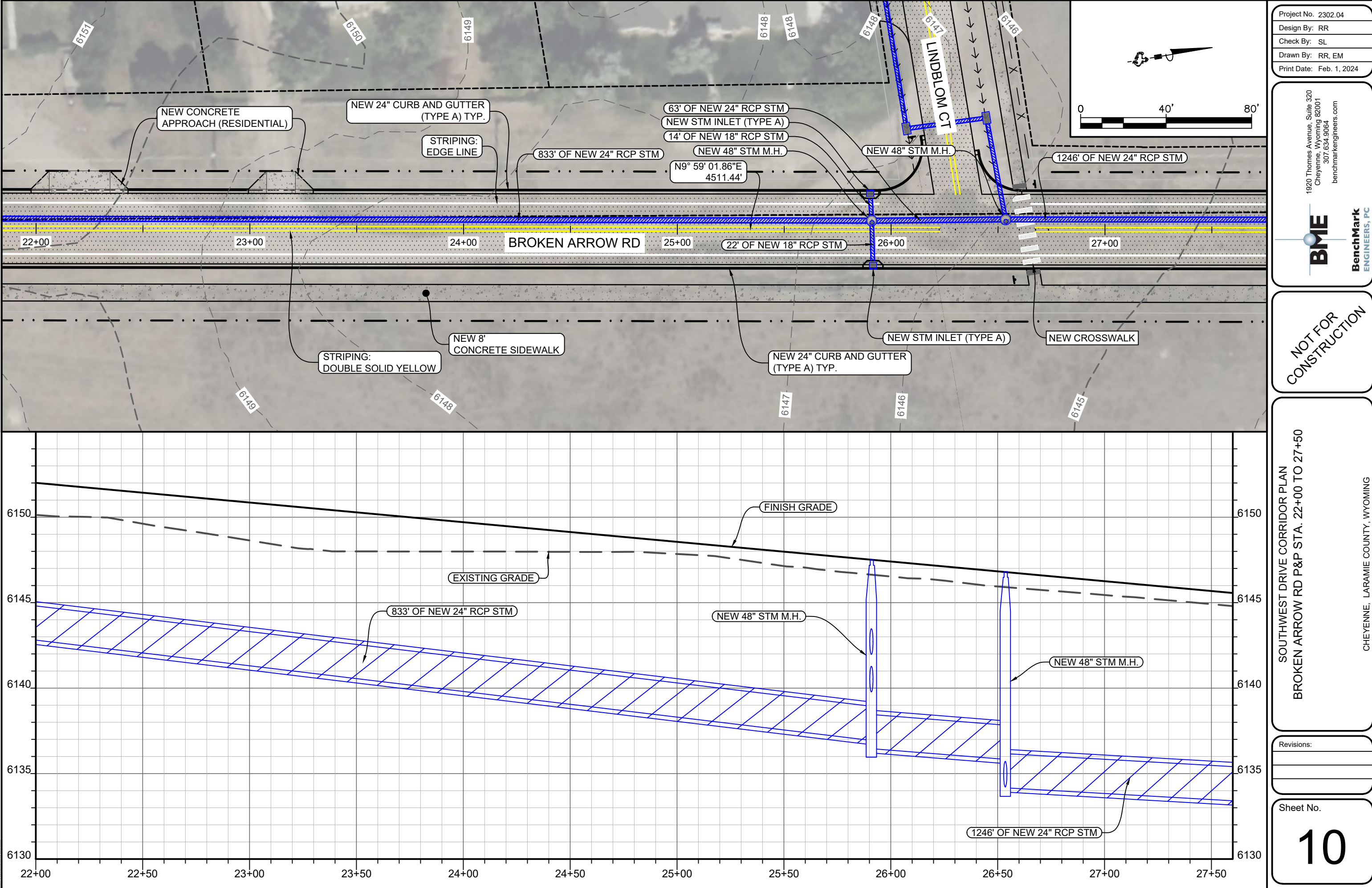
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BROKEN ARROW RD P&P STA. 16+50 TO 22+00

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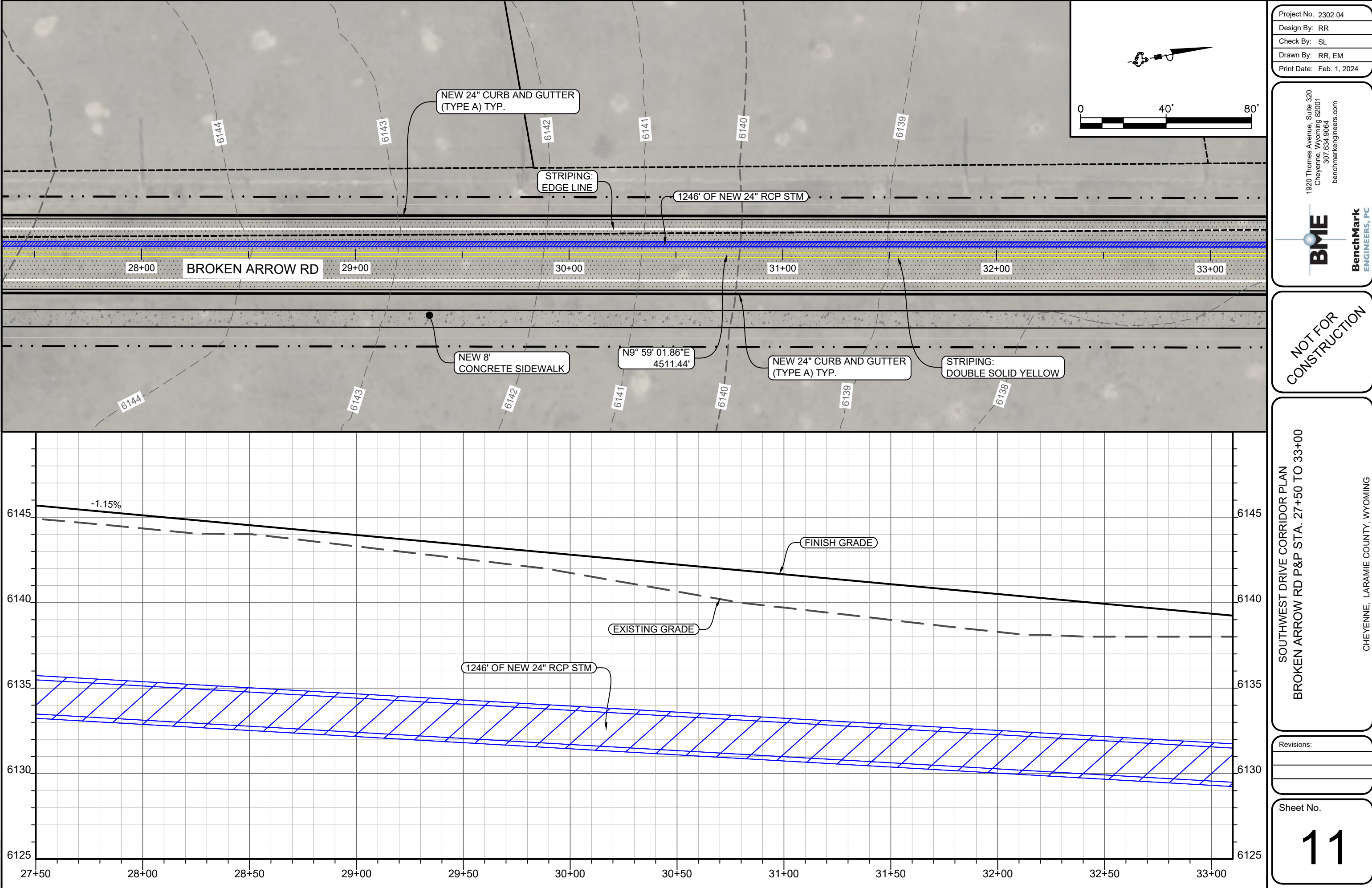
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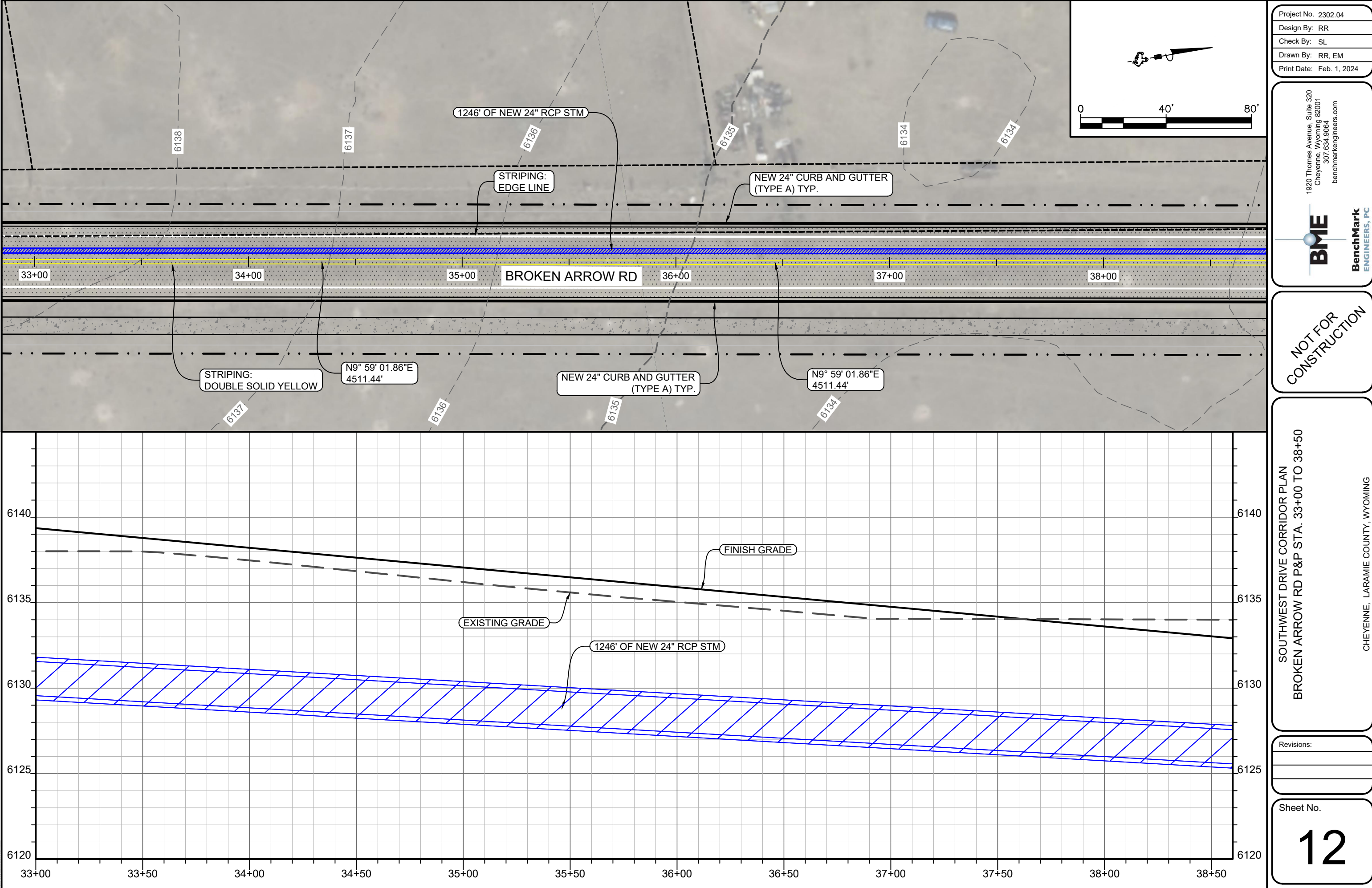
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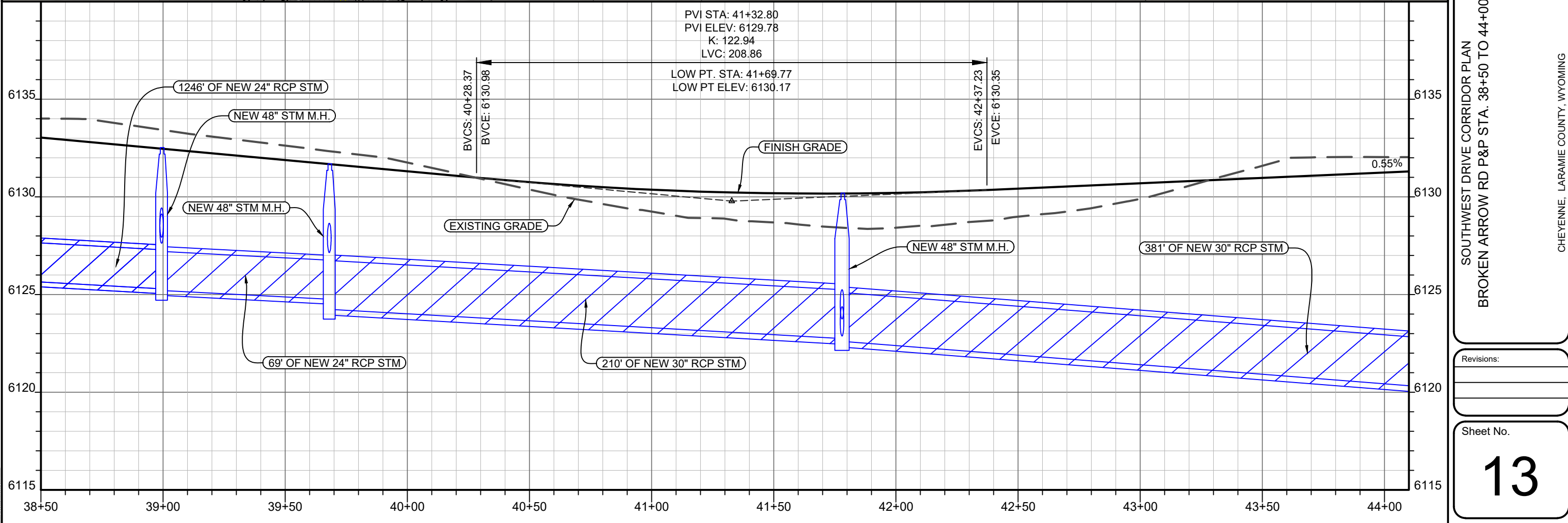
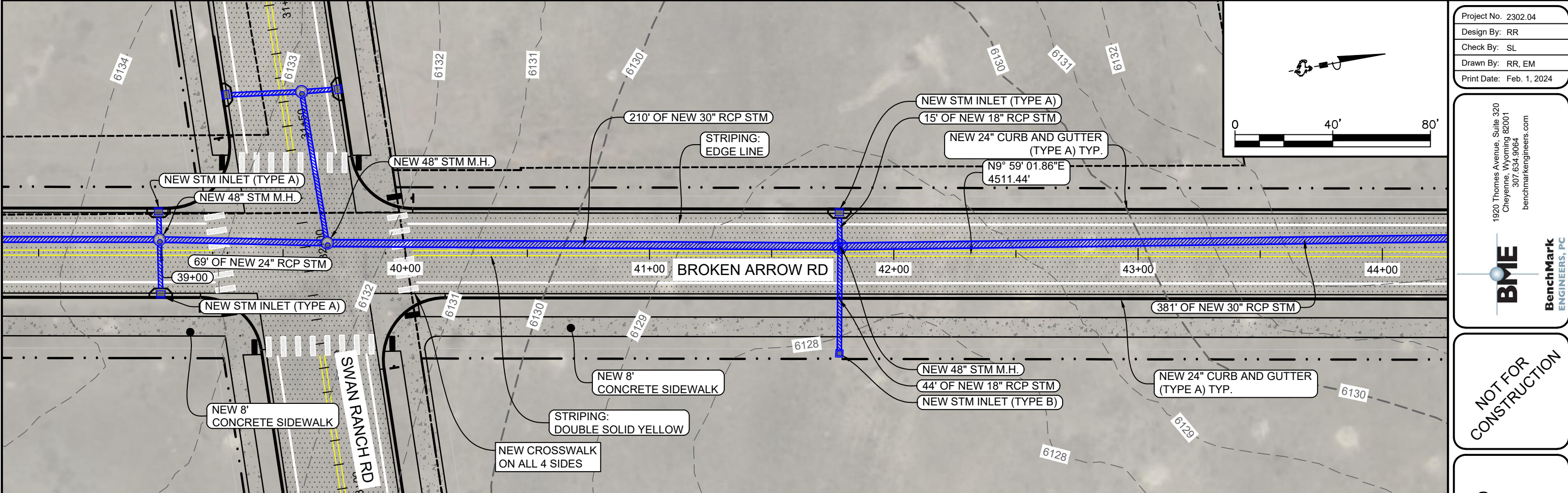
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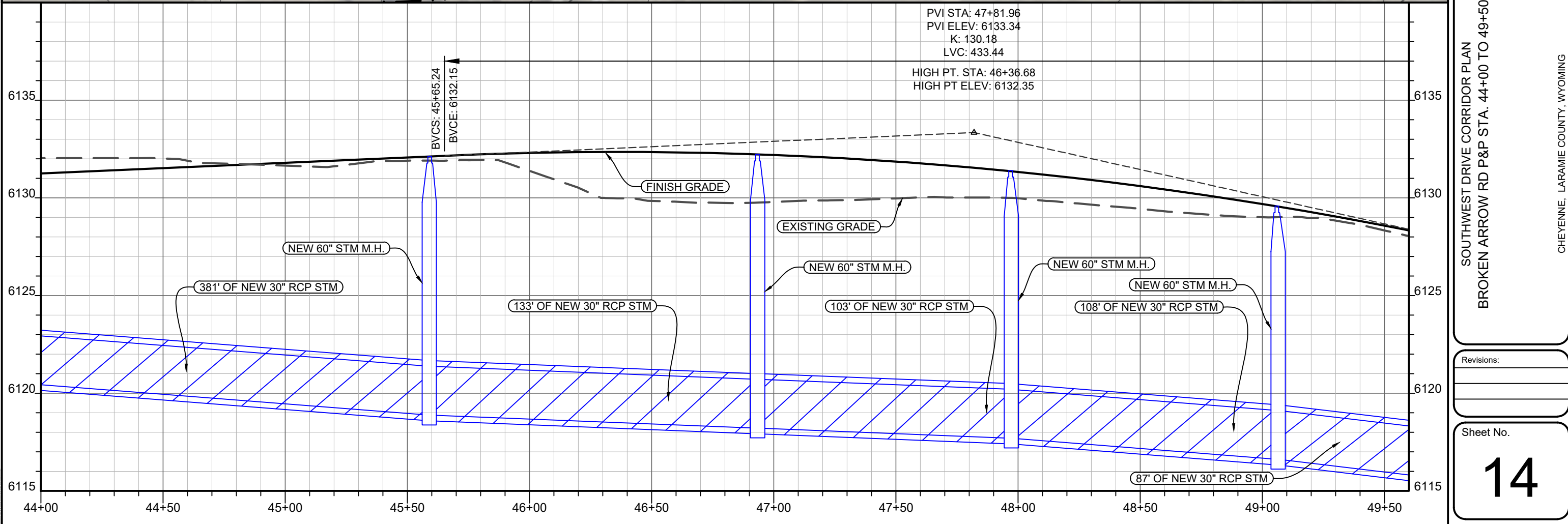
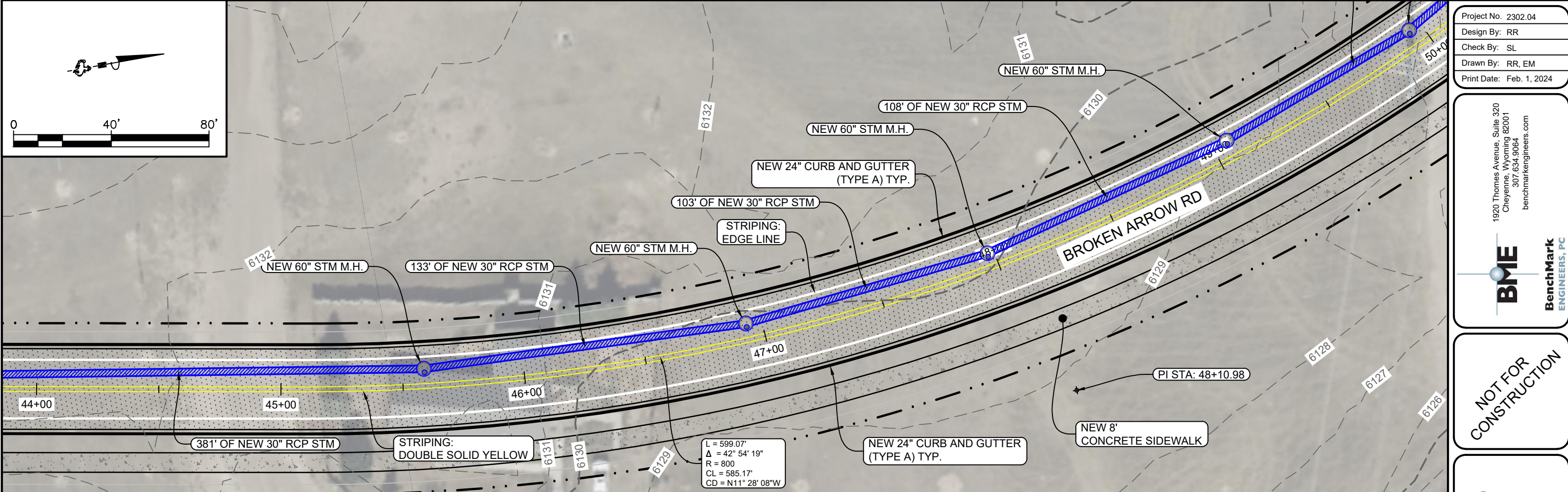
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SOUTHWEST DRIVE CORRIDOR PLAN  
BROKEN ARROW RD P&P STA. 38+50 TO 44+00

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BROKEN ARROW RD P&P STA. 44+00 TO 49+50

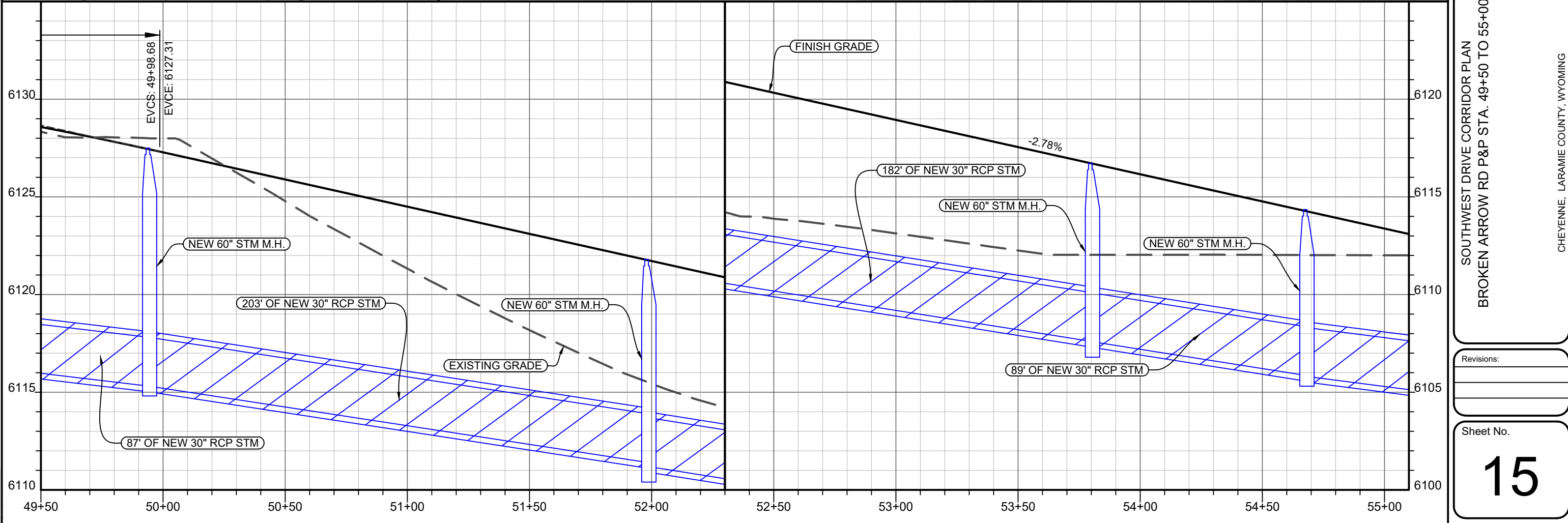
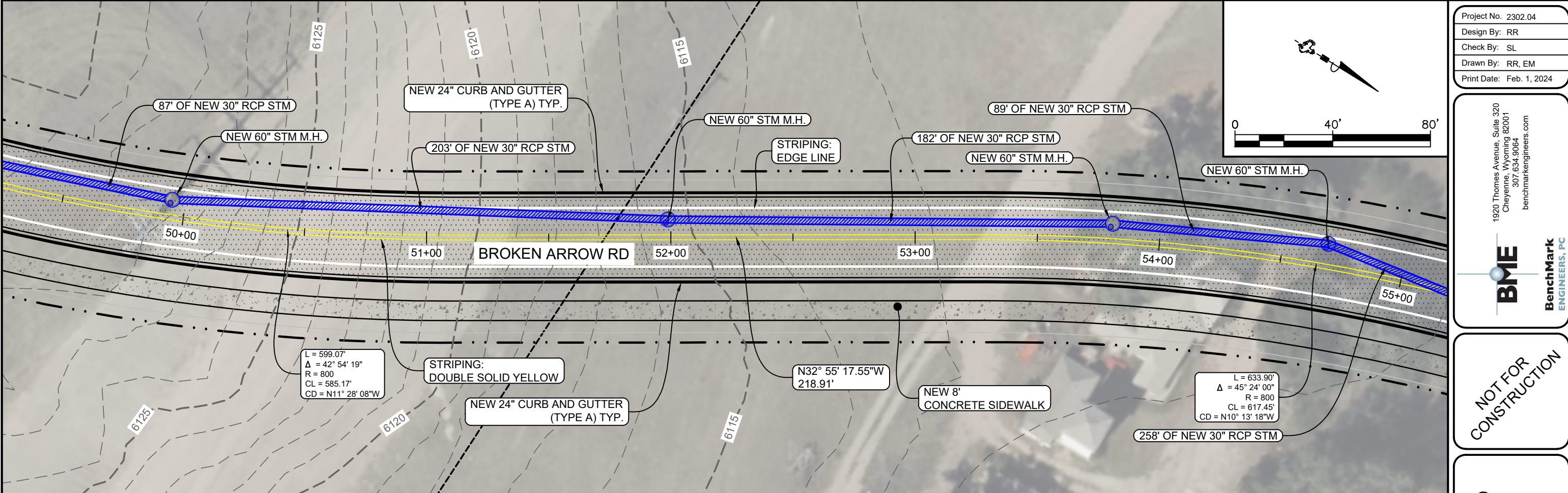
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BROKEN ARROW RD P&P STA. 49+50 TO 55+00

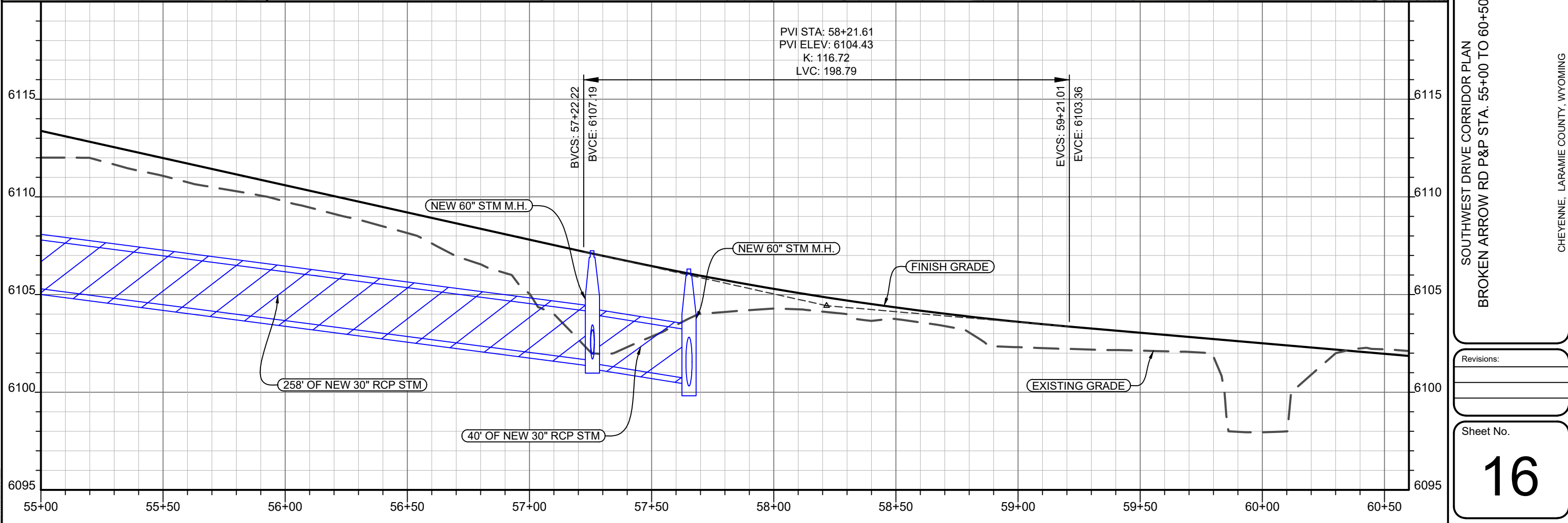
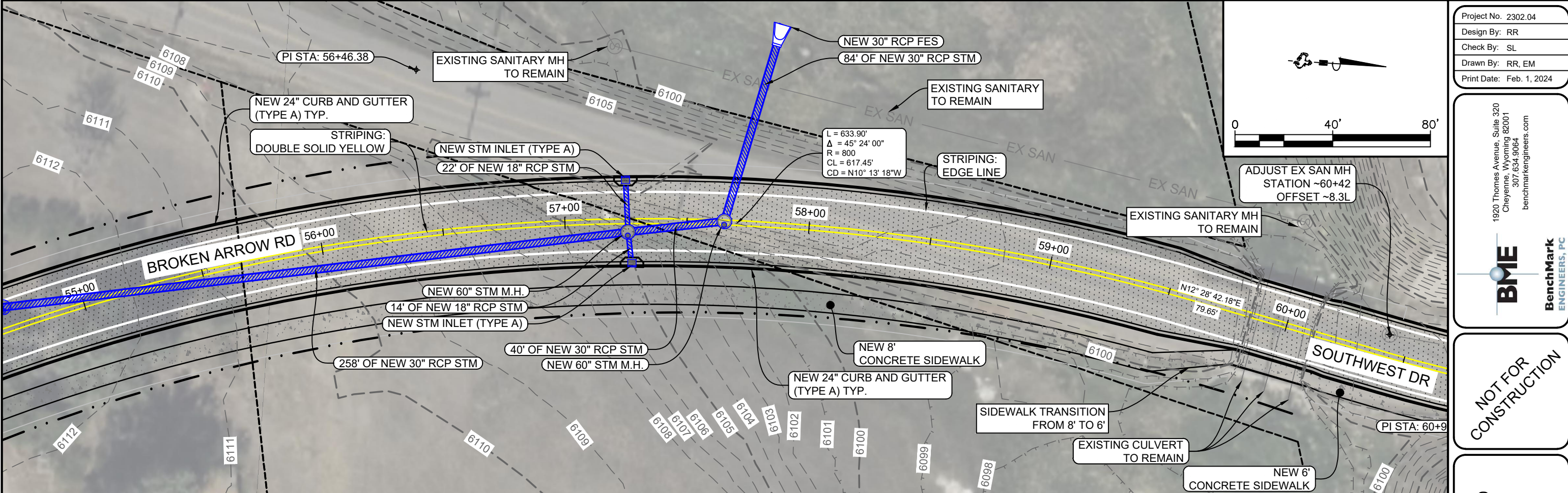
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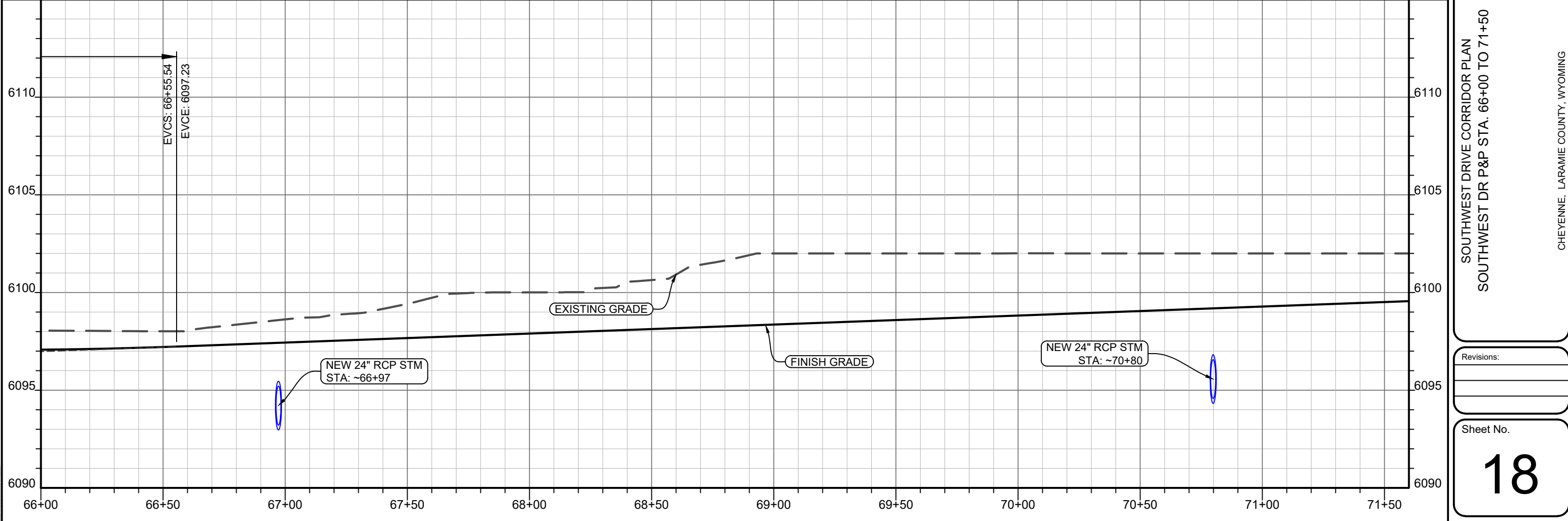
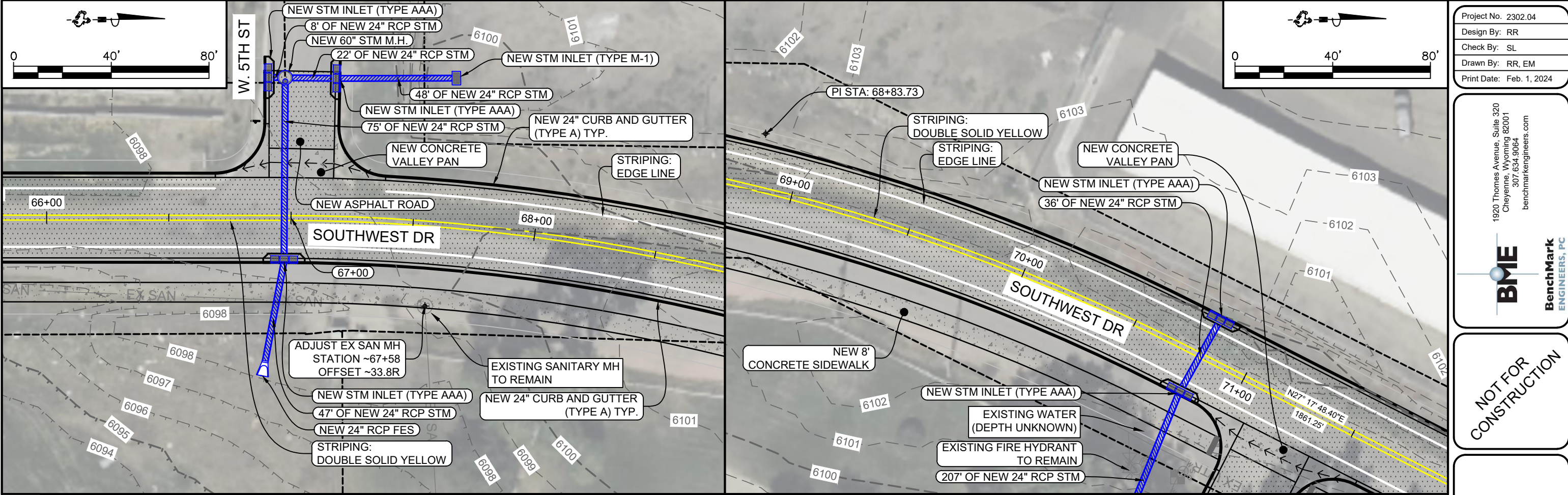
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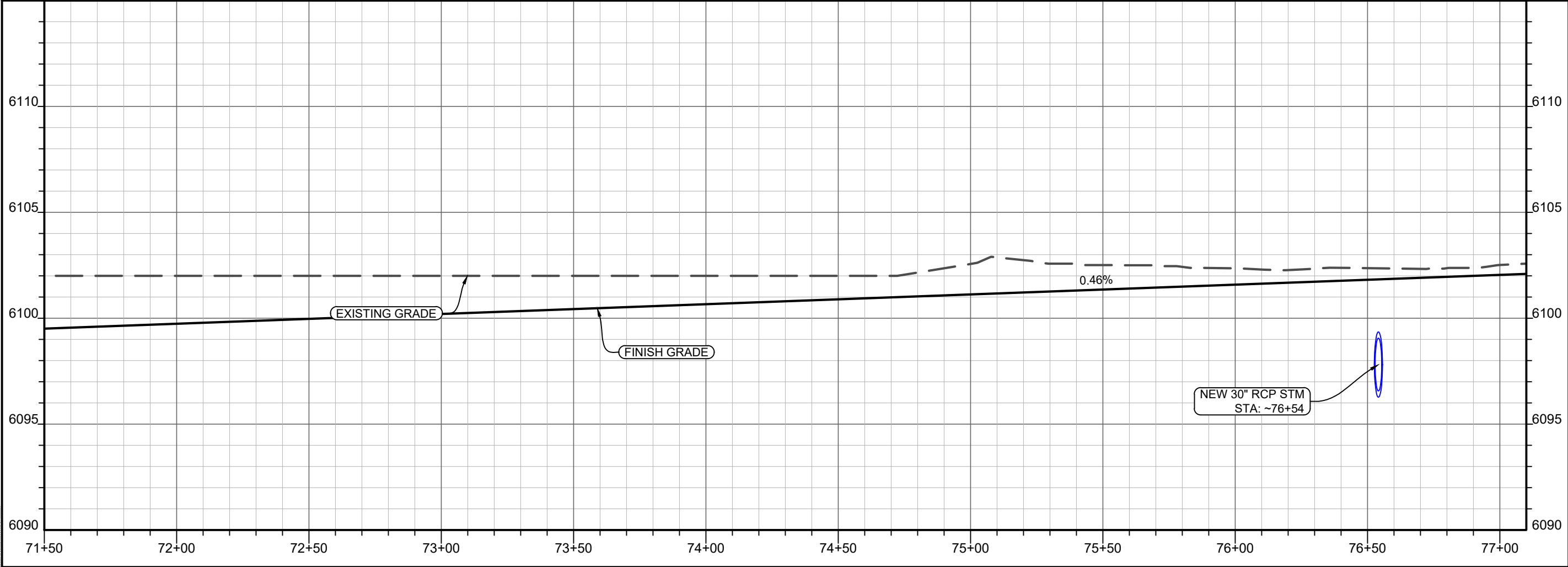
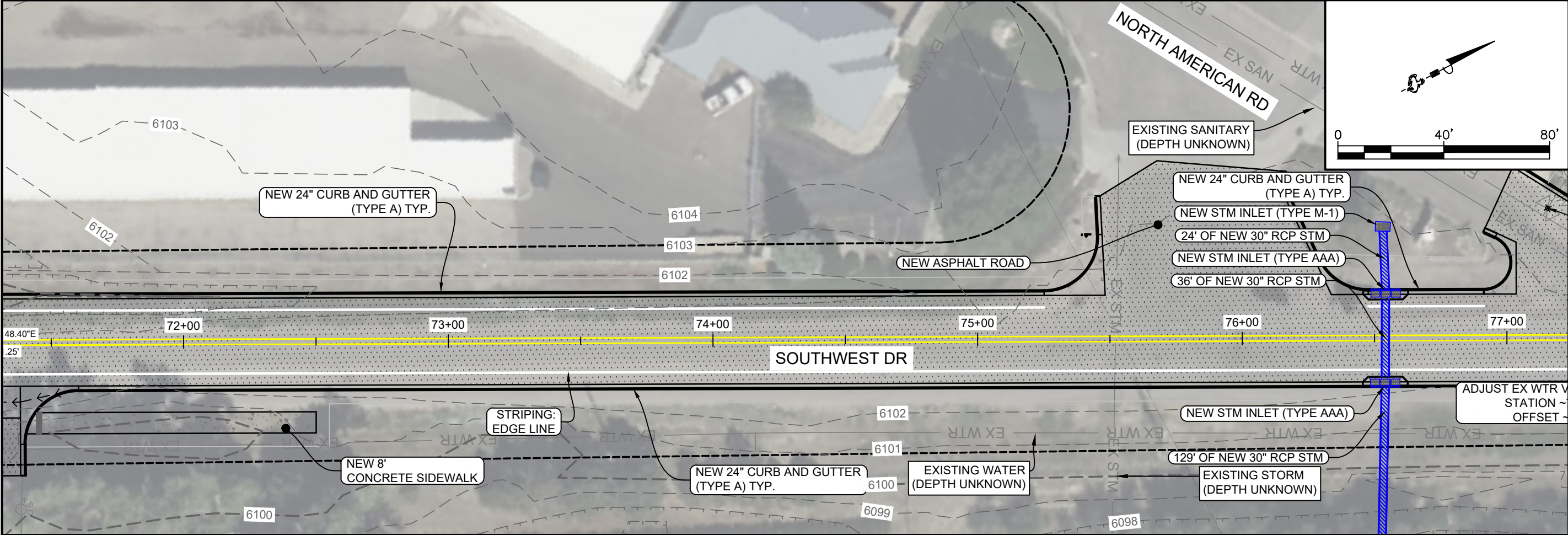
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SOUTHWEST DR P&P STA. 66+00 TO 71+50

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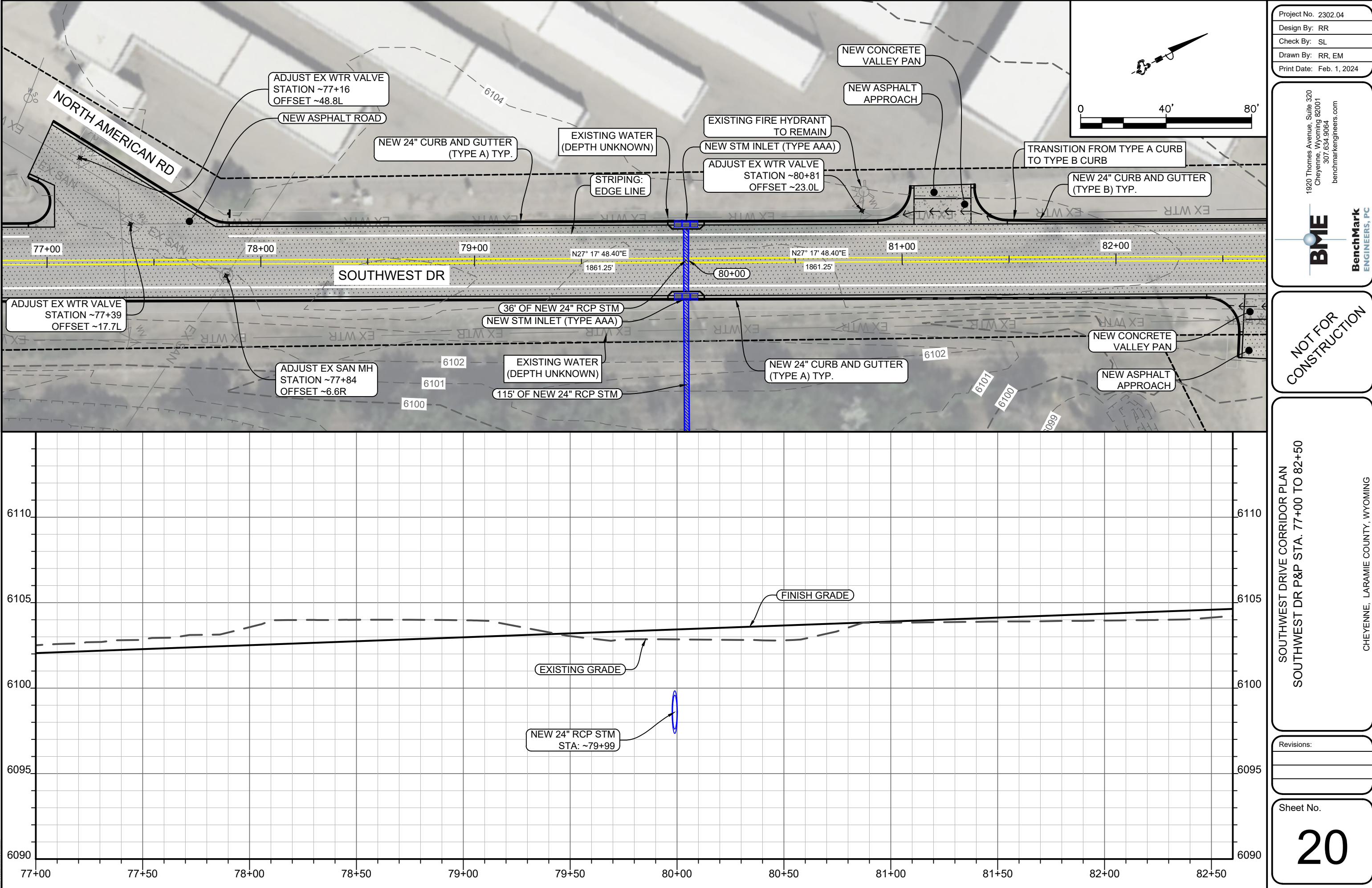
SOUTHWEST DRIVE CORRIDOR PLAN  
SOUTHWEST DR P&P STA. 71+50 TO 77+00

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SOUTHWEST DRIVE CORRIDOR PLAN  
SOUTHWEST DR P&P STA. 77+00 TO 82+50

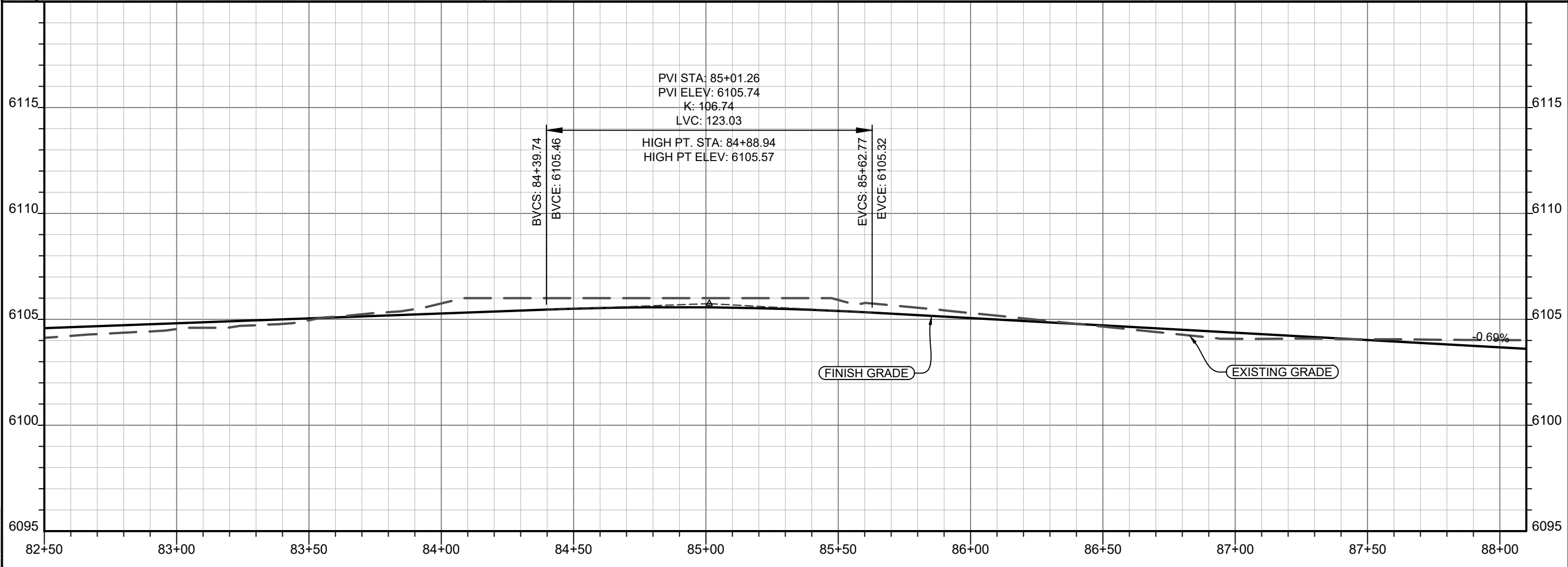
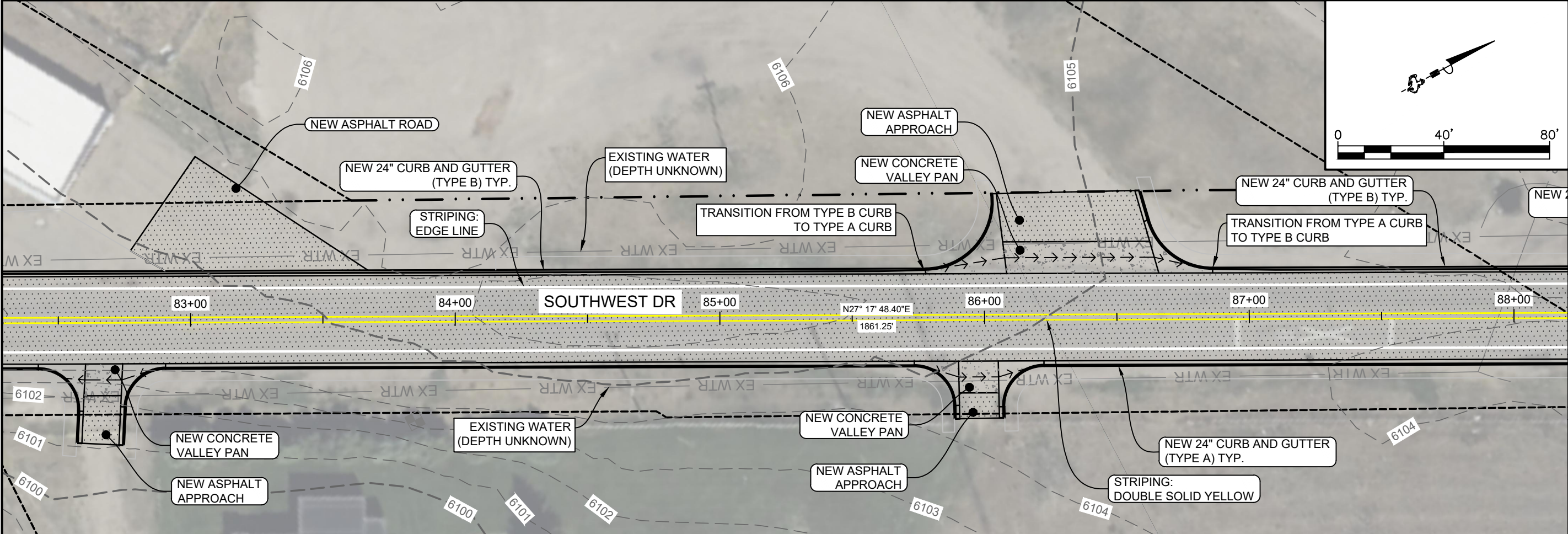
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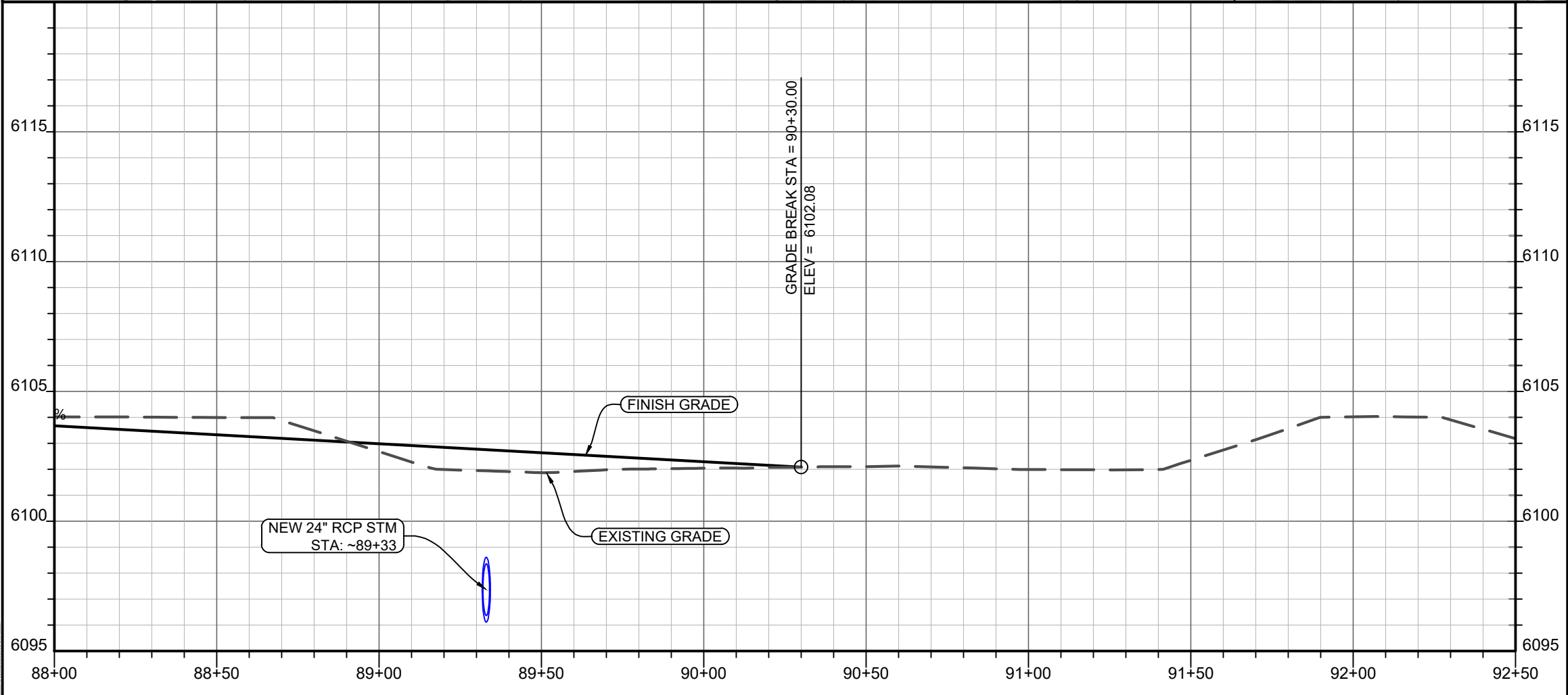
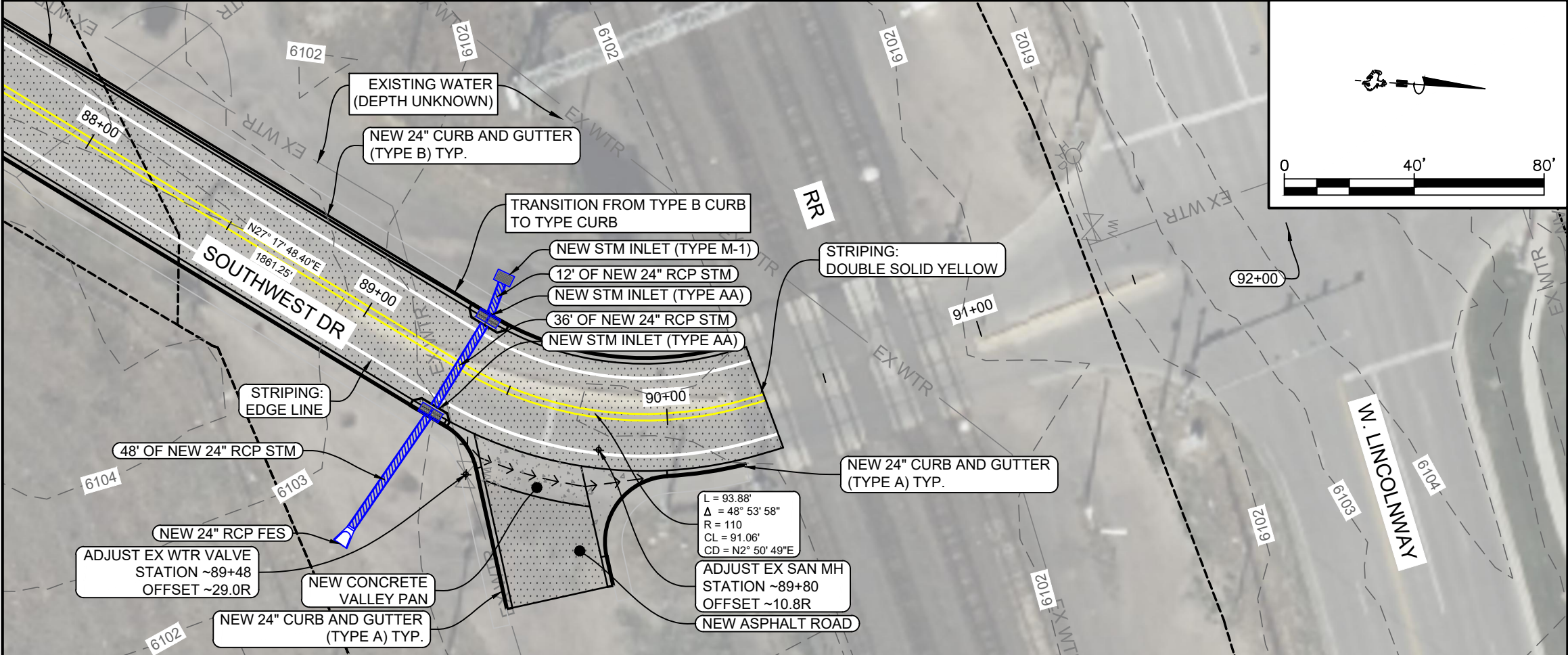
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SOUTHWEST DRIVE CORRIDOR PLAN  
SOUTHWEST DR P&P STA. 82+50 TO 88+00

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SOUTHWEST DRIVE CORRIDOR PLAN  
SOUTHWEST DR P&P STA. 88+00 TO 92+50

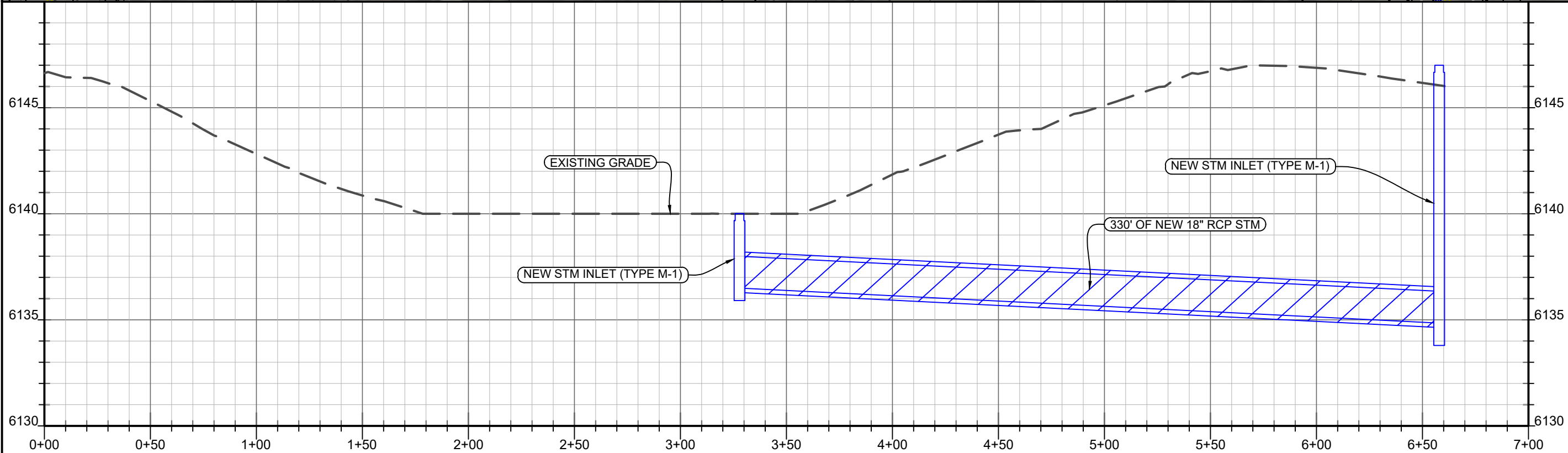
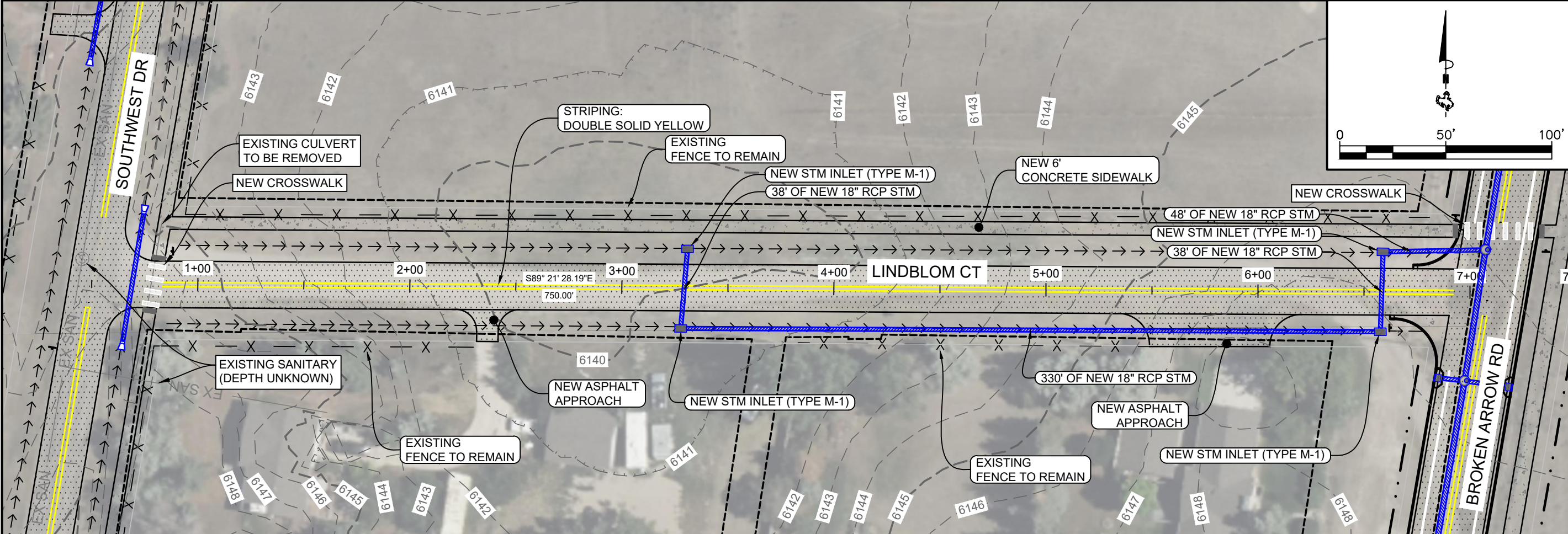
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SOUTHWEST DRIVE CORRIDOR PLAN  
LINDBLOM CT P&P STA. 0+00 TO 7+00

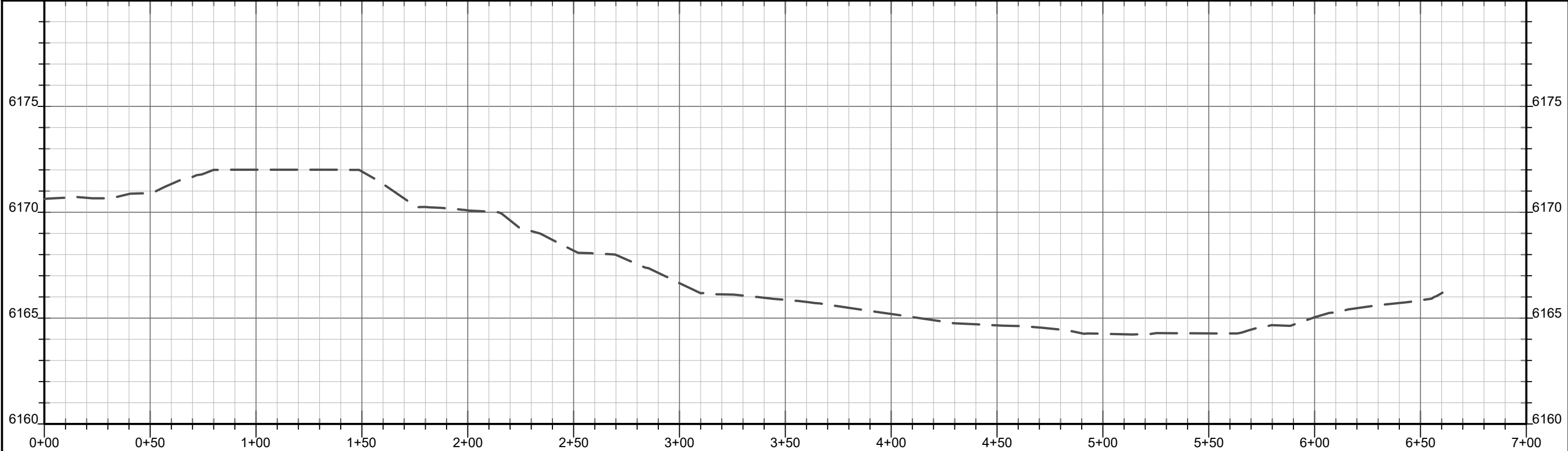
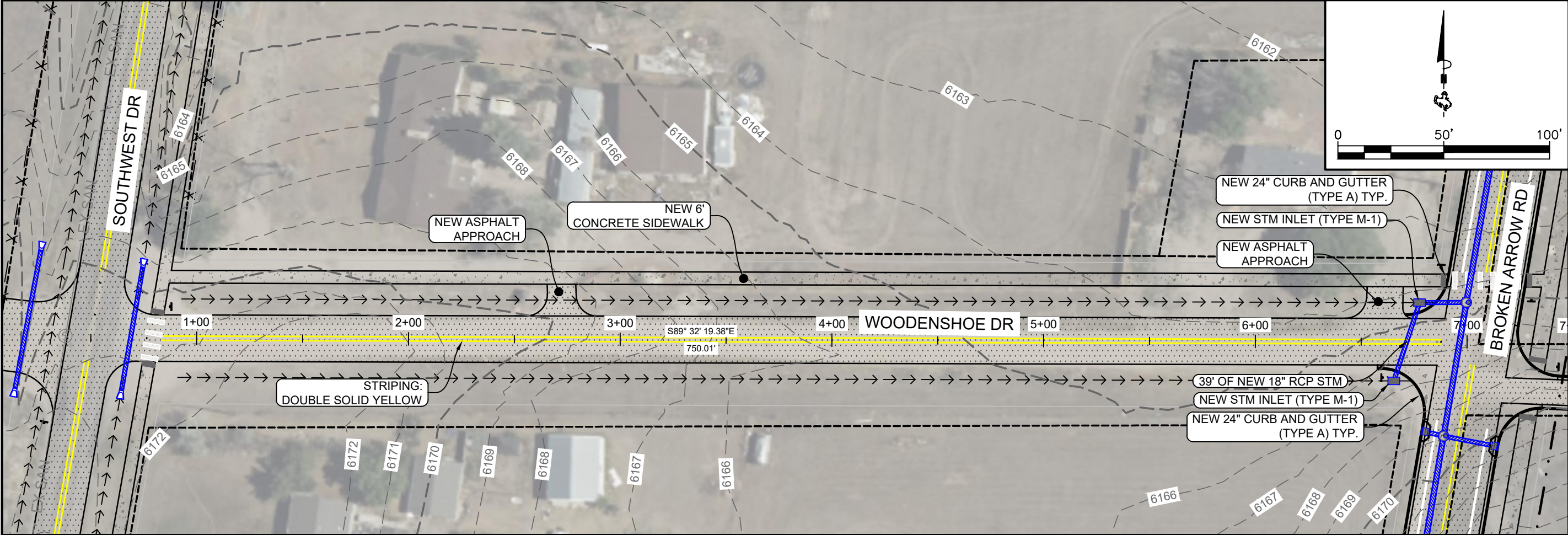
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SOUTHWEST DRIVE CORRIDOR PLAN  
WOODENSHOE DR P&P 0+00 TO 7+00

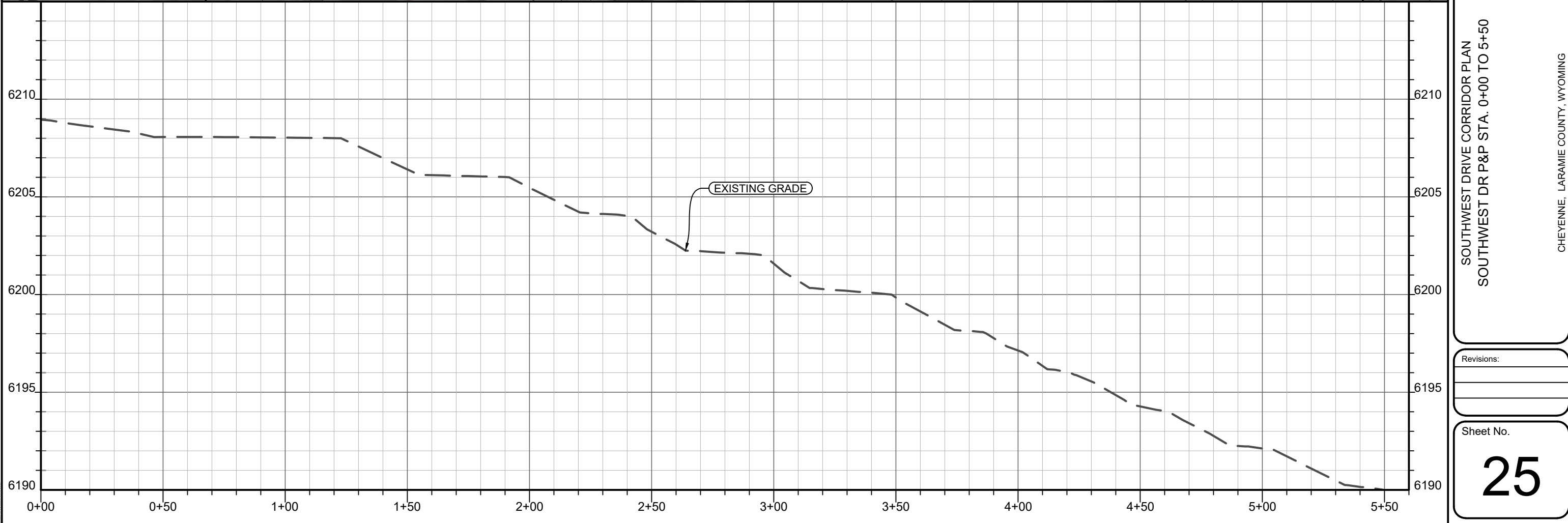
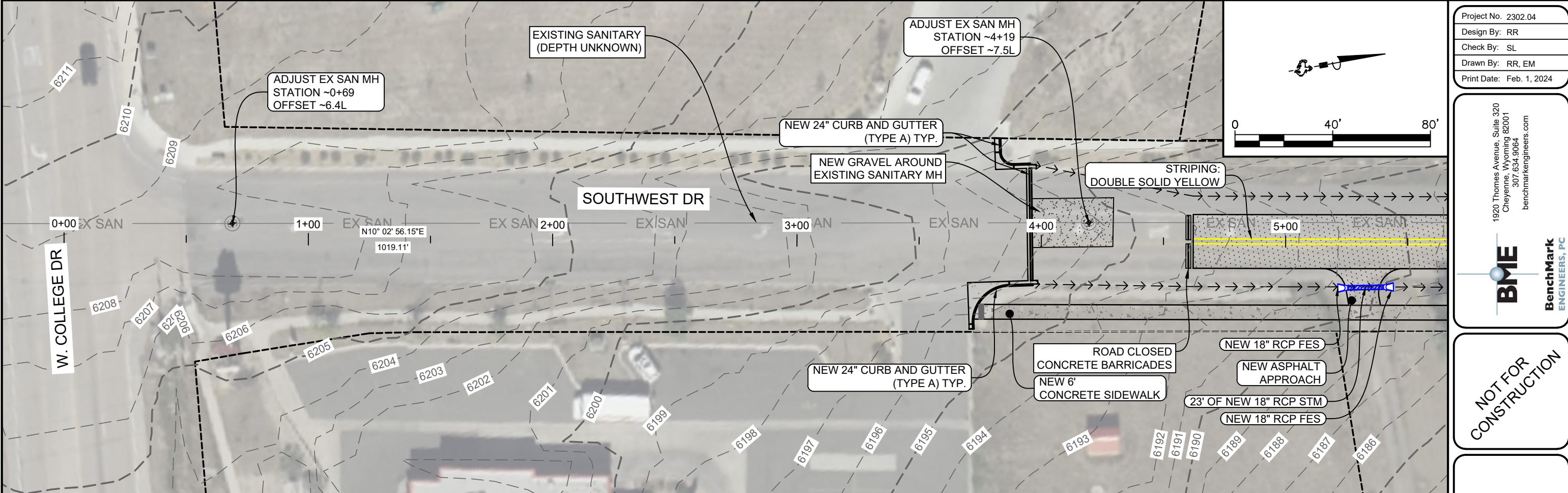
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Revisions:

Sheet No.

24





Project No. 2302.04  
Design By: RR  
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Drawn By: RR, EM  
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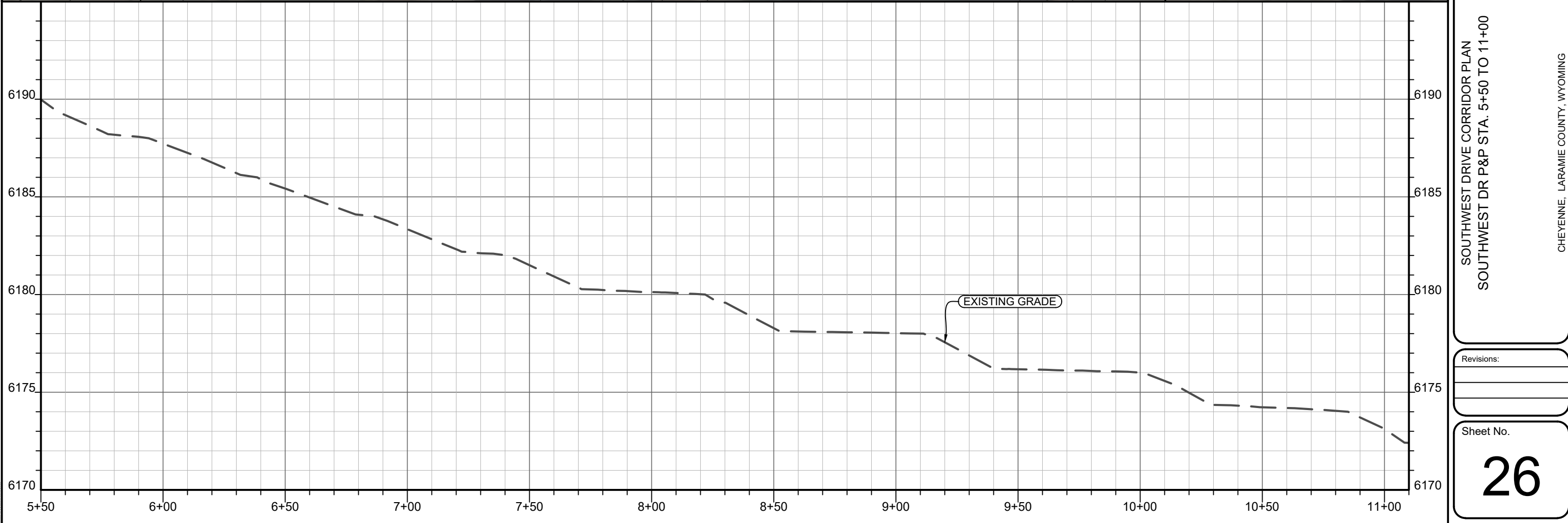
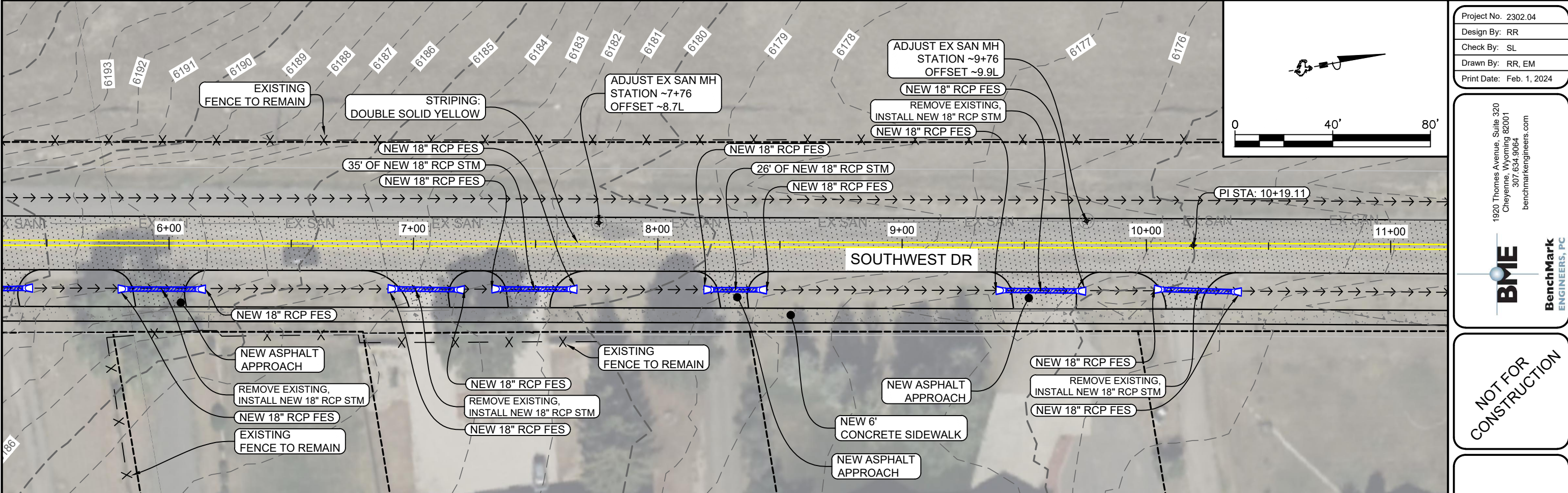
NOT FOR  
CONSTRUCTION

SOUTHWEST DRIVE CORRIDOR PLAN  
SOUTHWEST DR P&P STA. 0+00 TO 5+50

CHEYENNE, LARAMIE COUNTY, WYOMING

Revisions:

Sheet No.  
**25**



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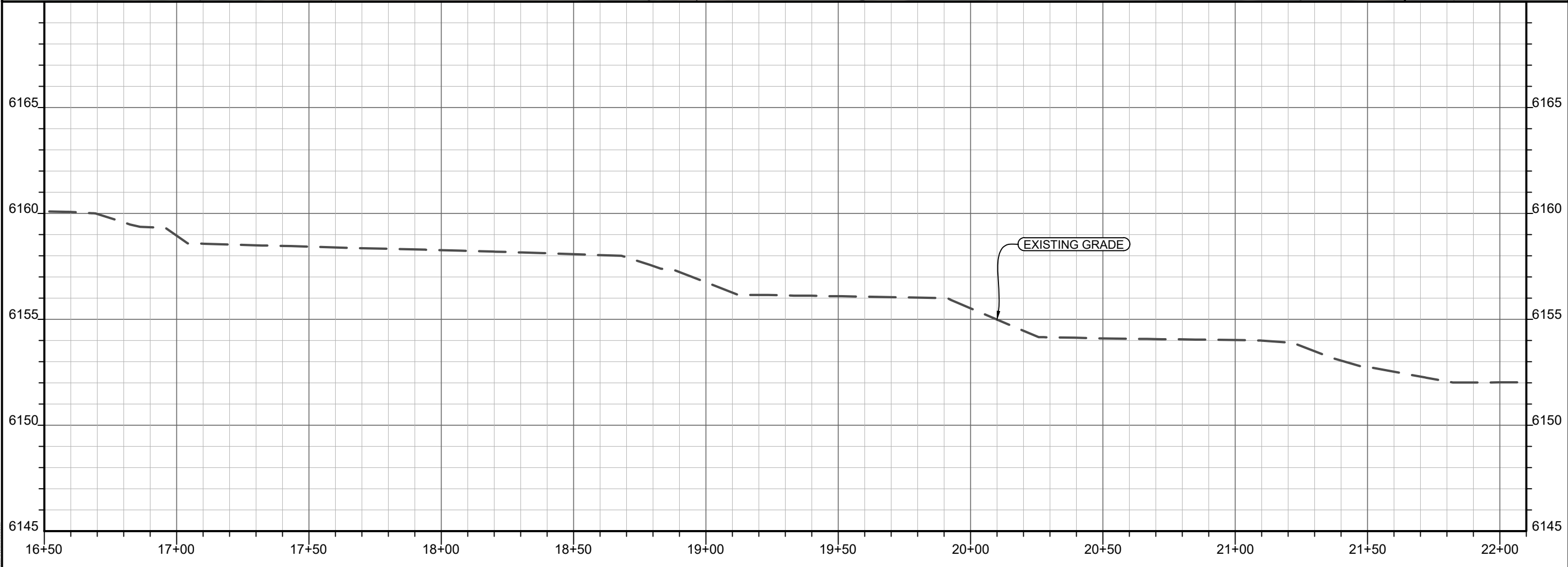
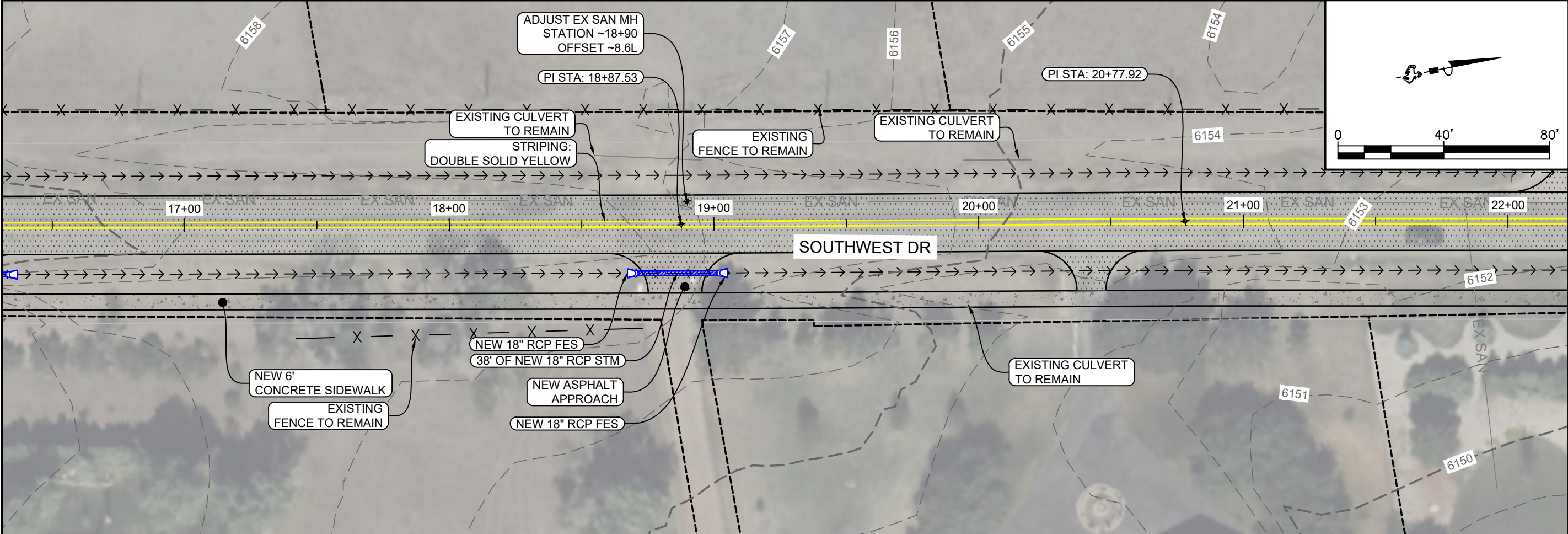
SOUTHWEST DRIVE CORRIDOR PLAN  
SOUTHWEST DR P&P STA. 5+50 TO 11+00  
CHEYENNE, LARAMIE COUNTY, WYOMING

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**26**







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SOUTHWEST DRIVE CORRIDOR PLAN  
SOUTHWEST DR P&P STA. 16+50 TO 22+00

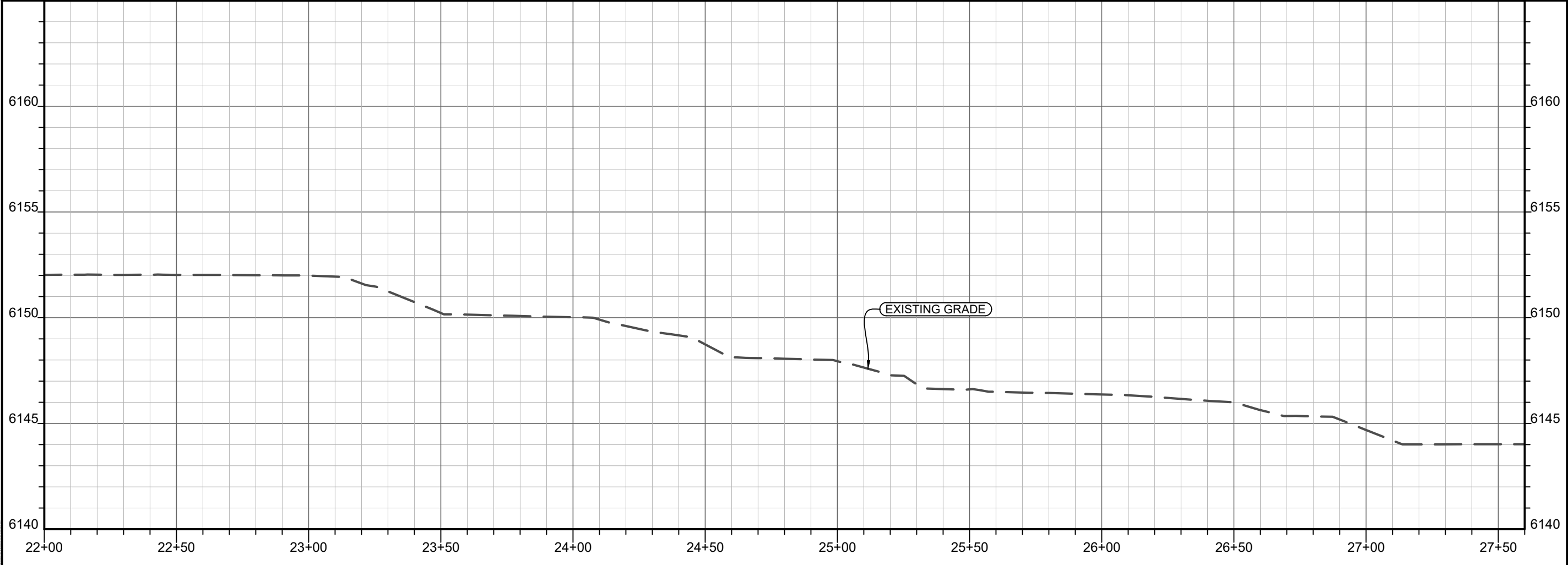
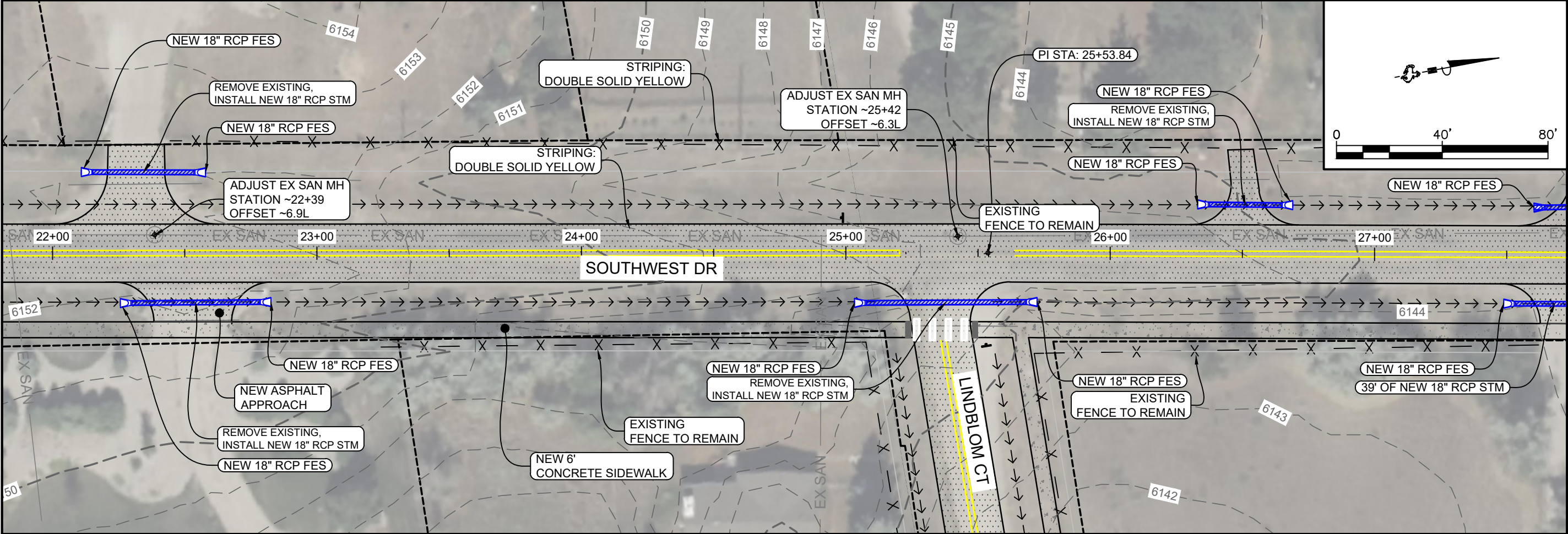
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**28**





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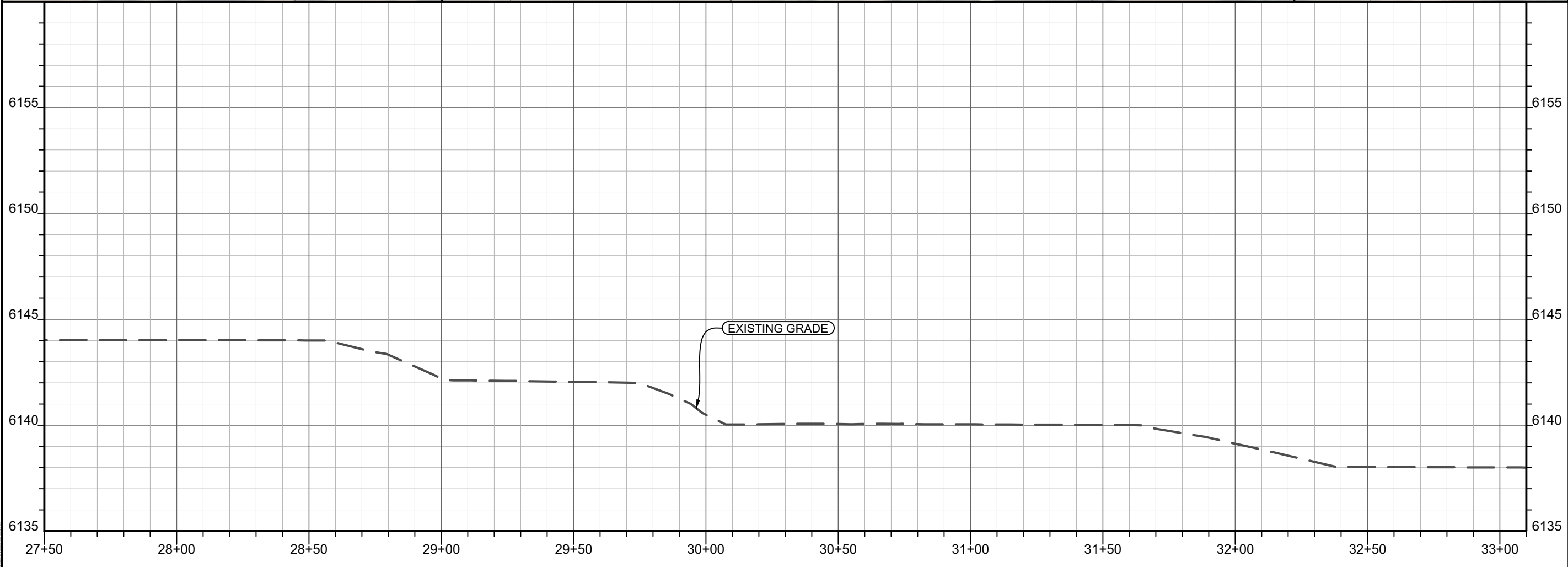
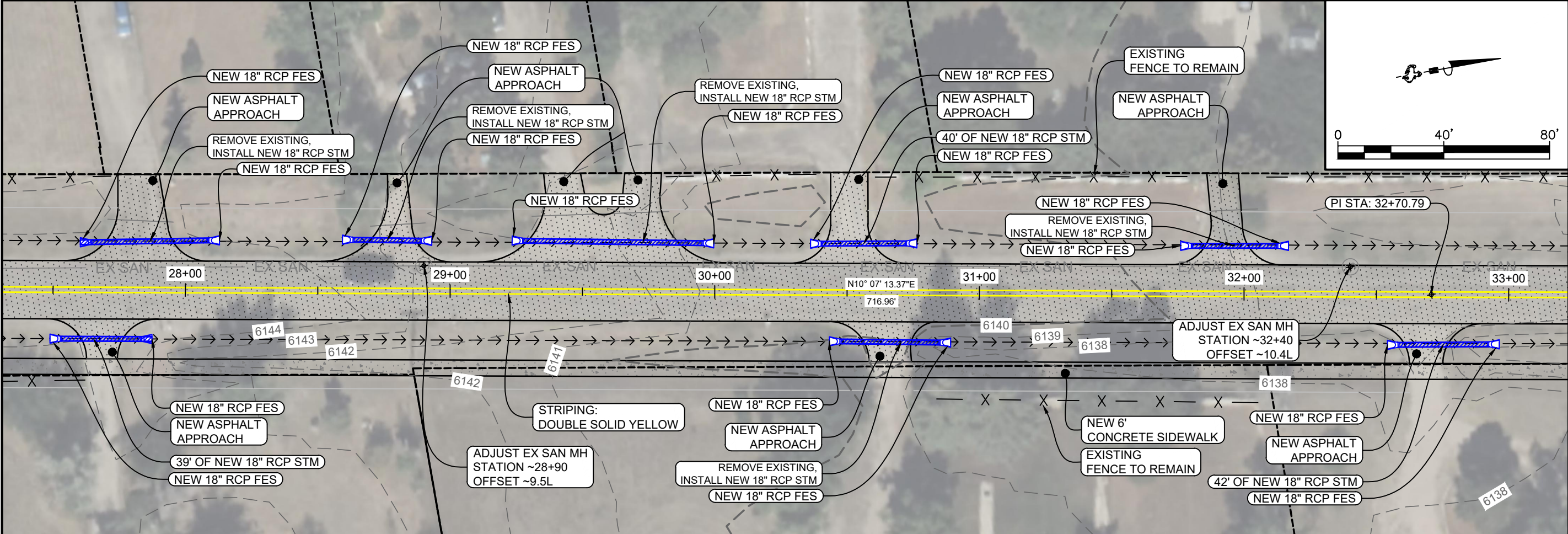
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SOUTHWEST DRIVE CORRIDOR PLAN  
SOUTHWEST DR P&P STA. 22+00 TO 27+50

CHEYENNE, LARAMIE COUNTY, WYOMING

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**29**



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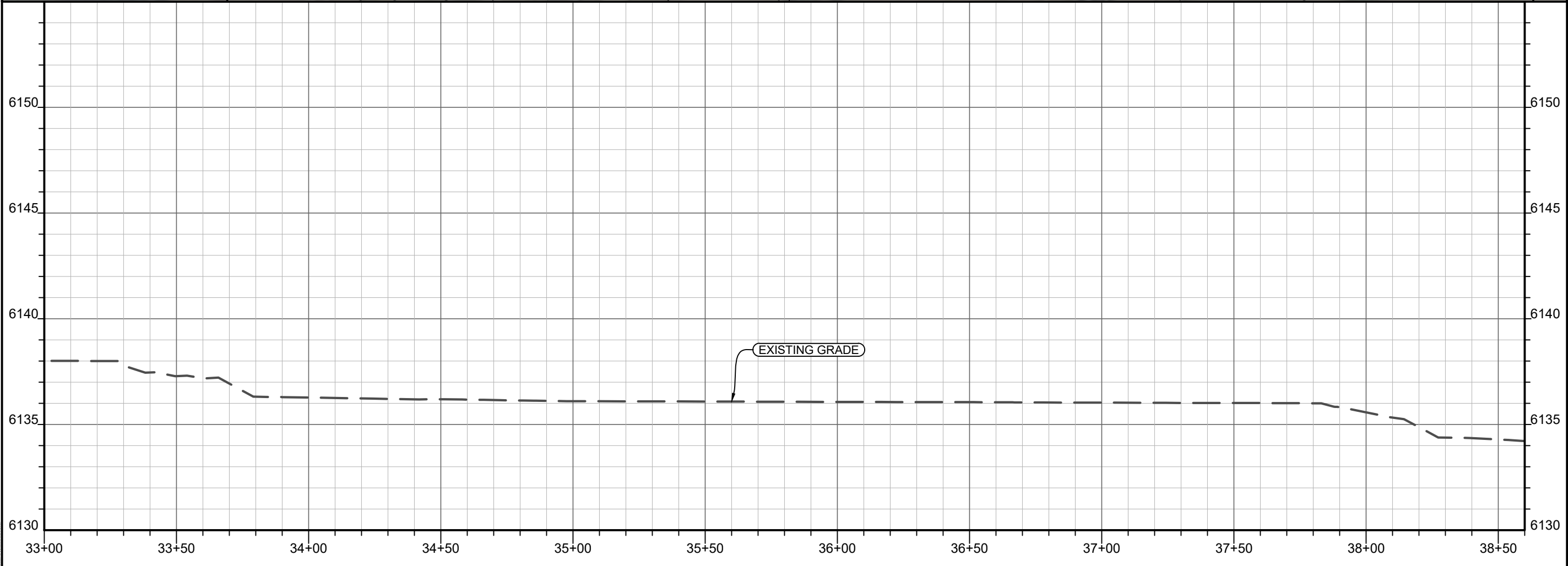
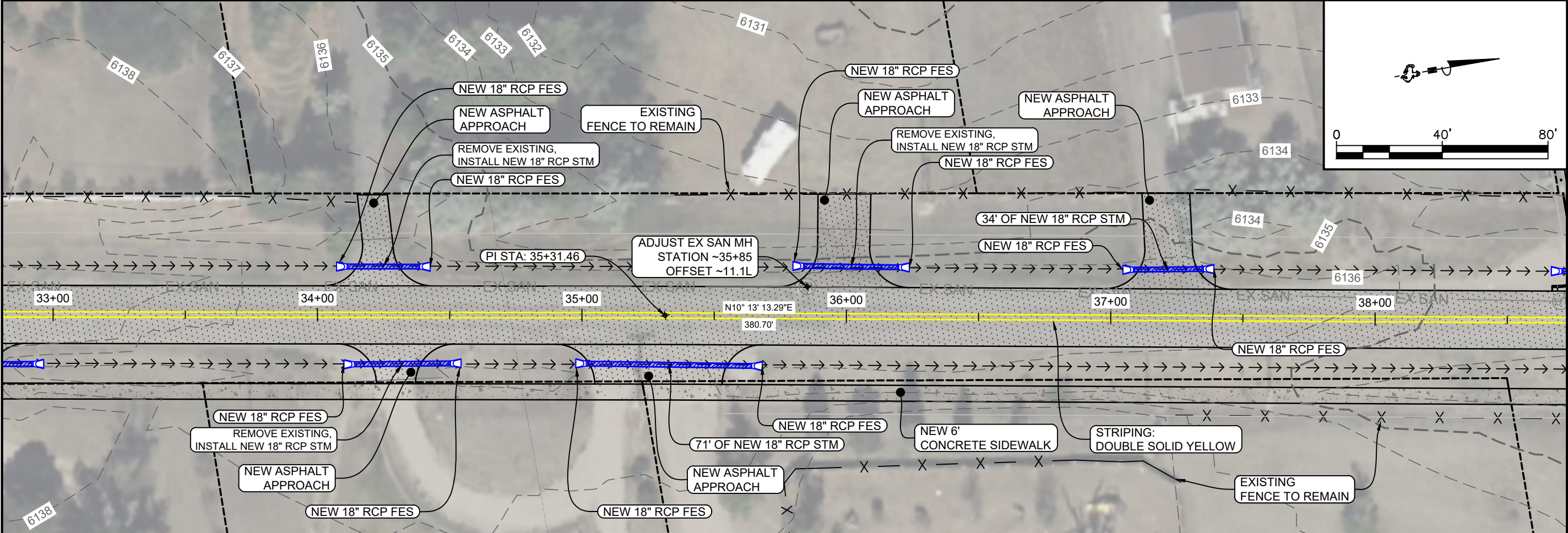
SOUTHWEST DRIVE CORRIDOR PLAN  
SOUTHWEST DR P&P STA. 27+50 TO 33+00

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**30**





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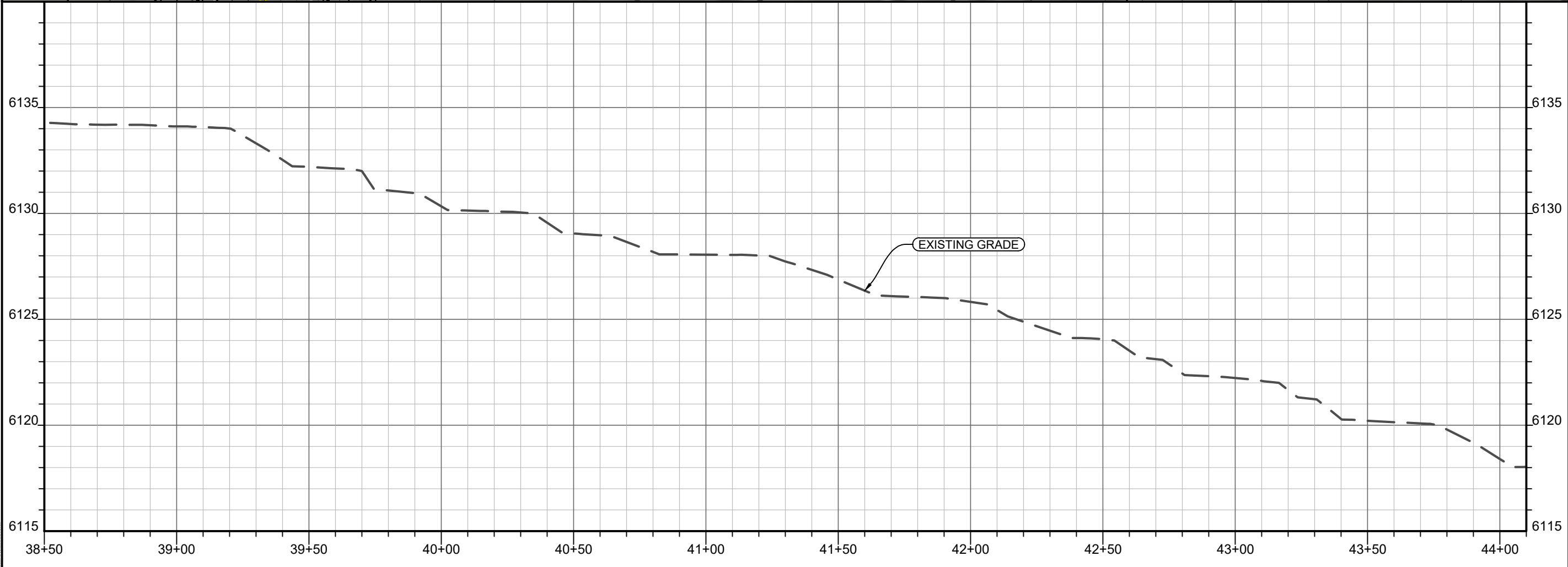
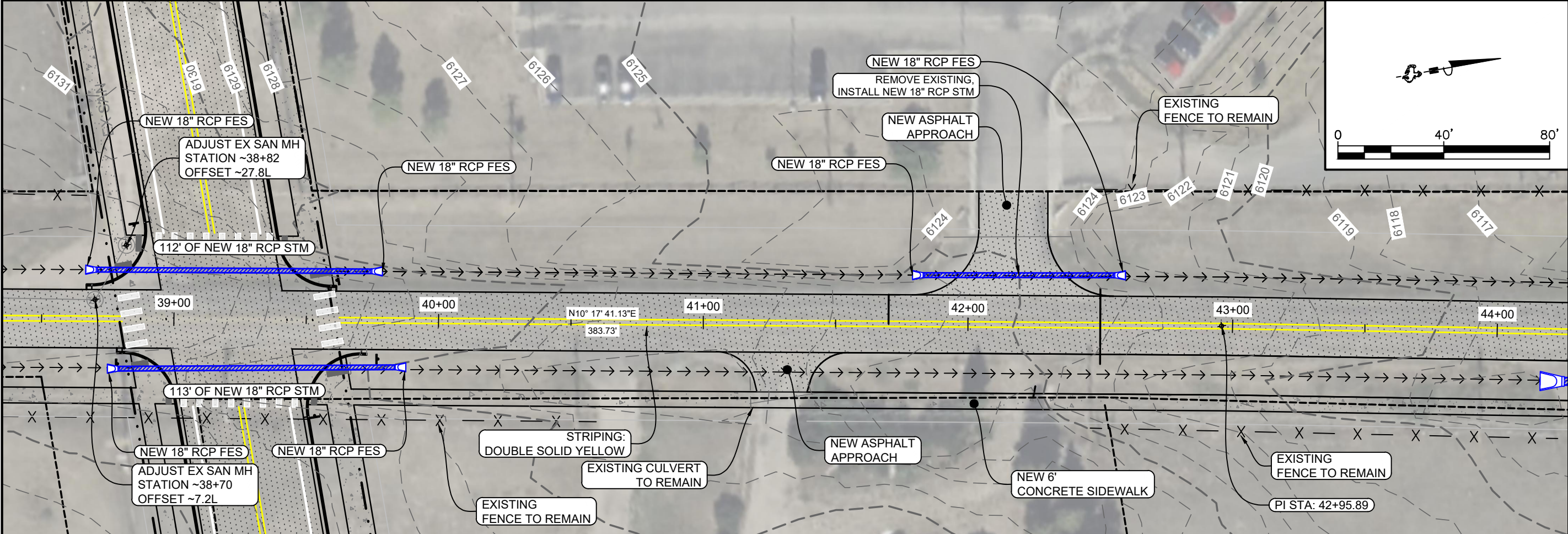
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SOUTHWEST DR P&P STA. 33+00 TO 38+50

CHEYENNE, LARAMIE COUNTY, WYOMING

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31



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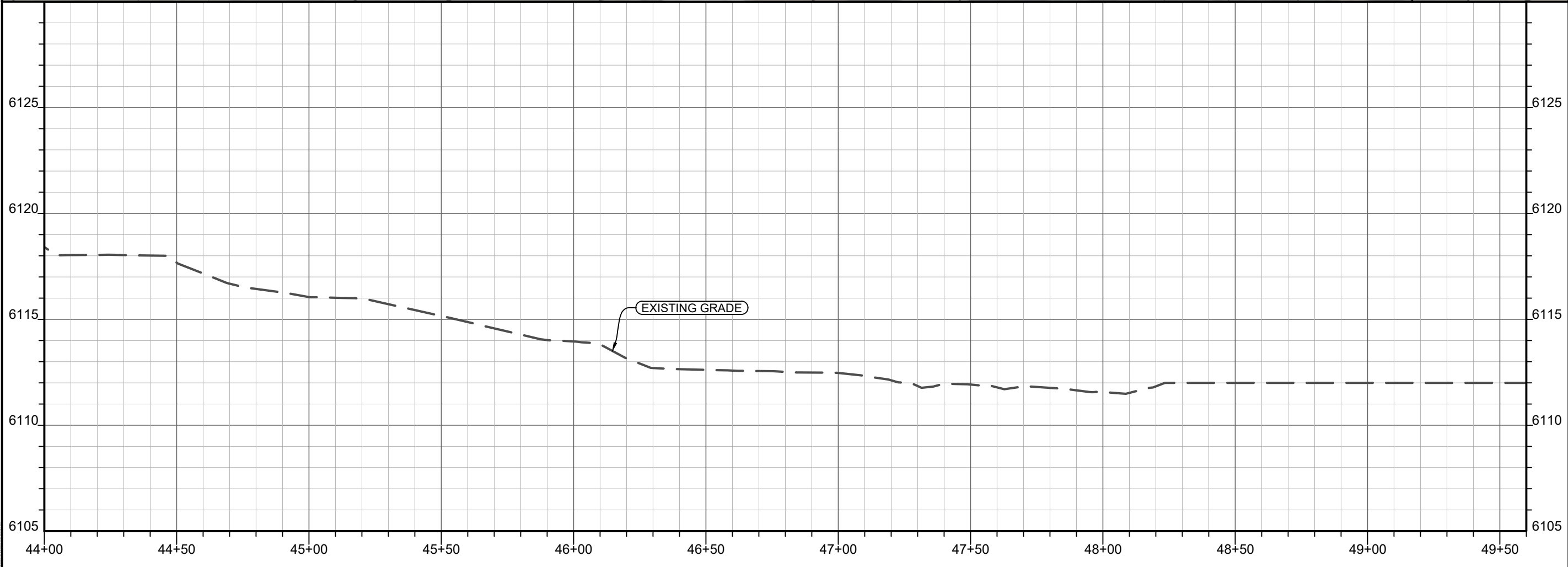
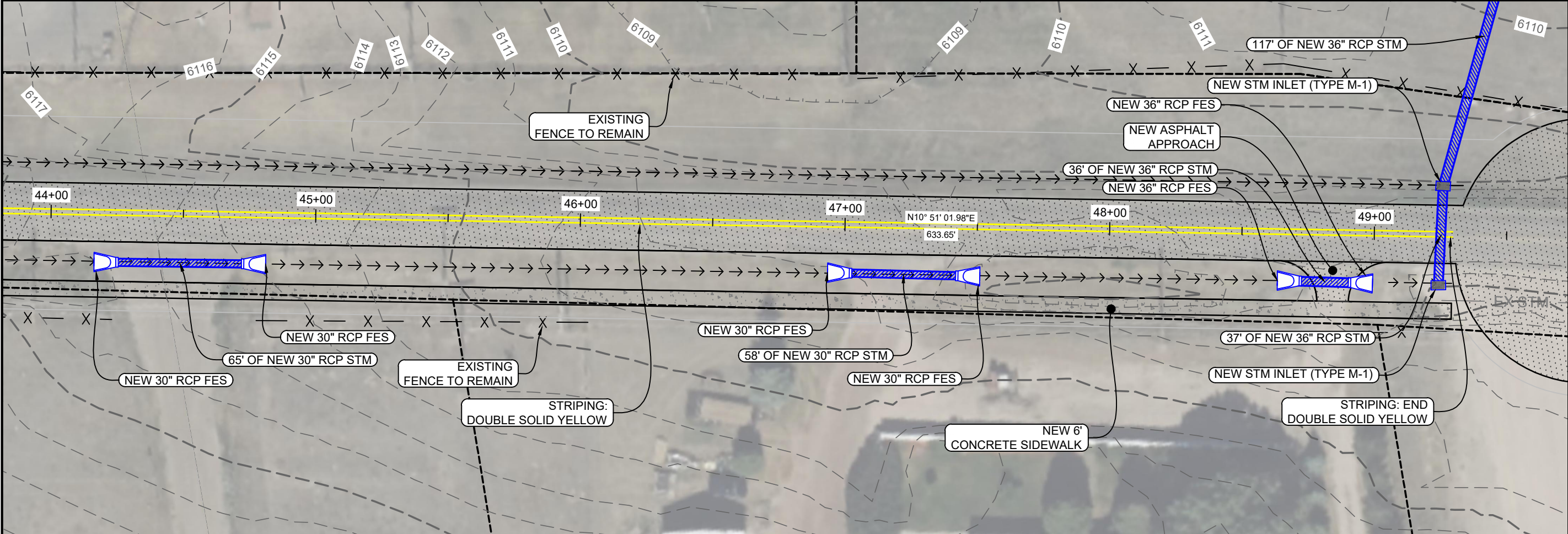
SOUTHWEST DRIVE CORRIDOR PLAN  
SOUTHWEST DR P&P STA. 38+50 TO 44+00

CHEYENNE, LARAMIE COUNTY, WYOMING

Revisions:

Sheet No.  
**32**





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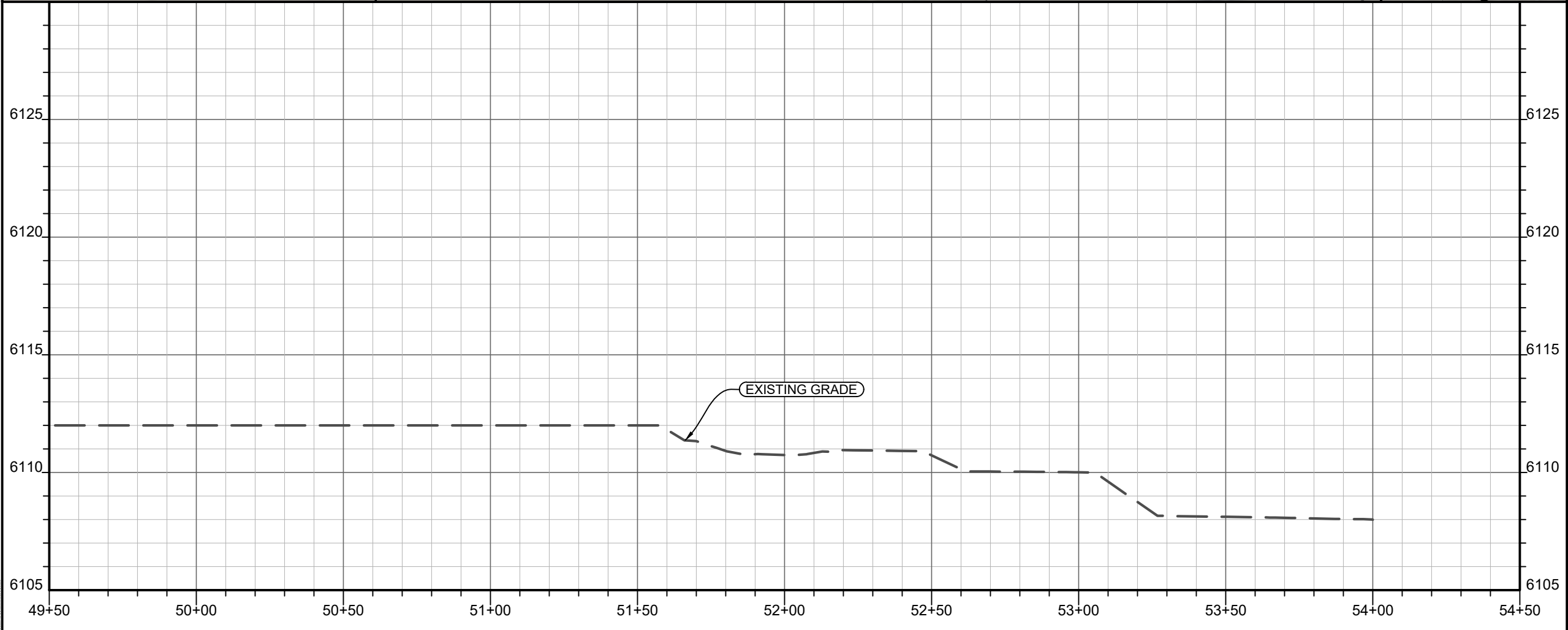
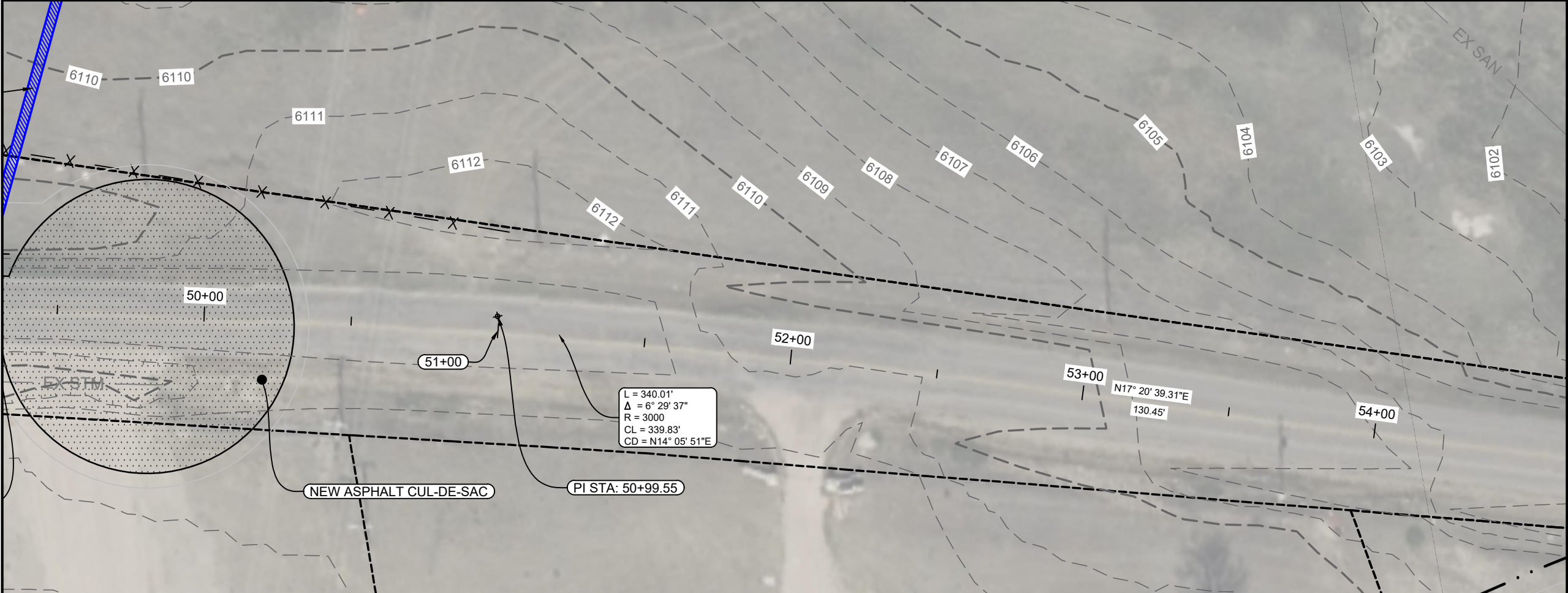
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CONSTRUCTION

SOUTHWEST DRIVE CORRIDOR PLAN  
SOUTHWEST DR P&P STA. 44+00 TO 49+50  
  
CHEYENNE, LARAMIE COUNTY, WYOMING

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Sheet No.  
**33**



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SOUTHWEST DRIVE CORRIDOR PLAN  
SOUTHWEST DR P&P STA. 49+50 TO 54+50

CHEYENNE, LARAMIE COUNTY, WYOMING

Revisions:

Sheet No.

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# APPENDIX II

## CONSTRUCTION COST ESTIMATE



## Southwest Drive 35% Cost Estimate, Short Term Recommendation

(Milling & overlay of Southwest Dr)

Item No.	Description	Unit	Estimated Quantity	Unit Price	Total Cost
1	Mobilization	LS	1	\$53,060.00	\$53,060
2	Bonds and Insurance	LS	1	\$15,918.00	\$15,918
3	Traffic Control	LS	1	\$26,530.00	\$26,530
4	Quality Control Testing	LS	1	\$15,918.00	\$15,918
5	1.5" Milling	SY	27,600	\$6.00	\$165,600
6	2" Overlay	SY	27,600	\$12.50	\$345,000
7	Force Account	\$	20,000	\$1.00	\$20,000

**Construction Total:     \$642,026**

**Engineering Design:     \$64,200**

**Construction Admin:     \$64,200**

**5% Contingency:     \$32,100**

**Project Total:     \$802,526**



## Southwest Drive 35% Cost Estimate, Intermediate Recommendation

(Broken Arrow Rd, Woodenshoe Dr, Lindblom Ct, Southwest Dr widening and sidewalk in closed off area, and Southwest Dr north of Broken Arrow Rd connection)

Item No.	Description	Unit	Estimated Quantity	Unit Price	Total Cost
1	Mobilization	LS	1	\$616,230.00	\$616,230
2	Bonds and Insurance	LS	1	\$123,250.00	\$123,250
3	Traffic Control	LS	1	\$246,490.00	\$246,490
4	Quality Control Testing	LS	1	\$246,490.00	\$246,490
5	Construction Surveying	LS	1	\$184,870.00	\$184,870
6	Erosion Control and Stormwater Management	LS	1	\$154,060.00	\$154,060
7	Removal of pipe (storm sewer/culverts)	LF	1,200	\$21.00	\$25,200
8	Remove Asphalt Pavement	SY	28,300	\$4.20	\$118,860
9	Remove Concrete Pavement (sidewalk, roadway, & approaches)	SY	160	\$15.00	\$2,400
10	Remove Curb and Gutter	LF	500	\$4.00	\$2,000
11	Clearing and Grubbing	LS	1	\$40,000.00	\$40,000
12	Relocate Existing Utilities	LS	1	\$125,000.00	\$125,000
13	Unclassified Excavation	LS	1	\$700,000.00	\$700,000
14	Crushed Base, Grading W, 4"	SY	10,300	\$5.30	\$54,590
15	Crushed Base, Grading W, 6"	SY	67,730	\$8.00	\$541,840
16	Plant Mix Bit. Pavement, 3"	SY	2,750	\$18.50	\$50,875
17	Plant Mix Bit. Pavement, 4"	SY	49,700	\$24.50	\$1,217,650
18	Adjust Sewer Manhole	EA	18	\$270.00	\$4,860
19	Adjust Water Valve Box	EA	5	\$420.00	\$2,100
20	Storm Inlet, Type A	EA	17	\$3,400.00	\$57,800
21	Storm Inlet, Type AA	EA	4	\$5,300.00	\$21,200
22	Storm Inlet, Type AAA	EA	9	\$7,200.00	\$64,800
23	Storm Inlet B	EA	1	\$3,400.00	\$3,400
24	Storm Inlet M-1	EA	13	\$6,800.00	\$88,400
25	Storm - RCP 18"	LF	2,880	\$130.00	\$374,400
26	Storm - RCP 24"	LF	3,820	\$160.00	\$611,200
27	Storm - RCP 30"	LF	2,330	\$190.00	\$442,700
28	Storm - RCP 36"	LF	300	\$220.00	\$66,000
29	FES - RCP 18"	EA	66	\$1,200.00	\$79,200
30	FES - RCP 24"	EA	4	\$1,600.00	\$6,400
31	FES - RCP 30"	EA	6	\$2,000.00	\$12,000
32	FES - RCP 36"	EA	4	\$3,000.00	\$12,000
33	Dryland Seeding	ACRE	8.5	\$2,500.00	\$21,250
34	Curb and Gutter, A, 24"	LF	17,900	\$24.00	\$429,600
35	Curb and Gutter, B, 24"	LF	730	\$24.00	\$17,520
36	Curb Turn Fillets	SF	6,100	\$8.50	\$51,850
37	Concrete Valley Pan	SF	2,320	\$8.50	\$19,720
38	Concrete Sidewalk, 4"	SF	92,500	\$7.40	\$684,500

39	Concrete Approach, 6"	SF	1,600	\$9.50	\$15,200
40	Concrete Approach, 8"	SF	1,040	\$12.50	\$13,000
41	Detectable Warning Plates	EA	105	\$200.00	\$21,000
42	Signs (new, allowance)	LS	1	\$30,000.00	\$30,000
43	Striping, White Edge Line	LF	17,500	\$0.45	\$7,875
44	Striping, Yellow Centerline	LF	14,300	\$0.80	\$11,440
45	Striping, Crosswalks	EA	12	\$1,200.00	\$14,400
46	Force Account	\$	100,000	\$1.00	\$100,000

**Construction Total:     \$7,733,620**

**Engineering Design:     \$928,030**

**Construction Admin:     \$618,690**

**Total with Engineering Design & Constr. Admin:     \$9,280,340**

**10% Contingency:     \$928,030**

**Project Total:     \$10,208,370**



## Swan Ranch Rd, Long Term

Item No.	Description	Unit	Estimated Quantity per Foot of Road	Unit Price	Total Cost per Foot of Road
1	Mobilization	LS	1	\$35.30	\$35.30
2	Bonds and Insurance	LS	1	\$7.10	\$7.10
3	Traffic Control	LS	1	\$14.10	\$14.10
4	Quality Control Testing	LS	1	\$14.10	\$14.10
5	Construction Surveying	LS	1	\$10.60	\$10.60
6	Erosion Control and Stormwater Management	LS	1	\$8.80	\$8.80
7	Clearing and Grubbing	LS	1	\$8.00	\$8.00
8	Crushed Base, Grading W, 4"	SY	1.78	\$5.30	\$9.42
9	Crushed Base, Grading W, 6"	SY	5.44	\$8.00	\$43.56
10	Plant Mix Bit. Pavement, 4"	SY	5.00	\$24.50	\$122.50
11	Dryland Seeding	SF	25.00	\$0.06	\$1.50
12	Curb and Gutter, A, 24"	LF	2.00	\$24.00	\$48.00
13	Concrete Sidewalk, 4"	SF	16.00	\$7.40	\$118.40
14	Striping, White Edge Line	LF	1.00	\$0.45	\$0.45
15	Striping, Yellow Centerline	LF	1.00	\$0.80	\$0.80

**Construction Total: \$442.63 per ft of road**

**Engineering Design: \$53.12 per ft of road**

**Construction Admin: \$35.41 per ft of road**

**Total with Engineering Design & Constr. Admin: \$531.16 per ft of road**

**10% Contingency: \$53.12 per ft of road**

**Project Total: \$584.28 per ft of road**

# APPENDIX III

## TRAIN DATA





# U. S. DOT CROSSING INVENTORY FORM

## DEPARTMENT OF TRANSPORTATION

FEDERAL RAILROAD ADMINISTRATION

OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For Private pathway grade crossings, complete the Header, Parts I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 20 and Part III Item 2.K. are required unless otherwise noted. An asterisk \* denotes an optional field.

<b>A. Revision Date</b> (MM/DD/YYYY) 05 / 14 / 2021	<b>B. Reporting Agency</b> <input checked="" type="checkbox"/> Railroad <input type="checkbox"/> Transit <input type="checkbox"/> State <input type="checkbox"/> Other	<b>C. Reason for Update (Select only one)</b> <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Change in Data  <input type="checkbox"/> Re-Open         </div> <div> <input type="checkbox"/> New Crossing  <input type="checkbox"/> Date Change Only         </div> <div> <input type="checkbox"/> Closed  <input type="checkbox"/> Change in Primary Operating RR         </div> <div> <input type="checkbox"/> No Train Traffic  <input checked="" type="checkbox"/> Admin. Correction         </div> <div> <input type="checkbox"/> Quiet Zone Update         </div> </div>	<b>D. DOT Crossing Inventory Number</b> 810600N
---	--	---	--

### Part I: Location and Classification Information

<b>1. Primary Operating Railroad</b> Union Pacific Railroad Company [UP]		<b>2. State</b> WYOMING		<b>3. County</b> LARAMIE	
<b>4. City / Municipality</b> <input checked="" type="checkbox"/> In <input type="checkbox"/> Near    CHEYENNE		<b>5. Street/Road Name &amp; Block Number</b> Southwest Drive (Street/Road Name)    * (Block Number)		<b>6. Highway Type &amp; No.</b> L	
<b>7. Do Other Railroads Operate a Separate Track at Crossing?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Specify RR			<b>8. Do Other Railroads Operate Over Your Track at Crossing?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Specify RR		
<b>9. Railroad Division or Region</b> <input type="checkbox"/> None    GREAT PLAINS		<b>10. Railroad Subdivision or District</b> <input type="checkbox"/> None    LARAMIE SUB		<b>11. Branch or Line Name</b> <input checked="" type="checkbox"/> None	
<b>12. RR Milepost</b> 0511.013 (prefix)   (nnnn.nnn)   (suffix)		<b>13. Line Segment</b> *			
<b>14. Nearest RR Timetable Station</b> *		<b>15. Parent RR (if applicable)</b> <input checked="" type="checkbox"/> N/A		<b>16. Crossing Owner (if applicable)</b> <input type="checkbox"/> N/A    UP	
<b>17. Crossing Type</b> <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private		<b>18. Crossing Purpose</b> <input checked="" type="checkbox"/> Highway <input type="checkbox"/> Pathway, Ped. <input type="checkbox"/> Station, Ped.		<b>19. Crossing Position</b> <input checked="" type="checkbox"/> At Grade <input type="checkbox"/> RR Under <input type="checkbox"/> RR Over	
<b>20. Public Access (if Private Crossing)</b> <input type="checkbox"/> Yes <input type="checkbox"/> No		<b>21. Type of Train</b> <input checked="" type="checkbox"/> Freight <input type="checkbox"/> Intercity Passenger <input type="checkbox"/> Commuter		<input type="checkbox"/> Transit <input type="checkbox"/> Shared Use Transit <input type="checkbox"/> Tourist/Other	
<b>22. Average Passenger Train Count Per Day</b> <input type="checkbox"/> Less Than One Per Day <input type="checkbox"/> Number Per Day 0					
<b>23. Type of Land Use</b> <input type="checkbox"/> Open Space <input type="checkbox"/> Farm <input type="checkbox"/> Residential <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Institutional <input type="checkbox"/> Recreational <input type="checkbox"/> RR Yard					
<b>24. Is there an Adjacent Crossing with a Separate Number?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No    If Yes, Provide Crossing Number			<b>25. Quiet Zone (FRA provided)</b> <input type="checkbox"/> No <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> Partial <input type="checkbox"/> Chicago Excused    Date Established 10/29/2014 12:00:		
<b>26. HSR Corridor ID</b> <input checked="" type="checkbox"/> N/A		<b>27. Latitude in decimal degrees</b> (WGS84 std: nn.nnnnnnn) 41.12287		<b>28. Longitude in decimal degrees</b> (WGS84 std: -nnn.nnnnnnn) -104.84021	
<b>29. Lat/Long Source</b> <input checked="" type="checkbox"/> Actual <input type="checkbox"/> Estimated					
<b>30.A. Railroad Use *</b>			<b>31.A. State Use *</b> ML		
<b>30.B. Railroad Use *</b>			<b>31.B. State Use *</b> 6736		
<b>30.C. Railroad Use *</b>			<b>31.C. State Use *</b> 1.711		
<b>30.D. Railroad Use *</b>			<b>31.D. State Use *</b> NOE 10/28/2014		
<b>32.A. Narrative (Railroad Use) *</b>			<b>32.B. Narrative (State Use) *</b>		
<b>33. Emergency Notification Telephone No. (posted)</b> 800-848-8715		<b>34. Railroad Contact (Telephone No.)</b> 402-544-3721		<b>35. State Contact (Telephone No.)</b> 307-777-4859	

### Part II: Railroad Information

<b>1. Estimated Number of Daily Train Movements</b>				
<b>1.A. Total Day Thru Trains (6 AM to 6 PM)</b> 13	<b>1.B. Total Night Thru Trains (6 PM to 6 AM)</b> 12	<b>1.C. Total Switching Trains</b> 14	<b>1.D. Total Transit Trains</b> 0	<b>1.E. Check if Less Than One Movement Per Day</b> <input type="checkbox"/> How many trains per week?
<b>2. Year of Train Count Data (YYYY)</b> 2019				
<b>3. Speed of Train at Crossing</b> 3.A. Maximum Timetable Speed (mph) 40 3.B. Typical Speed Range Over Crossing (mph) From 20 to 40				
<b>4. Type and Count of Tracks</b> Main 4    Siding 0    Yard 0    Transit 0    Industry 0				
<b>5. Train Detection (Main Track only)</b> <input checked="" type="checkbox"/> Constant Warning Time <input type="checkbox"/> Motion Detection <input type="checkbox"/> AFO <input type="checkbox"/> PTC <input type="checkbox"/> DC <input type="checkbox"/> Other <input type="checkbox"/> None				
<b>6. Is Track Signaled?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<b>7.A. Event Recorder</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<b>7.B. Remote Health Monitoring</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

# U. S. DOT CROSSING INVENTORY FORM

A. Revision Date (MM/DD/YYYY) 05/14/2021		PAGE 2		D. Crossing Inventory Number (7 char.) 810600N	
<b>Part III: Highway or Pathway Traffic Control Device Information</b>					
1. Are there Signs or Signals?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		2. Types of Passive Traffic Control Devices associated with the Crossing			
2.A. Crossbuck Assemblies (count) 0		2.B. STOP Signs (R1-1) (count) 0	2.C. YIELD Signs (R1-2) (count)	2.D. Advance Warning Signs (Check all that apply; include count) <input type="checkbox"/> None <input checked="" type="checkbox"/> W10-1 1 <input type="checkbox"/> W10-3 <input type="checkbox"/> W10-11 <input type="checkbox"/> W10-2 <input type="checkbox"/> W10-4 <input type="checkbox"/> W10-12	
2.E. Low Ground Clearance Sign (W10-5) <input type="checkbox"/> Yes (count 0) <input checked="" type="checkbox"/> No		2.F. Pavement Markings <input checked="" type="checkbox"/> Stop Lines <input type="checkbox"/> Dynamic Envelope <input checked="" type="checkbox"/> RR Xing Symbols <input type="checkbox"/> None		2.G. Channelization Devices/Medians <input checked="" type="checkbox"/> All Approaches <input type="checkbox"/> Median <input type="checkbox"/> One Approach <input type="checkbox"/> None	
2.H. EXEMPT Sign (R15-3) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		2.I. ENS Sign (I-13) Displayed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
2.J. Other MUTCD Signs <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Specify Type _____ Count 2 Specify Type _____ Count 3 Specify Type _____ Count _____			2.K. Private Crossing Signs (if private) <input type="checkbox"/> Yes <input type="checkbox"/> No		
2.L. LED Enhanced Signs (List types)					
<b>3. Types of Train Activated Warning Devices at the Grade Crossing (specify count of each device for all that apply)</b>					
3.A. Gate Arms (count)  Roadway 2 Pedestrian _____		3.B. Gate Configuration <input checked="" type="checkbox"/> 2 Quad <input type="checkbox"/> Full (Barrier) <input type="checkbox"/> 3 Quad   Resistance <input type="checkbox"/> 4 Quad   Median Gates		3.C. Cantilevered (or Bridged) Flashing Light Structures (count) Over Traffic Lane 0 <input type="checkbox"/> Incandescent Not Over Traffic Lane 0 <input type="checkbox"/> LED	
3.D. Mast Mounted Flashing Lights (count of masts) 2 <input type="checkbox"/> Incandescent <input checked="" type="checkbox"/> LED <input checked="" type="checkbox"/> Back Lights Included <input type="checkbox"/> Side Lights Included		3.E. Total Count of Flashing Light Pairs 4			
3.F. Installation Date of Current Active Warning Devices: (MM/YYYY) _____/_____/_____ <input type="checkbox"/> Not Required		3.G. Wayside Horn <input type="checkbox"/> Yes   Installed on (MM/YYYY) ____/____/_____ <input checked="" type="checkbox"/> No		3.H. Highway Traffic Signals Controlling Crossing <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
3.I. Bells (count) 2		3.J. Non-Train Active Warning <input type="checkbox"/> Flagging/Flagman <input type="checkbox"/> Manually Operated Signals <input type="checkbox"/> Watchman <input type="checkbox"/> Floodlighting <input type="checkbox"/> None			
3.K. Other Flashing Lights or Warning Devices Count 0   Specify type _____					
4.A. Does nearby Hwy Intersection have Traffic Signals? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		4.B. Hwy Traffic Signal Interconnection <input type="checkbox"/> Not Interconnected <input checked="" type="checkbox"/> For Traffic Signals <input type="checkbox"/> For Warning Signs		4.C. Hwy Traffic Signal Preemption <input checked="" type="checkbox"/> Simultaneous <input type="checkbox"/> Advance	
5. Highway Traffic Pre-Signals <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Storage Distance * _____ Stop Line Distance * _____		6. Highway Monitoring Devices (Check all that apply) <input type="checkbox"/> Yes - Photo/Video Recording <input type="checkbox"/> Yes - Vehicle Presence Detection <input type="checkbox"/> None			
<b>Part IV: Physical Characteristics</b>					
1. Traffic Lanes Crossing Railroad <input type="checkbox"/> One-way Traffic <input checked="" type="checkbox"/> Two-way Traffic Number of Lanes 2 <input type="checkbox"/> Divided Traffic		2. Is Roadway/Pathway Paved? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		3. Does Track Run Down a Street? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
4. Is Crossing Illuminated? (Street lights within approx. 50 feet from nearest rail) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
5. Crossing Surface (on Main Track, multiple types allowed)   Installation Date * (MM/YYYY) ____/____/_____ <input type="checkbox"/> 1 Timber <input type="checkbox"/> 2 Asphalt <input type="checkbox"/> 3 Asphalt and Timber <input checked="" type="checkbox"/> 4 Concrete <input type="checkbox"/> 5 Concrete and Rubber <input type="checkbox"/> 6 Rubber <input type="checkbox"/> 7 Metal <input type="checkbox"/> 8 Unconsolidated <input type="checkbox"/> 9 Composite <input type="checkbox"/> 10 Other (specify) _____					
6. Intersecting Roadway within 500 feet? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No   If Yes, Approximate Distance (feet) _____		7. Smallest Crossing Angle <input type="checkbox"/> 0° - 29° <input type="checkbox"/> 30° - 59° <input checked="" type="checkbox"/> 60° - 90°		8. Is Commercial Power Available? * <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Part V: Public Highway Information</b>					
1. Highway System <input type="checkbox"/> (01) Interstate Highway System <input type="checkbox"/> (02) Other Nat Hwy System (NHS) <input type="checkbox"/> (03) Federal AID, Not NHS <input checked="" type="checkbox"/> (08) Non-Federal AID		2. Functional Classification of Road at Crossing <input type="checkbox"/> (0) Rural <input checked="" type="checkbox"/> (1) Urban <input type="checkbox"/> (1) Interstate <input checked="" type="checkbox"/> (5) Major Collector <input type="checkbox"/> (2) Other Freeways and Expressways <input type="checkbox"/> (3) Other Principal Arterial <input type="checkbox"/> (6) Minor Collector <input type="checkbox"/> (4) Minor Arterial <input type="checkbox"/> (7) Local		3. Is Crossing on State Highway System? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 5. Linear Referencing System (LRS Route ID) * ML6736B 6. LRS Milepost * 1.711	
4. Highway Speed Limit 30 _____ MPH <input checked="" type="checkbox"/> Posted <input type="checkbox"/> Statutory					
7. Annual Average Daily Traffic (AADT) Year 2019   AADT 1300		8. Estimated Percent Trucks 13 _____ %		9. Regularly Used by School Buses? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   Average Number per Day 0	
10. Emergency Services Route <input type="checkbox"/> Yes <input type="checkbox"/> No					
<b>Submission Information - This information is used for administrative purposes and is not available on the public website.</b>					
Submitted by _____ Organization _____ Phone _____ Date _____  Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.					



1. Name of Reporting Railroad <b>Union Pacific Railroad Company [UP]</b>				1a. Alphabetic Code <b>UP</b>		1b. Railroad Accident/Incident No. <b>0312DV018</b>	
2. Name of Other Railroad or Other Entity Filling for Equipment Involved in Train Accident/Incident				2a. Alphabetic Code		2b. Railroad Accident/Incident No.	
3. Name of Railroad or Other Entity Responsible for Track Maintenance (single entry) <b>Union Pacific Railroad Company [UP]</b>				3a. Alphabetic Code <b>UP</b>		3b. Railroad Accident/Incident No. <b>0312DV018</b>	
4. U.S. DOT Grade Crossing ID No. <b>810600N</b>				5. Date of Accident/Incident month   day   year <b>0   3   3   0   2012</b>		6. Time of Accident/Incident <b>4:40</b> AM <input type="checkbox"/> PM <input checked="" type="checkbox"/>	
7. Nearest Railroad Station <b>WEST CHEYENNE</b>		8. Subdivision <b>LARAMIE SUB</b>		9. County <b>LARAMIE</b>		10. State Abbr. <b>WY</b> Code <b>56</b>	
11. City (if in a city) <b>CHEYENNE</b>			12. Highway Name or No. <b>SOUTHWEST DRIVE</b> Public <input checked="" type="checkbox"/> Private <input type="checkbox"/>				
Highway User Involved				Rail Equipment Involved			
13. Type C. Truck-trailer F. Bus J. Other Motor Vehicle A. Auto D. Pick-up truck G. School Bus K. Pedestrian B. Truck E. Van H. Motorcycle M. Other (specify) Code A				17. Equipment 1. Train (units pulling) 2. Train (units pushing) 3. Train (standing) 4. Car(s) (moving) 5. Car(s) (standing) 6. Light loco(s) (moving) 7. Light loco(s) (standing) 8. Other (specify) A. Train pulling- RCL B. Train pushing- RCL C. Train standing- RCL D. EMU Locomotive(s) E. DMU Locomotive(s) Code 2			
14. Vehicle Speed (est. mph at impact) <b>4</b>		15. Direction (geographical) 1. North 2. South 3. East 4. West Code 1		18. Position of Car Unit in Train <b>1</b>			
16. Position 1. Stalled or stuck on crossing 2. Stopped on Crossing 3. Moving over crossing Code 3		4. Trapped on crossing by traffic 5. Blocked on crossing by gates		19. Circumstance 1. Rail equipment struck highway user 2. Rail equipment struck by highway user Code 1			
20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials? 1. Highway User 2. Rail Equipment 3. Both 4. Neither Code 2		20b. Was there a hazardous materials release by 1. Highway User 2. Rail Equipment 3. Both 4. Neither Code 4					
20c. State here the name and quantity of the hazardous material released, if any							
21. Temperature (specify if minus) <b>60</b> °F		22. Visibility (single entry) 1. Dawn 2. Day 3. Dusk 4. Dark Code 2		23. Weather (single entry) 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow Code 2			
24. Type of Equipment Consist (single entry) 1. Freight Train 2. Passenger Train-Pulling 3. Commuter Train-Pulling 4. Work Train 5. Single Car 6. Cut of cars 7. Yard/Switching 8. Light loco(s) 9. Maint./inspect. car A. Spec. MoW Equip. B. Passenger Train-Pushing C. Commuter Train-Pushing D. EMU E. DMU Code 1		25. Track Type Used by Rail Equipment Involved 1. Main 2. Yard 3. Siding 4. Industry Code 1		26. Track Number or Name <b>NO. 4 MAIN</b>			
27. FRA Track Class (1-9,X) <b>1</b>		28. Number of Locomotive Units <b>4</b>		29. Number of Cars <b>77</b>		30. Consist Speed (Recorded speed if available) R. Recorded E. Estimated <b>4</b> mph Code E	
31. Time Table Direction 1. North 2. South 3. East 4. West Code 4		32. Type of Crossing Warning 1. Gates 2. Cantilever FLS 3. Standard FLS 4. Wig wags 5. Hwy. traffic signals 6. Audible 7. Crossbucks 8. Stop signs 9. Watchman 10. Flagged by crew 11. Other (specify) 12. None Code(s) <b>01 03 05 06 07</b>		33. Signaled Crossing Warning (See reverse side for instructions and codes) Code 1		34. Roadway Conditions A. Dry B. Wet C. Snow/Slush D. Ice E. Sand, Mud, Dirt, Oil, Gravel F. Water (Standing, Moving) Code A	
35. Location of Warning 1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach Code 1		36. Crossing Warning Interconnected with Highway Signals 1. Yes 2. No 3. Unknown Code 1		37. Crossing Illuminated by Street Lights or Special Lights 1. Yes 2. No 3. Unknown Code 2			
38. Highway User's Age <b>36</b>		39. Highway User's Gender 1. Male 2. Female Code 2		40. Highway User Went Behind or in Front of Train and Struck or was Struck by Second Train 1. Yes 2. No 3. Unknown Code 2		41. Highway User 1. Went around the gate 2. Stopped and then proceeded 3. Did not stop 4. Stopped on crossing 5. Other (specify) 6. Went around/thru temporary barricade (if yes, see instructions) 7. Went thru the gate 8. Suicide/Attempted suicide Code 7	
42. Driver Passed Standing Highway Vehicle 1. Yes 2. No 3. Unknown Code 2		43. View of Track Obscured by (primary obstruction) 1. Permanent Structure 2. Standing railroad equipment 3. Passing Train 4. Topography 5. Vegetation 6. Highway Vehicles 7. Other (specify) 8. Not Obstructed Code 8		44. Driver was 1. Killed 2. Injured 3. Uninjured Code 3			
45. Was Driver in the Vehicle? 1. Yes 2. No Code 1		46. Highway-Rail Crossing Users <b>0</b>		47. Highway Vehicle Property Damage (est. dollar damage) <b>\$2,000</b>		48. Total Number of Vehicle Occupants (including driver) <b>4</b>	
49. Railroad Employees <b>0</b>		50. Total Number of People on Train (include passengers and train crew) <b>2</b>		51. Is a Rail Equipment Accident / Incident Report Being Filed 1. Yes 2. No Code 2			
52. Passengers on Train <b>0</b>		53a. Special Study Block Video Taken? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Video Used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		53b. Special Study Block			
54. Narrative Description (Be specific, and continue on separate sheet if necessary) <b>HIGHWAY USER'S ACTIONS: WENT THROUGH THE GATE - MOVING. DRIVER WENT UNDER THE GATE.</b>							
55. Typed Name and Title				56. Signature		57. Date	

NOTE: This report is part of the reporting railroad's accident report pursuant to the accident reports statute and, as such shall not "be admitted as evidence or used for any purpose in any suit or action for damages growing out of any matter mentioned in said report..." 49 U.S.C. 20903. See 49 C.F.R. 225.7 (b).

1. Name of Reporting Railroad <b>Union Pacific Railroad Company [UP]</b>				1a. Alphabetic Code <b>UP</b>		1b. Railroad Accident/Incident No. <b>0785WY203</b>	
2. Name of Other Railroad or Other Entity Filing for Equipment Involved in Train Accident/Incident				2a. Alphabetic Code		2b. Railroad Accident/Incident No.	
3. Name of Railroad or Other Entity Responsible for Track Maintenance (single entry) <b>Union Pacific Railroad Company [UP]</b>				3a. Alphabetic Code <b>UP</b>		3b. Railroad Accident/Incident No. <b>0785WY203</b>	
4. U.S. DOT Grade Crossing ID No. <b>810600N</b>				5. Date of Accident/Incident month   day   year <b>0   7   0   7   1985</b>		6. Time of Accident/Incident <b>11:22</b> AM <input type="checkbox"/> PM <input checked="" type="checkbox"/>	
7. Nearest Railroad Station <b>CHEYENNE</b>		8. Subdivision		9. County <b>LARAMIE</b>		10. State Abbr. <b>WY</b> Code <b>56</b>	
11. City (if in a city) <b>CHEYENNE</b>		12. Highway Name or No. <b>SOUTHWEST DR</b> Public <input checked="" type="checkbox"/> Private <input type="checkbox"/>					
Highway User Involved				Rail Equipment Involved			
13. Type C. Truck-trailer F. Bus J. Other Motor Vehicle A. Auto D. Pick-up truck G. School Bus K. Pedestrian Code B. Truck E. Van H. Motorcycle M. Other (specify) A				17. Equipment 1. Train (units pulling) 2. Train (units pushing) 3. Train (standing) 4. Car(s) (moving) 5. Car(s) (standing) 6. Light loco(s) (moving) 7. Light loco(s) (standing) 8. Other (specify) A. Train pulling- RCL B. Train pushing- RCL C. Train standing- RCL D. EMU Locomotive(s) E. DMU Locomotive(s) Code <b>1</b>			
14. Vehicle Speed (est. mph at impact) <b>25</b>		15. Direction (geographical) 1. North 2. South 3. East 4. West Code <b>1</b>		18. Position of Car Unit in Train <b>1</b>			
16. Position 1. Stalled or stuck on crossing 2. Stopped on Crossing 3. Moving over crossing 4. Trapped on crossing by traffic 5. Blocked on crossing by gates Code <b>3</b>		19. Circumstance 1. Rail equipment struck highway user 2. Rail equipment struck by highway user Code <b>2</b>					
20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials? 1. Highway User 2. Rail Equipment 3. Both 4. Neither Code <b>4</b>		20b. Was there a hazardous materials release by 1. Highway User 2. Rail Equipment 3. Both 4. Neither Code					
20c. State here the name and quantity of the hazardous material released, if any							
21. Temperature (specify if minus) <b>70</b> °F		22. Visibility (single entry) 1. Dawn 2. Day 3. Dusk 4. Dark Code <b>4</b>		23. Weather (single entry) 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow Code <b>1</b>			
24. Type of Equipment Consist (single entry) 1. Freight Train 2. Passenger Train-Pulling 3. Commuter Train-Pulling 4. Work Train 5. Single Car 6. Cut of cars 7. Yard/Switching 8. Light loco(s) 9. Maint./inspect. car A. Spec. MoW Equip. B. Passenger Train-Pushing C. Commuter Train-Pushing Code <b>1</b>		25. Track Type Used by Rail Equipment Involved 1. Main 2. Yard 3. Siding 4. Industry Code <b>1</b>		26. Track Number or Name <b>MAINLINE</b>			
27. FRA Track Class (1-9,X) <b>5</b>		28. Number of Locomotive Units <b>3</b>		29. Number of Cars <b>68</b>		30. Consist Speed (Recorded speed if available) R. Recorded E. Estimated <b>30</b> mph Code <b>E</b>	
31. Time Table Direction 1. North 3. East 2. South 4. West Code <b>4</b>		32. Type of Crossing 1. Gates 2. Cantilever FLS 3. Standard FLS 4. Wig wags 5. Hwy. traffic signals 6. Audible 7. Crossbucks 8. Stop signs 9. Watchman 10. Flagged by crew 11. Other (specify) 12. None Code(s) <b>01</b>		33. Signaled Crossing Warning (See reverse side for instructions and codes) Code <b>1</b>		34. Roadway Conditions A. Dry B. Wet C. Snow/Slush D. Ice E. Sand, Mud, Dirt, Oil, Gravel F. Water (Standing, Moving) Code	
35. Location of Warning 1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach Code <b>1</b>		36. Crossing Warning Interconnected with Highway Signals 1. Yes 2. No 3. Unknown Code <b>1</b>		37. Crossing Illuminated by Street Lights or Special Lights 1. Yes 2. No 3. Unknown Code <b>1</b>			
38. Highway User's Gender 1. Male 2. Female Code		39. Highway User's Age 1. Male 2. Female Code		40. Highway User Went Behind or in Front of Train and Struck or was Struck by Second Train 1. Yes 2. No 3. Unknown Code <b>2</b>		41. Highway User 1. Went around the gate 2. Stopped and then proceeded 3. Did not stop 4. Stopped on crossing 5. Other (specify) 6. Went around/thru temporary barricade (if yes, see instructions) 7. Went thru the gate 8. Suicide/Attempted suicide Code <b>1</b>	
42. Driver Passed Standing Highway Vehicle 1. Yes 2. No 3. Unknown Code <b>3</b>		43. View of Track Obscured by (primary obstruction) 1. Permanent Structure 2. Standing railroad equipment 3. Passing Train 4. Topography 5. Vegetation 6. Highway Vehicles 7. Other (specify) 8. Not Obstructed Code <b>8</b>		44. Driver was 1. Killed 2. Injured 3. Uninjured Code <b>3</b>			
45. Was Driver in the Vehicle? 1. Yes 2. No Code <b>1</b>		46. Highway-Rail Crossing Users <b>0</b> Killed <b>0</b> Injured		47. Highway Vehicle Property Damage (est. dollar damage) <b>\$500</b>		48. Total Number of Vehicle Occupants (including driver) <b>2</b>	
49. Railroad Employees <b>0</b>		50. Total Number of People on Train (include passengers and train crew) <b>0</b>		51. Is a Rail Equipment Accident / Incident Report Being Filed 1. Yes 2. No Code <b>2</b>			
52. Passengers on Train <b>0</b>		53a. Special Study Block Video Taken? <input type="checkbox"/> Yes <input type="checkbox"/> No Video Used? <input type="checkbox"/> Yes <input type="checkbox"/> No		53b. Special Study Block			
54. Narrative Description (Be specific, and continue on separate sheet if necessary)							
55. Typed Name and Title				56. Signature		57. Date	

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1. Name of Reporting Railroad <b>Union Pacific Railroad Company [UP]</b>				1a. Alphabetic Code <b>UP</b>		1b. Railroad Accident/Incident No. <b>0878WY215</b>	
2. Name of Other Railroad or Other Entity Filing for Equipment Involved in Train Accident/Incident				2a. Alphabetic Code		2b. Railroad Accident/Incident No.	
3. Name of Railroad or Other Entity Responsible for Track Maintenance (single entry) <b>Union Pacific Railroad Company [UP]</b>				3a. Alphabetic Code <b>UP</b>		3b. Railroad Accident/Incident No. <b>0878WY215</b>	
4. U.S. DOT Grade Crossing ID No. <b>810600N</b>				5. Date of Accident/Incident month   day   year <b>0   8   3   1   1978</b>		6. Time of Accident/Incident <b>1:25</b> AM <input type="checkbox"/> PM <input checked="" type="checkbox"/>	
7. Nearest Railroad Station <b>CHEYENNE</b>		8. Subdivision		9. County <b>LARAMIE</b>		10. State Abbr. <b>WY</b> Code <b>56</b>	
11. City (if in a city)		12. Highway Name or No. <b>SOUTHWEST DRIVE</b> Public <input checked="" type="checkbox"/> Private <input type="checkbox"/>					
Highway User Involved				Rail Equipment Involved			
13. Type C. Truck-trailer F. Bus J. Other Motor Vehicle A. Auto D. Pick-up truck G. School Bus K. Pedestrian Code B. Truck E. Van H. Motorcycle M. Other (specify) A				17. Equipment 1. Train (units pulling) 2. Train (units pushing) 3. Train (standing) 4. Car(s) (moving) 5. Car(s) (standing) 6. Light loco(s) (moving) 7. Light loco(s) (standing) 8. Other (specify) A. Train pulling- RCL B. Train pushing- RCL C. Train standing- RCL D. EMU Locomotive(s) E. DMU Locomotive(s) Code <b>1</b>			
14. Vehicle Speed (est. mph at impact) <b>25</b>		15. Direction (geographical) 1. North 2. South 3. East 4. West Code <b>1</b>		18. Position of Car Unit in Train <b>1</b>			
16. Position 1. Stalled or stuck on crossing 2. Stopped on Crossing 3. Moving over crossing 4. Trapped on crossing by traffic 5. Blocked on crossing by gates Code <b>3</b>		19. Circumstance 1. Rail equipment struck highway user 2. Rail equipment struck by highway user Code <b>1</b>					
20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials? 1. Highway User 2. Rail Equipment 3. Both 4. Neither Code <b>4</b>		20b. Was there a hazardous materials release by 1. Highway User 2. Rail Equipment 3. Both 4. Neither Code					
20c. State here the name and quantity of the hazardous material released, if any							
21. Temperature (specify if minus) <b>80</b> °F		22. Visibility (single entry) 1. Dawn 2. Day 3. Dusk 4. Dark Code <b>2</b>		23. Weather (single entry) 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow Code <b>1</b>			
24. Type of Equipment Consist (single entry) 1. Freight Train 2. Passenger Train-Pulling 3. Commuter Train-Pulling 4. Work Train 5. Single Car 6. Cut of cars 7. Yard/Switching 8. Light loco(s) 9. Maint./inspect. car A. Spec. MoW Equip. B. Passenger Train-Pushing C. Commuter Train-Pushing Code <b>1</b>		25. Track Type Used by Rail Equipment Involved 1. Main 2. Yard 3. Siding 4. Industry Code <b>1</b>		26. Track Number or Name <b>DOUBLE MAIN</b>			
27. FRA Track Class (1-9,X) <b>4</b>		28. Number of Locomotive Units <b>4</b>		29. Number of Cars <b>46</b>		30. Consist Speed (Recorded speed if available) R. Recorded E. Estimated <b>5</b> mph Code <b>E</b>	
31. Time Table Direction 1. North 3. East 2. South 4. West Code <b>3</b>		32. Type of Crossing Warning 1. Gates 2. Cantilever FLS 3. Standard FLS 4. Wig wags 5. Hwy. traffic signals 6. Audible 7. Crossbucks 8. Stop signs 9. Watchman 10. Flagged by crew 11. Other (specify) 12. None Code(s) <b>03</b>		33. Signaled Crossing Warning (See reverse side for instructions and codes) Code <b>1</b>		34. Roadway Conditions A. Dry B. Wet C. Snow/Slush D. Ice E. Sand, Mud, Dirt, Oil, Gravel F. Water (Standing, Moving) Code	
35. Location of Warning 1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach Code <b>1</b>		36. Crossing Warning Interconnected with Highway Signals 1. Yes 2. No 3. Unknown Code		37. Crossing Illuminated by Street Lights or Special Lights 1. Yes 2. No 3. Unknown Code <b>2</b>			
38. Highway User's Age 1. Male 2. Female Code		39. Highway User's Gender 1. Male 2. Female Code		40. Highway User Went Behind or in Front of Train and Struck or was Struck by Second Train 1. Yes 2. No 3. Unknown Code <b>2</b>		41. Highway User 1. Went around the gate 2. Stopped and then proceeded 3. Did not stop 4. Stopped on crossing 5. Other (specify) 6. Went around/thru temporary barricade (if yes, see instructions) 7. Went thru the gate 8. Suicide/Attempted suicide Code <b>3</b>	
42. Driver Passed Standing Highway Vehicle 1. Yes 2. No 3. Unknown Code <b>2</b>		43. View of Track Obscured by (primary obstruction) 1. Permanent Structure 2. Standing railroad equipment 3. Passing Train 4. Topography 5. Vegetation 6. Highway Vehicles 7. Other (specify) 8. Not Obstructed Code <b>8</b>		44. Driver was 1. Killed 2. Injured 3. Uninjured Code <b>3</b>			
45. Was Driver in the Vehicle? 1. Yes 2. No Code <b>1</b>		46. Highway-Rail Crossing Users <b>0</b> Killed <b>0</b> Injured		47. Highway Vehicle Property Damage (est. dollar damage) <b>\$1,000</b>		48. Total Number of Vehicle Occupants (including driver) <b>1</b>	
49. Railroad Employees <b>0</b>		50. Total Number of People on Train (include passengers and train crew) <b>0</b>		51. Is a Rail Equipment Accident / Incident Report Being Filed 1. Yes 2. No Code <b>2</b>			
52. Passengers on Train <b>0</b>		53a. Special Study Block Video Taken? <input type="checkbox"/> Yes <input type="checkbox"/> No Video Used? <input type="checkbox"/> Yes <input type="checkbox"/> No		53b. Special Study Block			
54. Narrative Description (Be specific, and continue on separate sheet if necessary)							
55. Typed Name and Title				56. Signature		57. Date	

NOTE: This report is part of the reporting railroad's accident report pursuant to the accident reports statute and, as such shall not "be admitted as evidence or used for any purpose in any suit or action for damages growing out of any matter mentioned in said report...." 49 U.S.C. 20903. See 49 C.F.R. 225.7 (b).

1. Name of Reporting Railroad <b>Union Pacific Railroad Company [UP]</b>				1a. Alphabetic Code <b>UP</b>		1b. Railroad Accident/Incident No. <b>0276WY017</b>	
2. Name of Other Railroad or Other Entity Filing for Equipment Involved in Train Accident/Incident				2a. Alphabetic Code		2b. Railroad Accident/Incident No.	
3. Name of Railroad or Other Entity Responsible for Track Maintenance (single entry)				3a. Alphabetic Code		3b. Railroad Accident/Incident No.	
4. U.S. DOT Grade Crossing ID No. <b>810600N</b>				5. Date of Accident/Incident month   day   year <b>0   2   0   7   1976</b>		6. Time of Accident/Incident <b>5:50</b> AM <input type="checkbox"/> PM <input checked="" type="checkbox"/>	
7. Nearest Railroad Station <b>CHEYENNE</b>		8. Subdivision		9. County <b>LARAMIE</b>		10. State Abbr. <b>WY</b> Code <b>56</b>	
11. City (if in a city)		12. Highway Name or No. <b>CROSSING 2101</b> Public <input checked="" type="checkbox"/> Private <input type="checkbox"/>					
Highway User Involved				Rail Equipment Involved			
13. Type C. Truck-trailer F. Bus J. Other Motor Vehicle A. Auto D. Pick-up truck G. School Bus K. Pedestrian Code B. Truck E. Van H. Motorcycle M. Other (specify) A				17. Equipment 1. Train (units pulling) 2. Train (units pushing) 3. Train (standing) 4. Car(s) (moving) 5. Car(s) (standing) 6. Light loco(s) (moving) 7. Light loco(s) (standing) 8. Other (specify) A. Train pulling- RCL B. Train pushing- RCL C. Train standing- RCL D. EMU Locomotive(s) E. DMU Locomotive(s) Code <b>1</b>			
14. Vehicle Speed (est. mph at impact) <b>20</b>		15. Direction (geographical) 1. North 2. South 3. East 4. West Code <b>1</b>		18. Position of Car Unit in Train <b>1</b>			
16. Position 1. Stalled or stuck on crossing 2. Stopped on Crossing 3. Moving over crossing 4. Trapped on crossing by traffic 5. Blocked on crossing by gates Code <b>3</b>		19. Circumstance 1. Rail equipment struck highway user 2. Rail equipment struck by highway user Code <b>1</b>					
20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials? 1. Highway User 2. Rail Equipment 3. Both 4. Neither Code <b>4</b>		20b. Was there a hazardous materials release by 1. Highway User 2. Rail Equipment 3. Both 4. Neither Code					
20c. State here the name and quantity of the hazardous material released, if any							
21. Temperature (specify if minus) <b>30</b> °F		22. Visibility (single entry) 1. Dawn 2. Day 3. Dusk 4. Dark Code <b>3</b>		23. Weather (single entry) 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow Code <b>1</b>			
24. Type of Equipment Consist (single entry) 1. Freight Train 2. Passenger Train-Pulling 3. Commuter Train-Pulling 4. Work Train 5. Single Car 6. Cut of cars 7. Yard/Switching 8. Light loco(s) 9. Maint./inspect. car A. Spec. MoW Equip. B. Passenger Train-Pushing C. Commuter Train-Pushing D. EMU E. DMU Code <b>1</b>		25. Track Type Used by Rail Equipment Involved 1. Main 2. Yard 3. Siding 4. Industry Code <b>1</b>		26. Track Number or Name <b>DOUBLE MAIN TRACK</b>			
27. FRA Track Class (1-9,X) <b>5</b>		28. Number of Locomotive Units <b>2</b>		29. Number of Cars <b>23</b>		30. Consist Speed (Recorded speed if available) R. Recorded E. Estimated <b>30 mph E</b>	
31. Time Table Direction 1. North 3. East 2. South 4. West Code <b>4</b>		32. Type of Crossing 1. Gates 2. Cantilever FLS 3. Standard FLS 4. Wig wags 5. Hwy. traffic signals 6. Audible 7. Crossbucks 8. Stop signs 9. Watchman 10. Flagged by crew 11. Other (specify) 12. None Code(s) <b>03 05 06 07</b>		33. Signaled Crossing Warning (See reverse side for instructions and codes) Code <b>1</b>		34. Roadway Conditions A. Dry B. Wet C. Snow/Slush D. Ice E. Sand, Mud, Dirt, Oil, Gravel F. Water (Standing, Moving) Code	
35. Location of Warning 1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach Code <b>1</b>		36. Crossing Warning Interconnected with Highway Signals 1. Yes 2. No 3. Unknown Code <b>1</b>		37. Crossing Illuminated by Street Lights or Special Lights 1. Yes 2. No 3. Unknown Code <b>2</b>			
38. Highway User's Gender 1. Male 2. Female Code <b>1</b>		39. Highway User's Age 1. Male 2. Female Code <b>1</b>		40. Highway User Went Behind or in Front of Train and Struck or was Struck by Second Train 1. Yes 2. No 3. Unknown Code <b>1</b>		41. Highway User 1. Went around the gate 2. Stopped and then proceeded 3. Did not stop 4. Stopped on crossing 5. Other (specify) 6. Went around/thru temporary barricade (if yes, see instructions) 7. Went thru the gate 8. Suicide/Attempted suicide Code <b>3</b>	
42. Driver Passed Standing Highway Vehicle 1. Yes 2. No 3. Unknown Code <b>2</b>		43. View of Track Obscured by (primary obstruction) 1. Permanent Structure 2. Standing railroad equipment 3. Passing Train 4. Topography 5. Vegetation 6. Highway Vehicles 7. Other (specify) 8. Not Obstructed Code <b>8</b>		44. Driver was 1. Killed 2. Injured 3. Uninjured Code <b>1</b>			
45. Was Driver in the Vehicle? 1. Yes 2. No Code <b>1</b>		46. Highway-Rail Crossing Users <b>1 0</b>		47. Highway Vehicle Property Damage (est. dollar damage) <b>\$0</b>		48. Total Number of Vehicle Occupants (including driver) <b>1</b>	
49. Railroad Employees <b>0 0</b>		50. Total Number of People on Train (include passengers and train crew) <b>0 0</b>		51. Is a Rail Equipment Accident / Incident Report Being Filed 1. Yes 2. No Code <b>2</b>			
53a. Special Study Block Video Taken? <input type="checkbox"/> Yes <input type="checkbox"/> No Video Used? <input type="checkbox"/> Yes <input type="checkbox"/> No		53b. Special Study Block					
54. Narrative Description (Be specific, and continue on separate sheet if necessary)							
55. Typed Name and Title				56. Signature		57. Date	

NOTE: This report is part of the reporting railroad's accident report pursuant to the accident reports statute and, as such shall not "be admitted as evidence or used for any purpose in any suit or action for damages growing out of any matter mentioned in said report...." 49 U.S.C. 20903. See 49 C.F.R. 225.7 (b).



Events	41 Trains Pre Day Monday August 7th						Gap between Closures	Events	44 Trains Pre Day Tuesday August 8th						Gap between Closures
	Trains	Note	Time Start	Time End	Closure Duration				Trains	Note	Time Start	Time End	Closure Duration		
1	1	*	0:00:00	0:10:57	0:10:57			1	1		0:20:54	0:23:46	0:02:52		
2	1		1:03:06	1:09:11	0:06:05	0:52:09		2	1		1:11:48	1:19:33	0:07:45	0:48:02	
3	1		1:37:02	1:45:50	0:08:48	0:27:51		3	1		1:56:16	2:00:18	0:04:02	0:36:43	
4	1		1:48:15	2:03:49	0:15:34	0:02:25		4	1	***	2:16:42	2:17:42	0:01:00	0:16:24	
5	1		3:59:41	4:00:31	0:00:50	1:55:52		5	1	***	2:19:12	2:20:02	0:00:50	0:01:30	
6	1		4:13:39	4:20:34	0:06:55	0:13:08		6	1	***	4:36:18	4:37:24	0:01:06	2:16:16	
7	1		6:22:51	7:07:33	0:44:42	2:02:17		7	1	***	4:40:21	4:41:07	0:00:46	0:02:57	
8	2	**	7:45:33	7:57:58	0:12:25	0:38:00		8	1		4:45:15	5:11:48	0:26:33	0:04:08	
9	1		8:04:36	8:10:27	0:05:51	0:06:38		9	1		5:43:13	5:51:25	0:08:12	0:31:25	
10	1	***	8:32:57	8:33:23	0:00:26	0:22:30		10	1		6:00:20	6:18:16	0:17:56	0:08:55	
11	1		9:22:35	9:29:33	0:06:58	0:49:12		11	1		6:28:27	6:37:19	0:08:52	0:10:11	
12	1		10:11:20	10:18:15	0:06:55	0:41:47		12	1		7:25:53	7:31:57	0:06:04	0:48:34	
13	1		10:31:15	10:37:08	0:05:53	0:13:00		13	1		7:34:32	8:07:06	0:32:34	0:02:35	
14	5	**	10:44:00	11:53:18	1:09:18	0:06:52		14	1		8:36:29	8:45:30	0:09:01	0:29:23	
15	1		12:07:45	12:08:06	0:00:21	0:14:27		15	1		9:04:50	9:28:56	0:24:06	0:19:20	
16	1		12:13:55	12:14:23	0:00:28	0:05:49		16	1		9:37:08	9:45:16	0:08:08	0:08:12	
17	1		12:26:55	12:29:57	0:03:02	0:12:32		17	4	**	9:53:50	10:54:53	1:01:03	0:08:34	
18	1		12:41:39	12:48:00	0:06:21	0:11:42		18	1		12:23:34	12:27:49	0:04:15	1:28:41	
19	1		13:12:26	13:15:30	0:03:04	0:24:26		19	1		12:33:02	12:42:24	0:09:22	0:05:13	
20	1		13:31:24	13:34:45	0:03:21	0:15:54		20	2	**	12:55:10	13:24:49	0:29:39	0:12:46	
21	2	**	13:40:14	14:13:19	0:33:05	0:05:29		21	1		13:28:54	13:31:59	0:03:05	0:04:05	
22	1		15:22:51	15:27:07	0:04:16	1:09:32		22	1		13:38:57	13:40:29	0:01:32	0:06:58	
23	1		15:50:11	16:01:14	0:11:03	0:23:04		23	1		14:09:50	14:18:12	0:08:22	0:29:21	
24	1		16:40:18	16:53:03	0:12:45	0:39:04		24	1		15:10:21	15:12:08	0:01:47	0:52:09	
25	1		17:37:52	17:46:44	0:08:52	0:44:49		25	1		15:19:38	15:22:43	0:03:05	0:07:30	
26	1	***	17:55:13	17:55:35	0:00:22	0:08:29		26	1		15:50:07	15:53:14	0:03:07	0:27:24	
27	1		18:04:58	18:08:59	0:04:01	0:09:23		27	1		16:25:42	16:46:20	0:20:38	0:32:28	
28	1	***	18:10:45	18:11:03	0:00:18	0:01:46		28	1		16:52:14	16:55:52	0:03:38	0:05:54	
29	1		18:40:57	18:48:08	0:07:11	0:29:54		29	1		17:22:02	17:31:02	0:09:00	0:26:10	
30	1		18:56:00	18:57:24	0:01:24	0:07:52		30	1		17:59:21	18:01:07	0:01:46	0:28:19	
31	1		20:08:35	20:11:47	0:03:12	1:11:11		31	1		18:49:39	18:52:56	0:03:17	0:48:32	
32	1		21:42:16	21:45:05	0:02:49	1:30:29		32	1		19:01:31	19:10:51	0:09:20	0:08:35	
33	1		21:53:50	21:57:26	0:03:36	0:08:45		33	2	**	19:29:03	20:51:19	1:22:16	0:18:12	
34	1		22:15:59	22:23:19	0:07:20	0:18:33		34	1		20:56:52	21:04:15	0:07:23	0:05:33	
35	1		23:18:04	23:20:29	0:02:25	0:54:45		35	1		21:11:50	21:15:24	0:03:34	0:07:35	
36	1		23:33:35	23:41:26	0:07:51	0:13:06		36	1		21:35:17	21:38:01	0:02:44	0:19:53	
37								37	1		21:52:00	21:56:48	0:04:48	0:13:59	
38								38	1		22:14:50	22:28:47	0:13:57	0:18:02	
39								39	1		22:59:19	23:03:52	0:04:33	0:30:32	
40								40							
41								41							
42								42							
43								43							
44								44							
45								45							
46								46							
47								47							
48								48							
49								49							
50								50							

Monday August 7th		Closure Duration	Gap between Closures
Total Closure Time:		5:28:44	18:12:42
Average:		0:09:08	0:31:13
Median:		0:05:59	0:18:33
Max:		1:09:18	2:02:17
Min:		0:00:18	0:01:46
Closure Events:		36	
# of Trains:		41	

Note:

\* Road Closure started the day before.

\*\* RXR Crossing Closure while multiple trains pass.

\*\*\* Engine Only causing RxR Crossing Closure.

Tuesday August 8th		Closure Duration	Gap between Closures
Total Closure Time:		7:31:58	15:11:00
Average:		0:11:35	0:23:58
Median:		0:06:04	0:17:13
Max:		1:22:16	2:16:16
Min:		0:00:46	0:01:30
Closure Events:		39	
# of Trains:		44	

Note:

\*

\*\* RXR Crossing Closure while multiple trains pass.

\*\*\* Engine Only causing RxR Crossing Closure.

48 Trains Pre Day Wednesday August 9th						Gap between		51 Trains Pre Day Thursday August 10th						Gap between	
Events	Trains	Note	Time Start	Time End	Closure Duration	Closures		Events	Trains	Note	Time Start	Time End	Closure Duration	Closures	
1	1		0:18:02	0:19:49	0:01:47			1	1	*	0:00:00	0:15:47	0:15:47		
2	1	***	1:02:40	1:03:29	0:00:49	0:42:51		2	1		1:33:01	1:38:03	0:05:02	1:17:14	
3	1		1:25:17	1:43:30	0:18:13	0:21:48		3	1		1:49:53	1:56:05	0:06:12	0:11:50	
4	1		2:28:47	2:35:01	0:06:14	0:45:17		4	1		1:59:03	2:21:10	0:22:07	0:02:58	
5	1		2:37:16	2:44:46	0:07:30	0:02:15		5	1		2:28:50	2:37:58	0:09:08	0:07:40	
6	1		2:54:47	3:20:49	0:26:02	0:10:01		6	2	**	2:45:36	2:57:00	0:11:24	0:07:38	
7	1		3:36:29	3:54:42	0:18:13	0:15:40		7	1		3:44:42	3:52:50	0:08:08	0:47:42	
8	1		5:21:06	5:29:47	0:08:41	1:26:24		8	1		5:51:13	6:01:12	0:09:59	1:58:23	
9	1		5:56:38	6:09:03	0:12:25	0:26:51		9	1		6:07:49	6:21:53	0:14:04	0:06:37	
10	1		6:16:51	6:21:04	0:04:13	0:07:48		10	1		6:47:03	6:52:20	0:05:17	0:25:10	
11	1		6:38:47	6:42:15	0:03:28	0:17:43		11	2	**	6:52:47	7:37:37	0:44:50	0:00:27	
12	1		7:08:50	7:11:26	0:02:36	0:26:35		12	2	**	7:46:15	8:52:50	1:06:35	0:08:38	
13	1		8:17:16	8:26:20	0:09:04	1:05:50		13	1		9:05:54	9:13:14	0:07:20	0:13:04	
14	1	***	8:33:49	8:35:11	0:01:22	0:07:29		14	1		11:30:02	11:37:26	0:07:24	2:16:48	
15	1		9:39:01	9:43:48	0:04:47	1:03:50		15	1		11:42:10	11:47:37	0:05:27	0:04:44	
16	2	**	10:17:44	10:34:10	0:16:26	0:33:56		16	1		12:25:27	12:30:09	0:04:42	0:37:50	
17	1		10:41:03	10:44:26	0:03:23	0:06:53		17	1		12:40:25	12:44:12	0:03:47	0:10:16	
18	1		10:49:25	10:55:45	0:06:20	0:04:59		18	1		12:50:49	12:56:40	0:05:51	0:06:37	
19	1		11:39:02	11:43:24	0:04:22	0:43:17		19	1	***	13:39:59	13:41:57	0:01:58	0:43:19	
20	1		11:51:52	11:59:37	0:07:45	0:08:28		20	1	***	13:45:00	13:46:22	0:01:22	0:03:03	
21	1		12:11:19	12:38:15	0:26:56	0:11:42		21	1		13:49:37	13:54:16	0:04:39	0:03:15	
22	1		13:07:33	13:13:05	0:05:32	0:29:18		22	2	**	14:05:33	14:22:08	0:16:35	0:11:17	
23	1		13:41:01	13:46:30	0:05:29	0:27:56		23	2	**	15:16:43	15:39:50	0:23:07	0:54:35	
24	1	***	13:50:51	13:51:34	0:00:43	0:04:21		24	1	***	15:49:40	15:50:49	0:01:09	0:09:50	
25	1	***	13:55:15	13:56:04	0:00:49	0:03:41		25	1		16:49:26	16:51:21	0:01:55	0:58:37	
26	1		14:15:24	14:21:59	0:06:35	0:19:20		26	1		17:46:05	17:53:20	0:07:15	0:54:44	
27	1		14:47:02	14:52:34	0:05:32	0:25:03		27	1		18:01:48	18:07:24	0:05:36	0:08:28	
28	1		15:29:23	15:41:21	0:11:58	0:36:49		28	1		18:46:58	18:49:28	0:02:30	0:39:34	
29	1		16:18:30	16:22:26	0:03:56	0:37:09		29	1		19:37:33	19:45:52	0:08:19	0:48:05	
30	1		16:45:02	16:47:16	0:02:14	0:22:36		30	4	**	19:54:29	20:27:02	0:32:33	0:08:37	
31	1		16:59:06	17:17:35	0:18:29	0:11:50		31	1	***	20:38:13	20:38:44	0:00:31	0:11:11	
32	1		17:21:47	17:26:57	0:05:10	0:04:12		32	1		20:39:32	20:44:34	0:05:02	0:00:48	
33	1		17:32:34	17:33:12	0:00:38	0:05:37		33	1		20:49:31	20:57:39	0:08:08	0:04:57	
34	1		18:03:03	18:10:20	0:07:17	0:29:51		34	1		21:48:13	21:58:50	0:10:37	0:50:34	
35	1	***	18:29:51	18:30:20	0:00:29	0:19:31		35	1		22:05:39	22:10:16	0:04:37	0:06:49	
36	1		18:35:28	18:40:11	0:04:43	0:05:08		36	3		22:11:00	22:21:46	0:10:46	0:00:44	
37	1		18:54:28	19:00:20	0:05:52	0:14:17		37	1		22:29:45	22:35:05	0:05:20	0:07:59	
38	1		19:08:35	19:16:26	0:07:51	0:08:15		38	1		22:42:41	22:47:44	0:05:03	0:07:36	
39	2	**	20:05:42	20:53:22	0:47:40	0:49:16		39	1		22:51:55	23:00:21	0:08:26	0:04:11	
40	1		20:59:35	21:18:42	0:19:07	0:06:13		40	1		23:15:28	23:17:35	0:02:07	0:15:07	
41	3	**	21:19:07	22:08:42	0:49:35	0:00:25		41	1		23:59:50	0:00:00	0:00:10	0:42:15	
42	1		22:43:51	23:03:29	0:19:38	0:35:09		42							
43	1		23:24:51	23:27:07	0:02:16	0:21:22		43							
44	1	*	23:47:29	0:00:00	0:12:31	0:20:22		44							
45								45							
46								46							
47								47							
48								48							
49								49							
50								50							

Wednesday August 9th	Closure Duration	Gap between Closures
Total Closure Time:	7:14:40	16:27:18
Average:	0:09:53	0:22:58
Median:	0:06:03	0:19:31
Max:	0:49:35	1:26:24
Min:	0:00:29	0:00:25
Closure Events:	44	
# of Trains:	48	

Note:

\*

Last RXR Crossing closure continued to next day.

\*\* RXR Crossing Closure while multiple trains pass.

\*\*\* Engine Only causing RxR Crossing Closure.

Thursday August 10th	Closure Duration	Gap between Closures
Total Closure Time:	7:00:49	16:59:11
Average:	0:10:16	0:25:29
Median:	0:06:12	0:10:03
Max:	1:06:35	2:16:48
Min:	0:00:10	0:00:27
Closure Events:	41	
# of Trains:	51	

Note:

\* Road Closure started the day before an/or Road Closure continue to next day.

\*\* RXR Crossing Closure while multiple trains pass.

\*\*\* Engine Only and/or Maintenance Crew Equipment causing RxR Crossing Closure.



Events	60 Trains Pre Day Friday August 11th						Gap between Closures	Events	49 Trains Pre Day Saturday August 12th						Gap between Closures
	Trains	Note	Time Start	Time End	Closure Duration	Trains			Note	Time Start	Time End	Closure Duration			
1	1	*	0:00:00	0:08:01	0:08:01			1	2	* & **	0:00:00	0:29:49	0:29:49		
2	1		0:14:32	0:16:43	0:02:11	0:06:31		2	1		0:40:39	0:51:55	0:11:16	0:10:50	
3	1		0:26:09	0:32:53	0:06:44	0:09:26		3	1		1:33:32	1:39:39	0:06:07	0:41:37	
4	1		0:36:22	0:58:26	0:22:04	0:03:29		4	1		1:46:15	1:50:59	0:04:44	0:06:36	
5	2	**	1:07:14	1:32:53	0:25:39	0:08:48		5	1		1:52:35	2:02:18	0:09:43	0:01:36	
6	1		1:38:35	1:46:12	0:07:37	0:05:42		6	1		2:08:26	2:18:01	0:09:35	0:06:08	
7	1		1:47:52	1:55:09	0:07:17	0:01:40		7	2	**	2:25:57	2:55:12	0:29:15	0:07:56	
8	1		2:15:14	2:23:22	0:08:08	0:20:05		8	1		3:02:58	3:14:00	0:11:02	0:07:46	
9	1		2:26:48	2:31:03	0:04:15	0:03:26		9	1		3:34:56	3:45:35	0:10:39	0:20:56	
10	1		3:08:06	3:32:29	0:24:23	0:37:03		10	2	**	3:48:40	4:36:39	0:47:59	0:03:05	
11	1		4:27:35	4:38:12	0:10:37	0:55:06		11	1		5:04:23	5:09:40	0:05:17	0:27:44	
12	1		5:03:25	5:15:34	0:12:09	0:25:13		12	1		6:20:27	6:28:54	0:08:27	1:10:47	
13	1		5:37:05	5:45:27	0:08:22	0:21:31		13	1		6:59:39	7:11:47	0:12:08	0:30:45	
14	1		6:16:04	6:21:39	0:05:35	0:30:37		14	2	**	7:17:31	7:40:54	0:23:23	0:05:44	
15	1		6:52:44	6:54:56	0:02:12	0:31:05		15	1	***	8:45:47	8:48:05	0:02:18	1:04:53	
16	2	**	7:00:38	7:09:31	0:08:53	0:05:42		16	1	***	8:49:39	8:50:24	0:00:45	0:01:34	
17	1		7:28:58	7:36:35	0:07:37	0:19:27		17	2	**	9:14:31	9:41:56	0:27:25	0:24:07	
18	1	***	8:07:00	8:08:30	0:01:30	0:30:25		18	1		9:45:53	9:49:16	0:03:23	0:03:57	
19	1	***	8:09:09	8:11:06	0:01:57	0:00:39		19	1		9:54:09	10:08:54	0:14:45	0:04:53	
20	1	***	8:30:25	8:32:21	0:01:56	0:19:19		20	1		11:25:20	11:53:24	0:28:04	1:16:26	
21	1	***	8:36:27	8:37:24	0:00:57	0:04:06		21	2	**	12:20:07	12:37:07	0:17:00	0:26:43	
22	1		9:19:08	9:29:40	0:10:32	0:41:44		22	1		12:43:58	12:58:09	0:14:11	0:06:51	
23	2		10:10:25	10:40:34	0:30:09	0:40:45		23	1		13:04:05	13:18:34	0:14:29	0:05:56	
24	1	***	11:53:04	11:57:15	0:04:11	1:12:30		24	3	**	13:30:54	15:10:15	1:39:21	0:12:20	
25	1	***	12:01:12	12:01:52	0:00:40	0:03:57		25	2	**	15:27:25	15:39:20	0:11:55	0:17:10	
26	1	***	12:09:02	12:10:10	0:01:08	0:07:10		26	1		15:59:47	16:03:54	0:04:07	0:20:27	
27	1	***	12:26:14	12:27:25	0:01:11	0:16:04		27	1		16:33:21	16:39:42	0:06:21	0:29:27	
28	2	**	14:14:12	14:23:24	0:09:12	1:46:47		28	1		17:03:36	17:07:20	0:03:44	0:23:54	
29	1		14:46:24	14:52:30	0:06:06	0:23:00		29	1		17:10:55	17:49:30	0:38:35	0:03:35	
30	1		14:57:09	15:03:48	0:06:39	0:04:39		30	1		18:11:21	18:32:26	0:21:05	0:21:51	
31	1		15:11:49	15:17:57	0:06:08	0:08:01		31	3	**	19:13:35	19:56:07	0:42:32	0:41:09	
32	1		15:20:49	15:27:08	0:06:19	0:02:52		32	1		21:23:28	21:27:35	0:04:07	1:27:21	
33	1		15:44:09	15:49:39	0:05:30	0:17:01		33	1	***	21:53:11	21:54:15	0:01:04	0:25:36	
34	3	**	15:55:25	16:26:59	0:31:34	0:05:46		34	1	***	21:56:02	21:56:42	0:00:40	0:01:47	
35	2	**	16:39:58	16:54:28	0:14:30	0:12:59		35	2	**	22:58:30	23:12:24	0:13:54	1:01:48	
36	1		17:33:02	17:41:48	0:08:46	0:38:34		36	2	**	23:48:45	23:57:27	0:08:42	0:36:21	
37	2	**	18:18:27	19:00:32	0:42:05	0:36:39		37							
38	1		19:04:34	19:10:59	0:06:25	0:04:02		38							
39	2	**	19:16:05	19:35:56	0:19:51	0:05:06		39							
40	1		19:40:22	19:42:57	0:02:35	0:04:26		40							
41	3	**	19:58:39	20:16:20	0:17:41	0:15:42		41							
42	1		21:08:30	21:10:06	0:01:36	0:52:10		42							
43	1		21:26:53	21:33:31	0:06:38	0:16:47		43							
44	2	**	22:13:10	22:22:27	0:09:17	0:39:39		44							
45	1		22:27:16	23:17:08	0:49:52	0:04:49		45							
46	1		23:29:01	23:30:34	0:01:33	0:11:53		46							
47	2	* & **	23:56:22	0:00:00	0:03:38	0:25:48		47							
48								48							
49								49							
50								50							

Friday August 11th		Gap between Closures	
Total Closure Time:	8:01:50	15:58:10	
Average:	0:10:15	0:20:50	
Median:	0:06:44	0:15:53	
Max:	0:49:52	1:46:47	
Min:	0:00:40	0:00:39	
Closure Events:	47		
# of Trains:	60		

Note:

- \* Road Closure started the day before an/or Road Closure continue to next day.
- \*\* RXR Crossing Closure while multiple trains pass.
- \*\*\* Engine Only and/or Maintenance Crew Equipment causing RxR Crossing Closure.

Saturday August 12th		Gap between Closures	
Total Closure Time:	9:57:51	13:59:36	
Average:	0:16:36	0:23:59	
Median:	0:11:09	0:20:27	
Max:	1:39:21	1:27:21	
Min:	0:00:40	0:01:34	
Closure Events:	36		
# of Trains:	49		

Note:

- \* Road Closure started the day before an/or Road Closure continue to next day.
- \*\* RXR Crossing Closure while multiple trains pass.
- \*\*\* Engine Only and/or Maintenance Crew Equipment causing RxR Crossing Closure.

	47 Trains Pre Day			Sunday	August 13th	Gap between
Events	Trains	Note	Time Start	Time End	Closure Duration	Closures
1	1		0:06:03	1:24:24	1:18:21	
2	1		2:32:45	2:44:00	0:11:15	1:08:21
3	1		2:58:47	3:02:39	0:03:52	0:14:47
4	1		3:57:26	4:15:22	0:17:56	0:54:47
5	1	***	4:38:34	4:41:54	0:03:20	0:23:12
6	1		4:51:21	5:04:33	0:13:12	0:09:27
7	2		5:53:08	6:06:28	0:13:20	0:48:35
8	1		6:10:35	6:20:12	0:09:37	0:04:07
9	1		6:28:21	6:32:02	0:03:41	0:08:09
10	1		7:09:48	7:19:58	0:10:10	0:37:46
11	1		7:51:12	7:57:02	0:05:50	0:31:14
12	1		8:11:17	8:15:09	0:03:52	0:14:15
13	1		8:21:55	8:25:08	0:03:13	0:06:46
14	1		8:38:53	8:42:57	0:04:04	0:13:45
15	1		10:11:40	10:18:18	0:06:38	1:28:43
16	1		10:32:49	10:36:39	0:03:50	0:14:31
17	1		10:39:55	10:43:52	0:03:57	0:03:16
18	1		11:02:39	11:09:54	0:07:15	0:18:47
19	1		11:19:28	11:26:37	0:07:09	0:09:34
20	1		11:32:46	11:39:59	0:07:13	0:06:09
21	1		12:07:21	12:15:32	0:08:11	0:27:22
22	1		12:16:32	12:22:33	0:06:01	0:01:00
23	2	**	12:24:46	12:35:05	0:10:19	0:02:13
24	1		12:53:15	13:00:38	0:07:23	0:18:10
25	2	**	13:02:18	13:38:56	0:36:38	0:01:40
26	2	**	16:07:20	16:27:18	0:19:58	2:28:24
27	1		16:41:49	17:00:39	0:18:50	0:14:31
28	2	**	17:47:21	18:14:32	0:27:11	0:46:42
29	2	**	18:44:24	19:07:30	0:23:06	0:29:52
30	1		19:10:12	19:16:04	0:05:52	0:02:42
31	1		19:25:49	19:34:18	0:08:29	0:09:45
32	2	**	19:39:18	19:57:17	0:17:59	0:05:00
33	1		20:07:54	20:11:35	0:03:41	0:10:37
34	1		20:16:06	20:21:02	0:04:56	0:04:31
35	1		20:24:45	20:31:31	0:06:46	0:03:43
36	1		21:12:28	21:19:22	0:06:54	0:40:57
37	2	**	21:39:25	21:52:49	0:13:24	0:20:03
38	1		23:28:21	23:36:37	0:08:16	1:35:32
39	1		23:37:29	23:41:46	0:04:17	0:00:52
40						
41						
42						
43						
44						
45						
46						
47						
48						
49						
50						

Sunday August 13th		Gap between
Closure Duration		Closures
Total Closure Time:	7:35:56	15:59:47
Average:	0:11:41	0:25:15
Median:	0:07:15	0:14:23
Max:	1:18:21	2:28:24
Min:	0:03:13	0:00:52
Closure Events:	39	
# of Trains:	47	

Note:

- \* Road Closure started the day before an/or Road Closure continue to next day.
- \*\* RXR Crossing Closure while multiple trains pass.
- \*\*\* Engine Only and/or Maintenance Crew Equipment causing RxR Crossing Closure.



# HB0233 - Trains blocking roadways.

The current version of the bill text is displayed below. To view all versions of the bill with page and line numbers, use the PDF documents located to the right, under "Bill Versions & Resources."

2009

STATE OF WYOMING

09LSO-0466

## HOUSE BILL NO. HB0233

Trains blocking roadways.

Sponsored by: Representative(s) Harvey, Brown, Buchanan and Teeters and Senator(s) Geis, Peterson and Von Flatern

A BILL

for

AN ACT relating to railroads; prohibiting blocking of public highways at grade crossings as specified; providing penalties; and providing for an effective date.

*Be It Enacted by the Legislature of the State of Wyoming:*

**Section 1.** W.S. 37-10-106 is created to read:

**37-10-106. Blocking of public road crossing prohibited; penalty.**

(a) A railroad company, except in an emergency, shall not order, allow or permit the operation of its system so that a train or other railroad equipment blocks the passage of vehicular traffic over the railroad crossing of any public street, road or highway for a period longer than ten (10) minutes. This section does not apply to any blockage of traffic caused by a continuously moving train or caused by circumstances wholly beyond the control of the railroad, but does apply to all other blockages including, but not limited to, those caused by a stopped train or a train engaged in switching, loading or unloading operations.

(b) Upon receiving notification from a law enforcement officer, member of a fire department, operator of an emergency medical vehicle or a member of an emergency services provider that emergency circumstances require the immediate clearing of a public highway railroad grade crossing, the members of the train crew of the train, engine, railroad car

or equipment blocking the crossing shall immediately notify the appropriate railroad dispatcher of the emergency situation and the railroad shall immediately clear the crossing, consistent with the safe operation of the railroad.

(c) Any railroad company whose employees or agents knowingly violate the provisions of this section shall be guilty of a misdemeanor and shall:

(i) For a first conviction be punished by a fine of not more than two hundred dollars (\$200.00);

(ii) For a second conviction within one (1) year thereafter, be punished by a fine of not more than three hundred dollars (\$300.00);

(iii) For a third or subsequent conviction within one (1) year after the first conviction, be punished by a fine of not more than five hundred dollars (\$500.00).

**Section 2.** This act is effective July 1, 2009.

(END)

1

HB0233

Sponsor:

Representative Harvey


Co-Sponsor:


Representative(s) Brown, Buchanan, Teeters


Senator(s) Geis, Peterson, Von Flatern

---

Bill Versions and Resources:

Introduced  Version initially introduced on the floor for debate.

Fiscal note  Estimate of the fiscal and personnel impact to the state for the bill.

Digest  A summary of proceedings for the bill as it moves through the process.

---

Last Action:

H Committee Returned Bill Pursuant to HR 4-3(c)

Last Action Date:

03/03/2009

Scheduled Committee Meetings

No Meetings Currently Scheduled

Scheduled Floor Sessions

No Floor Sessions Currently Scheduled

Date	Action	Location	Vote
03/03/2009	H Committee Returned Bill Pursuant to HR 4-3(c)	House	Details
01/21/2009	H Introduced and Referred to H08; No Report Prior to CoW Cutoff	House	
01/20/2009	H Received for Introduction	House	
01/19/2009	Bill Number Assigned	LSO	

House Amendments

[Amendment](#) [↑](#) [Origin](#) [Sponsor](#) [Status](#)

Senate Amendments

[Amendment](#) [↑](#) [Origin](#) [Sponsor](#) [Status](#)



Trains blocking roadways.

09LSO-0466.L1

FISCAL NOTE

No fiscal or personnel impact.

[H Committee Returned Bill Pursuant to HR 4-3\(c\) 1-8-0-0-0](#)

**Vote recorded:** 3/3/2009 10:34AM

**Ayes:** McKim

**Nays:** Blake, Carson, Cohee, Gilmore, Hallinan, Madden, Petersen, Zwonitzer, Dv.

**Excused:**

**Absent:**

**Conflict:**

**Total: Ayes: 1 Nays: 8 Excused: 0 Absent: 0 Conflict: 0**

**H.B. No. 0233      Trains blocking roadways.**

Sponsored By: Representative(s) Harvey, Brown, Buchanan and Teeters and  
Senator(s) Geis, Peterson and Von Flatern

AN ACT relating to railroads; prohibiting blocking of public highways at grade crossings as specified; providing penalties; and providing for an effective date.

1/19/2009 Bill Number Assigned

1/20/2009 H Received for Introduction

1/21/2009 H Introduced and Referred to H08; No Report Prior to CoW Cutoff

2/24/2009 Motion to Do Pass Failed

**ROLL CALL**

**Ayes:** Representative(s) McKim

**Nays:** Representative(s) Blake, Carson, Cohee, Gilmore, Hallinan, Madden, Petersen and Zwonitzer, Dv.

**Ayes** 1 **Nays** 8 **Excused** 0 **Absent** 0 **Conflicts** 0

3/3/2009 H Committee Returned Bill Pursuant to HR 4-3(c)



# APPENDIX IV

## TRANSPORTATION OPERATIONS REPORT



# **TRANSPORTATION OPERATIONS REPORT**

Southwest Drive Corridor Plan  
Cheyenne, Wyoming

Prepared for:

BenchMark Engineers, PC  
1920 Thomas Avenue, Ste 320  
Cheyenne, WY 82001

Prepared by:

Felsburg Holt & Ullevig  
6400 South Fiddlers Green Cir., Suite 1500  
Greenwood Village, CO 80120  
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Principal-In-Charge: Lyle DeVries, PE, PTOE

Project Manager: Faith Kelley, EI (CO, VA)



FHU Reference No. 123563-01

November 2023

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## I. INTRODUCTION

Southwest Drive is a north-south roadway just east of Interstate 25 (I-25) in Laramie County that begins at College Drive to the south, runs underneath Interstate 80 (I-80), and ends at W. Lincolnway to the north. It currently serves as a major collector. The study area is shown on **Figure I**.

Given its proximity to I-25, the intersection of Southwest Drive with College Drive is a hub for semi-truck traffic. Backups due to the access configuration as well as heavy truck traffic have been observed. Further, constrained accesses to commercial developments, residential frontages along Southwest Drive, and limited regional continuity all make this corridor an ideal candidate for improvements. There is high potential for development in this area given its proximity to undeveloped land, and this corridor is not equipped to handle growth nor multimodal travel. The railroad crossing presents another difficulty for drivers and multimodal users alike.

The Cheyenne Metropolitan Planning Organization (MPO) has initiated a corridor planning effort to understand the infrastructure needs, develop analyses to quantify the needs, provide recommendations, and furnish preliminary design plans to set the stage for future construction. The corridor planning process includes public and stakeholder outreach to help inform the process and recommendations.

This report assesses travel safety and existing and projected future transportation operations conditions along Southwest Drive and identifies improvements needed to maintain acceptable operational levels into the future. Analyses of potential future alternatives are also provided to support the selection of a recommended alternative.

### Transportation Operations Analysis

#### ***Purpose of Analysis***

This analysis of existing and projected future conditions outlines deficiencies of the corridor to inform needed improvements and provides analysis of these suggested improvements for build alternatives.

#### ***Scope of Analysis***

This study included collecting the following data:

1. Travel speeds
2. Multimodal facility characteristics
3. Intersection and corridor traffic volumes
4. Surrounding land uses
5. Crash history
6. Travel demand model information

The above data were used to analyze existing conditions and develop future forecasts. Using the forecasted data, various improvement alternatives were analyzed, and final recommendations are provided.

The following information is included in this report:

- **Existing Conditions** – This section describes existing infrastructure, vehicular information, and data collected.
- **Future No Action Conditions** – This section evaluates the anticipated volumes and operations assuming no improvements are made to the study corridor.

- **Alternative Analysis** – This section evaluates several proposed alternatives and summarizes the anticipated results of each.
- **Recommendations** – This section summarizes the final improvement recommendations for near term and ultimate improvement scenarios.

## Methods and Assumptions

The study area will include the intersections of Southwest Drive with:

1. W. College Drive
2. Woodenshoe Drive
3. W. 5th Street
4. N American Road
5. W. Lincolnway

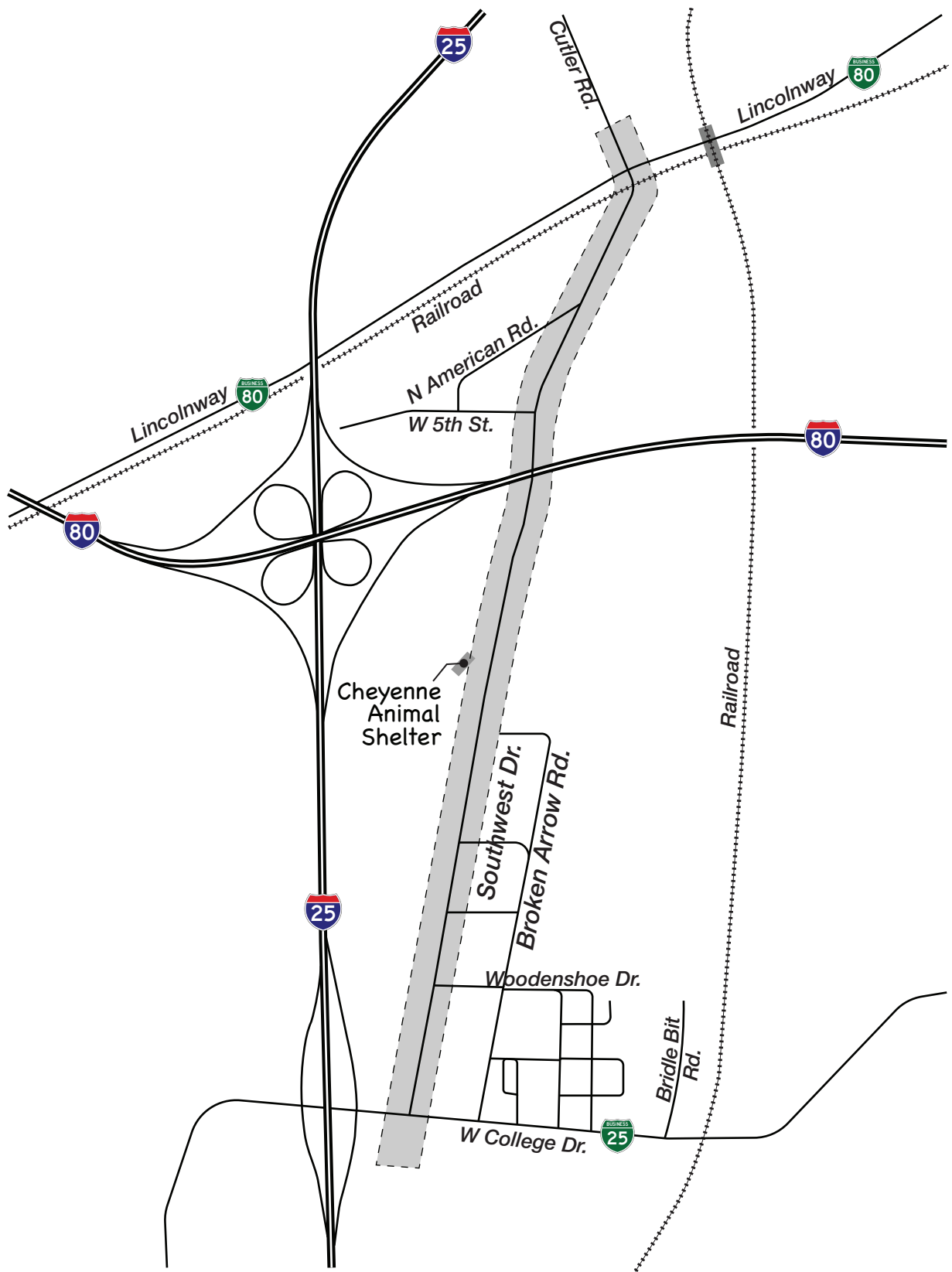
The Method and Assumptions document contains a table summarizing the parameters used for *Highway Capacity Manual* (HCM) 6<sup>th</sup> Edition analyses.

The measures of effectiveness for this effort will include the following:

- Intersection operations use Level of Service (LOS) per HCM as calculated by Synchro.
- Multimodal LOS (transit, bicycle, and pedestrian) use HCM 6th Edition methods.
- The primary mobility goal is LOS D or better for intersection operations. LOS C is the goal for all multimodal operations.

The full Methods and Assumptions document can be found in **Appendix A**.





## II. EXISTING CONDITIONS

### II.A. Roadway Network

Southwest Drive is a north-south major collector just east of and parallel to I-25 in Cheyenne, Wyoming. The roadway begins at W. College Drive, runs north for just over a mile to an underpass below Interstate 80 (I-80), and continues another two thirds of a mile to W. Lincolnway. The road continues north for a third of a mile on the other side of W. Lincolnway as Cutler Road. It is currently a two-lane roadway with a speed limit of 40 miles per hour (mph).

### II.B. Railroad Crossing

Just south of Lincolnway, there is a Union Pacific railroad crossing that is four tracks wide. Counts for the number of trains served and time which the crossing is blocked were conducted during the week of August 6<sup>th</sup> to August 13<sup>th</sup>, 2023. It was found that the crossing served an average of 48 trains per day with an average of 40 closures per day. The average closure was found to last about 11 minutes; however, the longest closure lasted up to 1 hour and 39 minutes. The crossing is closed an average of eight hours per day. This severely limits throughput to Lincolnway from Southwest Drive and causes drivers familiar with the area to take an alternate route to avoid waiting at the crossing. Detailed train crossing data can be found in **Appendix H**.

### II.C. Surrounding Land Uses

The Southwest Drive corridor is set within a diverse land use context with residential, industrial, commercial and community amenities. South of I-80 there are private residences with direct front door access to Southwest Drive and a few small businesses along the road as well as the Cheyenne Animal Shelter. On the south end of Southwest Drive, there are commercial businesses mainly oriented towards freeway users exiting I-25 to the west. To the north of I-80 commercial warehouses are on the west side of the road and Clear Creek Park is on the east side. Much of the land between I-80 to the west and the railway corridor to the east is undeveloped, so there is potential for future development.

### II.D. Traffic Volumes

24-hour turning movement counts were collected by the Cheyenne MPO on Tuesday, September 13<sup>th</sup>, 2022, at the intersections of Southwest Drive with College Drive, 5<sup>th</sup> Street, North American Road, and Lincolnway. The overall peak hours were found to be 7:15-8:15am, 12-1pm, and 4:15-5:15pm. The traffic count data can be found in **Appendix B**.







### II.E. Travel Speeds

The posted speed limit along Southwest Drive is 40 mph. Vehicle Speed data were collected on Tuesday September 20, 2022, south of the Cheyenne Animal Shelter and south of North American Drive. Average observed speeds north of I-80 were at or below the posted speed. South of I-80, northbound travels were observed to travel less than 5 mph over the posted speed limit on average. Traveling southbound, the average observed speed was greater than 5mph over the posted speed limit but less than 10 mph over. **Figure 2** shows posted speed locations and observed speeding behavior. Speed data are provided in **Appendix C**.

### II.F. Multimodal Conditions

Pedestrian, bicycle, and transit facilities are not present along most of the corridor. There are sidewalks along the first few hundred feet of Southwest Drive at the south end and no crosswalks are provided. **Figure 3** outlines existing multimodal facilities.

# LEGEND

-  = Speed Data Collection Site
-  = Observed Average Speeds at or Below Posted Speed
-  = Observed Average Speeds  $\geq 10$ mph Over Posted Speed
-  = Observed Average Speeds  $\geq 5$ mph Over Posted Speed
-  = Observed Average Speeds  $< 5$ mph Over Posted Speed
-  = Speed Limit Sign





LEGEND

= Detached Sidewalk

= Crosswalk

= Bus Route

= Bus Stop

= Railroad



## ***II.G. Crash History***

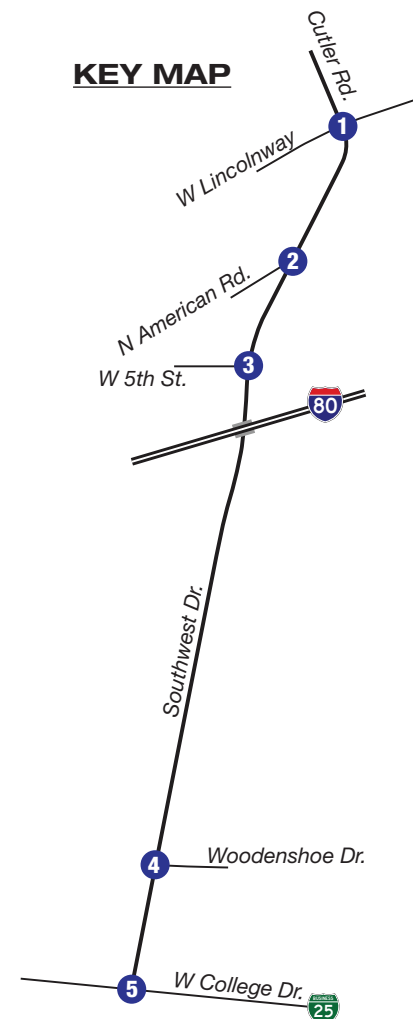
The Cheyenne MPO provided crash history along the Southwest Drive corridor for a 5-year timeframe, 2016–2020. The intersection of College Drive with Southwest Drive experienced nine crashes within this timeframe with the majority of those crashes being angle crashes. It should be noted that the failure to meet Wyoming Department of Transportation (WYDOT) Access Manual spacing requirements at this intersection could be the cause of several of these crashes. The intersection of Lincolnway with Southwest Drive experienced six crashes with half of those being rear-end crashes. However, it is common for signalized intersections to experience a higher number of rear end crashes and there were rear end crashes from different directions suggesting there is no pattern present. **Figure 3** shows the crash history along the corridor and any notable patterns. Supporting crash data can be found in **Appendix D**.

## ***II.H. Traffic Operations***

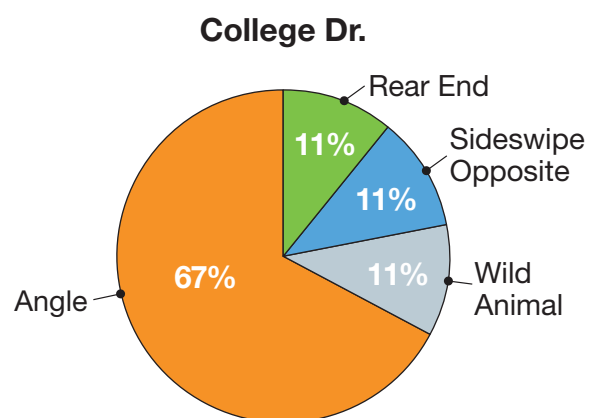
Traffic operations within the study area were evaluated according to techniques documented in the Transportation Research Board HCM, 6<sup>th</sup> Edition (2016). Level of service (LOS) is a qualitative measure of traffic operational conditions based on roadway capacity and vehicle delay. Levels of service are described by a letter designation ranging from LOS A to LOS F; with LOS A representing the best possible conditions and LOS F representing congested conditions. For unsignalized intersections, LOS is calculated for movements that must yield right-of-way to other traffic movements. For signalized traffic control, LOS represents an average of the delays for all movements at the intersection. Synchro traffic analysis software was used to develop the LOS calculations based on the HCM 6<sup>th</sup> Edition methodology.

Existing traffic volumes and lane geometry were used to evaluate operations along the study corridor. Currently, all signalized intersections operate at LOS A for all peak periods. The unsignalized movements operate at LOS C or better. **Figure 5** shows existing lane geometry, volumes, and operations. **Appendix E** provides the LOS worksheets for existing conditions.

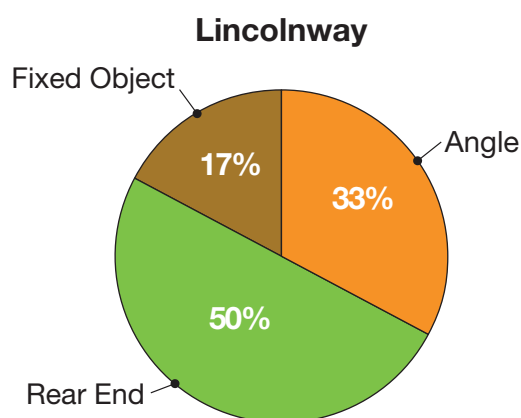
Intersection #	Cross Street	Total Crashes, 2016-2020
1	Lincolnway	6
2	North American Rd.	1
3	5th St.	0
4	Woodenshoe Dr.	0
5	College Dr.	9



### Crash Types at Higher Frequency Intersections

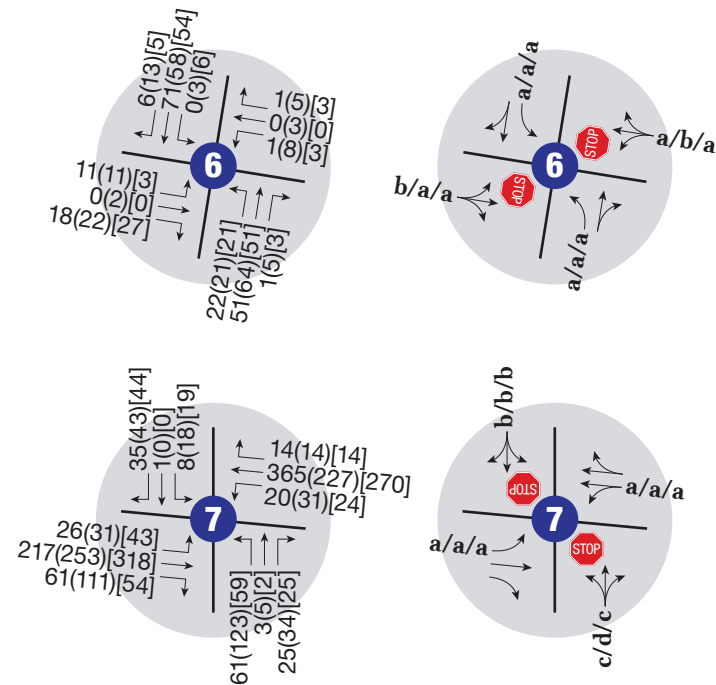
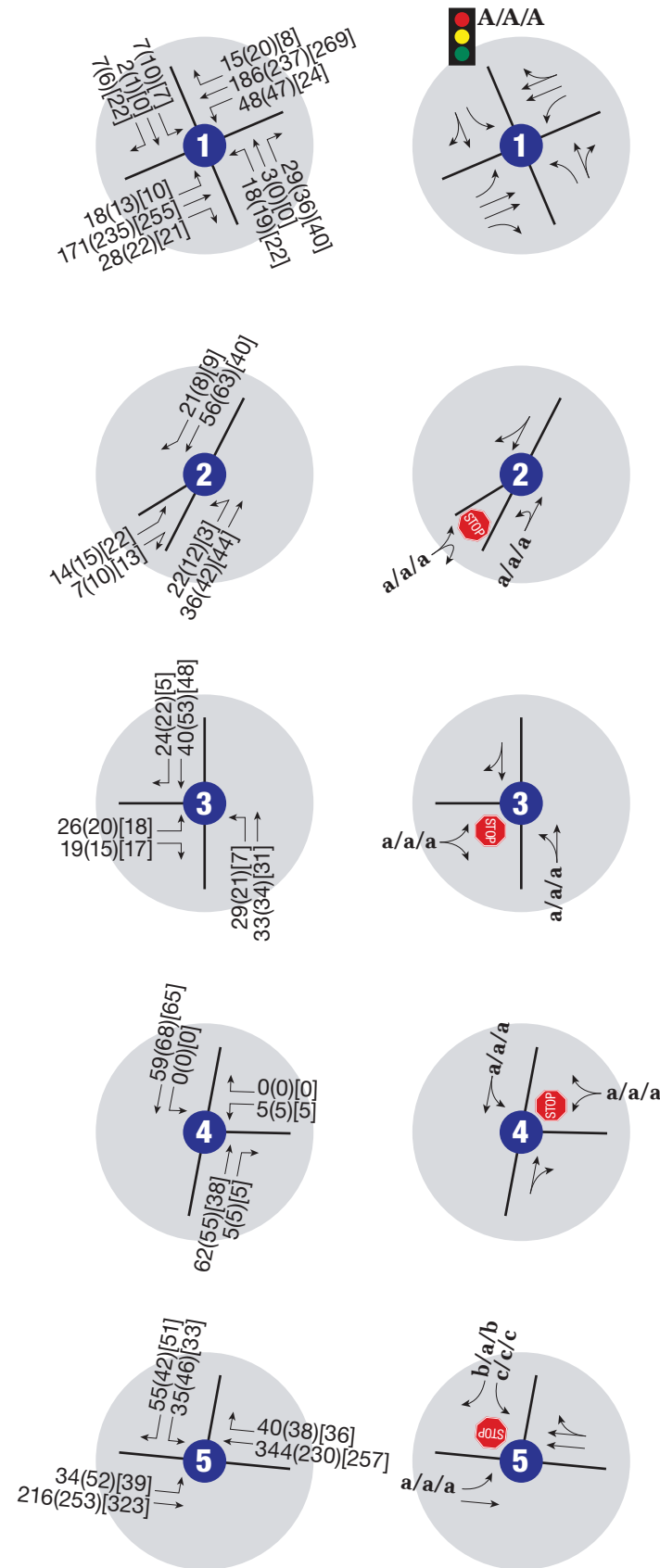


- Angle crash pattern
- Poor access spacing could contribute to crashes at this intersection

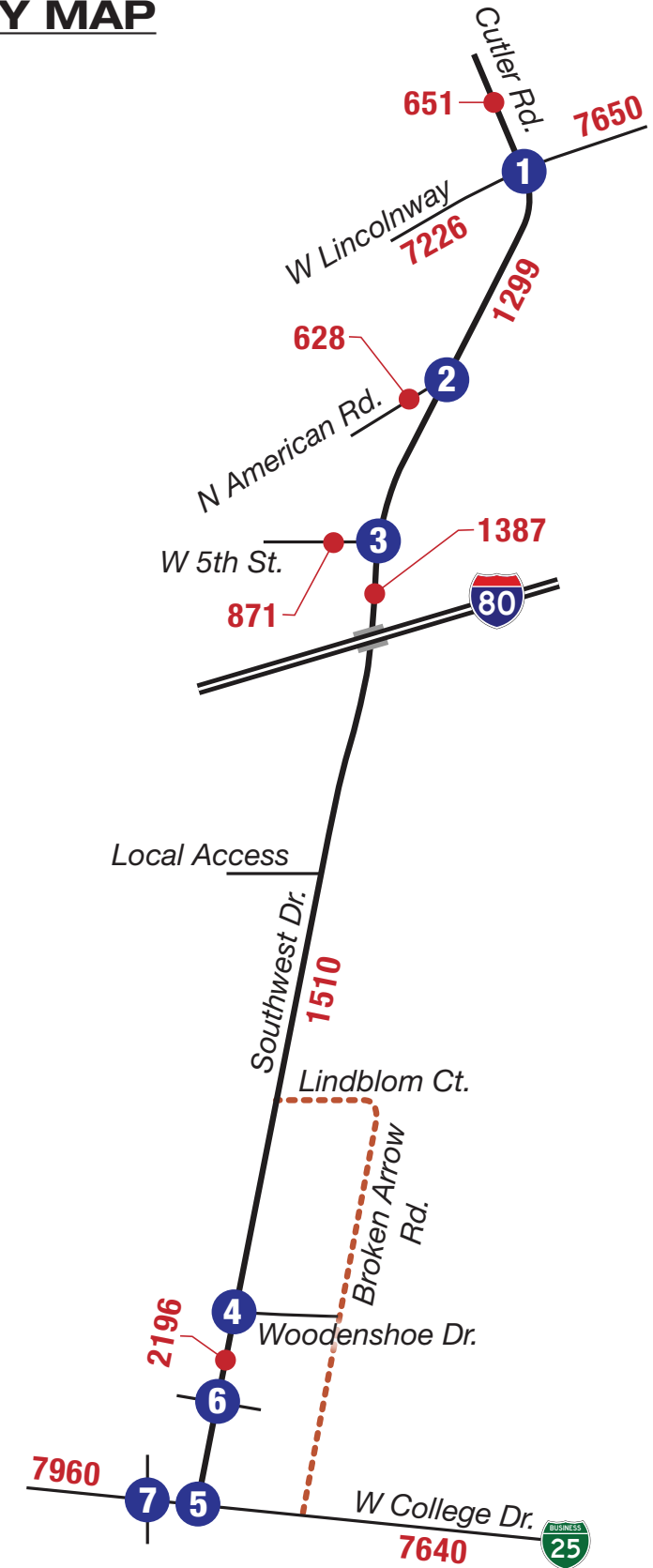


- Rear-End type consistent with signalized intersection patterns





## KEY MAP



### III. FUTURE NO ACTION CONDITIONS

Year 2045 No Action conditions represent the anticipated traffic conditions given future growth, but no changes to Southwest Drive.

#### III.A. Travel Demand Forecasting

To develop future background volumes, a growth rate was applied to existing volumes (shown on **Figure 5**). The Year 2045 Cheyenne MPO Travel Demand Model (TDM) developed for the Connect2045 Regional Transportation Plan Update (RTP+DEV scenario) was used to develop No Action traffic growth rates and forecasts for the study area. This travel demand model scenario includes development-driven roadway improvements anticipated to occur by 2045.

**Table 1** provides projected daily traffic volumes for the study area roadways. **Figure 6** shows projected year 2045 future volumes.

**Table 1. Summary of Growth Forecasts**

Roadway	Location	2023 Daily Volume	2045 Daily Volume	% Growth per Year
Southwest Dr	N/O College Dr	2,196	4,100	2.88%
	S/O Woodenshoe	1,650	3,100	2.91%
	S/O W. 5th St	1,387	3,700	4.56%
	N/O American Rd	1,299	3,700	4.87%
College Dr	W/O Southwest Dr	7,960	15,700	3.14%
	E/O Southwest Dr	7,640	14,300	2.89%
W. 5th St	W/O Southwest Dr	871	1,300	1.84%
N American Rd	W/O Southwest Dr	628	900	1.65%
Cutler Rd	N/O Lincolnway	651	1,700	4.46%
Lincolnway	W/O Southwest Dr	7,226	9,300	1.15%
	E/O Southwest Dr	7,650	11,100	1.71%

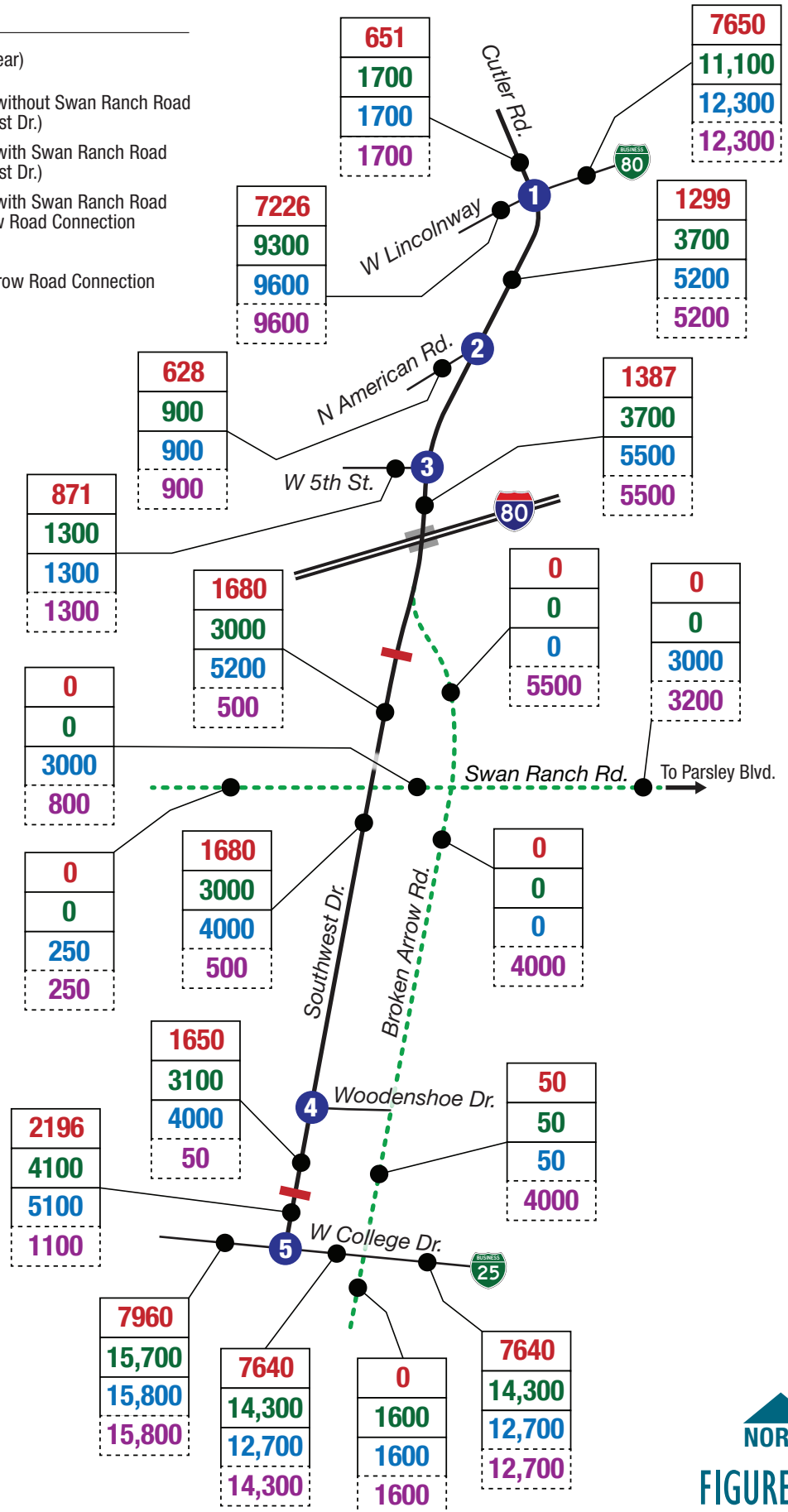
As shown on **Figure 6**, Southwest Drive is anticipated to carry a maximum daily traffic volume of about 4,100 vehicles per day (vpd) just south of Woodenshoe Drive. College Drive is anticipated to carry over 15,700 vpd west of Southwest Drive. Lincolnway is anticipated to grow to 11,100 vpd east of Southwest Drive with no additional connection to the study area. The study area is anticipated to experience growth rates between 1 and 5 percent per year. The lowest growth would be along Lincolnway west of Southwest Drive and the highest growth would be along Southwest Drive north of American Road.

#### III.B. Traffic Operations

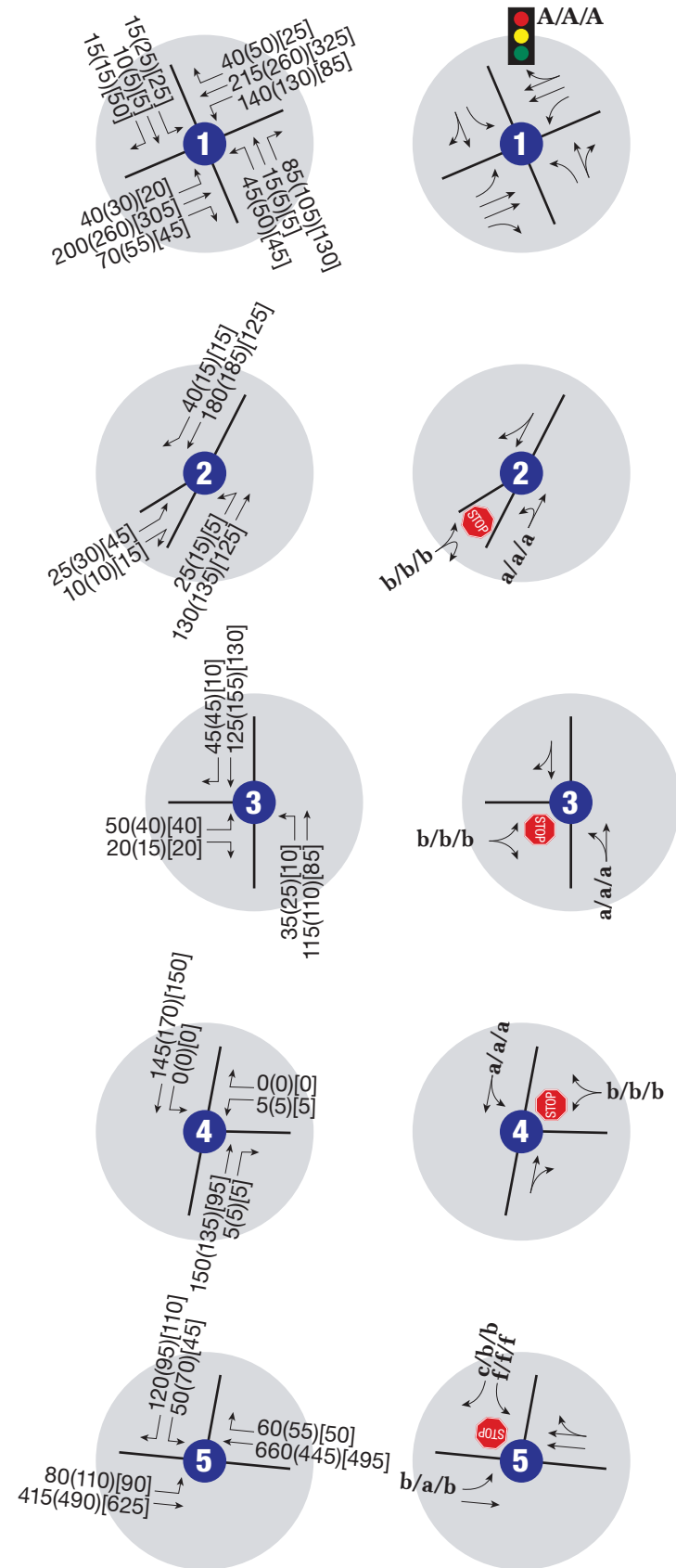
LOS traffic analysis procedures discussed previously were applied to the volumes for the future planning horizon. **Figure 7** illustrates the capacity analyses for future volumes with no geometry improvements. **Appendix F** contains the No Action LOS worksheets. The southbound left turn movement at the intersection of Southwest Dr with College Dr is anticipated to operate at LOS F for all peak hours. However, it is not uncommon for side street stop-controlled movements to experience higher than average delays during peak hours and this intersection is not anticipated to meet signal warrants; therefore, no improvements are needed due to operational deficiencies.

# LEGEND

- XXXX** = Daily Traffic Volumes (Base Year)
- XXXX** = 2045 Daily Traffic Forecasts without Swan Ranch Road Connection (2-Lane Southwest Dr.)
- XXXX** = 2045 Daily Traffic Forecasts with Swan Ranch Road Connection (2-Lane Southwest Dr.)
- XXXX** = 2045 Daily Traffic Forecasts with Swan Ranch Road Connection and Broken Arrow Road Connection
- = Future Roadway Connections
- = Road Closure with Broken Arrow Road Connection







## LEGEND

XXX(XXX)[XXX] = AM(Midday)[PM] Peak Hour Traffic Volumes

XXXX = Daily Traffic Volumes

X/X/X = AM/Midday/PM Peak Hour Signalized Intersection Level of Service

x/x/x = AM/Midday/PM Peak Hour Unsignalized Intersection Level of Service

----- = Unimproved Roadway/Not Navigable

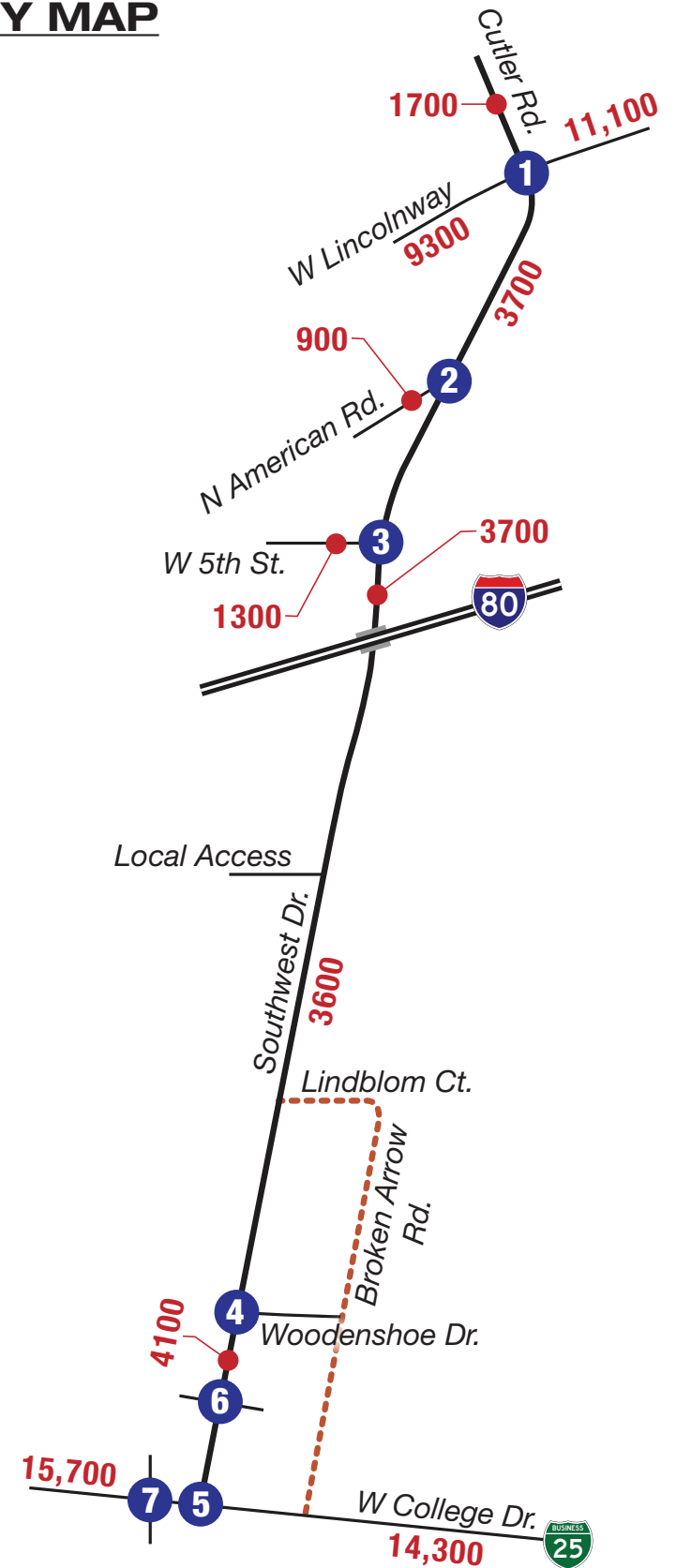


= Stop Sign



= Traffic Signal

## KEY MAP



## IV. ALTERNATIVES

The following subsections describe the alternatives development and evaluation process for the Southwest Drive corridor, including traffic analyses of the proposed alternative.

### IV.A. Summary of Needs

Intersection improvements are suggested to address multimodal deficiencies as well as access spacing concerns and railroad crossing wait times. **Table 2** outlines the improvements.

**Table 2. Alternatives Development and Evaluation Summary**

Category	Alternative	Advance?	Reason for determination to advance or eliminate
Southwest Drive Typical Section	Widen to Provide Additional Travel Lanes	No	Two travel lanes sufficient for anticipated growth
	Resurface Roadway	Yes	Improve conditions for local users
	Provide Sidewalks	Yes	For residential users on east side only
	Implement Bicycle Facilities	No	Little bicycle traffic in the area
Access and Intersection Spacing	Restrict Access to Neighboring Commercial Facilities	Yes	Limit conflicting turning movements at intersection of College Dr with Southwest Dr
	Restrict Access from Southwest Drive	No	Rerouting traffic will lower volumes utilizing College Drive intersection and limit turning conflicts, recommendation consistent with WYDOT study
	Improve Broken Arrow Road to Collector Standards	Yes	Moves majority of vehicular traffic farther away from I-25 ramps along College Drive, limits turning conflicts
	Improve Bridle Bit to Collector Standards	No	Limited available right of way
	Block Southwest Drive North of Arby's Access	Yes	Through volumes to use Broken Arrow Rd collector
	Signalize Southwest Drive & College Drive Intersection	No	Future year forecasts do not meet volume warrants, could have limited long term value with implementation of Broken Arrow Road improvements
Roadway Network	Swan Ranch Road Connection	Yes	Connect2045 Plan to connect with Parsley Boulevard, would provide relief route for grade crossing
	Broken Arrow Road Upgrade	Yes	Through traffic to use this roadway instead of Southwest Drive, limits turning conflicts and improves access spacing along College Dr east of the I-25 ramps, better serves future growth with the addition of Wallick Rd in the long term
Railroad Crossing Wait Times	Add "Railroad Crossing Closed" Warning Devices	Yes	Gives drivers the option to choose another route due to long wait times
	Build Grade Separated Crossing	No	Not cost effective

### ***IV.B. Recommended Improvements***

From the above listed possibilities for improvements, the following were chosen to be the most cost-effective solutions:

- Repave Southwest Drive for local residential users
- Add Sidewalk on the east side of Southwest Drive
- Restrict access to neighboring commercial facilities
- Improve Broken Arrow Rd to collector standards replacing Southwest Drive
- Block Southwest Drive north of the Arby's Access (only if Broken Arrow Road is developed)
- Add "Railroad Crossing Closed" waring devices
- Build Swan Ranch Road as regional connector to Parsley Boulevard in long range future

The above outlined improvements are considered ultimate improvements and would require time to implement. It should be noted that the above improvements are consistent with the College Drive Study conducted by Wyoming Department of Transportation (WYDOT). The above would be the conclusive recommendations for the area.

### ***IV.C. Summary of Recommended Improvements***

In order to facilitate better operations at the intersection of Southwest Drive with College Drive as well as limit conflicting movements near the intersection, Broken Arrow Road is suggested to be improved to major collector standards and replace Southwest Drive as the main throughway to Lincolnway. This improvement would involve Broken Arrow Road tying back into Southwest Drive just south of I-80. This would also require blocking off Southwest Drive just north of the Arby's Access, north of the dog park, and north of the animal shelter access. Vehicles would still be able to access Southwest Drive from College Drive, but only those interested in accessing the truck stop or Arby's, no through traffic will be allowed. Residents of Southwest Drive will be able to access the roadway by turning onto Broken Arrow Road and turning onto either Woodenshoe Road or Lindblom Court which will both have rural road improvements similar to those suggested for Southwest Drive.

The truck stop access along College Dive would also be constricted to a Right-In/Right-Out (RIRO) on the north side, forcing left turning vehicles to use the Southwest Drive access.

By 2045, a new connection of Swan Ranch Road is planned to extend from Parsley Boulevard to connect with both the new Broken Arrow alignment as well as Southwest Drive. **Figure 8** depicts the proposed new network configuration.



#### ***IV.D. Alternative Network Volumes***

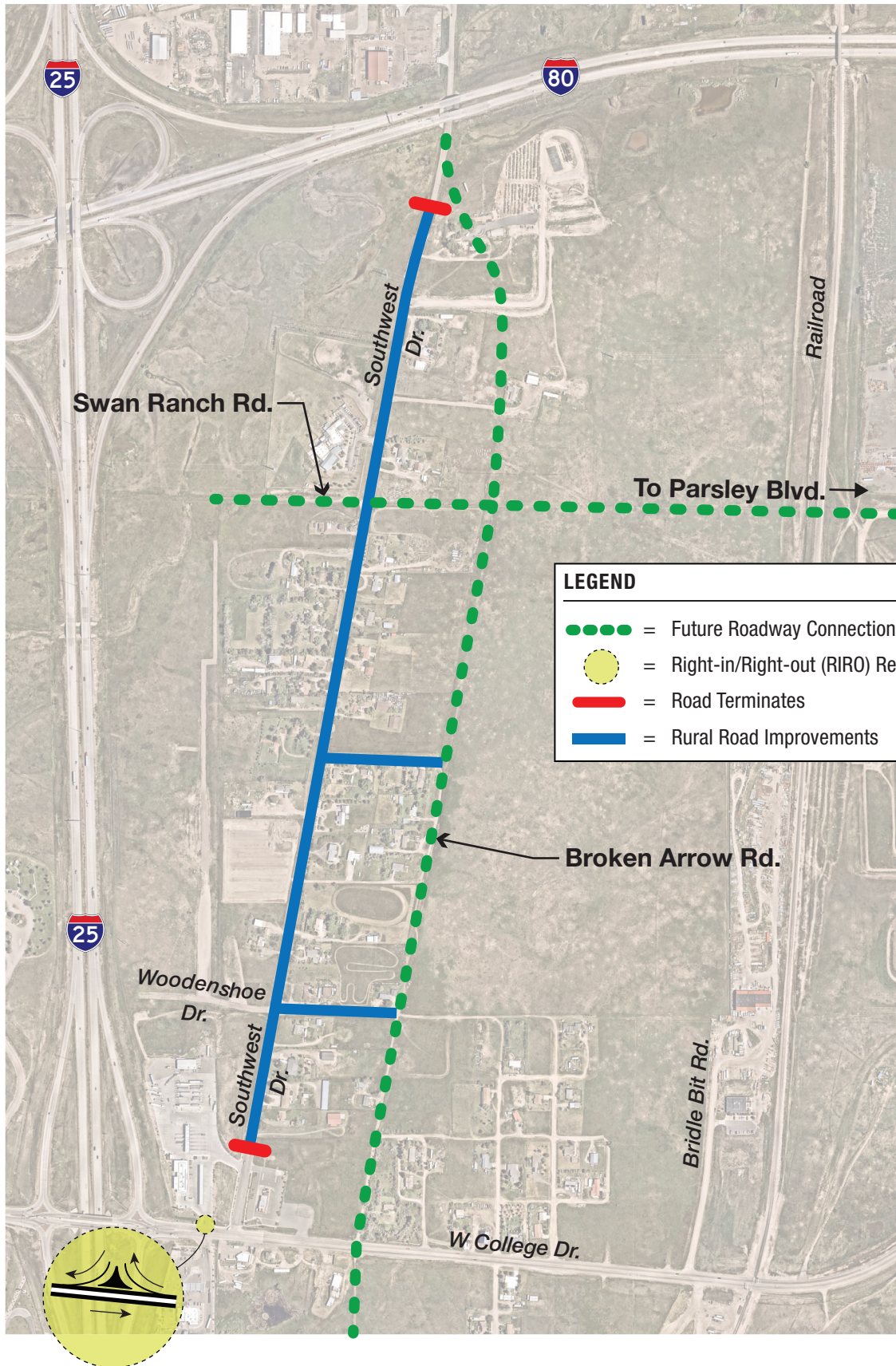
Given this new alignment, traffic volumes at the intersection of College Drive with Southwest Drive would be lowered significantly. The through volumes on Southwest Drive would be moved further east to Broken Arrow. This action along with the restricted truck stop access will lower conflicting turning movements at the closely spaced accesses around the intersection of Southwest Drive with College Drive. Anticipated traffic volumes for the new network configuration in the short term 2030 scenario are shown on **Figure 9**.

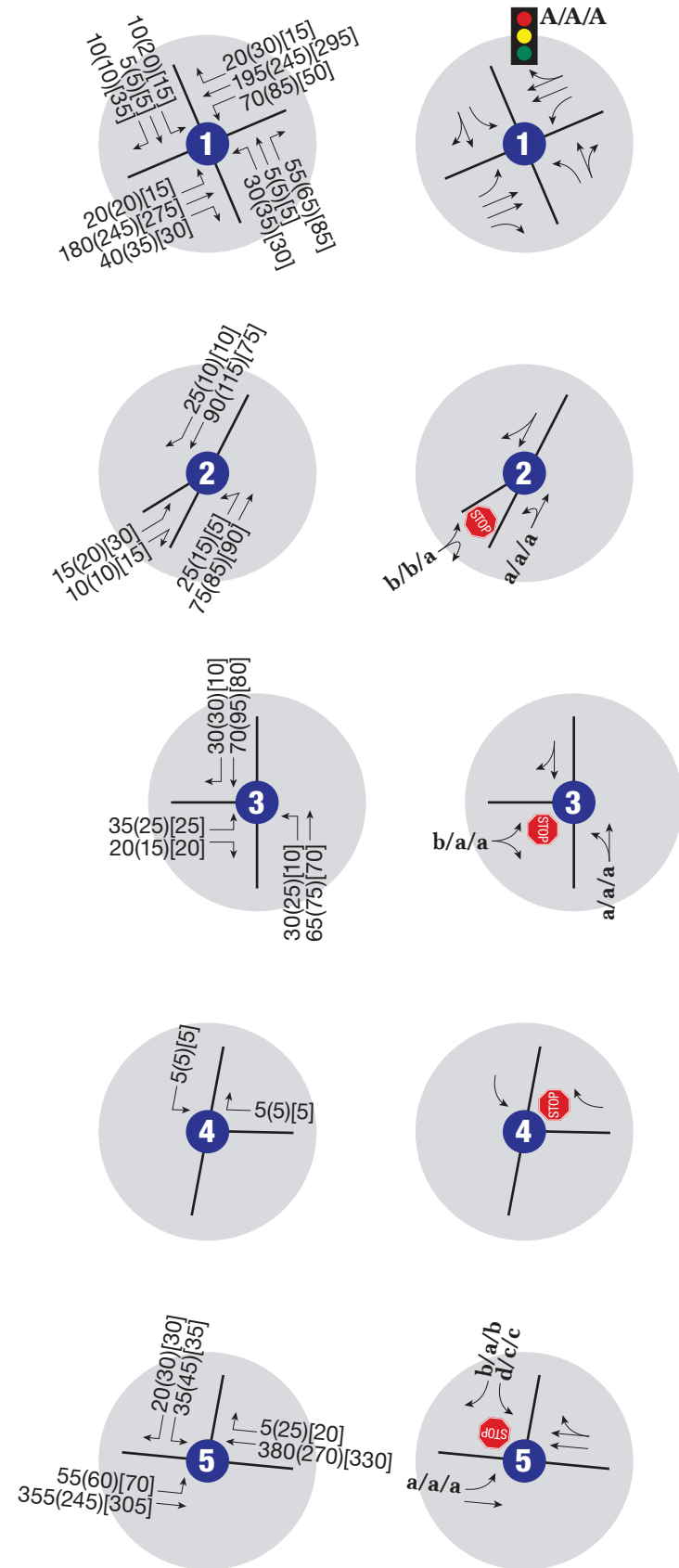
In 2045, the addition of Swan Ranch Road would change traffic volumes in the study area. This addition is likely to reroute traffic onto Parsley Boulevard to avoid the railroad crossing on Southwest Drive. 2045 network traffic volumes are shown on **Figure 10**.

#### ***IV.E. Alternative Evaluation***

Rerouting the vehicular traffic results in better operations at the intersection of College Drive with Southwest Drive as compared to the 2045 No Action scenario. As shown in the 2045 No Action scenario, the majority of intersections are anticipated to remain with acceptable operations; however, the intersection of College Drive with Southwest Drive would improve in this new alternative operating at LOS D or better for all movements. This alternative would also include rerouting traffic to Broken Arrow Road and all movements are anticipated to operate at LOS C or better for the 2030 alternative. Lane geometry and traffic operations for the 2030 scenario are shown on **Figure 9**. Detailed LOS worksheets can be found in **Appendix I**.

In 2045, the majority of movements and intersections in the study area would remain acceptable with the recommended improvements; however, the intersection of College Drive with Southwest Drive would see one LOS E in the AM for the southbound left turn movement. It is not uncommon for side street stop-controlled movements to experience higher than average delay during peak hours, and this intersection is not anticipated to warrant signalization. The intersection of College Drive with Broken Arrow Road would also experience some failing levels of service, but, similar to the Southwest Drive intersection, this is not uncommon, and the intersection is not anticipated to meet signal warrant criteria. Lane geometry and traffic operations for the 2045 Build alternative are shown on **Figure 10**. Detailed LOS worksheets for the 2045 Build alternative can be found in **Appendix G**.





#### LEGEND

xxx(xxx)[xxx] = AM(Midday)[PM] Peak Hour Traffic Volumes

XXXX = Daily Traffic Volumes

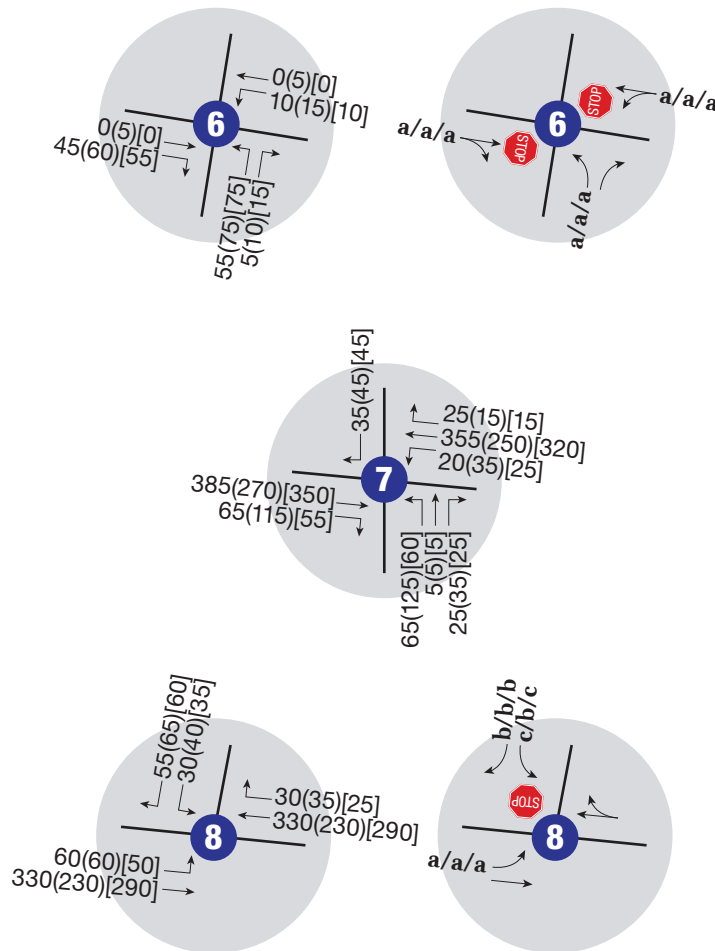
X/X/X = AM/Midday/PM Peak Hour Signalized Intersection Level of Service

x/x/x = AM/Midday/PM Peak Hour Unsignalized Intersection Level of Service

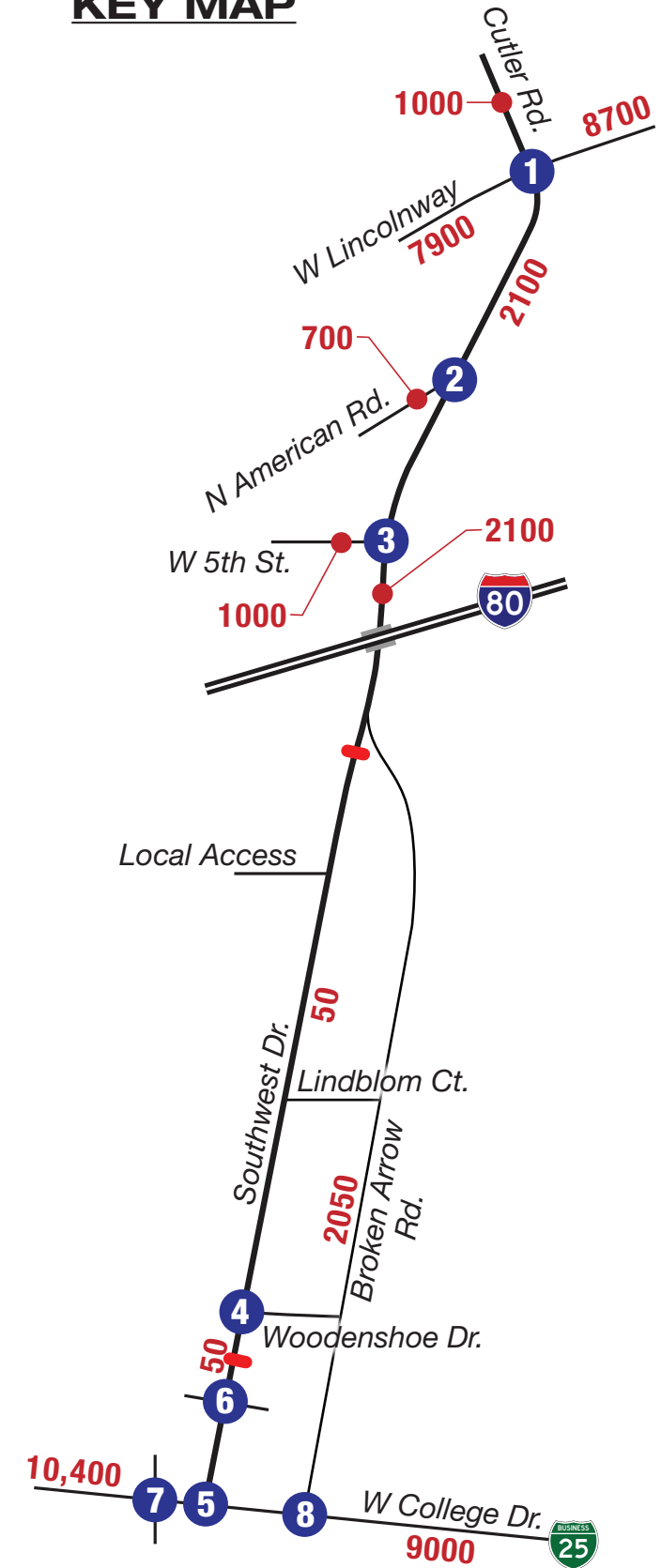
STOP = Stop Sign

Traffic Signal

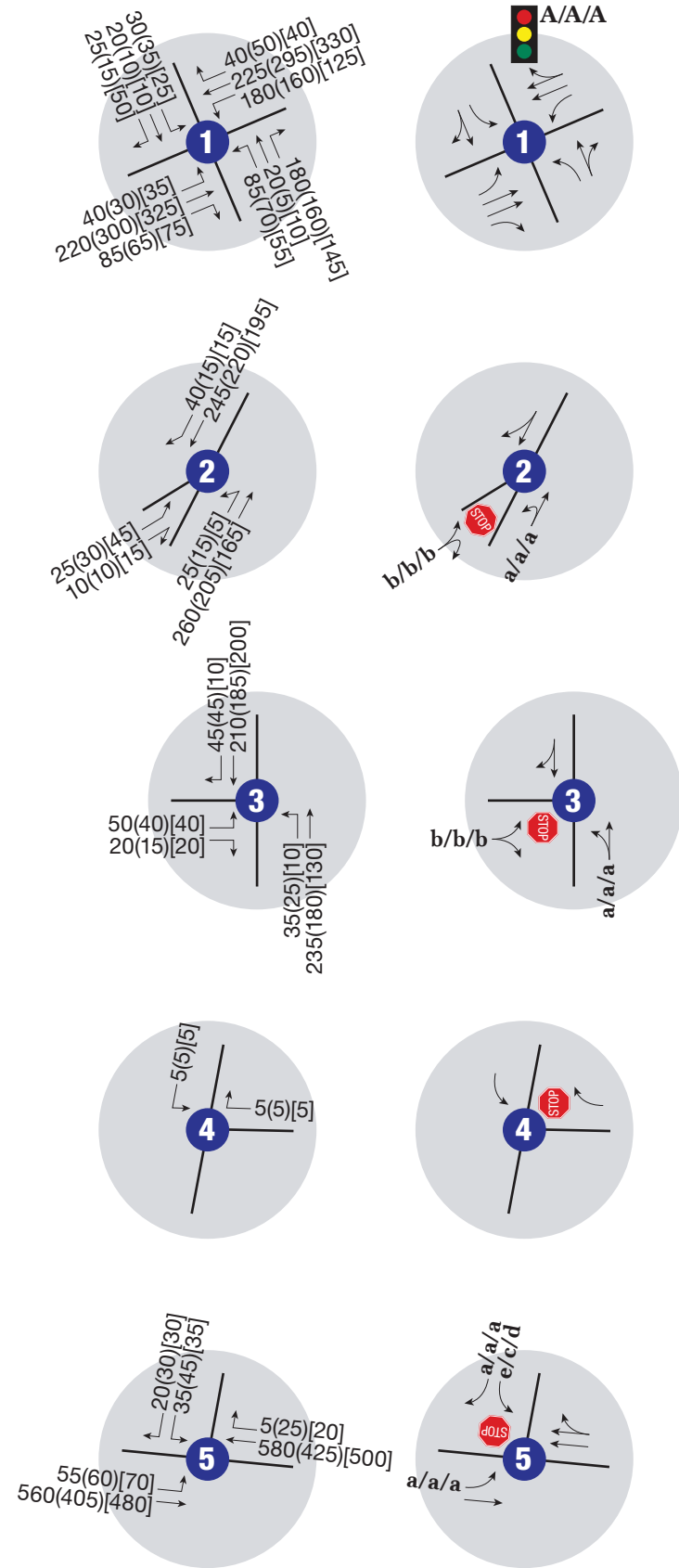
Red Line = Road Terminates



#### KEY MAP







## LEGEND

xxx(xxx)[xxx] = AM(Midday)[PM] Peak Hour Traffic Volumes

XXXX = Daily Traffic Volumes

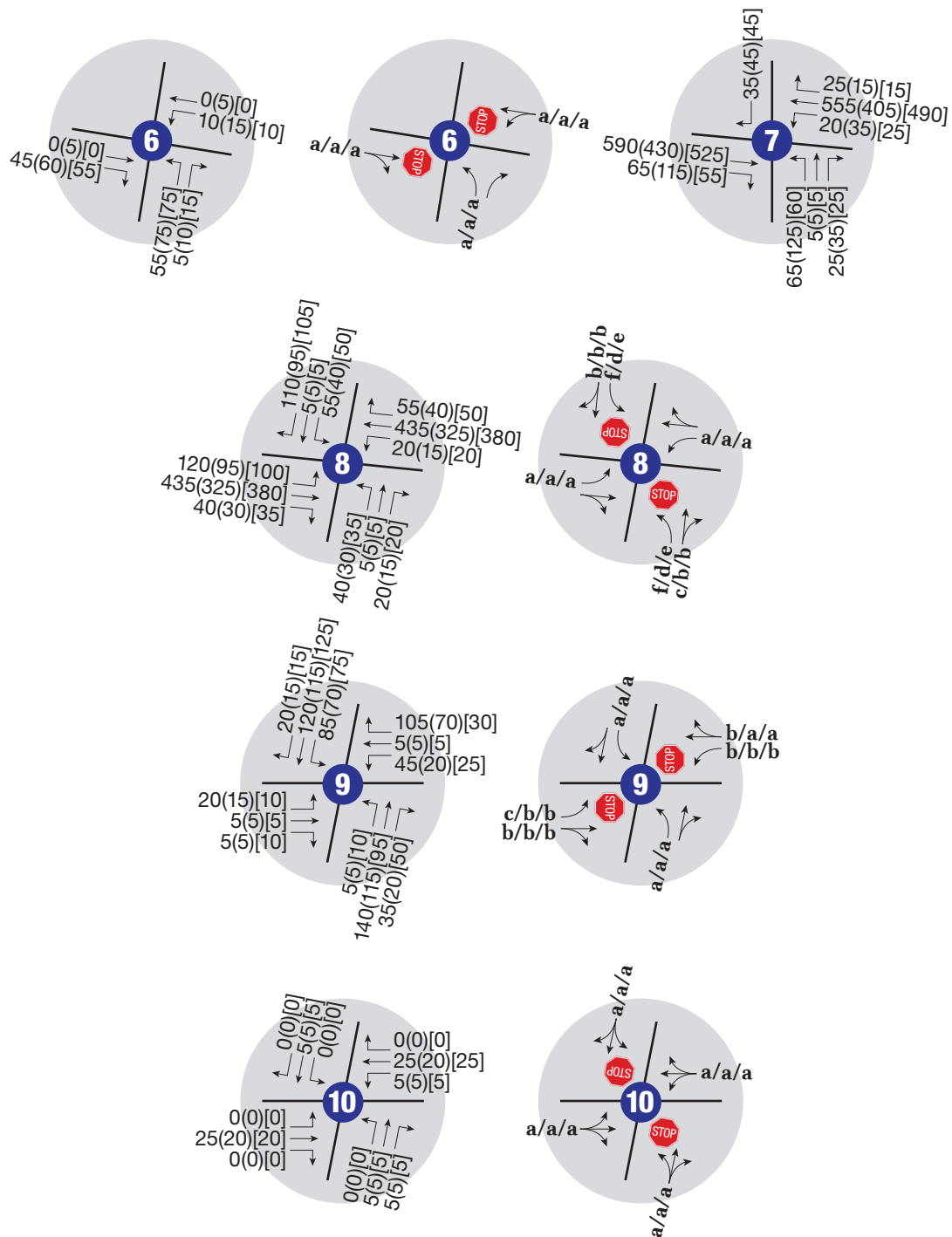
X/X/X = AM/Midday/PM Peak Hour Signalized Intersection Level of Service

x/x/x = AM/Midday/PM Peak Hour Unsignalized Intersection Level of Service

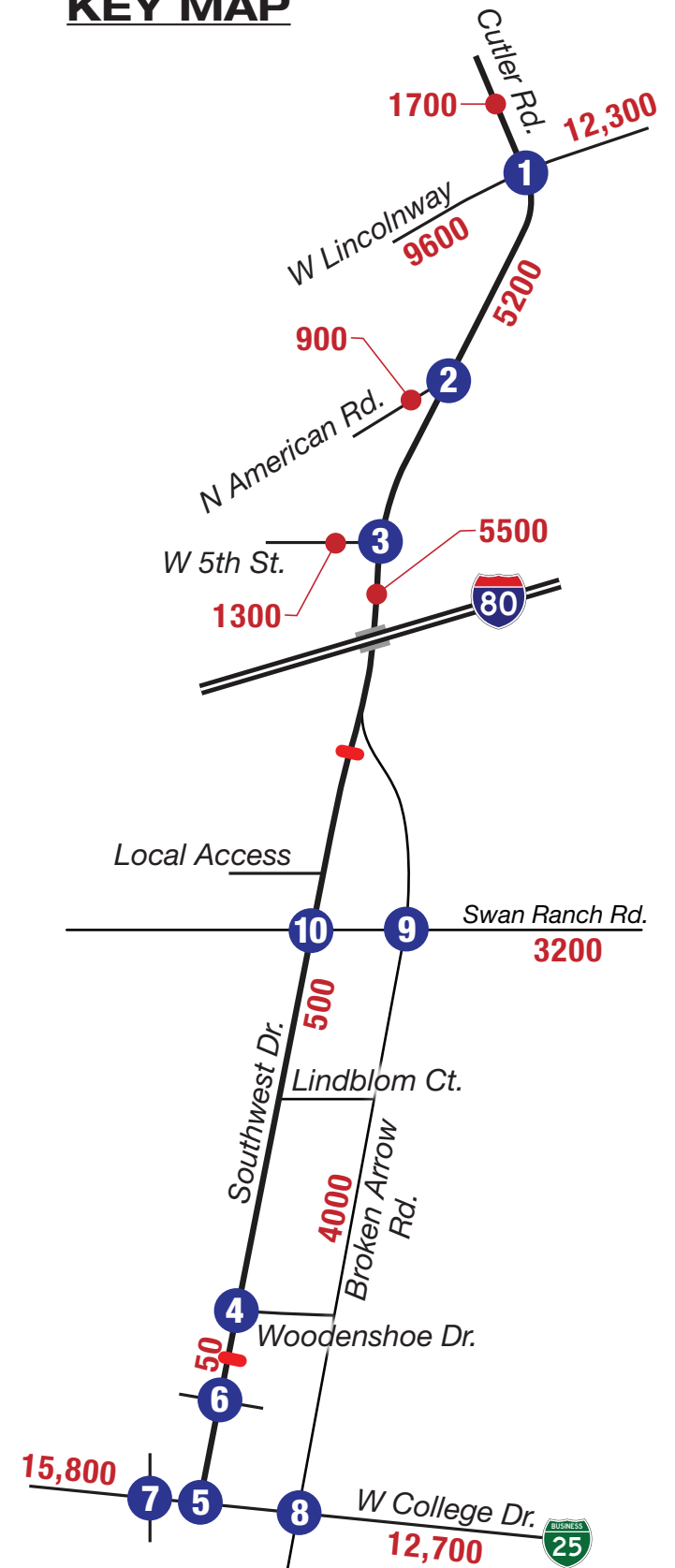
STOP = Stop Sign

Traffic Signal

Road Terminates



## KEY MAP



## V. SUMMARY

Southwest Drive is a north-south major collector just east of I-25 in Cheyenne, Wyoming. The roadway begins at W. College Drive, runs north for just over a mile to an underpass below Interstate 80 (I-80), and continues another two thirds of a mile to W. Lincolnway. The road continues north for a third of a mile on the other side of W. Lincolnway as Cutler Road. It is currently a two-lane roadway with a speed limit of 40 miles per hour (mph).

The study area includes the following intersections:

1. W. College Drive
2. Woodenshoe Drive
3. W. 5th Street
4. N American Road
5. W. Lincolnway

The Southwest drive corridor is mainly surrounded by residential and commercial land uses. Pedestrian, bicycle, and transit facilities are not present along most of the corridor.

Currently, all signalized intersections operate at LOS A for all peak periods. The unsignalized movements operate at LOS C or better. Given 2045 No Action conditions, the southbound left turn movement at the intersection of Southwest Dr with College Dr is anticipated to operate at LOS F for all peak hours.

Currently, problem areas include the existing railroad crossing on Southwest Drive which is blocked an average of eight hours per day and the intersection of Southwest Drive with College Drive which experiences high truck volumes as well as close access spacing.

Given the concerns for the study area, it is recommended that Broken Arrow Road be improved to major collector standards at College Drive and tie back into Southwest Drive just south of I-80, replacing Southwest Drive as the main through connector to Lincolnway. This would require blocking off Southwest Drive just north of the Arby's Access, north of the dog park, and north of the animal shelter access. Vehicles would still be able to access Southwest Drive from College Drive, but only those interested in accessing the truck stop or Arby's, no through traffic will be allowed. Further, the truck stop access along College Drive would be constricted to a Right-In/Right-Out (RIRO) on the north side, forcing left turning vehicles to use the Southwest Drive access.

By 2045, a new connection of Swan Ranch Road is planned to extend from Parsley Boulevard to connect with the new Broken Arrow alignment as well as Southwest Drive.

For the 2030 Build scenario, without the addition of Swan Ranch Road, All movements and intersections would operate at LOS D or better for all peak periods. In 2045, including the new connectivity, the majority of movements and intersections in the study area would remain acceptable with the recommended improvements; however, the intersection of College Drive with Southwest Drive would see one LOS E in the AM for the southbound left turn movement. It is not uncommon for side street stop-controlled movements to experience higher than average delay during peak hours, and this intersection is not anticipated to warrant signalization. The intersection of College Drive with Broken Arrow Road would also experience some failing levels of service, but, similar to the Southwest Drive intersection, this is not uncommon, and the intersection is not anticipated to meet signal warrant criteria.

## APPENDIX A. METHODS & ASSUMPTIONS DOCUMENT





## MEMORANDUM

**TO:** Julie Goode, BenchMark Engineers

**FROM:** Faith Kelley, EI  
Lyle DeVries, PE, PTOE

**DATE:** April 4, 2023

**SUBJECT:** Methods and Assumptions – Traffic and Safety Analysis  
Southwest Drive Reconstruction Plan  
FHU Reference No. 123563-01

This brief memorandum identifies the methods and assumptions for traffic engineering analysis in support of the Southwest Drive Reconstruction Plan. The traffic analyses will be used to develop and refine potential improvement concepts for the proposed reconstruction. A traffic study will be prepared to support and inform the plan.

### Study Area

The study area includes the following intersections along Southwest Drive:

- W College Drive
- Woodenshoe Drive
- W 5<sup>th</sup> Street
- N American Road
- W Lincolnway

### Data Collection

24-hour vehicle classification turning movement counts (recorded in September of 2022) and pedestrian counts at four of the five study intersections (volumes will be estimated for the Woodenshoe Drive intersection due to exceptionally low traffic levels) will be provided to the study team by the MPO for analysis. From these counts, the study team will identify three composite weekday peak hours for analysis; AM, Midday, and PM peak hours.

Daily vehicular classification and speeds were recorded at two points along Southwest Drive, just south of N American Road and south of the Cheyenne Animal Shelter, on September 20<sup>th</sup>, 2022. This data will be used to quantify daily traffic patterns and assess current travel speeds in light of posted limits.

### Traffic Volume Projections

The existing traffic volumes will establish a baseline for evaluation of future conditions. 2045 projections will be based on the Cheyenne MPO's regional travel demand model and vehicle trip estimates to be generated by known area developments. Coordination with MPO Staff will be needed to ensure that the study team is using the most appropriate iteration of Year 2045 travel demand model information, and additional adjusted model runs may be needed to enhance accuracy.

## Traffic Operations

Operational analyses will be conducted for existing and year 2045 conditions based on procedures documented in the *Highway Capacity Manual* (HCM) 6<sup>th</sup> Edition (Transportation Research Board, 2016). Although there is a newer 7<sup>th</sup> Edition available of the HCM, the chosen software for this effort, Synchro 11, utilizes 6<sup>th</sup> Edition methodology and changes to signalized and unsignalized intersections between the two editions are minimal. The 6<sup>th</sup> Edition HCM provides methods for multi-modal evaluation. Where appropriate, the following chapters of the HCM will be used to analyze specific operational conditions:

- Chapter 19 – Signalized Intersections
- Chapter 20 – Two-Way Stop Controlled Intersections
- Chapter 22 - Roundabouts

Highway Capacity Software (HCS) and Synchro will be used to develop basic lane requirements and geometric configurations. In the event that roundabouts are considered for any study intersections, additional software tools may be introduced to provide more accurate operational results; these softwares may include SIDRA and RODEL. HCM 6<sup>th</sup> Edition analysis procedures require the use of certain parameters, including heavy vehicle percentages and peak hour factors, which will be calculated based on existing recorded counts at study intersections. **Table I** summarizes current values.

Existing signalized intersection LOS analyses will utilize signal timing plans as provided by the City and MPO. For future LOS analyses, a minimum Peak Hour Factor (PHF) of 0.8 will be utilized given uncertainty in future peaking characteristics, a minimum heavy vehicle percentage of 5% will be used, and signal timings will be optimized. A saturation flow rate of 1900 vehicles per hour per lane will be used for the analysis.

## Measures of Effectiveness

The measures of effectiveness (MOE) for this effort will include the following:

- Intersection operations use Level of Service (LOS) per HCM 6<sup>th</sup> Edition methods as calculated by Synchro. Potential roundabout alternatives will also be analyzed using SIDRA or RODEL. 95<sup>th</sup> percentile queue lengths will be utilized for comparison
- Multi-modal LOS (transit, bicycle, and pedestrian) use HCM 6<sup>th</sup> Edition methods.
- The primary mobility goal is LOS D or better for intersection operations. LOS C is the goal for all multi-modal operations.

## Safety Analysis

The MPO will provide crash history information along the corridor and at intersections for the most recent available 5 years. Data will be compared with similar information provided by the Wyoming Department of Transportation (WYDOT) to ensure maximum capture of available reported crash information. Crash frequency and patterns susceptible to correction will be identified.

## Documentation

A preliminary Traffic Analysis Technical Memorandum will be prepared to document conceptual-level alternatives and results. Following review and comment by MPO and City staff, the traffic analyses and documentation will be refined to identify a preferred alternative for design.

Please contact FHU at (303)721-1440 with any questions.

Attachment: **Table I**

**Table I. Operations Analysis Parameters**

Intersection	Movement	Traffic Parameter	
		Existing Conditions <sup>1</sup> % Heavy Vehicles	Existing Conditions <sup>2</sup> Peak Hour Factor
		AM (midday) [PM]	AM(Midday)[PM]
W College Dr	EBL	9% (21%) [26%]	0.84 (0.86) [0.82]
	EBT	4% (4%) [2%]	
	WBT	7% (8%) [5%]	
	WBR	3% (16%) [6%]	0.81 (0.91) [0.82]
	SBL	9% (7%) [3%]	
	SBR	24% (29%) [24%]	0.73 (0.83) [0.75]
Woodenshoe Dr	WBL	0% (0%) [0%]	N/A, to be estimated from nearby available data
	WBR	0% (0%) [0%]	
	NBT	2% (4%) [5%]	
	NBR	0% (0%) [0%]	
	SBL	0% (0%) [0%]	
	SBT	5% (7%) [5%]	
5 <sup>th</sup> St	EBL	4% (0%) [0%]	0.89(0.94)[0.83]
	EBR	21% (7%) [12%]	
	NBL	3% (0%) [14%]	
	NBT	0% (6%) [3%]	
	SBT	13% (4%) [4%]	
	SBR	4% (0%) [20%]	
N American Rd	EBL	21% (7%) [0%]	0.8(0.89)[0.89]
	EBR	29% (10%) [8%]	
	NBL	0% (17%) [0%]	
	NBT	3% (0%) [2%]	
	SBT	7% (2%) [5%]	
	SBR	5% (0%) [11%]	
W Lincolnway	EBL	6% (31%) [40%]	0.78 (0.56) [0.87]
	EBT	3% (4%) [3%]	
	EBR	7% (5%) [10%]	
	WBL	6% (0%) [0%]	0.71 (0.9) [0.88]
	WBT	4% (4%) [1%]	
	WBR	7% (5%) [0%]	
	NBL	11% (0%) [0%]	0.82 (0.73) [0.82]
	NBT	0% (0%) [0%]	
	NBR	7% (3%) [0%]	
	SBL	14% (10%) [0%]	0.48 (0.88) [0.66]
	SBT	0% (0%) [0%]	
	SBR	71% (0%) [9%]	

<sup>1</sup>Future Year analyses will assume same truck percentages as existing conditions with a minimum of 2%

<sup>2</sup>Unless dictated by specific known traffic patterns, future year traffic analyses will establish minimum PHF of 0.8 for all movements given uncertainty in future peaking characteristics



## APPENDIX B. TRAFFIC COUNTS

**5th St & Southwest Dr  
Cheyenne Wyoming  
Tuesday, September 13, 2022**

Time	Southbound Southwest Dr						Westbound 0						Northbound Southwest Dr						Eastbound 5th St						VEHICLE TOTAL	
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total		
12:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1
12:45 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	1	0	0	1	4
Hourly Total	0	0	2	0	0	2	0	0	0	0	0	0	0	1	3	0	0	4	0	0	0	1	0	1	1	7
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1
1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	1	0	0	0	1	1	3
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1
2:15 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:30 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1
Hourly Total	0	0	2	0	0	2	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	4
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1
3:15 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1
3:45 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hourly Total	0	0	2	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	1	1	4
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1
4:15 AM	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4:30 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:45 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	0	4
Hourly Total	0	0	6	0	0	6	0	0	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	0	0	10
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	1	1	2
5:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1
5:30 AM	0	0	2	1	0	3	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	4
5:45 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	3
Hourly Total	0	0	3	1	0	4	0	0	0	0	0	0	0	3	2	0	0	5	0	0	0	1	0	1	1	10
6:00 AM	0	0	4	3	0	7	0	0	0	0	0	0	0	4	2	0	0	6	0	0	0	0	0	0	0	13
6:15 AM	0	0	1	4	0	5	0	0	0	0	0	0	0	11	2	0	0	13	0	0	0	0	0	0	0	18
6:30 AM	0	0	4	10	0	14	0	0	0	0	0	0	0	14	4	0	0	18	0	1	0	3	0	4	4	36
6:45 AM	0	0	6	10	0	16	0	0	0	0	0	0	0	22	6	0	0	28	0	3	0	2	0	5	5	49
Hourly Total	0	0	15	27	0	42	0	0	0	0	0	0	0	42	14	0	0	65	0	4	0	5	0	9	9	116
7:00 AM	0	0	4	8	0	12	0	0	0	0	0	0	0	4	5	0	0	9	0	3	0	2	0	5	5	26
7:15 AM	0	0	9	9	0	18	0	0	0	0	0	0	0	8	11	0	0	19	0	7	0	2	0	9	9	46
7:30 AM	0	0	10	4	0	14	0	0	0	0	0	0	0	11	9	0	0	20	0	5	0	9	0	14	14	48
7:45 AM	0	0	7	5	0	12	0	0	0	0	0	0	0	6	2	0	0	8	0	5	0	6	1	11	11	31
Hourly Total	0	0	30	26	0	56	0	0	0	0	0	0	0	29	27	0	0	56	0	20	0	19	1	39	39	151

**5th St & Southwest Dr  
Cheyenne Wyoming  
Tuesday, September 13, 2022**

Time	Southbound Southwest Dr						Westbound 0						Northbound Southwest Dr						Eastbound 5th St						VEHICLE TOTAL	
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total		
8:00 AM	0	0	14	6	0	20	0	0	0	0	0	0	0	4	11	0	0	0	15	0	9	0	2	2	11	46
8:15 AM	0	0	12	2	0	14	0	0	0	0	0	0	0	1	12	0	0	0	13	0	4	0	2	0	6	33
8:30 AM	0	0	8	0	0	8	0	0	0	0	0	0	0	5	12	0	0	0	17	0	2	0	3	0	5	30
8:45 AM	0	0	6	6	0	12	0	0	0	0	0	0	0	5	12	0	0	0	17	0	4	0	3	0	7	36
Hourly Total	0	0	40	14	0	54	0	0	0	0	0	0	0	15	47	0	0	0	62	0	19	0	10	2	29	145
9:00 AM	0	0	13	4	0	17	0	0	0	0	0	0	0	2	12	0	0	0	14	0	4	0	0	0	4	35
9:15 AM	0	0	6	3	0	9	0	0	0	0	0	0	0	3	8	0	0	0	11	0	6	0	1	0	7	27
9:30 AM	0	0	6	4	0	10	0	0	0	0	0	0	0	3	3	0	0	0	6	0	8	0	4	0	12	28
9:45 AM	0	0	4	10	0	14	0	0	0	0	0	0	0	2	8	0	0	0	10	0	4	0	6	0	10	34
Hourly Total	0	0	29	21	0	50	0	0	0	0	0	0	0	10	31	0	0	0	41	0	22	0	11	0	33	124
10:00 AM	0	0	6	3	0	9	0	0	0	0	0	0	0	2	5	0	0	0	7	0	4	0	5	0	9	25
10:15 AM	0	0	6	6	0	12	0	0	0	0	0	0	0	5	10	0	0	0	15	0	4	0	5	0	9	36
10:30 AM	0	0	12	2	0	14	0	0	0	0	0	0	0	5	11	0	0	0	16	0	6	0	3	0	9	39
10:45 AM	1	0	9	2	0	12	0	0	0	0	0	0	0	0	11	0	0	0	11	0	5	0	6	0	11	34
Hourly Total	1	0	33	13	0	47	0	0	0	0	0	0	0	12	37	0	0	0	49	0	19	0	19	0	38	134
11:00 AM	0	0	13	7	0	20	0	0	0	0	0	0	0	4	9	0	0	0	13	0	5	0	0	0	5	38
11:15 AM	0	0	13	1	0	14	0	0	0	0	0	0	0	4	10	0	0	0	14	0	3	0	3	0	6	34
11:30 AM	0	0	14	5	0	19	0	0	0	0	0	0	0	3	9	0	0	0	12	0	4	0	2	0	6	37
11:45 AM	0	0	11	3	0	14	0	0	0	0	0	0	0	2	5	0	0	0	7	0	6	0	8	0	14	35
Hourly Total	0	0	51	16	0	67	0	0	0	0	0	0	0	13	33	0	0	0	46	0	18	0	13	0	31	144
12:00 PM	0	0	10	4	0	14	0	0	0	0	0	0	0	6	7	0	0	0	13	0	3	0	8	0	11	38
12:15 PM	0	0	15	6	0	21	0	0	0	0	0	0	0	5	10	0	0	0	15	0	5	0	2	0	7	43
12:30 PM	0	0	11	8	0	19	0	0	0	0	0	0	0	6	8	0	0	0	14	0	5	0	2	0	7	40
12:45 PM	0	0	17	4	0	21	0	0	0	0	0	0	0	4	9	0	0	0	13	0	7	0	3	0	10	44
Hourly Total	0	0	53	22	0	75	0	0	0	0	0	0	0	21	34	0	0	0	55	0	20	0	15	0	35	165
1:00 PM	0	0	11	2	0	13	0	0	0	0	0	0	0	6	14	0	0	0	20	0	3	0	7	0	10	43
1:15 PM	0	0	11	0	0	11	0	0	0	0	0	0	0	4	12	0	0	0	16	0	2	0	3	0	5	32
1:30 PM	0	0	8	0	0	8	0	0	0	0	0	0	0	6	13	0	0	0	19	0	1	0	6	0	7	34
1:45 PM	0	0	13	0	0	13	0	0	0	0	0	0	0	5	13	0	0	0	18	0	0	0	8	0	8	39
Hourly Total	0	0	43	2	0	45	0	0	0	0	0	0	0	21	52	0	0	0	73	0	6	0	24	0	30	148
2:00 PM	0	0	14	0	0	14	0	0	0	0	0	0	0	8	14	0	0	0	22	0	2	0	7	0	9	45
2:15 PM	0	0	10	4	0	14	0	0	0	0	0	0	0	6	4	0	0	0	10	0	3	0	5	0	8	32
2:30 PM	0	0	7	2	0	9	0	0	0	0	0	0	0	3	6	0	0	0	9	0	3	0	1	0	4	22
2:45 PM	0	0	10	0	0	10	0	0	0	0	0	0	0	7	10	0	0	0	17	0	5	0	9	0	14	41
Hourly Total	0	0	41	6	0	47	0	0	0	0	0	0	0	24	34	0	0	0	58	0	13	0	22	0	35	140
3:00 PM	0	0	13	4	0	17	0	0	0	0	0	0	0	4	5	0	0	0	9	1	9	0	4	0	14	40
3:15 PM	0	0	13	5	0	18	0	0	0	0	0	0	0	3	9	0	0	0	12	0	3	0	1	0	4	34
3:30 PM	0	0	16	4	0	20	0	0	0	0	0	0	0	10	9	0	0	0	19	0	9	0	18	0	27	66
3:45 PM	0	0	11	4	0	15	0	0	0	0	0	0	0	3	10	0	0	0	13	0	9	0	7	0	16	44
Hourly Total	0	0	53	17	0	70	0	0	0	0	0	0	0	20	33	0	0	0	53	1	30	0	30	0	61	184



**5th St & Southwest Dr  
Cheyenne Wyoming  
Tuesday, September 13, 2022**

Time	Southbound Southwest Dr						Westbound 0						Northbound Southwest Dr						Eastbound 5th St						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	
4:00 PM	0	0	13	0	0	13	0	0	0	0	0	0	0	4	7	0	0	0	0	3	0	14	0	0	41
4:15 PM	0	0	7	2	0	9	0	0	0	0	0	0	0	1	7	0	3	8	0	5	0	3	0	8	25
4:30 PM	0	0	12	1	0	13	0	0	0	0	0	0	0	3	4	0	0	7	0	4	0	7	0	11	31
4:45 PM	0	0	14	1	0	15	0	0	0	0	0	0	0	2	10	0	0	12	0	2	0	3	0	5	32
Hourly Total	0	0	46	4	0	50	0	0	0	0	0	0	0	10	28	0	3	38	0	14	0	27	0	41	129
5:00 PM	0	0	15	1	0	16	0	0	0	0	0	0	0	1	10	0	0	11	0	7	0	4	0	11	38
5:15 PM	0	0	6	1	0	7	0	0	0	0	0	0	0	0	7	0	0	7	0	2	0	1	0	3	17
5:30 PM	0	0	10	0	0	10	0	0	0	0	0	0	1	7	7	0	0	15	0	0	0	11	0	11	36
5:45 PM	0	0	9	0	0	9	0	0	0	0	0	0	0	3	4	0	0	7	0	4	0	1	0	5	21
Hourly Total	0	0	40	2	0	42	0	0	0	0	0	0	1	11	28	0	0	40	0	13	0	17	0	30	112
6:00 PM	0	0	5	2	0	7	0	0	0	0	0	0	0	0	5	0	0	5	0	4	0	3	0	7	19
6:15 PM	0	0	8	1	0	9	0	0	0	0	0	0	0	5	6	0	0	11	0	3	0	2	0	5	25
6:30 PM	0	0	8	0	0	8	0	0	0	0	0	0	0	1	8	0	0	9	0	0	0	0	0	0	17
6:45 PM	0	0	1	2	0	3	0	0	0	0	0	0	0	1	2	0	0	3	0	2	0	1	0	3	9
Hourly Total	0	0	22	5	0	27	0	0	0	0	0	0	0	7	21	0	0	28	0	9	0	6	0	15	70
7:00 PM	0	0	7	0	0	7	0	0	0	0	0	0	0	2	3	0	0	5	0	1	0	1	0	2	14
7:15 PM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4
7:30 PM	1	0	9	0	0	10	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	13
7:45 PM	0	0	5	0	0	5	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	10
Hourly Total	1	0	23	0	0	24	0	0	0	0	0	0	0	2	13	0	0	15	0	1	0	1	0	2	41
8:00 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	4
8:15 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	2	4	0	0	6	0	0	0	0	0	0	7
8:30 PM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	6
8:45 PM	0	0	3	0	0	3	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	6
Hourly Total	0	0	9	0	0	9	0	0	0	0	0	0	0	3	11	0	0	14	0	0	0	0	0	0	23
9:00 PM	0	0	3	0	0	3	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4
9:15 PM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2	0	2	5
9:30 PM	0	0	5	0	0	5	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	5
9:45 PM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4
Hourly Total	0	0	12	0	0	12	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	2	0	2	18
10:00 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	4
10:15 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
10:30 PM	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	2
Hourly Total	0	0	3	1	0	4	0	0	0	0	0	0	0	1	4	0	0	5	0	0	0	1	0	1	10
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	3
11:45 PM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	5
Hourly Total	0	0	4	0	0	4	0	0	0	0	0	0	0	1	3	0	0	4	0	1	0	0	0	1	9
<b>DAILY TOTAL</b>	<b>2</b>	<b>0</b>	<b>562</b>	<b>177</b>	<b>0</b>	<b>741</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>259</b>	<b>464</b>	<b>0</b>	<b>3</b>	<b>724</b>	<b>1</b>	<b>210</b>	<b>0</b>	<b>225</b>	<b>3</b>	<b>436</b>	<b>1901</b>
<b>Cars</b>	2	0	532	166	0	700	0	0	0	0	0	0	1	221	441	0	3	663	1	199	0	196	3	396	1759
<b>Heavy Vehicles</b>	0	0	30	11	0	41	0	0	0	0	0	0	0	38	23	0	0	61	0	11	0	29	0	40	142
<b>Heavy Vehicle %</b>	0.00%	0.00%	5.34%	6.21%	0.00%	5.53%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.67%	4.96%	0.00%	0.00%	8.43%	0.00%	5.24%	0.00%	12.89%	0.00%	9.17%	7.47%

**5th St & Southwest Dr  
Cheyenne Wyoming  
Tuesday, September 13, 2022**

**AM Peak Hour**

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
7:15 AM	0	0	9	9	0	18	0	0	0	0	0	0	0	8	11	0	0	19	0	7	0	2	0	9	46
7:30 AM	0	0	10	4	0	14	0	0	0	0	0	0	0	11	9	0	0	20	0	5	0	9	0	14	48
7:45 AM	0	0	7	5	0	12	0	0	0	0	0	0	0	6	2	0	0	8	0	5	0	6	1	11	31
8:00 AM	0	0	14	6	0	20	0	0	0	0	0	0	0	4	11	0	0	15	0	9	0	2	2	11	46
Peak Hour Total PHF	0	0	40	24	0	64	0	0	0	0	0	0	0	29	33	0	0	62	0	26	0	19	3	45	171
	0.000	0.000	0.714	0.667	0.000	0.800	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.659	0.750	0.000	0.000	0.775	0.000	0.722	0.000	0.528	0.375	0.804	0.891

**PM Peak Hour**

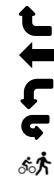
Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
3:15 PM	0	0	13	5	0	18	0	0	0	0	0	0	0	3	9	0	0	12	0	3	0	1	0	4	34
3:30 PM	0	0	16	4	0	20	0	0	0	0	0	0	0	10	9	0	0	19	0	9	0	18	0	27	66
3:45 PM	0	0	11	4	0	15	0	0	0	0	0	0	0	3	10	0	0	13	0	9	0	7	0	16	44
4:00 PM	0	0	13	0	0	13	0	0	0	0	0	0	0	4	7	0	0	11	0	3	0	14	0	17	41
Peak Hour Total PHF	0	0	53	13	0	66	0	0	0	0	0	0	0	20	35	0	0	55	0	24	0	40	0	64	185
	0.000	0.000	0.828	0.650	0.000	0.825	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.875	0.000	0.000	0.724	0.000	0.667	0.000	0.556	0.000	0.593	0.701

Total Vehicles On Leg				1417		
Vehicles Entering Intersection			741	Vehicles Exiting Intersection		676
Southbound						
Cars	166	532	0	2	0	
Heavy	11	30	0	0	0	
Total	177	562	0	2	0	

Total Vehicles on Leg 873	Vehicles Entering Intersection 436	Eastbound	Cars	Heavy	Total
	Vehicles Exiting Intersection 437		3	0	3
			1	0	1
			199	11	210
			0	0	0
			196	29	225



Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 0	Total Vehicles on Leg 0
0	0	0			
0	0	0			
0	0	0			
0	0	0		Vehicles Exiting Intersection 0	
0	0	0			



Daily Volumes

Cars	3	1	221	441	0
Heavy	0	0	38	23	0
Total	3	1	259	464	0
Northbound					
Vehicles Entering Intersection			724		
Vehicles Exiting Intersection			788		
Total Vehicles On Leg			1512		

**College Dr & Business Access  
Cheyenne WY  
Tuesday, August 29, 2023**

Time	Southbound Business Access						Westbound College Dr						Northbound Business Access						Eastbound College Dr						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
12:00 AM	0	0	0	0	0	0	0	2	6	0	0	8	0	5	1	5	0	11	0	1	10	4	0	15	34
12:15 AM	0	0	0	2	0	2	0	0	5	0	0	5	0	4	0	3	0	7	0	1	6	6	0	13	27
12:30 AM	0	0	0	0	0	0	0	1	5	0	0	6	0	1	0	0	0	1	0	0	5	5	0	10	17
12:45 AM	0	0	0	0	0	0	0	0	5	0	0	5	0	10	0	0	0	10	0	0	4	4	0	8	23
Hourly Total	0	0	0	2	0	2	0	3	21	0	0	24	0	20	1	8	0	29	0	2	25	19	0	46	101
1:00 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	1	0	1	0	0	5	2	0	7	10
1:15 AM	0	0	0	1	0	1	0	0	1	0	0	1	0	4	0	2	0	6	0	1	14	1	0	16	24
1:30 AM	0	0	0	0	0	0	0	0	5	0	0	5	0	4	0	1	0	5	0	1	4	4	0	9	19
1:45 AM	0	0	0	0	0	0	0	0	10	0	0	10	0	5	0	0	0	5	0	0	7	6	0	13	28
Hourly Total	0	0	0	1	0	1	0	0	18	0	0	18	0	13	0	4	0	17	0	2	30	13	0	45	81
2:00 AM	0	0	1	0	0	1	0	1	5	0	0	6	0	4	1	0	0	5	0	0	6	8	0	14	26
2:15 AM	0	0	0	0	0	0	0	1	5	0	0	6	0	8	0	0	0	8	0	1	5	3	0	9	23
2:30 AM	0	0	0	1	0	1	0	1	3	1	0	5	0	5	0	0	0	5	0	2	3	3	0	8	19
2:45 AM	0	0	0	1	0	1	0	0	4	0	0	4	0	5	0	0	0	5	0	2	2	3	0	7	17
Hourly Total	0	0	1	2	0	3	0	3	17	1	0	21	0	22	1	0	0	23	0	5	16	17	0	38	85
3:00 AM	0	0	0	1	0	1	0	0	8	0	0	8	0	3	0	0	0	3	0	0	8	6	0	14	26
3:15 AM	0	0	0	3	0	3	0	0	7	1	0	8	0	6	0	2	0	8	0	0	3	4	0	7	26
3:30 AM	0	0	0	0	0	0	0	1	10	0	0	11	0	9	0	1	0	10	0	2	4	11	0	17	38
3:45 AM	0	0	0	1	0	1	0	2	22	0	0	24	0	5	0	0	0	5	0	0	3	4	0	7	37
Hourly Total	0	0	0	5	0	5	0	3	47	1	0	51	0	23	0	3	0	26	0	2	18	25	0	45	127
4:00 AM	0	0	1	1	0	2	0	1	13	1	0	15	0	9	0	0	0	9	0	1	3	8	0	12	38
4:15 AM	0	1	0	0	0	1	0	2	19	0	0	21	0	7	1	3	0	11	0	3	3	4	0	10	43
4:30 AM	0	0	0	1	0	1	0	3	21	2	0	26	0	3	0	1	0	4	0	4	10	9	0	23	54
4:45 AM	0	1	0	5	0	6	0	2	26	3	0	31	0	14	1	2	0	17	0	1	10	10	0	21	75
Hourly Total	0	2	1	7	0	10	0	8	79	6	0	93	0	33	2	6	0	41	0	9	26	31	0	66	210
5:00 AM	0	2	0	5	0	7	0	4	31	3	0	38	0	12	0	1	0	13	0	3	8	10	0	21	79
5:15 AM	0	0	1	8	0	9	0	4	36	2	0	42	0	25	0	1	0	26	0	5	11	9	0	25	102
5:30 AM	0	1	0	7	0	8	0	0	53	6	0	59	0	8	0	0	0	8	0	3	21	12	0	36	111
5:45 AM	0	0	0	9	0	9	0	7	61	5	0	73	0	13	1	2	0	16	0	4	40	6	0	50	148
Hourly Total	0	3	1	29	0	33	0	15	181	16	0	212	0	58	1	4	0	63	0	15	80	37	0	132	440
6:00 AM	0	4	1	4	0	9	0	1	45	2	0	48	0	9	1	1	0	11	0	1	26	14	0	41	109
6:15 AM	0	0	0	9	0	9	0	2	40	5	0	47	0	15	0	1	0	16	0	6	36	13	0	55	127
6:30 AM	0	3	0	3	0	6	0	1	68	4	0	73	0	15	1	4	0	20	0	4	40	23	0	67	166
6:45 AM	0	0	0	12	0	12	0	9	67	5	0	81	0	26	0	9	0	35	0	9	81	22	0	112	240
Hourly Total	0	7	1	28	0	36	0	13	220	16	0	249	0	65	2	15	0	82	0	20	183	72	0	275	642
7:00 AM	0	3	0	10	0	13	0	2	106	6	0	114	0	16	0	5	0	21	0	9	86	22	0	117	265
7:15 AM	0	3	0	10	0	13	0	4	73	4	0	81	0	13	1	11	0	25	0	6	111	19	0	136	255
7:30 AM	0	3	0	7	0	10	0	7	96	2	0	105	0	18	0	6	0	24	0	8	71	13	0	92	231
7:45 AM	0	2	1	13	0	16	0	5	88	4	0	97	0	17	1	5	0	23	0	5	73	17	0	95	231
Hourly Total	0	11	1	40	0	52	0	18	363	16	0	397	0	64	2	27	0	93	0	28	341	71	0	440	982

**College Dr & Business Access  
Cheyenne WY  
Tuesday, August 29, 2023**

Time	Southbound Business Access						Westbound College Dr						Northbound Business Access						Eastbound College Dr						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
8:00 AM	0	0	0	5	0	5	0	4	84	4	0	92	0	13	1	3	0	17	0	7	43	12	0	62	176
8:15 AM	0	3	1	9	0	13	0	5	61	5	0	71	0	15	0	2	0	17	0	4	41	20	0	65	166
8:30 AM	0	3	2	8	0	13	0	10	72	4	3	86	0	24	0	11	1	35	0	6	41	23	1	70	204
8:45 AM	0	1	0	8	0	9	0	2	56	3	0	61	0	19	1	3	0	23	0	8	47	31	0	86	179
Hourly Total	0	7	3	30	0	40	0	21	273	16	3	310	0	71	2	19	1	92	0	25	172	86	1	283	725
9:00 AM	0	2	0	9	0	11	0	2	60	7	0	69	0	22	1	6	0	29	0	11	46	15	3	72	181
9:15 AM	0	1	1	12	0	14	0	4	58	2	0	64	0	25	1	5	0	31	0	3	55	17	0	75	184
9:30 AM	0	1	0	6	0	7	0	5	63	1	0	69	0	21	0	2	1	23	0	10	53	22	0	85	184
9:45 AM	0	1	0	13	0	14	0	0	66	7	0	73	0	23	2	3	0	28	0	6	50	21	0	77	192
Hourly Total	0	5	1	40	0	46	0	11	247	17	0	275	0	91	4	16	1	111	0	30	204	75	3	309	741
10:00 AM	0	0	0	17	0	17	0	5	41	5	1	51	0	12	1	6	0	19	0	8	42	17	0	67	154
10:15 AM	0	0	0	11	0	11	0	4	52	4	0	60	0	30	0	4	0	34	0	8	53	25	0	86	191
10:30 AM	0	2	0	9	1	11	0	4	57	0	0	61	0	21	2	5	0	28	0	11	55	30	0	96	196
10:45 AM	0	0	0	8	1	8	0	6	72	2	0	80	0	21	0	3	0	24	0	4	52	31	0	87	199
Hourly Total	0	2	0	45	2	47	0	19	222	11	1	252	0	84	3	18	0	105	0	31	202	103	0	336	740
11:00 AM	0	2	0	10	0	12	0	6	68	4	0	78	0	24	0	9	0	33	0	8	31	22	0	61	184
11:15 AM	0	4	0	9	0	13	0	8	62	5	0	75	0	29	0	10	0	39	0	7	59	34	0	100	227
11:30 AM	0	3	1	7	2	11	0	4	59	3	0	66	0	31	2	5	0	38	0	9	48	24	0	81	196
11:45 AM	0	5	1	12	0	18	0	19	76	8	0	103	0	15	1	10	1	26	0	15	53	37	0	105	252
Hourly Total	0	14	2	38	2	54	0	37	265	20	0	322	0	99	3	34	1	136	0	39	191	117	0	347	859
12:00 PM	0	10	0	11	0	21	0	12	70	3	0	85	0	37	2	14	0	53	0	7	76	28	0	111	270
12:15 PM	0	1	0	12	0	13	0	6	73	4	0	83	0	32	0	10	0	42	0	14	43	28	0	85	223
12:30 PM	0	4	0	13	0	17	0	5	57	4	0	66	0	27	3	5	0	35	0	5	67	27	0	99	217
12:45 PM	0	3	0	7	2	10	0	8	56	3	0	67	0	27	0	5	1	32	0	5	71	28	0	104	213
Hourly Total	0	18	0	43	2	61	0	31	256	14	0	301	0	123	5	34	1	162	0	31	257	111	0	399	923
1:00 PM	0	3	0	11	0	14	0	10	53	4	0	67	0	19	5	8	0	32	0	14	65	18	0	97	210
1:15 PM	0	0	0	13	0	13	0	3	58	3	0	64	0	23	1	3	0	27	0	9	49	24	0	82	186
1:30 PM	0	5	0	15	0	20	0	4	52	7	0	63	0	20	0	6	0	26	0	9	56	30	0	95	204
1:45 PM	0	0	0	11	0	11	0	4	46	3	0	53	0	27	1	4	0	32	0	11	62	24	1	97	193
Hourly Total	0	8	0	50	0	58	0	21	209	17	0	247	0	89	7	21	0	117	0	43	232	96	1	371	793
2:00 PM	0	0	0	13	0	13	0	9	55	3	0	67	0	24	1	4	0	29	0	4	57	20	0	81	190
2:15 PM	0	1	0	8	0	9	0	3	48	0	0	51	0	20	0	6	0	26	0	8	57	18	0	83	169
2:30 PM	0	0	0	8	0	8	0	2	58	1	0	61	0	22	1	9	0	32	0	8	69	24	0	101	202
2:45 PM	0	2	0	6	0	8	0	1	80	8	0	89	0	16	0	6	0	22	0	12	68	13	1	93	212
Hourly Total	0	3	0	35	0	38	0	15	241	12	0	268	0	82	2	25	0	109	0	32	251	75	1	358	773
3:00 PM	0	6	0	12	0	18	0	10	87	2	0	99	0	12	1	6	0	19	0	8	58	24	0	90	226
3:15 PM	0	4	0	9	0	13	0	4	63	2	1	69	0	26	0	6	0	32	0	6	70	18	0	94	208
3:30 PM	0	5	0	13	0	18	0	0	65	4	0	69	0	18	0	3	0	21	0	10	77	18	0	105	213
3:45 PM	0	1	1	9	0	11	0	3	64	1	0	68	0	16	1	2	0	19	0	8	70	30	0	108	206
Hourly Total	0	16	1	43	0	60	0	17	279	9	1	305	0	72	2	17	0	91	0	32	275	90	0	397	853



**College Dr & Business Access  
Cheyenne WY  
Tuesday, August 29, 2023**

Time	Southbound Business Access						Westbound College Dr						Northbound Business Access						Eastbound College Dr						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach Total</i>	
4:00 PM	0	1	0	12	0	13	0	8	85	3	0	96	0	17	1	10	0	28	0	15	97	21	0	133	270
4:15 PM	0	6	0	12	0	18	0	7	56	2	0	65	0	25	2	5	0	32	0	8	90	15	0	113	228
4:30 PM	0	3	0	11	0	14	0	5	78	3	0	86	0	11	0	4	0	15	0	9	97	15	0	121	236
4:45 PM	0	5	0	6	0	11	0	8	75	4	0	87	0	11	0	8	0	19	0	13	88	19	0	120	237
Hourly Total	0	15	0	41	0	56	0	28	294	12	0	334	0	64	3	27	0	94	0	45	372	70	0	487	971
5:00 PM	0	5	0	15	0	20	0	4	80	5	0	89	0	12	0	8	0	20	0	13	105	5	1	123	252
5:15 PM	0	1	0	12	0	13	0	6	72	5	0	83	0	17	2	6	0	25	0	8	78	17	0	103	224
5:30 PM	0	1	0	10	0	11	0	5	65	3	0	73	0	14	0	6	0	20	0	12	90	18	0	120	224
5:45 PM	0	2	1	13	1	16	0	2	51	7	0	60	0	13	1	3	0	17	0	4	61	16	0	81	174
Hourly Total	0	9	1	50	1	60	0	17	268	20	0	305	0	56	3	23	0	82	0	37	334	56	1	427	874
6:00 PM	0	1	0	5	0	6	0	4	40	2	0	46	0	19	1	7	0	27	0	7	73	21	0	101	180
6:15 PM	0	2	2	9	0	13	0	3	50	4	0	57	0	13	1	7	0	21	0	4	68	21	0	93	184
6:30 PM	0	0	0	9	0	9	0	3	45	0	0	48	0	11	1	6	0	18	0	5	53	14	0	72	147
6:45 PM	0	1	0	4	0	5	0	5	27	4	0	36	0	11	0	2	0	13	0	5	43	14	0	62	116
Hourly Total	0	4	2	27	0	33	0	15	162	10	0	187	0	54	3	22	0	79	0	21	237	70	0	328	627
7:00 PM	0	4	1	6	0	11	0	6	42	1	1	49	0	17	5	4	0	26	0	10	41	18	0	69	155
7:15 PM	0	2	0	7	0	9	0	5	28	2	0	35	0	17	0	8	0	25	0	4	34	13	0	51	120
7:30 PM	0	0	0	2	0	2	0	5	23	2	2	30	0	14	1	3	0	18	0	3	37	23	1	63	113
7:45 PM	0	2	0	4	0	6	0	7	22	1	0	30	0	13	1	5	0	19	0	6	29	21	0	56	111
Hourly Total	0	8	1	19	0	28	0	23	115	6	3	144	0	61	7	20	0	88	0	23	141	75	1	239	499
8:00 PM	0	0	0	7	0	7	0	1	16	1	0	18	0	17	1	5	0	23	0	4	31	11	0	46	94
8:15 PM	0	1	0	3	0	4	0	6	15	0	0	21	0	10	1	7	0	18	0	4	24	13	0	41	84
8:30 PM	0	2	0	2	0	4	0	2	24	0	0	26	0	9	0	3	0	12	0	2	31	15	0	48	90
8:45 PM	0	0	0	2	0	2	0	4	15	2	0	21	0	12	1	3	0	16	0	2	33	11	0	46	85
Hourly Total	0	3	0	14	0	17	0	13	70	3	0	86	0	48	3	18	0	69	0	12	119	50	0	181	353
9:00 PM	0	0	0	3	0	3	0	2	16	0	0	18	0	6	0	7	0	13	0	2	25	5	0	32	66
9:15 PM	0	1	1	3	0	5	0	2	12	1	0	15	0	12	0	0	0	12	0	6	20	12	1	38	70
9:30 PM	0	1	0	1	0	2	0	1	8	1	0	10	0	6	0	4	0	10	0	0	19	9	0	28	50
9:45 PM	0	0	0	1	0	1	0	1	10	2	0	13	0	8	0	1	0	9	0	0	17	13	0	30	53
Hourly Total	0	2	1	8	0	11	0	6	46	4	0	56	0	32	0	12	0	44	0	8	81	39	1	128	239
10:00 PM	0	1	0	4	0	5	0	0	12	0	0	12	0	13	0	1	0	14	0	1	12	7	0	20	51
10:15 PM	0	0	0	3	0	3	0	0	8	1	0	9	0	9	0	0	0	9	0	1	11	10	0	22	43
10:30 PM	0	0	0	2	0	2	0	2	15	2	0	19	0	7	0	3	0	10	0	0	16	12	0	28	59
10:45 PM	0	0	0	1	0	1	0	2	7	0	0	9	0	4	0	4	0	8	0	3	16	6	0	25	43
Hourly Total	0	1	0	10	0	11	0	4	42	3	0	49	0	33	0	8	0	41	0	5	55	35	0	95	196
11:00 PM	0	3	0	2	0	5	0	1	7	0	0	8	0	7	0	2	0	9	0	1	15	11	0	27	49
11:15 PM	0	0	0	2	0	2	0	1	5	1	0	7	0	8	0	1	0	9	0	1	15	5	0	21	39
11:30 PM	0	1	0	0	0	1	0	3	8	1	0	12	0	7	0	2	0	9	0	3	9	5	0	17	39
11:45 PM	0	1	0	0	0	1	0	0	4	1	0	5	0	8	0	1	0	9	0	1	14	4	0	19	34
Hourly Total	0	5	0	4	0	9	0	5	24	3	0	32	0	30	0	6	0	36	0	6	53	25	0	84	161
<b>DAILY TOTAL</b>	<b>0</b>	<b>143</b>	<b>17</b>	<b>611</b>	<b>7</b>	<b>771</b>	<b>0</b>	<b>346</b>	<b>3959</b>	<b>233</b>	<b>8</b>	<b>4538</b>	<b>0</b>	<b>1387</b>	<b>56</b>	<b>387</b>	<b>4</b>	<b>1830</b>	<b>0</b>	<b>503</b>	<b>3895</b>	<b>1458</b>	<b>9</b>	<b>5856</b>	<b>12995</b>
<b>Cars</b>	0	135	14	564	5	713	0	280	3295	218	8	3793	0	821	34	315	1	1170	0	462	3337	872	9	4671	10347
<b>Heavy Vehicles</b>	0	8	3	47	2	58	0	66	664	15	0	745	0	566	22	72	3	660	0	41	558	586	0	1185	2648
<b>Heavy Vehicle %</b>	0.00%	5.59%	17.65%	7.69%	28.57%	7.52%	0.00%	19.08%	16.77%	6.44%	0.00%	16.42%	0.00%	40.81%	39.29%	18.60%	75.00%	36.07%	0.00%	8.15%	14.33%	40.19%	0.00%	20.24%	20.38%

College Dr & Business Access  
Cheyenne WY  
Tuesday, August 29, 2023

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
7:15 AM	0	3	0	10	0	13	0	4	73	4	0	81	0	13	1	11	0	25	0	6	111	19	0	136	255
7:30 AM	0	3	0	7	0	10	0	7	96	2	0	105	0	18	0	6	0	24	0	8	71	13	0	92	231
7:45 AM	0	2	1	13	0	16	0	5	88	4	0	97	0	17	1	5	0	23	0	5	73	17	0	95	231
8:00 AM	0	0	0	5	0	5	0	4	84	4	0	92	0	13	1	3	0	17	0	7	43	12	0	62	176
Peak Hour Total	0	8	1	35	0	44	0	20	341	14	0	375	0	61	3	25	0	89	0	26	298	61	0	385	893
PHF	0.00	0.67	0.25	0.67	0.00	0.69	0.00	0.71	0.89	0.88	0.00	0.89	0.00	0.85	0.75	0.57	0.00	0.89	0.00	0.81	0.67	0.80	0.00	0.71	0.875
HV%	0%	25%	0%	14%	0%	16%	0%	30%	13%	7%	0%	14%	0%	46%	67%	36%	0%	44%	0%	12%	16%	36%	0%	19%	

Noon Peak Hour																									
Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
12:00 PM	0	10	0	11	0	21	0	12	70	3	0	85	0	37	2	14	0	53	0	7	76	28	0	111	270
12:15 PM	0	1	0	12	0	13	0	6	73	4	0	83	0	32	0	10	0	42	0	14	43	28	0	85	223
12:30 PM	0	4	0	13	0	17	0	5	57	4	0	66	0	27	3	5	0	35	0	5	67	27	0	99	217
12:45 PM	0	3	0	7	2	10	0	8	56	3	0	67	0	27	0	5	1	32	0	5	71	28	0	104	213
Peak Hour Total	0	18	0	43	2	61	0	31	256	14	0	301	0	123	5	34	1	162	0	31	257	111	0	399	923
PHF	0.00	0.45	0.00	0.83	0.25	0.73	0.00	0.65	0.88	0.88	0.00	0.89	0.00	0.83	0.42	0.61	0.25	0.76	0.00	0.55	0.85	0.99	0.00	0.90	0.855
HV%	0%	6%	0%	5%	50%	5%	0%	13%	14%	7%	0%	13%	0%	37%	60%	6%	0%	31%	0%	3%	15%	34%	0%	20%	

PM Peak Hour																									
Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
4:15 PM	0	6	0	12	0	18	0	7	56	2	0	65	0	25	2	5	0	32	0	8	90	15	0	113	228
4:30 PM	0	3	0	11	0	14	0	5	78	3	0	86	0	11	0	4	0	15	0	9	97	15	0	121	236
4:45 PM	0	5	0	6	0	11	0	8	75	4	0	87	0	11	0	8	0	19	0	13	88	19	0	120	237
5:00 PM	0	5	0	15	0	20	0	4	80	5	0	89	0	12	0	8	0	20	0	13	105	5	1	123	252
Peak Hour Total	0	19	0	44	0	63	0	24	289	14	0	327	0	59	2	25	0	86	0	43	380	54	1	477	953
PHF	0.00	0.79	0.00	0.73	0.00	0.79	0.00	0.75	0.90	0.70	0.00	0.92	0.00	0.59	0.25	0.78	0.00	0.67	0.00	0.83	0.90	0.71	0.25	0.97	0.945
HV%	0%	0%	0%	0%	0%	0%	0%	21%	9%	0%	0%	10%	0%	42%	100%	24%	0%	38%	0%	7%	11%	48%	0%	14%	

Total Vehicles On Leg			1563		
Vehicles Entering Intersection 771			Vehicles Exiting Intersection 792		
Southbound					
Cars	564	14	135	0	5
Heavy	47	3	8	0	2
Total	611	17	143	0	7








Total Vehicles on Leg 11813	Vehicles Entering Intersection 5856	Eastbound	Cars	Heavy	Total
	Vehicles Exiting Intersection 5957		9	0	9
			0	0	0
			462	41	503
			3337	558	3895
	872		586	1458	



Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 4538	Total Vehicles on Leg 8963
218	15	233			
3295	664	3959			
280	66	346			
0	0	0			
8	0	8			



											
Cars	1	0	821	34	315						
Heavy	3	0	566	22	72						
Total	4	0	1387	56	387						
Northbound											
Vehicles Entering Intersection 1830						Vehicles Exiting Intersection 1821					
Total Vehicles On Leg						3651					



**College Dr & Southwest Dr  
Cheyenne Wyoming  
Tuesday, September 13, 2022**

Time	Southbound Southwest Dr						Westbound College Dr						Northbound 0						Eastbound College Dr						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
#####	0	0	0	1	0	1	0	0	5	2	0	7	0	0	0	0	0	0	0	1	6	0	0	7	15
#####	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	1	6	0	0	7	11
#####	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	2	9	0	0	11	15
#####	0	1	0	1	0	2	0	0	3	1	0	4	0	0	0	0	0	0	0	2	6	0	0	8	14
Hourly Total	0	1	0	2	0	3	0	0	16	3	0	19	0	0	0	0	0	0	0	6	27	0	0	33	55
1:00 AM	0	0	0	2	0	2	0	0	3	0	0	3	0	0	0	0	0	0	0	0	2	0	0	2	7
1:15 AM	0	1	0	1	0	2	0	0	5	0	0	5	0	0	0	0	0	0	0	2	5	0	0	7	14
1:30 AM	0	0	0	1	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	1	6	0	0	7	9
1:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	1	7	0	0	8	10
Hourly Total	0	1	0	4	0	5	0	0	11	0	0	11	0	0	0	0	0	0	0	4	20	0	0	24	40
2:00 AM	0	0	0	0	0	0	0	0	9	1	0	10	0	0	0	0	0	0	0	1	5	0	0	6	16
2:15 AM	0	1	0	0	0	1	0	0	10	0	0	10	0	0	0	0	0	0	0	0	6	0	0	6	17
2:30 AM	0	1	0	2	0	3	0	0	1	0	0	1	0	0	0	0	0	0	0	1	5	0	0	6	10
2:45 AM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	2	2	0	0	4	10
Hourly Total	0	2	0	2	0	4	0	0	26	1	0	27	0	0	0	0	0	0	0	4	18	0	0	22	53
3:00 AM	0	0	0	2	0	2	0	0	4	1	0	5	0	0	0	0	0	0	0	1	3	0	0	4	11
3:15 AM	0	2	0	2	0	4	0	0	1	0	0	1	0	0	0	0	0	0	0	1	5	0	0	6	11
3:30 AM	0	0	0	1	0	1	0	0	6	2	0	8	0	0	0	0	0	0	0	1	5	0	0	6	15
3:45 AM	0	0	0	4	0	4	0	0	14	2	0	16	0	0	0	0	0	0	0	2	3	0	0	5	25
Hourly Total	0	2	0	9	0	11	0	0	25	5	0	30	0	0	0	0	0	0	0	5	16	0	0	21	62
4:00 AM	0	0	0	1	0	1	0	0	7	1	0	8	0	0	0	0	0	0	0	1	2	0	0	3	12
4:15 AM	0	2	0	2	0	4	0	0	11	0	0	11	0	0	0	0	0	0	0	0	2	0	0	2	17
4:30 AM	0	2	0	0	0	2	0	0	13	0	0	13	0	0	0	0	0	0	0	0	1	0	0	1	16
4:45 AM	0	0	0	2	0	2	0	0	23	1	0	24	0	0	0	0	0	0	0	3	5	0	0	8	34
Hourly Total	0	4	0	5	0	9	0	0	54	2	0	56	0	0	0	0	0	0	0	4	10	0	0	14	79
5:00 AM	0	0	0	3	0	3	0	0	15	2	0	17	0	0	0	0	0	0	0	1	4	0	0	5	25
5:15 AM	0	0	0	4	0	4	0	0	28	0	0	28	0	0	0	0	0	0	0	1	6	0	0	7	39
5:30 AM	0	1	0	3	0	4	0	0	40	2	0	42	0	0	0	0	0	0	0	1	12	0	0	13	59
5:45 AM	0	1	0	1	0	2	0	0	36	3	0	39	0	0	0	0	0	0	0	2	17	0	0	19	60
Hourly Total	0	2	0	11	0	13	0	0	119	7	0	126	0	0	0	0	0	0	0	5	39	0	0	44	183
6:00 AM	0	3	0	3	0	6	0	0	40	3	0	43	0	0	0	0	0	0	0	5	7	0	0	12	61
6:15 AM	0	0	0	1	0	1	0	0	33	6	0	39	0	0	0	0	0	0	0	8	29	0	0	37	77
6:30 AM	0	2	0	8	0	10	0	0	63	12	0	75	0	0	0	0	0	0	0	7	32	0	0	39	124
6:45 AM	0	5	0	8	0	13	0	0	61	13	0	74	0	0	0	0	0	0	0	20	48	0	0	68	155
Hourly Total	0	10	0	20	0	30	0	0	197	34	0	231	0	0	0	0	0	0	0	40	116	0	0	156	417
7:00 AM	0	5	0	7	0	12	0	0	65	12	0	77	0	0	0	0	0	0	0	8	50	0	1	58	147
7:15 AM	0	8	0	8	0	16	0	0	86	15	0	101	0	0	0	0	0	0	0	6	63	0	0	69	186
7:30 AM	0	12	0	12	0	24	0	0	82	11	0	93	0	0	0	0	0	0	0	12	60	0	0	72	189
7:45 AM	0	4	0	16	0	20	0	0	104	6	1	110	0	0	0	0	1	0	0	9	52	0	0	61	191
Hourly Total	0	29	0	43	0	72	0	0	337	44	1	381	0	0	0	0	1	0	0	35	225	0	1	260	713

**College Dr & Southwest Dr  
Cheyenne Wyoming  
Tuesday, September 13, 2022**

Time	Southbound Southwest Dr						Westbound College Dr						Northbound 0						Eastbound College Dr						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
8:00 AM	0	11	0	19	0	30	0	0	72	8	0	80	0	0	0	0	0	0	0	7	41	0	0	48	158
8:15 AM	0	7	0	7	0	14	0	0	60	12	0	72	0	0	0	0	0	0	0	8	42	0	1	50	136
8:30 AM	0	7	0	9	0	16	0	0	47	5	0	52	0	0	0	0	0	0	0	10	48	0	0	58	126
8:45 AM	0	7	0	10	0	17	0	0	52	8	0	60	0	0	0	0	0	0	0	15	36	0	0	51	128
Hourly Total	0	32	0	45	0	77	0	0	231	33	0	264	0	0	0	0	0	0	0	40	167	0	1	207	548
9:00 AM	0	9	0	5	0	14	0	0	28	8	0	36	0	0	0	0	1	0	0	5	38	0	0	43	93
9:15 AM	0	3	0	4	0	7	0	0	40	15	0	55	0	0	0	0	1	0	0	3	37	0	0	40	102
9:30 AM	0	4	0	9	0	13	0	0	62	3	0	65	0	0	0	0	0	0	0	6	36	0	0	42	120
9:45 AM	0	8	0	8	0	16	0	0	37	7	0	44	0	0	0	0	0	0	0	4	26	0	0	30	90
Hourly Total	0	24	0	26	0	50	0	0	167	33	0	200	0	0	0	0	2	0	0	18	137	0	0	155	405
#####	0	5	0	9	0	14	0	0	44	5	0	49	0	0	0	0	0	0	0	5	35	0	0	40	103
#####	0	5	0	10	0	15	0	0	47	9	0	56	0	0	0	0	0	0	1	9	38	0	0	48	119
#####	0	10	0	9	0	19	0	0	38	7	0	45	0	0	0	0	0	0	0	10	45	0	0	55	119
#####	0	6	0	11	0	17	0	0	69	8	0	77	0	0	0	0	0	0	0	7	39	0	0	46	140
Hourly Total	0	26	0	39	0	65	0	0	198	29	0	227	0	0	0	0	0	0	0	31	157	0	0	189	481
#####	0	12	0	17	0	29	0	0	72	11	0	83	0	0	0	0	0	0	0	14	98	0	0	112	224
#####	0	6	0	8	0	14	0	0	45	10	0	55	0	0	0	0	0	0	0	10	48	0	0	58	127
#####	0	8	0	16	0	24	0	0	39	9	0	48	0	0	0	0	0	0	0	8	46	0	0	54	126
#####	0	6	0	14	0	20	0	0	47	7	0	54	0	0	0	0	0	0	0	8	45	0	0	53	127
Hourly Total	0	32	0	55	0	87	0	0	203	37	0	240	0	0	0	0	0	0	0	40	237	0	0	277	604
#####	0	12	0	10	0	22	0	0	63	9	0	72	0	0	0	0	0	0	0	17	56	0	0	73	167
#####	0	12	0	14	0	26	0	0	63	9	0	72	0	0	0	0	0	0	0	11	62	0	0	73	171
#####	0	10	0	14	0	24	0	0	60	9	0	69	0	0	0	0	0	0	0	10	75	0	0	85	178
#####	0	12	0	4	0	16	0	0	44	11	0	55	0	0	0	0	0	0	0	14	60	0	0	74	145
Hourly Total	0	46	0	42	0	88	0	0	230	38	0	268	0	0	0	0	0	0	0	52	253	0	0	305	661
1:00 PM	0	9	0	15	0	24	0	0	53	11	0	64	0	0	0	0	0	0	0	14	61	0	0	75	163
1:15 PM	0	7	0	16	0	23	0	0	45	9	0	54	0	0	0	0	0	0	0	21	55	0	0	76	153
1:30 PM	0	9	0	15	0	24	0	0	36	4	0	40	0	0	0	0	0	0	0	13	52	0	0	65	129
1:45 PM	0	7	0	23	0	30	0	0	47	9	0	56	0	0	0	0	0	0	0	19	35	0	0	54	140
Hourly Total	0	32	0	69	0	101	0	0	181	33	0	214	0	0	0	0	0	0	0	67	203	0	0	270	585
2:00 PM	0	7	0	18	0	25	0	0	40	5	0	45	0	0	0	0	0	0	0	18	49	0	0	67	137
2:15 PM	0	10	0	20	0	30	0	0	59	6	0	65	0	0	0	0	0	0	0	11	44	0	0	55	150
2:30 PM	0	3	0	11	0	14	0	0	42	7	0	49	0	0	0	0	0	0	0	7	51	0	0	58	121
2:45 PM	0	7	0	18	0	25	0	0	60	6	0	66	0	0	0	0	0	0	0	14	50	0	0	64	155
Hourly Total	0	27	0	67	0	94	0	0	201	24	0	225	0	0	0	0	0	0	0	50	194	0	0	244	563
3:00 PM	0	14	0	6	0	20	0	0	60	11	0	71	0	0	0	0	0	0	0	6	75	0	0	81	172
3:15 PM	0	6	0	12	0	18	0	0	51	10	0	61	0	0	0	0	0	0	0	7	54	0	0	61	140
3:30 PM	0	13	0	18	0	31	0	0	45	9	0	54	0	0	0	0	0	0	0	15	63	0	0	78	163
3:45 PM	0	10	0	12	0	22	0	0	70	5	1	75	0	0	0	0	1	0	0	8	65	0	0	73	170
Hourly Total	0	43	0	48	0	91	0	0	226	35	1	261	0	0	0	0	1	0	0	36	257	0	0	293	645



**College Dr & Southwest Dr  
Cheyenne Wyoming  
Tuesday, September 13, 2022**

Time	Southbound Southwest Dr						Westbound College Dr						Northbound 0						Eastbound College Dr						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
4:00 PM	0	16	0	16	0	32	0	0	56	12	1	68	0	0	0	0	0	0	0	10	84	0	0	94	194
4:15 PM	0	6	0	11	0	17	0	0	60	6	0	66	0	0	0	0	0	0	0	11	72	0	0	83	166
4:30 PM	0	7	0	17	0	24	0	0	56	8	0	64	0	0	0	0	0	0	0	9	75	0	0	84	172
4:45 PM	0	11	0	8	0	19	0	0	66	16	0	82	0	0	0	0	0	0	0	13	78	0	0	91	192
Hourly Total	0	40	0	52	0	92	0	0	238	42	1	280	0	0	0	0	0	0	0	43	309	0	0	352	724
5:00 PM	0	9	0	15	0	24	0	0	75	6	0	81	0	0	0	0	0	0	0	6	98	0	0	104	209
5:15 PM	0	8	0	6	0	14	0	0	57	7	0	64	0	0	0	0	0	0	0	8	80	0	0	88	166
5:30 PM	0	9	0	17	0	26	0	0	54	4	0	58	0	0	0	0	0	0	0	11	54	0	0	65	149
5:45 PM	0	7	0	5	2	12	0	0	62	7	0	69	0	0	0	0	0	0	0	6	51	0	0	57	138
Hourly Total	0	33	0	43	2	76	0	0	248	24	0	272	0	0	0	0	0	0	0	31	283	0	0	314	662
6:00 PM	0	11	0	8	0	19	0	0	43	8	0	51	0	0	0	0	0	0	0	5	65	0	0	70	140
6:15 PM	0	9	0	8	1	17	2	0	43	5	0	50	0	0	0	0	0	0	0	7	50	0	0	57	124
6:30 PM	0	5	0	13	0	18	0	0	42	6	0	48	0	0	0	0	0	0	0	4	59	0	0	63	129
6:45 PM	0	4	0	6	0	10	0	0	45	3	0	48	0	0	0	0	0	0	0	5	38	0	0	43	101
Hourly Total	0	29	0	35	1	64	2	0	173	22	0	197	0	0	0	0	0	0	0	21	212	0	0	233	494
7:00 PM	0	5	0	1	1	6	0	0	36	4	0	40	0	0	0	0	0	0	0	2	46	0	0	48	94
7:15 PM	0	2	0	10	0	12	0	0	49	2	0	51	0	0	0	0	0	0	0	2	33	0	0	35	98
7:30 PM	0	3	0	5	0	8	0	0	25	3	0	28	0	0	0	0	0	0	0	2	40	0	0	42	78
7:45 PM	0	2	0	5	0	7	0	0	24	1	0	25	0	0	0	0	0	0	0	4	31	0	0	35	67
Hourly Total	0	12	0	21	1	33	0	0	134	10	0	144	0	0	0	0	0	0	0	10	150	0	0	160	337
8:00 PM	0	4	0	4	0	8	0	0	20	3	0	23	0	0	0	0	0	0	0	3	43	0	0	46	77
8:15 PM	0	3	0	3	0	6	0	0	22	5	0	27	0	0	0	0	0	0	0	9	26	0	0	35	68
8:30 PM	0	1	0	3	0	4	0	0	16	0	0	16	0	0	0	0	0	0	0	3	24	0	0	27	47
8:45 PM	0	9	0	3	0	12	0	0	21	3	0	24	0	0	0	0	0	0	0	3	22	0	0	25	61
Hourly Total	0	17	0	13	0	30	0	0	79	11	0	90	0	0	0	0	0	0	0	18	115	0	0	133	253
9:00 PM	0	0	0	6	0	6	0	0	5	0	0	5	0	0	0	0	0	0	0	0	23	0	0	23	34
9:15 PM	0	0	0	4	0	4	0	0	15	0	0	15	0	0	0	0	0	0	0	3	16	0	0	19	38
9:30 PM	0	4	0	1	0	5	0	0	7	3	0	10	0	0	0	0	0	0	0	2	13	0	0	15	30
9:45 PM	0	2	0	1	0	3	0	0	10	1	0	11	0	0	0	0	0	0	0	5	17	0	0	22	36
Hourly Total	0	6	0	12	0	18	0	0	37	4	0	41	0	0	0	0	0	0	0	10	69	0	0	79	138
#####	0	4	0	3	0	7	0	0	15	2	0	17	0	0	0	0	0	0	0	0	23	0	0	23	47
#####	0	1	0	1	0	2	0	0	10	1	0	11	0	0	0	0	0	0	0	0	19	0	0	19	32
#####	0	2	0	0	0	2	0	0	12	0	0	12	0	0	0	0	0	0	0	4	11	0	0	15	29
#####	0	0	0	3	0	3	0	0	10	0	0	10	0	0	0	0	0	0	0	4	5	0	0	9	22
Hourly Total	0	7	0	7	0	14	0	0	47	3	0	50	0	0	0	0	0	0	0	8	58	0	0	66	130
#####	0	5	0	1	0	6	0	0	8	0	0	8	0	0	0	0	0	0	0	1	13	0	0	14	28
#####	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	3	7	0	0	10	12
#####	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	4	7	0	0	11	14
#####	0	1	0	1	0	2	0	0	4	0	0	4	0	0	0	0	0	0	0	0	9	0	0	9	15
Hourly Total	0	6	0	2	0	8	0	0	16	1	0	17	0	0	0	0	0	0	0	8	36	0	0	44	69
<b>NILY TOT</b>	<b>0</b>	<b>463</b>	<b>0</b>	<b>672</b>	<b>4</b>	<b>1135</b>	<b>2</b>	<b>0</b>	<b>3394</b>	<b>475</b>	<b>3</b>	<b>3871</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>586</b>	<b>3308</b>	<b>0</b>	<b>2</b>	<b>3895</b>	<b>8901</b>
<b>Cars</b>	<b>0</b>	<b>419</b>	<b>0</b>	<b>486</b>	<b>4</b>	<b>905</b>	<b>2</b>	<b>0</b>	<b>3143</b>	<b>425</b>	<b>3</b>	<b>3570</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>412</b>	<b>3124</b>	<b>0</b>	<b>2</b>	<b>3537</b>	<b>8012</b>
<b>avy Vehic</b>	<b>0</b>	<b>44</b>	<b>0</b>	<b>186</b>	<b>0</b>	<b>230</b>	<b>0</b>	<b>0</b>	<b>251</b>	<b>50</b>	<b>0</b>	<b>301</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>174</b>	<b>184</b>	<b>0</b>	<b>0</b>	<b>358</b>	<b>889</b>
<b>vy Vehic</b>	<b>0.00%</b>	<b>9.50%</b>	<b>0.00%</b>	<b>27.68%</b>	<b>0.00%</b>	<b>20.26%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>7.40%</b>	<b>10.53%</b>	<b>0.00%</b>	<b>7.78%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>29.69%</b>	<b>5.56%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>9.19%</b>	<b>9.99%</b>

**College Dr & Southwest Dr  
Cheyenne Wyoming  
Tuesday, September 13, 2022  
AM Peak Hour**

	Southbound						Westbound						Northbound						Eastbound							
Time	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	VEHICLE TOTAL	
7:15 AM	0	8	0	8	0	16	0	0	86	15	0	101	0	0	0	0	0	0	0	6	63	0	0	0	69	186
7:30 AM	0	12	0	12	0	24	0	0	82	11	0	93	0	0	0	0	0	0	0	12	60	0	0	0	72	189
7:45 AM	0	4	0	16	0	20	0	0	104	6	1	110	0	0	0	0	1	0	0	9	52	0	0	0	61	191
8:00 AM	0	11	0	19	0	30	0	0	72	8	0	80	0	0	0	0	0	0	0	7	41	0	0	0	48	158
AM Peak Hour Total	0	35	0	55	0	90	0	0	344	40	1	384	0	0	0	0	1	0	0	34	216	0	0	0	250	724
PHF	0.000	0.729	0.000	0.724	0.000	0.750	0.000	0.000	0.827	0.667	0.250	0.873	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.708	0.857	0.000	0.000	0.868	0.948	

**PM Peak Hour**

	Southbound						Westbound						Northbound						Eastbound						
Time	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	VEHICLE TOTAL
4:15 PM	0	6	0	11	0	17	0	0	60	6	0	66	0	0	0	0	0	0	0	11	72	0	0	83	166
4:30 PM	0	7	0	17	0	24	0	0	56	8	0	64	0	0	0	0	0	0	0	9	75	0	0	84	172
4:45 PM	0	11	0	8	0	19	0	0	66	16	0	82	0	0	0	0	0	0	0	13	78	0	0	91	192
5:00 PM	0	9	0	15	0	24	0	0	75	6	0	81	0	0	0	0	0	0	0	6	98	0	0	104	209
ak Hour Total	0	33	0	51	0	84	0	0	257	36	0	293	0	0	0	0	0	0	0	39	323	0	0	362	739
PHF	0.000	0.750	0.000	0.750	0.000	0.875	0.000	0.000	0.857	0.563	0.000	0.893	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.824	0.000	0.000	0.870	0.884

Total Vehicles On Leg			2196		
Vehicles Entering Intersection 1135			Vehicles Exiting Intersection 1061		
Southbound					
Cars	486	0	419	0	4
Heavy	186	0	44	0	0
Total	672	0	463	0	4

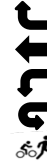


Total Vehicles on Leg 7962	Vehicles Entering Intersection 3895	Eastbound	Cars	Heavy	Total
	Vehicles Exiting Intersection 4067		2	0	2
			1	0	1
			412	174	586
			3124	184	3308
			0	0	0



**Daily Volumes**

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 3871	Total Vehicles on Leg 7644
425	50	475			
3143	251	3394			
0	0	0		Vehicles Exiting Intersection 3773	
2	0	2			
3	0	3			



Cars	4	0	0	0	0
Heavy	0	0	0	0	0
Total	4	0	0	0	0
Northbound					
Vehicles Entering Intersection			0		
Vehicles Exiting Intersection			0		
Total Vehicles On Leg			0		



**Lincolnway & Southwest Dr  
Cheyenne Wyoming  
Tuesday, September 13, 2022**

Time	Southbound Cutler Rd						Westbound Lincolnway						Northbound Southwest Dr						Eastbound Lincolnway						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
12:00 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	6	0	0	6	9
12:15 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	4	0	0	4	8
12:30 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2	0	0	2	4
12:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	5	0	0	5	6
Hourly Total	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	0	0	17	0	0	17	27
1:00 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	1	0	1	0	0	2	0	0	2	7
1:15 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	1	0	0	1	5	0	0	6	10
1:30 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	1	0	0	0	1	0	2	2	0	0	4	8
1:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	1	0	0	1	0	0	1	3
Hourly Total	0	0	0	0	0	0	0	0	12	0	0	12	0	2	0	1	1	3	0	3	10	0	0	13	28
2:00 AM	0	0	0	2	0	2	0	0	3	0	0	3	0	0	0	0	0	0	0	2	1	0	0	3	8
2:15 AM	0	0	0	1	0	1	0	0	4	0	0	4	0	0	0	0	0	0	0	1	2	0	0	3	8
2:30 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	1	2	0	0	3	6
2:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	5	0	0	5	7
Hourly Total	0	0	0	3	0	3	0	0	12	0	0	12	0	0	0	0	0	0	0	4	10	0	0	14	29
3:00 AM	0	2	0	0	0	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	5
3:15 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	1	1	0	2	4
3:30 AM	0	1	0	0	0	1	0	1	2	1	0	4	0	0	0	0	0	0	0	1	2	0	0	3	8
3:45 AM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	2	2	1	0	5	9
Hourly Total	0	3	0	0	0	3	0	1	9	1	0	11	0	0	0	0	0	0	0	3	7	2	0	12	26
4:00 AM	0	0	0	1	0	1	0	0	6	0	0	6	0	1	0	0	0	1	0	0	4	0	0	4	12
4:15 AM	0	0	1	0	0	1	0	1	15	0	0	16	0	2	0	0	0	2	1	0	4	2	0	7	26
4:30 AM	0	1	0	1	0	2	0	1	9	1	0	11	0	0	0	0	0	0	0	3	5	1	0	9	22
4:45 AM	0	1	0	0	0	1	0	1	14	0	0	15	0	0	1	0	0	1	0	2	6	0	0	8	25
Hourly Total	0	2	1	2	0	5	0	3	44	1	0	48	0	3	1	0	0	4	1	5	19	3	0	28	85
5:00 AM	0	1	0	1	0	2	0	0	11	0	1	11	0	0	0	1	0	1	0	0	7	0	0	7	21
5:15 AM	0	0	0	0	1	0	0	0	19	0	0	19	0	1	0	0	0	1	0	0	10	2	1	12	32
5:30 AM	0	0	0	0	0	0	0	3	19	1	0	23	0	0	0	1	0	1	0	1	6	1	0	8	32
5:45 AM	0	0	0	0	0	0	0	0	25	0	0	25	0	0	0	0	0	0	0	3	15	2	0	20	45
Hourly Total	0	1	0	1	1	2	0	3	74	1	1	78	0	1	0	2	0	3	0	4	38	5	1	47	130
6:00 AM	0	0	1	1	1	2	0	7	27	1	0	35	0	0	0	0	0	0	0	1	11	1	0	13	50
6:15 AM	0	1	0	3	0	4	0	6	24	3	0	33	0	0	0	1	0	1	0	0	18	2	0	20	58
6:30 AM	0	2	0	1	0	3	0	13	29	1	0	43	0	0	0	2	0	2	0	3	22	10	0	35	83
6:45 AM	0	1	0	2	2	3	0	14	39	2	1	55	0	2	0	6	0	8	0	4	31	10	0	45	111
Hourly Total	0	4	1	7	3	12	0	40	119	7	1	166	0	2	0	9	0	11	0	8	82	23	0	113	302
7:00 AM	0	1	2	0	0	3	0	10	34	5	0	49	0	3	0	7	0	10	0	4	34	5	0	43	105
7:15 AM	0	1	2	1	0	4	0	13	27	4	0	44	0	6	2	8	0	16	0	6	25	8	0	39	103
7:30 AM	0	1	0	2	0	3	0	6	56	2	0	64	0	3	0	8	1	11	0	2	44	7	0	53	131
7:45 AM	0	1	0	1	1	2	0	11	39	3	0	53	0	4	0	6	0	10	0	4	56	8	0	68	133
Hourly Total	0	4	4	4	1	12	0	40	156	14	0	210	0	16	2	29	1	47	0	16	159	28	0	203	472

**Lincolnway & Southwest Dr  
Cheyenne Wyoming  
Tuesday, September 13, 2022**

Time	Southbound Cutler Rd						Westbound Lincolnway						Northbound Southwest Dr						Eastbound Lincolnway						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
8:00 AM	0	4	0	3	0	7	0	18	64	6	0	88	0	5	1	7	0	13	0	6	46	5	0	57	165
8:15 AM	0	2	0	1	0	3	0	13	45	4	0	62	0	8	2	5	0	15	0	5	58	7	0	70	150
8:30 AM	0	1	0	1	0	2	0	7	63	2	0	72	0	3	1	12	0	16	0	6	52	2	1	60	150
8:45 AM	0	0	0	2	1	2	0	7	47	7	0	61	0	2	0	7	0	9	0	0	64	4	0	68	140
Hourly Total	0	7	0	7	1	14	0	45	219	19	0	283	0	18	4	31	0	53	0	17	220	18	1	255	605
9:00 AM	0	2	1	0	2	3	0	8	53	1	0	62	0	6	0	16	0	22	0	3	42	7	0	52	139
9:15 AM	0	2	0	1	1	3	0	11	61	3	1	75	0	6	0	7	0	13	0	2	45	5	0	52	143
9:30 AM	0	3	0	1	0	4	0	6	60	6	1	72	0	5	0	12	0	17	0	2	49	5	0	56	149
9:45 AM	0	2	1	1	5	4	0	6	48	1	0	55	0	0	0	9	0	9	0	0	48	6	0	54	122
Hourly Total	0	9	2	3	8	14	0	31	222	11	2	264	0	17	0	44	0	61	0	7	184	23	0	214	553
10:00 AM	0	2	0	2	2	4	0	7	62	1	0	70	0	1	0	7	0	8	0	5	40	4	0	49	131
10:15 AM	0	2	0	2	0	4	0	10	46	5	0	61	0	3	0	6	0	9	0	2	50	4	0	56	130
10:30 AM	0	5	0	2	0	7	0	8	43	5	0	56	0	2	0	17	0	19	0	4	49	5	0	58	140
10:45 AM	0	0	1	1	0	2	0	5	65	3	0	73	0	2	0	6	0	8	1	1	54	2	0	58	141
Hourly Total	0	9	1	7	2	17	0	30	216	14	0	260	0	8	0	36	0	44	1	12	193	15	0	221	542
11:00 AM	1	4	0	4	2	9	0	11	57	2	0	70	0	7	0	11	0	18	0	4	55	10	0	69	166
11:15 AM	0	2	0	2	1	4	0	13	55	4	0	72	0	6	0	13	0	19	0	3	49	6	0	58	153
11:30 AM	0	2	0	0	1	2	0	13	54	6	0	73	0	8	0	9	0	17	0	1	66	6	0	73	165
11:45 AM	0	7	1	2	1	10	0	13	59	3	0	75	0	3	0	9	0	12	0	3	52	2	0	57	154
Hourly Total	1	15	1	8	5	25	0	50	225	15	0	290	0	24	0	42	0	66	0	11	222	24	0	257	638
12:00 PM	0	1	0	2	1	3	0	8	63	7	0	78	0	4	0	7	0	11	0	4	62	3	0	69	161
12:15 PM	0	2	1	1	0	4	0	14	64	2	0	80	0	4	0	12	0	16	0	2	65	6	0	73	173
12:30 PM	0	4	0	3	0	7	0	14	48	6	0	68	0	7	0	9	0	16	0	2	60	6	0	68	159
12:45 PM	0	3	0	0	0	3	0	11	62	5	0	78	0	4	0	8	0	12	0	5	48	7	0	60	153
Hourly Total	0	10	1	6	1	17	0	47	237	20	0	304	0	19	0	36	0	55	0	13	235	22	0	270	646
1:00 PM	0	3	0	2	2	5	0	5	56	6	0	67	0	3	0	9	0	12	0	2	50	3	0	55	139
1:15 PM	0	5	0	1	1	6	0	0	61	8	0	69	0	0	0	0	0	0	0	2	66	0	0	68	143
1:30 PM	0	3	0	2	3	5	0	0	69	2	0	71	0	0	0	0	0	0	2	4	69	0	0	75	151
1:45 PM	0	2	0	1	0	3	0	0	64	5	0	69	0	0	0	0	0	0	0	2	58	0	0	60	132
Hourly Total	0	13	0	6	6	19	0	5	250	21	0	276	0	3	0	9	0	12	2	10	243	3	0	258	565
2:00 PM	0	3	0	1	4	4	0	2	59	2	0	63	0	2	0	2	0	4	0	5	62	3	1	70	141
2:15 PM	0	5	1	1	1	7	0	10	41	4	0	55	0	2	0	5	0	7	0	3	67	6	0	76	145
2:30 PM	1	1	0	2	0	4	0	1	58	4	0	63	0	4	0	5	0	9	0	4	44	1	0	49	125
2:45 PM	0	4	0	1	0	5	1	2	61	1	0	65	0	0	0	4	0	4	0	2	52	0	0	54	128
Hourly Total	1	13	1	5	5	20	1	15	219	11	0	246	0	8	0	16	0	24	0	14	225	10	1	249	539
3:00 PM	0	6	0	2	2	8	0	9	55	7	0	71	0	3	0	14	0	17	0	6	69	10	1	85	181
3:15 PM	0	3	0	6	2	9	0	6	68	5	0	79	0	2	0	4	0	6	0	0	64	2	0	66	160
3:30 PM	0	4	0	4	0	8	0	9	59	4	0	72	0	7	1	8	0	16	0	1	67	2	0	70	166
3:45 PM	0	4	0	2	3	6	0	14	45	4	0	63	0	5	0	18	0	23	0	1	49	1	3	51	143
Hourly Total	0	17	0	14	7	31	0	38	227	20	0	285	0	17	1	44	0	62	0	8	249	15	4	272	650



**Lincolnway & Southwest Dr  
Cheyenne Wyoming  
Tuesday, September 13, 2022**

Time	Southbound Cutler Rd						Westbound Lincolnway						Northbound Southwest Dr						Eastbound Lincolnway						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	
4:00 PM	0	0	0	2	0	2	0	2	79	1	0	82	0	7	0	4	0	11	0	0	54	3	0	57	152
4:15 PM	0	1	0	6	0	7	0	6	66	2	0	74	0	7	0	9	0	16	0	2	58	5	0	65	162
4:30 PM	0	2	0	8	1	10	0	10	67	4	0	81	0	4	0	8	0	12	0	4	58	1	0	63	166
4:45 PM	0	1	0	5	0	6	0	4	63	1	0	68	0	7	0	11	0	18	0	2	70	5	0	77	169
Hourly Total	0	4	0	21	1	25	0	22	275	8	0	305	0	25	0	32	0	57	0	8	240	14	0	262	649
5:00 PM	0	3	0	3	1	6	0	4	73	1	3	78	0	4	0	12	0	16	0	2	69	10	0	81	181
5:15 PM	0	5	0	1	3	6	0	3	74	1	0	78	0	1	1	5	0	7	0	2	71	3	0	76	167
5:30 PM	0	2	1	5	0	8	0	2	54	6	0	62	0	0	0	2	0	2	0	2	70	0	0	72	144
5:45 PM	0	4	0	3	4	7	0	5	52	3	0	60	0	2	0	7	0	9	0	0	48	4	0	52	128
Hourly Total	0	14	1	12	8	27	0	14	253	11	3	278	0	7	1	26	0	34	0	6	258	17	0	281	620
6:00 PM	0	4	0	0	0	4	0	4	48	3	0	55	0	6	0	11	0	17	0	3	61	2	0	66	142
6:15 PM	0	2	0	1	1	3	0	7	51	2	0	60	0	0	0	11	0	11	0	3	50	3	0	56	130
6:30 PM	0	3	0	3	3	6	0	1	36	3	0	40	0	2	0	6	0	8	0	3	49	3	0	55	109
6:45 PM	0	0	0	1	2	1	0	0	32	2	0	34	0	3	0	3	0	6	1	2	38	2	0	43	84
Hourly Total	0	9	0	5	6	14	0	12	167	10	0	189	0	11	0	31	0	42	1	11	198	10	0	220	465
7:00 PM	0	0	0	3	0	3	0	5	35	0	0	40	0	2	0	4	0	6	0	0	37	1	0	38	87
7:15 PM	0	1	0	1	3	2	0	1	35	0	0	36	0	2	0	2	0	4	0	4	34	2	1	40	82
7:30 PM	0	1	0	2	0	3	0	4	37	0	0	41	0	1	1	4	0	6	0	1	42	1	1	44	94
7:45 PM	0	0	0	1	0	1	0	5	41	0	0	46	0	0	0	3	0	3	0	1	38	3	0	42	92
Hourly Total	0	2	0	7	3	9	0	15	148	0	0	163	0	5	1	13	0	19	0	6	151	7	2	164	355
8:00 PM	0	0	0	1	0	1	0	1	22	1	0	24	0	0	0	4	0	4	0	0	43	1	0	44	73
8:15 PM	0	0	0	1	0	1	0	0	27	0	0	27	0	0	0	4	0	4	0	0	22	1	0	23	55
8:30 PM	0	0	0	2	0	2	0	1	30	0	0	31	0	2	0	1	0	3	0	0	32	5	0	37	73
8:45 PM	0	0	0	0	0	0	0	0	20	1	0	21	0	0	0	2	0	2	0	0	20	2	0	22	45
Hourly Total	0	0	0	4	0	4	0	2	99	2	0	103	0	2	0	11	0	13	0	0	117	9	0	126	246
9:00 PM	0	0	0	1	0	1	0	2	15	1	0	18	0	0	0	0	0	0	0	3	13	0	0	16	35
9:15 PM	0	0	0	0	0	0	0	1	15	0	0	16	0	0	0	1	0	1	0	1	14	1	0	16	33
9:30 PM	0	0	0	1	0	1	0	3	4	0	0	7	0	0	0	0	0	0	0	0	8	0	0	8	16
9:45 PM	0	1	0	0	0	1	0	0	10	0	0	10	0	0	0	1	0	1	0	0	13	0	0	13	25
Hourly Total	0	1	0	2	0	3	0	6	44	1	0	51	0	0	0	2	0	2	0	4	48	1	0	53	109
10:00 PM	0	0	0	1	0	1	0	1	15	0	0	16	0	0	0	2	0	2	0	1	16	0	0	17	36
10:15 PM	0	0	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	0	0	16	0	0	16	28
10:30 PM	0	0	0	0	0	0	0	2	11	0	0	13	0	0	0	0	0	0	0	1	11	0	0	12	25
10:45 PM	0	0	0	2	0	2	0	0	6	1	0	7	0	0	0	1	0	1	0	0	9	0	0	9	19
Hourly Total	0	0	0	3	0	3	0	3	44	1	0	48	0	0	0	3	0	3	0	2	52	0	0	54	108
11:00 PM	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	5	0	0	5	10
11:15 PM	0	0	0	1	0	1	0	0	2	0	0	2	0	0	0	0	0	0	0	1	7	0	0	8	11
11:30 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	1	3	0	0	4	7
11:45 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	1	0	0	0	1	4
Hourly Total	0	0	0	1	0	1	0	0	13	0	0	13	0	0	0	0	0	0	0	3	15	0	0	18	32
<b>DAILY TOTAL</b>	<b>2</b>	<b>137</b>	<b>13</b>	<b>128</b>	<b>58</b>	<b>280</b>	<b>1</b>	<b>422</b>	<b>3294</b>	<b>188</b>	<b>7</b>	<b>3905</b>	<b>0</b>	<b>188</b>	<b>10</b>	<b>417</b>	<b>2</b>	<b>615</b>	<b>5</b>	<b>175</b>	<b>3192</b>	<b>249</b>	<b>9</b>	<b>3621</b>	<b>8421</b>
<b>Cars</b>	2	126	12	81	47	221	1	407	3182	174	7	3764	0	170	6	407	2	583	5	119	3074	229	7	3427	7995
<b>Heavy Vehicles</b>	0	11	1	47	11	59	0	15	112	14	0	141	0	18	4	10	0	32	0	56	118	20	2	194	426
<b>Heavy Vehicle %</b>	0.00%	8.03%	7.69%	36.72%	18.97%	21.07%	0.00%	3.55%	3.40%	7.45%	0.00%	3.61%	0.00%	9.57%	40.00%	2.40%	0.00%	5.20%	0.00%	32.00%	3.70%	8.03%	22.22%	5.36%	5.06%

**Lincolnway & Southwest Dr  
Cheyenne Wyoming  
Tuesday, September 13, 2022**

**AM Peak Hour**

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
11:00 AM	1	4	0	4	2	9	0	11	57	2	0	70	0	7	0	11	0	18	0	4	55	10	0	69	166
11:15 AM	0	2	0	2	1	4	0	13	55	4	0	72	0	6	0	13	0	19	0	3	49	6	0	58	153
11:30 AM	0	2	0	0	1	2	0	13	54	6	0	73	0	8	0	9	0	17	0	1	66	6	0	73	165
11:45 AM	0	7	1	2	1	10	0	13	59	3	0	75	0	3	0	9	0	12	0	3	52	2	0	57	154
Peak Hour Total PHF	1	15	1	8	5	25	0	50	225	15	0	290	0	24	0	42	0	66	0	11	222	24	0	257	638
	0.250	0.536	0.250	0.500	0.625	0.625	0.000	0.962	0.953	0.625	0.000	0.967	0.000	0.750	0.000	0.808	0.000	0.868	0.000	0.688	0.841	0.600	0.000	0.880	0.961

**PM Peak Hour**

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
4:30 PM	0	2	0	8	1	10	0	10	67	4	0	81	0	4	0	8	0	12	0	4	58	1	0	63	166
4:45 PM	0	1	0	5	0	6	0	4	63	1	0	68	0	7	0	11	0	18	0	2	70	5	0	77	169
5:00 PM	0	3	0	3	1	6	0	4	73	1	3	78	0	4	0	12	0	16	0	2	69	10	0	81	181
5:15 PM	0	5	0	1	3	6	0	3	74	1	0	78	0	1	1	5	0	7	0	2	71	3	0	76	167
Peak Hour Total PHF	0	11	0	17	5	28	0	21	277	7	3	305	0	16	1	36	0	53	0	10	268	19	0	297	683
	0.000	0.550	0.000	0.531	0.417	0.700	0.000	0.525	0.936	0.438	0.250	0.941	0.000	0.571	0.250	0.750	0.000	0.736	0.000	0.625	0.944	0.475	0.000	0.917	0.943

Total Vehicles On Leg				655	
Vehicles Entering Intersection 280			Vehicles Exiting Intersection 375		
Southbound					
Cars	81	12	126	2	47
Heavy	47	1	11	0	11
Total	128	13	137	2	58



Total Vehicles on Leg 7236	Vehicles Entering Intersection 3621	Eastbound	Cars	Heavy	Total
	Vehicles Exiting Intersection 3615		7	2	9
			5	0	5
			119	56	175
			3074	118	3192
			229	20	249



Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 3905	Total Vehicles on Leg 7652
174	14	188			
3182	112	3294			
407	15	422		Vehicles Exiting Intersection 3747	
1	0	1			
7	0	7			



Cars	2	0	170	6	407
Heavy	0	0	18	4	10
Total	2	0	188	10	417
Northbound					
Vehicles Entering Intersection 615			Vehicles Exiting Intersection 684		
Total Vehicles On Leg			1299		

**North American Rd & Southwest Dr  
Cheyenne Wyoming  
Tuesday, September 13, 2022**

Time	Southbound Southwest Dr						Westbound 0						Northbound Southwest Dr						Eastbound North American Rd						VEHICLE TOTAL	
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total		
12:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2	
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	1	0	3	
Hourly Total	0	0	1	0	0	1	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	1	0	1	5
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	2
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:15 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
3:30 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
3:45 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Hourly Total	0	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	
4:15 AM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	1	6	
4:30 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
4:45 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	
Hourly Total	0	0	7	0	0	7	0	0	0	0	0	0	0	0	4	0	0	4	0	1	0	0	0	1	12	
5:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	
5:15 AM	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	3	
5:30 AM	0	0	3	1	0	4	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	5	
5:45 AM	0	0	1	1	0	2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	3	
Hourly Total	0	0	5	4	0	9	0	0	0	0	0	0	0	2	1	0	0	3	0	1	0	0	0	1	13	
6:00 AM	0	0	6	2	0	8	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	10	
6:15 AM	0	0	5	4	0	9	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	10	
6:30 AM	0	0	14	7	0	21	0	0	0	0	0	0	0	3	1	0	0	4	0	1	0	1	0	2	27	
6:45 AM	0	0	14	8	0	22	0	0	0	0	0	0	0	2	7	0	0	9	0	1	0	1	0	2	33	
Hourly Total	0	0	39	21	0	60	0	0	0	0	0	0	0	7	9	0	0	16	0	2	0	2	0	4	80	
7:00 AM	0	0	11	6	0	17	0	0	0	0	0	0	0	2	6	0	0	8	0	3	0	1	0	4	29	
7:15 AM	0	0	18	6	0	24	0	0	0	0	0	0	0	8	10	0	0	18	0	7	0	0	0	7	49	
7:30 AM	0	0	12	2	0	14	0	0	0	0	0	0	0	6	9	0	0	15	0	1	0	3	0	4	33	
7:45 AM	0	0	11	7	0	18	0	0	0	0	0	0	0	1	6	0	0	7	0	4	0	1	1	5	30	
Hourly Total	0	0	52	21	0	73	0	0	0	0	0	0	0	17	31	0	0	48	0	15	0	5	1	20	141	

**North American Rd & Southwest Dr  
Cheyenne Wyoming  
Tuesday, September 13, 2022**

Time	Southbound Southwest Dr						Westbound 0						Northbound Southwest Dr						Eastbound North American Rd						VEHICLE TOTAL	
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach Total</i>		
8:00 AM	0	0	15	6	0	21	0	0	0	0	0	0	0	7	11	0	0	0	0	2	0	3	0	5	44	
8:15 AM	0	0	15	7	0	22	0	0	0	0	0	0	0	5	11	0	0	0	0	8	0	1	2	9	47	
8:30 AM	0	0	7	2	0	9	0	0	0	0	0	0	0	3	11	0	0	0	0	4	0	1	0	5	28	
8:45 AM	0	0	10	1	0	11	0	0	0	0	0	0	0	7	8	0	0	0	0	3	0	2	0	5	31	
Hourly Total	0	0	47	16	0	63	0	0	0	0	0	0	0	22	41	0	0	0	0	17	0	7	2	24	150	
9:00 AM	0	0	13	2	0	15	0	0	0	0	0	0	0	3	13	0	0	0	0	7	0	3	0	10	41	
9:15 AM	0	0	9	6	0	15	0	0	0	0	0	0	0	5	10	0	0	0	0	3	0	1	0	4	34	
9:30 AM	0	0	8	3	0	11	0	0	0	0	0	0	0	2	10	0	0	0	0	6	0	2	0	8	31	
9:45 AM	0	0	11	3	0	14	0	0	0	0	0	0	0	2	10	0	0	0	0	1	0	2	0	3	29	
Hourly Total	0	0	41	14	0	55	0	0	0	0	0	0	0	12	43	0	0	0	0	17	0	8	0	25	135	
10:00 AM	0	0	9	2	0	11	0	0	0	0	0	0	0	3	5	0	0	0	0	1	0	2	0	3	22	
10:15 AM	0	0	11	2	0	13	0	0	0	0	0	0	0	2	9	0	0	0	0	1	0	0	0	1	25	
10:30 AM	0	0	11	2	0	13	0	0	0	0	0	0	0	5	13	0	0	0	0	5	0	2	0	7	38	
10:45 AM	0	0	10	1	0	11	0	0	0	0	0	0	0	3	13	0	0	0	0	2	0	2	0	4	31	
Hourly Total	0	0	41	7	0	48	0	0	0	0	0	0	0	13	40	0	0	0	0	9	0	6	0	15	116	
11:00 AM	0	0	20	2	0	22	0	0	0	0	0	0	0	4	11	0	0	0	0	2	0	2	0	4	41	
11:15 AM	0	0	11	5	0	16	0	0	0	0	0	0	0	1	12	0	0	0	0	7	0	3	0	10	39	
11:30 AM	0	0	18	4	0	22	0	0	0	0	0	0	0	0	13	0	0	0	0	4	0	4	0	8	43	
11:45 AM	0	0	11	5	0	16	0	0	0	0	0	0	0	1	10	0	0	0	0	3	0	3	0	6	33	
Hourly Total	0	0	60	16	0	76	0	0	0	0	0	0	0	6	46	0	0	0	0	16	0	12	0	28	156	
12:00 PM	0	0	11	1	0	12	0	0	0	0	0	0	0	3	5	0	0	0	0	7	0	3	0	10	30	
12:15 PM	0	0	19	2	0	21	0	0	0	0	0	0	0	3	13	0	0	0	0	4	0	1	0	5	42	
12:30 PM	0	0	14	4	0	18	0	0	0	0	0	0	0	2	11	0	0	0	0	3	0	4	0	7	38	
12:45 PM	0	0	19	1	0	20	0	0	0	0	0	0	0	4	13	0	0	0	0	1	1	2	0	4	41	
Hourly Total	0	0	63	8	0	71	0	0	0	0	0	0	0	12	42	0	0	0	0	1	15	0	10	0	26	151
1:00 PM	0	0	6	2	0	8	0	0	0	0	0	0	0	7	10	0	0	0	0	3	0	4	0	7	33	
1:15 PM	0	0	6	0	0	6	0	0	0	0	0	0	0	8	6	0	0	0	0	1	0	5	0	6	26	
1:30 PM	0	0	2	1	0	3	0	0	0	0	0	0	0	8	3	0	0	0	0	0	0	4	0	4	18	
1:45 PM	0	0	4	0	0	4	0	0	0	0	0	0	0	5	4	0	0	0	0	0	0	7	0	7	20	
Hourly Total	0	0	18	3	0	21	0	0	0	0	0	0	0	1	28	23	0	0	0	0	4	0	20	0	24	97
2:00 PM	0	0	5	2	0	7	0	0	0	0	0	0	0	10	7	0	0	0	0	1	0	6	0	7	31	
2:15 PM	0	0	12	4	0	16	0	0	0	0	0	0	0	2	5	0	0	0	0	2	0	5	0	7	30	
2:30 PM	0	0	4	1	0	5	0	0	0	0	0	0	0	3	7	0	0	0	0	3	0	5	0	8	23	
2:45 PM	0	0	5	2	0	7	0	0	0	0	0	0	0	5	9	0	0	0	0	0	0	3	0	3	24	
Hourly Total	0	0	26	9	0	35	0	0	0	0	0	0	0	20	28	0	0	0	0	6	0	19	0	25	108	
3:00 PM	0	0	16	3	0	19	0	0	0	0	0	0	0	1	13	0	0	0	0	4	0	2	0	6	39	
3:15 PM	0	0	12	1	0	13	0	0	0	0	0	0	0	2	10	0	0	0	0	2	0	6	0	8	33	
3:30 PM	0	0	10	3	0	13	0	0	0	0	0	0	0	6	13	0	0	0	0	5	0	10	0	15	47	
3:45 PM	0	0	13	3	0	16	0	0	0	0	0	0	0	1	18	0	0	0	0	5	0	3	0	8	43	
Hourly Total	0	0	51	10	0	61	0	0	0	0	0	0	0	10	54	0	0	0	0	16	0	21	0	37	162	



**North American Rd & Southwest Dr  
Cheyenne Wyoming  
Tuesday, September 13, 2022**

Time	Southbound Southwest Dr						Westbound 0						Northbound Southwest Dr						Eastbound North American Rd						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	
4:00 PM	0	0	5	0	0	5	0	0	0	0	0	0	1	1	7	0	0	9	0	3	0	5	0	8	22
4:15 PM	0	0	8	3	0	11	0	0	0	0	0	0	0	0	10	0	0	10	0	8	0	1	0	9	30
4:30 PM	0	0	10	3	0	13	0	0	0	0	0	0	0	0	9	0	0	9	0	5	0	3	0	8	30
4:45 PM	0	0	9	1	0	10	0	0	0	0	0	0	0	2	11	0	0	13	0	6	0	5	0	11	34
Hourly Total	0	0	32	7	0	39	0	0	0	0	0	0	1	3	37	0	0	41	0	22	0	14	0	36	116
5:00 PM	0	0	13	2	0	15	0	0	0	0	0	0	0	1	14	0	0	15	0	3	0	4	0	7	37
5:15 PM	0	0	4	2	0	6	0	0	0	0	0	0	1	4	5	0	0	10	0	1	0	3	0	4	20
5:30 PM	0	0	4	0	0	4	0	0	0	0	0	0	0	3	4	0	0	7	0	0	0	3	0	3	14
5:45 PM	0	0	8	1	0	9	0	0	0	0	0	0	0	0	8	0	0	8	0	2	0	1	0	3	20
Hourly Total	0	0	29	5	0	34	0	0	0	0	0	0	1	8	31	0	0	40	0	6	0	11	0	17	91
6:00 PM	0	0	6	1	0	7	0	0	0	0	0	0	0	0	11	0	0	11	0	5	0	1	0	6	24
6:15 PM	0	0	6	2	0	8	0	0	0	0	0	0	0	0	9	0	0	9	0	1	0	3	0	4	21
6:30 PM	0	0	4	0	0	4	0	0	0	0	0	0	0	1	5	0	0	6	0	2	0	2	0	4	14
6:45 PM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	7
Hourly Total	0	0	18	3	0	21	0	0	0	0	0	0	0	1	30	0	0	31	0	8	0	6	0	14	66
7:00 PM	0	0	7	0	0	7	0	0	0	0	0	0	0	0	4	0	0	4	0	1	0	0	0	1	12
7:15 PM	0	0	2	1	0	3	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	1	0	3	7
7:30 PM	0	0	5	1	0	6	0	0	0	0	0	0	0	0	5	0	0	5	0	1	0	2	0	3	14
7:45 PM	0	0	5	1	0	6	0	0	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	0	11
Hourly Total	0	0	19	3	0	22	0	0	0	0	0	0	0	1	14	0	0	15	0	4	0	3	0	7	44
8:00 PM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	3	0	0	3	0	1	0	0	0	1	6
8:15 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	5
8:30 PM	0	0	4	1	0	5	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	8
8:45 PM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	1	0	2	5
Hourly Total	0	0	9	1	0	10	0	0	0	0	0	0	0	0	11	0	0	11	0	2	0	1	0	3	24
9:00 PM	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
9:15 PM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3
9:30 PM	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	2	0	2	4
Hourly Total	0	0	8	0	0	8	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	2	0	2	13
10:00 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	1	2
10:30 PM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
Hourly Total	0	0	3	0	0	3	0	0	0	0	0	0	0	1	3	0	0	4	0	0	0	1	0	1	8
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	0	3
11:45 PM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	2	0	3	6
Hourly Total	0	0	2	0	0	2	0	0	0	0	0	0	0	2	2	0	0	4	0	1	0	2	0	3	9
DAILY TOTAL	0	0	573	149	0	722	0	0	0	0	0	0	3	166	497	0	0	666	1	162	0	151	3	314	1702
Cars	0	0	546	139	0	685	0	0	0	0	0	0	3	152	478	0	0	633	1	147	0	136	3	284	1602
Heavy Vehicles	0	0	27	10	0	37	0	0	0	0	0	0	0	14	19	0	0	33	0	15	0	15	0	30	100
Heavy Vehicle %	0.00%	0.00%	4.71%	6.71%	0.00%	5.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.43%	3.82%	0.00%	0.00%	4.95%	0.00%	9.26%	0.00%	9.93%	0.00%	9.55%	5.88%

# North American Rd & Southwest Dr Cheyenne Wyoming

Tuesday, September 13, 2022

AM Peak Hour

	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL	
Time	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total		
7:15 AM	0	0	18	6	0	24	0	0	0	0	0	0	0	8	10	0	0	0	18	0	7	0	0	0	7	49
7:30 AM	0	0	12	2	0	14	0	0	0	0	0	0	0	6	9	0	0	0	15	0	1	0	3	0	4	33
7:45 AM	0	0	11	7	0	18	0	0	0	0	0	0	0	1	6	0	0	0	7	0	4	0	1	1	5	30
8:00 AM	0	0	15	6	0	21	0	0	0	0	0	0	0	7	11	0	0	0	18	0	2	0	3	0	5	44
Peak Hour Total	0	0	56	21	0	77	0	0	0	0	0	0	0	22	36	0	0	0	58	0	14	0	7	1	21	156
PHF	0.000	0.000	0.778	0.750	0.000	0.802	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.688	0.818	0.000	0.000	0.806	0.000	0.500	0.000	0.583	0.250	0.750	0.796	

PM Peak Hour

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL	
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total		
3:00 PM	0	0	16	3	0	19	0	0	0	0	0	0	0	1	13	0	0	0	14	0	4	0	2	0	6	39
3:15 PM	0	0	12	1	0	13	0	0	0	0	0	0	0	2	10	0	0	12	0	2	0	6	0	8	33	
3:30 PM	0	0	10	3	0	13	0	0	0	0	0	0	0	6	13	0	0	19	0	5	0	10	0	15	47	
3:45 PM	0	0	13	3	0	16	0	0	0	0	0	0	0	1	18	0	0	19	0	5	0	3	0	8	43	
Peak Hour Total	0	0	51	10	0	61	0	0	0	0	0	0	0	10	54	0	0	64	0	16	0	21	0	37	162	
PHF	0.000	0.000	0.797	0.833	0.000	0.803	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.417	0.750	0.000	0.000	0.842	0.000	0.800	0.000	0.525	0.000	0.617	0.862	

Total Vehicles On Leg				1381			
Vehicles Entering Intersection 722				Vehicles Exiting Intersection 659			
Southbound							
Cars	139	546	0	0	0	0	0
Heavy	10	27	0	0	0	0	0
Total	149	573	0	0	0	0	0



Total Vehicles on Leg 630	Vehicles Entering Intersection 314	Eastbound	Cars	Heavy	Total	
			3	0	3	
			1	0	1	
	Vehicles Exiting Intersection 316		147	15	162	
			0	0	0	
			136	15	151	

Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 0	Total Vehicles on Leg 0
0	0	0			
0	0	0			
0	0	0			
0	0	0			
0	0	0			
			Vehicles Exiting Intersection 0		

Cars	0	3	152	478	0
Heavy	0	0	14	19	0
Total	0	3	166	497	0
Northbound					
Vehicles Entering Intersection 666			Vehicles Exiting Intersection 727		
Total Vehicles On Leg			1393		

**Southwest Dr & Business Access**  
**Cheyenne WY**  
**Tuesday, August 29, 2023**

Time	Southbound Southwest Dr						Westbound Business Access						Northbound Southwest Dr						Eastbound Business Access						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
12:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	3
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	1	0	1	0	2	4
12:30 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	4	2	0	0	6	0	0	0	1	0	1	8
12:45 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	4	0	4	6
Hourly Total	0	0	3	0	0	3	0	0	0	0	0	0	0	7	3	0	0	10	0	1	0	7	0	8	21
1:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	3
1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	0	1	0	1	3
1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	2	0	2	6
1:45 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	4	0	4	6
Hourly Total	0	0	2	0	0	2	0	0	0	0	0	0	0	8	0	1	0	9	0	0	0	7	0	7	18
2:00 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	1	4
2:15 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	3	0	3	6
2:30 AM	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	0	0	0	2	0	2	5
Hourly Total	0	0	3	2	0	5	0	0	0	0	0	0	0	5	1	0	0	6	0	0	0	6	0	6	17
3:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	3	0	0	0	3	0	0	0	3	0	3	7
3:15 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	2	0	2	6
3:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	3	0	3	5
3:45 AM	0	0	2	0	0	2	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	4
Hourly Total	0	0	4	0	0	4	0	1	1	0	0	2	0	4	2	1	0	7	0	0	0	9	0	9	22
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	1	2
4:15 AM	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	4
4:30 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	2	2	0	0	4	0	0	0	2	0	2	8
4:45 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	2	6	0	0	8	0	0	0	2	0	2	11
Hourly Total	0	0	6	0	0	6	0	0	0	0	0	0	0	5	8	0	0	13	0	0	0	6	0	6	25
5:00 AM	0	0	2	2	0	4	0	0	0	0	0	0	0	1	3	0	0	4	0	0	0	3	0	3	11
5:15 AM	0	0	4	0	0	4	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	1	0	1	8
5:30 AM	0	0	3	2	0	5	0	0	0	0	0	0	0	2	6	0	0	8	0	0	0	2	0	2	15
5:45 AM	0	0	3	2	0	5	0	0	0	0	0	0	0	3	6	0	0	9	0	1	0	4	0	5	19
Hourly Total	0	0	12	6	0	18	0	0	0	0	0	0	0	7	17	0	0	24	0	1	0	10	0	11	53
6:00 AM	0	0	5	2	0	7	0	0	0	0	0	0	0	0	6	0	0	6	0	2	0	2	0	4	17
6:15 AM	0	0	3	0	0	3	0	0	0	1	0	1	0	2	16	0	0	18	0	0	0	0	0	0	22
6:30 AM	0	0	11	0	0	11	0	0	0	0	0	0	1	0	22	0	0	23	0	1	0	3	0	4	38
6:45 AM	0	0	6	0	1	6	0	0	0	0	0	0	0	4	40	0	0	44	0	3	0	4	2	7	57
Hourly Total	0	0	25	2	1	27	0	0	0	1	0	1	1	6	84	0	0	91	0	6	0	9	2	15	134
7:00 AM	0	1	10	0	0	11	0	0	0	0	0	0	0	4	20	0	0	24	0	3	0	4	0	7	42
7:15 AM	0	0	10	1	0	11	0	0	0	0	0	0	0	7	11	0	0	18	0	2	0	4	0	6	35
7:30 AM	0	0	21	1	0	22	0	0	0	0	0	0	0	4	22	0	0	26	0	1	0	4	0	5	53
7:45 AM	0	0	17	4	2	21	0	0	0	1	1	1	0	6	19	0	0	25	0	3	0	4	0	7	54
Hourly Total	0	1	58	6	2	65	0	0	0	1	1	1	0	21	72	0	0	93	0	9	0	16	0	25	184

**Southwest Dr & Business Access**  
**Cheyenne WY**  
**Tuesday, August 29, 2023**

Time	Southbound Southwest Dr						Westbound Business Access						Northbound Southwest Dr						Eastbound Business Access						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
8:00 AM	0	0	9	0	0	9	0	1	0	0	0	1	0	5	16	1	0	22	0	5	0	6	0	11	43
8:15 AM	0	1	15	4	0	20	0	0	0	0	0	0	0	6	11	0	0	17	0	0	0	5	0	5	42
8:30 AM	0	0	16	2	0	18	0	0	0	0	0	0	0	6	16	0	0	22	0	1	0	6	1	7	47
8:45 AM	0	0	8	0	0	8	0	0	0	0	0	0	0	4	15	1	0	20	0	2	0	4	0	6	34
Hourly Total	0	1	48	6	0	55	0	1	0	0	0	1	0	21	58	2	0	81	0	8	0	21	1	29	166
9:00 AM	0	0	17	5	0	22	0	0	0	0	0	0	0	6	16	0	0	22	0	3	0	9	0	12	56
9:15 AM	0	0	20	0	0	20	0	0	0	0	0	0	0	11	11	0	0	22	0	1	0	9	0	10	52
9:30 AM	0	0	10	2	0	12	0	0	0	1	0	1	0	4	14	0	0	18	0	0	0	5	0	5	36
9:45 AM	0	0	6	2	0	8	0	0	0	0	0	0	0	3	18	0	0	21	0	0	0	6	0	6	35
Hourly Total	0	0	53	9	0	62	0	0	0	1	0	1	0	24	59	0	0	83	0	4	0	29	0	33	179
10:00 AM	0	0	10	3	0	13	0	0	0	0	0	0	0	3	10	0	0	13	0	1	1	4	1	6	32
10:15 AM	0	0	14	1	0	15	0	1	0	0	0	1	0	5	13	0	0	18	0	1	0	5	0	6	40
10:30 AM	0	0	12	0	0	12	0	0	0	0	0	0	0	8	14	1	0	23	0	1	0	5	0	6	41
10:45 AM	0	0	13	1	0	14	0	0	0	0	0	0	0	5	15	1	0	21	0	0	0	6	0	6	41
Hourly Total	0	0	49	5	0	54	0	1	0	0	0	1	0	21	52	2	0	75	0	3	1	20	1	24	154
11:00 AM	0	2	18	2	0	22	0	2	0	3	0	5	0	4	11	2	0	17	0	0	0	2	0	2	46
11:15 AM	0	1	18	1	0	20	0	3	0	0	0	3	0	4	13	3	0	20	0	2	0	3	0	5	48
11:30 AM	0	1	15	2	0	18	0	1	0	0	0	1	0	5	13	4	0	22	0	1	0	9	0	10	51
11:45 AM	0	1	15	2	0	18	0	4	0	0	0	4	0	5	12	5	0	22	0	0	0	5	0	5	49
Hourly Total	0	5	66	7	0	78	0	10	0	3	0	13	0	18	49	14	0	81	0	3	0	19	0	22	194
12:00 PM	0	1	18	5	0	24	0	0	0	0	0	0	0	5	14	3	0	22	0	3	1	9	0	13	59
12:15 PM	0	2	10	2	0	14	0	4	2	3	0	9	1	5	10	1	0	17	0	4	0	4	0	8	48
12:30 PM	0	0	20	3	0	23	0	2	0	0	0	2	0	5	14	0	0	19	0	2	0	7	0	9	53
12:45 PM	0	0	20	3	0	23	0	2	1	2	0	5	0	6	23	1	0	30	0	2	1	2	0	5	63
Hourly Total	0	3	68	13	0	84	0	8	3	5	0	16	1	21	61	5	0	88	0	11	2	22	0	35	223
1:00 PM	0	0	9	3	0	12	0	4	1	0	0	5	0	8	13	3	0	24	0	3	1	4	0	8	49
1:15 PM	0	1	10	2	0	13	0	1	1	0	1	2	0	9	9	2	0	20	0	4	1	11	0	16	51
1:30 PM	0	0	5	2	0	7	0	0	1	2	0	3	0	5	19	0	0	24	0	1	1	12	0	14	48
1:45 PM	0	1	14	1	0	16	0	1	0	0	0	1	0	10	18	0	0	28	0	1	0	9	0	10	55
Hourly Total	0	2	38	8	0	48	0	6	3	2	1	11	0	32	59	5	0	96	0	9	3	36	0	48	203
2:00 PM	0	1	15	2	0	18	0	1	0	0	0	1	0	3	15	1	0	19	0	1	0	9	0	10	48
2:15 PM	0	0	12	0	0	12	0	0	0	1	0	1	0	1	14	0	0	15	0	0	0	6	0	6	34
2:30 PM	0	1	18	4	0	23	0	0	0	0	0	0	0	13	17	0	1	30	0	5	0	3	0	8	61
2:45 PM	0	0	18	0	2	18	0	1	1	1	0	3	0	3	14	5	0	22	0	3	0	7	0	10	53
Hourly Total	0	2	63	6	2	71	0	2	1	2	0	5	0	20	60	6	1	86	0	9	0	25	0	34	196
3:00 PM	0	0	19	0	0	19	0	1	0	0	0	1	0	5	12	0	0	17	0	0	1	7	0	8	45
3:15 PM	0	1	11	1	0	13	0	1	0	1	0	2	0	6	13	0	0	19	0	1	0	4	0	5	39
3:30 PM	0	0	12	3	0	15	0	1	0	0	0	1	0	2	16	2	0	20	0	0	0	3	0	3	39
3:45 PM	0	0	15	0	0	15	0	0	0	0	0	0	0	2	12	1	0	15	0	0	0	6	0	6	36
Hourly Total	0	1	57	4	0	62	0	3	0	1	0	4	0	15	53	3	0	71	0	1	1	20	0	22	159



**Southwest Dr & Business Access**  
**Cheyenne WY**  
**Tuesday, August 29, 2023**

Time	Southbound Southwest Dr						Westbound Business Access						Northbound Southwest Dr						Eastbound Business Access						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	
4:00 PM	0	0	31	3	0	34	0	1	0	1	0	2	0	11	19	1	0	31	0	2	0	3	0	5	72
4:15 PM	0	1	19	0	0	20	0	1	0	0	0	1	0	8	11	0	0	19	0	1	0	6	0	7	47
4:30 PM	0	3	20	2	0	25	0	1	0	1	0	2	0	5	21	0	0	26	0	0	0	4	0	4	57
4:45 PM	0	0	20	2	1	22	0	0	0	0	0	0	0	2	14	0	0	16	0	2	0	11	0	13	51
Hourly Total	0	4	90	7	1	101	0	3	0	2	0	5	0	26	65	1	0	92	0	5	0	24	0	29	227
5:00 PM	0	2	31	1	0	34	0	1	0	2	0	3	0	6	18	3	0	27	0	0	0	6	0	6	70
5:15 PM	0	0	20	0	0	20	0	0	1	0	0	1	0	4	16	2	0	22	0	3	0	8	0	11	54
5:30 PM	0	0	12	0	0	12	0	0	1	0	0	1	0	2	18	1	0	21	0	0	1	5	0	6	40
5:45 PM	0	0	14	2	0	16	0	2	0	0	0	2	0	2	14	1	0	17	0	3	0	5	0	8	43
Hourly Total	0	2	77	3	0	82	0	3	2	2	0	7	0	14	66	7	0	87	0	6	1	24	0	31	207
6:00 PM	0	0	16	2	0	18	0	0	0	0	0	0	0	4	9	0	0	13	0	2	0	2	0	4	35
6:15 PM	0	0	21	0	0	21	0	0	0	0	0	0	0	3	9	0	0	12	0	0	0	2	0	2	35
6:30 PM	0	0	13	0	0	13	0	0	0	0	0	0	0	5	1	0	0	6	0	0	0	3	0	3	22
6:45 PM	0	0	9	0	0	9	0	1	0	0	0	1	0	8	5	3	0	16	0	0	0	2	0	2	28
Hourly Total	0	0	59	2	0	61	0	1	0	0	0	1	0	20	24	3	0	47	0	2	0	9	0	11	120
7:00 PM	0	0	9	3	0	12	0	1	0	0	0	1	0	1	4	1	0	6	0	1	0	8	0	9	28
7:15 PM	0	1	12	1	0	14	0	1	0	1	0	2	0	2	4	1	0	7	0	2	0	3	0	5	28
7:30 PM	0	0	5	0	0	5	0	1	0	0	0	1	0	5	5	0	0	10	0	3	0	5	0	8	24
7:45 PM	0	1	2	0	0	3	0	0	0	0	0	0	0	2	4	0	0	6	0	1	0	4	0	5	14
Hourly Total	0	2	28	4	0	34	0	3	0	1	0	4	0	10	17	2	0	29	0	7	0	20	0	27	94
8:00 PM	0	0	5	0	0	5	0	0	0	0	0	0	0	1	5	0	0	6	0	0	0	2	0	2	13
8:15 PM	0	0	6	0	0	6	0	0	0	1	0	1	0	1	2	1	0	4	0	0	1	1	0	2	13
8:30 PM	0	0	3	0	0	3	0	0	0	0	0	0	0	3	1	2	0	6	0	0	0	0	0	0	9
8:45 PM	0	0	2	0	0	2	0	0	0	0	0	0	0	3	3	0	0	6	0	0	0	0	0	0	8
Hourly Total	0	0	16	0	0	16	0	0	0	1	0	1	0	8	11	3	0	22	0	0	1	3	0	4	43
9:00 PM	0	0	5	0	0	5	0	1	0	0	0	1	0	0	4	2	0	6	0	1	0	3	0	4	16
9:15 PM	0	0	3	0	0	3	0	1	0	0	0	1	0	1	5	0	0	6	0	1	0	2	0	3	13
9:30 PM	0	0	2	0	0	2	0	0	0	0	0	0	0	1	5	0	0	6	0	0	0	1	0	1	9
9:45 PM	0	1	3	0	0	4	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	1	0	1	7
Hourly Total	0	1	13	0	0	14	0	2	0	0	0	2	0	4	14	2	0	20	0	2	0	7	0	9	45
10:00 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	0	0	2	0	0	0	1	0	1	4
10:15 PM	0	0	3	0	0	3	0	0	0	0	0	0	0	5	1	0	0	6	0	1	0	0	0	1	10
10:30 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	5	0	0	0	5	0	0	0	5	0	5	11
10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	0	5	0	0	0	1	0	1	6
Hourly Total	0	0	4	0	0	4	0	1	0	0	0	1	0	12	6	0	0	18	0	1	0	7	0	8	31
11:00 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	2	1	1	0	4	0	0	0	5	0	5	10
11:15 PM	0	0	2	0	0	2	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	5
11:30 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	4	0	4	8
11:45 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	2	0	2	5
Hourly Total	0	0	4	1	0	5	0	0	0	0	0	0	0	7	4	1	0	12	0	0	0	11	0	11	28
<b>DAILY TOTAL</b>	<b>0</b>	<b>24</b>	<b>846</b>	<b>91</b>	<b>6</b>	<b>961</b>	<b>0</b>	<b>45</b>	<b>10</b>	<b>22</b>	<b>2</b>	<b>77</b>	<b>2</b>	<b>336</b>	<b>845</b>	<b>58</b>	<b>1</b>	<b>1241</b>	<b>0</b>	<b>88</b>	<b>9</b>	<b>367</b>	<b>4</b>	<b>464</b>	<b>2743</b>
<b>Cars</b>	0	24	779	79	6	882	0	44	10	22	2	76	2	104	777	57	1	940	0	83	9	119	4	211	2109
<b>Heavy Vehicles</b>	0	0	67	12	0	79	0	1	0	0	0	1	0	232	68	1	0	301	0	5	0	248	0	253	634
<b>Heavy Vehicle %</b>	0.00%	0.00%	7.92%	13.19%	0.00%	8.22%	0.00%	2.22%	0.00%	0.00%	0.00%	1.30%	0.00%	69.05%	8.05%	1.72%	0.00%	24.25%	0.00%	5.68%	0.00%	67.57%	0.00%	54.53%	23.11%

### AM Peak Hour






Time	Southbound						Westbound						Midday Peak Hour						Northbound						Eastbound						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>							
12:00 PM	0	1	18	5	0	24	0	0	0	0	0	0	0	5	14	3	0	22	0	3	1	9	0	13	59						
12:15 PM	0	2	10	2	0	14	0	4	2	3	0	9	1	5	10	1	0	17	0	4	0	4	0	8	48						
12:30 PM	0	0	20	3	0	23	0	2	0	0	0	2	0	5	14	0	0	19	0	2	0	7	0	9	53						
12:45 PM	0	0	20	3	0	23	0	2	1	2	0	5	0	6	23	1	0	30	0	2	1	2	0	5	63						
Peak Hour Total	0	3	68	13	0	84	0	8	3	5	0	16	1	21	61	5	0	88	0	11	2	22	0	35	223						
PHF	0.00	0.38	0.85	0.65	0.00	0.88	0.00	0.50	0.38	0.42	0.00	0.44	0.25	0.88	0.66	0.42	0.00	0.73	0.00	0.69	0.50	0.61	0.00	0.67	0.88						
HV%	0%	0%	3%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	57%	2%	0%	0%	15%	0%	0%	0%	59%	0%	37%							
Balanced 2045	0	3	58	13	0	0	0	8	3	5	0	0	0	21	64	5	0	0	0	11	2	22	0	0							

Total Vehicles On Leg		1916	
Vehicles Entering Intersection	961	Vehicles Exiting Intersection	955
Southbound			
Cars	79	779	24
Heavy	12	67	0
Total	91	846	24

Total	Vehicles Entering Intersection	Cars	Heavy	Total	
		4	0	4	

Cars	Heavy	Total		Vehicles Entering Intersection	Total
22	0	22			

### Daily Volumes

					
Cars	1	2	104	777	57
Heavy	0	0	232	68	1
<b>Total</b>	<b>1</b>	<b>2</b>	<b>336</b>	<b>845</b>	<b>58</b>

Northbound	
Vehicles Entering Intersection	1241
Vehicles Exiting Intersection	1260
Total Vehicles On Leg	2501

## APPENDIX C. SPEED DATA

## Time/Speed Report

<b>Device ID:</b> 404091		<b>Location:</b> South of Cheyenne Animal Shelter										<b>Raw Count:</b> 821				
<b>Operator:</b> CTY		<b>Lane:</b> Northbound										<b>AADT Count:</b> 821				
<b>Begin:</b> 09/20/2022 12:00 AM		<b>Street:</b> Southwest Dr										<b>AADT Factor:</b> 1				
<b>End:</b> 09/21/2022 12:00 AM		<b>City:</b> Cheyenne										<b>Speed Limit:</b> 40				
<b>Hours:</b> 24.00		<b>County:</b> Laramie														
<b>Period (min):</b> 15		<b>State:</b> WY														
Date And Time Range	< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >	Total
Tue, 09/20/2022																
[12:00 AM-12:15 AM]	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
[12:15 AM-12:30 AM]	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	2
[12:30 AM-12:45 AM]	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
[12:45 AM-01:00 AM]	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
	0	0	1	0	0	0	3	0	0	2	0	0	0	0	0	6
[01:00 AM-01:15 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[01:15 AM-01:30 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[01:30 AM-01:45 AM]	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
[01:45 AM-02:00 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
[02:00 AM-02:15 AM]	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
[02:15 AM-02:30 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[02:30 AM-02:45 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[02:45 AM-03:00 AM]	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
[03:00 AM-03:15 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[03:15 AM-03:30 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[03:30 AM-03:45 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[03:45 AM-04:00 AM]	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
[04:00 AM-04:15 AM]	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
[04:15 AM-04:30 AM]	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
[04:30 AM-04:45 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[04:45 AM-05:00 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
[05:00 AM-05:15 AM]	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
[05:15 AM-05:30 AM]	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	3
[05:30 AM-05:45 AM]	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
[05:45 AM-06:00 AM]	0	0	0	0	0	2	1	1	3	0	1	1	0	0	0	9
	0	0	0	0	0	2	2	2	4	2	2	1	1	0	0	16
[06:00 AM-06:15 AM]	0	0	0	0	0	0	0	2	2	1	0	1	1	0	0	7
[06:15 AM-06:30 AM]	0	0	0	0	0	0	0	5	2	0	3	0	0	0	1	11
[06:30 AM-06:45 AM]	0	0	0	0	1	0	1	5	9	9	2	1	0	0	0	28
[06:45 AM-07:00 AM]	0	0	0	0	0	3	0	5	12	9	3	0	0	1	1	34
	0	0	0	0	1	3	1	17	25	19	8	2	1	1	2	80
[07:00 AM-07:15 AM]	0	0	0	0	0	0	3	3	3	3	5	1	1	0	0	19
[07:15 AM-07:30 AM]	0	0	0	0	3	0	4	7	5	4	2	1	1	0	0	27
[07:30 AM-07:45 AM]	0	0	0	0	1	4	4	4	3	5	1	0	0	0	0	22
[07:45 AM-08:00 AM]	0	0	0	0	1	1	1	1	4	4	1	1	0	0	0	14



## Time/Speed Report

Device ID: 404091 Operator: CTY Begin: 09/20/2022 12:00 AM End: 09/21/2022 12:00 AM Hours: 24.00 Period (min): 15				Location: South of Cheyenne Animal Shelter Lane: Northbound Street: Southwest Dr City: Cheyenne County: Laramie State: WY								Raw Count: 821 AADT Count: 821 AADT Factor: 1 Speed Limit: 40				
Date And Time Range	< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >	Total
Tue,09/20/2022	0	0	0	0	5	5	12	15	15	16	9	3	2	0	0	82
[08:00 AM-08:15 AM]	0	0	0	0	0	1	2	3	7	2	4	0	0	0	1	20
[08:15 AM-08:30 AM]	0	0	0	0	0	1	3	5	7	1	0	1	0	0	0	18
[08:30 AM-08:45 AM]	0	0	0	0	0	1	3	4	2	2	0	1	1	0	0	14
[08:45 AM-09:00 AM]	0	0	0	0	0	0	2	2	2	1	0	2	0	0	0	9
	0	0	0	0	0	3	10	14	18	6	4	4	1	0	1	61
[09:00 AM-09:15 AM]	0	0	0	0	1	2	5	4	2	0	1	0	0	0	0	15
[09:15 AM-09:30 AM]	0	0	0	0	0	1	4	2	1	0	0	0	0	0	0	8
[09:30 AM-09:45 AM]	0	0	0	0	0	2	5	3	2	0	0	1	0	0	0	13
[09:45 AM-10:00 AM]	0	0	0	0	0	1	5	6	4	1	0	0	0	0	0	17
	0	0	0	0	1	6	19	15	9	1	1	1	0	0	0	53
[10:00 AM-10:15 AM]	0	0	0	0	0	2	5	1	0	1	0	0	0	0	0	9
[10:15 AM-10:30 AM]	0	0	0	0	0	4	2	2	3	3	1	0	0	0	0	15
[10:30 AM-10:45 AM]	0	0	0	0	1	0	2	2	5	0	0	1	0	0	0	11
[10:45 AM-11:00 AM]	0	0	0	1	0	1	3	4	3	2	0	0	0	0	0	14
	0	0	0	1	1	7	12	9	11	6	1	1	0	0	0	49
[11:00 AM-11:15 AM]	0	0	0	0	0	1	8	3	1	1	2	0	0	0	0	16
[11:15 AM-11:30 AM]	0	0	0	0	0	0	2	4	3	2	0	0	0	0	0	11
[11:30 AM-11:45 AM]	0	0	0	0	1	0	1	2	3	2	0	0	0	0	0	9
[11:45 AM-12:00 PM]	0	0	0	0	1	1	2	4	4	1	0	1	0	0	0	14
	0	0	0	0	2	2	13	13	11	6	2	1	0	0	0	50
[12:00 PM-12:15 PM]	0	0	1	1	0	1	1	8	6	1	1	1	0	0	2	23
[12:15 PM-12:30 PM]	0	0	0	1	0	5	7	6	5	4	1	0	1	0	0	30
[12:30 PM-12:45 PM]	0	0	0	0	2	0	5	3	9	3	0	1	0	0	0	23
[12:45 PM-01:00 PM]	0	0	0	0	0	0	7	5	1	0	0	1	0	0	0	14
	0	0	1	2	2	6	20	22	21	8	2	3	1	0	2	90
[01:00 PM-01:15 PM]	0	0	0	0	0	2	2	4	3	3	0	0	0	0	0	14
[01:15 PM-01:30 PM]	0	0	0	0	0	0	3	8	2	2	0	0	0	0	1	16
[01:30 PM-01:45 PM]	0	0	0	0	2	2	2	4	3	1	0	0	0	0	0	14
[01:45 PM-02:00 PM]	0	0	0	0	1	1	2	2	2	0	0	0	0	0	0	8
	0	0	0	0	3	5	9	18	10	6	0	0	0	0	1	52
[02:00 PM-02:15 PM]	0	0	0	0	0	0	4	2	2	2	0	0	0	0	0	10
[02:15 PM-02:30 PM]	0	0	0	0	0	1	2	4	1	1	0	1	0	0	0	10
[02:30 PM-02:45 PM]	0	0	0	0	0	1	1	1	3	1	0	0	0	0	0	7
[02:45 PM-03:00 PM]	0	0	0	0	0	2	4	2	4	0	0	0	0	0	0	12
	0	0	0	0	0	4	11	9	10	4	0	1	0	0	0	39
[03:00 PM-03:15 PM]	0	0	0	0	2	3	2	2	1	0	0	0	0	0	0	10
[03:15 PM-03:30 PM]	0	0	0	0	0	1	6	2	1	1	1	0	0	0	0	12

## Time/Speed Report

<b>Device ID:</b> 404091		<b>Location:</b> South of Cheyenne Animal Shelter										<b>Raw Count:</b> 821				
<b>Operator:</b> CTY		<b>Lane:</b> Northbound										<b>AADT Count:</b> 821				
<b>Begin:</b> 09/20/2022 12:00 AM		<b>Street:</b> Southwest Dr										<b>AADT Factor:</b> 1				
<b>End:</b> 09/21/2022 12:00 AM		<b>City:</b> Cheyenne										<b>Speed Limit:</b> 40				
<b>Hours:</b> 24.00		<b>County:</b> Laramie														
<b>Period (min):</b> 15		<b>State:</b> WY														
<b>Date And Time Range</b>	<b>&lt; to 9</b>	<b>10 to 14</b>	<b>15 to 19</b>	<b>20 to 24</b>	<b>25 to 29</b>	<b>30 to 34</b>	<b>35 to 39</b>	<b>40 to 44</b>	<b>45 to 49</b>	<b>50 to 54</b>	<b>55 to 59</b>	<b>60 to 64</b>	<b>65 to 69</b>	<b>70 to 74</b>	<b>75 to &gt;</b>	<b>Total</b>
Tue, 09/20/2022																
[03:30 PM-03:45 PM]	0	0	0	0	0	2	4	6	1	3	0	0	0	0	0	16
[03:45 PM-04:00 PM]	0	0	0	0	0	4	4	6	2	2	0	0	0	0	0	18
	0	0	0	0	2	10	16	16	5	6	1	0	0	0	0	56
[04:00 PM-04:15 PM]	0	0	0	0	0	1	5	0	3	1	1	0	0	0	0	11
[04:15 PM-04:30 PM]	0	0	0	0	1	1	8	2	0	1	0	0	0	0	0	13
[04:30 PM-04:45 PM]	0	0	0	0	0	0	1	5	5	0	0	1	0	0	0	12
[04:45 PM-05:00 PM]	0	1	0	0	0	0	2	4	1	1	0	0	0	0	0	9
	0	1	0	0	1	2	16	11	9	3	1	1	0	0	0	45
[05:00 PM-05:15 PM]	0	0	0	1	0	0	4	4	3	0	0	0	0	0	0	12
[05:15 PM-05:30 PM]	0	0	0	0	1	3	3	7	4	0	0	0	0	0	0	18
[05:30 PM-05:45 PM]	0	0	0	0	0	1	2	1	0	3	1	1	0	0	0	9
[05:45 PM-06:00 PM]	0	0	0	0	0	2	2	4	2	0	2	0	0	0	0	12
	0	0	0	1	1	6	11	16	9	3	3	1	0	0	0	51
[06:00 PM-06:15 PM]	0	0	0	0	0	1	2	1	1	1	1	0	0	0	0	7
[06:15 PM-06:30 PM]	0	0	0	0	1	0	5	1	2	0	1	0	1	0	0	11
[06:30 PM-06:45 PM]	0	0	0	0	0	0	0	2	0	2	0	0	0	1	0	5
[06:45 PM-07:00 PM]	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
	0	0	0	0	1	1	8	4	3	3	2	0	1	1	0	24
[07:00 PM-07:15 PM]	0	0	0	1	0	0	0	2	0	1	0	0	0	0	0	4
[07:15 PM-07:30 PM]	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
[07:30 PM-07:45 PM]	0	0	0	0	0	2	2	1	0	2	2	0	0	0	0	9
[07:45 PM-08:00 PM]	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	4
	0	0	0	1	0	2	5	5	1	3	2	0	0	0	0	19
[08:00 PM-08:15 PM]	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	3
[08:15 PM-08:30 PM]	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	3
[08:30 PM-08:45 PM]	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2
[08:45 PM-09:00 PM]	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	3
	0	0	0	0	1	2	1	3	1	1	1	0	0	0	1	11
[09:00 PM-09:15 PM]	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
[09:15 PM-09:30 PM]	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
[09:30 PM-09:45 PM]	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	3
[09:45 PM-10:00 PM]	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	3
	0	0	0	0	0	1	3	2	1	1	0	0	0	0	0	8
[10:00 PM-10:15 PM]	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	4
[10:15 PM-10:30 PM]	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	3
[10:30 PM-10:45 PM]	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	2
[10:45 PM-11:00 PM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	0	1	2	3	2	0	0	0	0	0	0	0	9

## Time/Speed Report

<b>Device ID:</b> 404091 <b>Operator:</b> CTY <b>Begin:</b> 09/20/2022 12:00 AM <b>End:</b> 09/21/2022 12:00 AM <b>Hours:</b> 24.00 <b>Period (min):</b> 15				<b>Location:</b> South of Cheyenne Animal Shelter <b>Lane:</b> Northbound <b>Street:</b> Southwest Dr <b>City:</b> Cheyenne <b>County:</b> Laramie <b>State:</b> WY								<b>Raw Count:</b> 821 <b>AADT Count:</b> 821 <b>AADT Factor:</b> 1 <b>Speed Limit:</b> 40				
<b>Date</b>	<b>&lt;</b>	<b>10</b>	<b>15</b>	<b>20</b>	<b>25</b>	<b>30</b>	<b>35</b>	<b>40</b>	<b>45</b>	<b>50</b>	<b>55</b>	<b>60</b>	<b>65</b>	<b>70</b>	<b>75</b>	
<b>And</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	
<b>Time Range</b>	<b>9</b>	<b>14</b>	<b>19</b>	<b>24</b>	<b>29</b>	<b>34</b>	<b>39</b>	<b>44</b>	<b>49</b>	<b>54</b>	<b>59</b>	<b>64</b>	<b>69</b>	<b>74</b>	<b>&gt;</b>	<b>Total</b>
Tue,09/20/2022																
[11:00 PM-11:15 PM]	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
[11:15 PM-11:30 PM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[11:30 PM-11:45 PM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[11:45 PM-12:00 AM]	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
	0	0	0	0	3	0	0	0	0	1	0	0	0	0	0	4
09/20/2022 12:00 AM																
09/21/2022 12:00 AM	0	1	3	5	25	69	175	198	165	97	39	19	7	2	7	812

## Time/Speed Report

Device ID: 404022 Operator: CTY Begin: 09/20/2022 12:00 AM End: 09/21/2022 12:00 AM Hours: 24.00 Period (min): 15		Location: South of Cheyenne Animal Shelter Lane: Southbound Street: Southwest Dr City: Cheyenne County: Laramie State: WY										Raw Count: 860 AADT Count: 860 AADT Factor: 1 Speed Limit: 40				
Date And Time Range	< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >	Total
Tue,09/20/2022																
[12:00 AM-12:15 AM]	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
[12:15 AM-12:30 AM]	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
[12:30 AM-12:45 AM]	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	4
[12:45 AM-01:00 AM]	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	2
	0	0	0	0	0	1	2	2	2	0	1	1	0	0	0	9
[01:00 AM-01:15 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[01:15 AM-01:30 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[01:30 AM-01:45 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[01:45 AM-02:00 AM]	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
[02:00 AM-02:15 AM]	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
[02:15 AM-02:30 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[02:30 AM-02:45 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[02:45 AM-03:00 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
[03:00 AM-03:15 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[03:15 AM-03:30 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[03:30 AM-03:45 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[03:45 AM-04:00 AM]	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
[04:00 AM-04:15 AM]	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
[04:15 AM-04:30 AM]	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
[04:30 AM-04:45 AM]	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
[04:45 AM-05:00 AM]	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
	0	0	0	0	0	0	1	0	0	3	0	0	0	0	0	4
[05:00 AM-05:15 AM]	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
[05:15 AM-05:30 AM]	0	0	0	1	0	0	0	2	2	0	0	0	0	0	0	5
[05:30 AM-05:45 AM]	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
[05:45 AM-06:00 AM]	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2
	0	0	0	1	0	0	0	2	4	1	0	1	0	0	0	9
[06:00 AM-06:15 AM]	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	3
[06:15 AM-06:30 AM]	0	0	0	0	0	1	1	0	1	2	0	0	0	0	0	5
[06:30 AM-06:45 AM]	0	0	0	0	0	0	1	3	2	0	0	0	1	0	0	7
[06:45 AM-07:00 AM]	0	0	0	0	0	0	2	1	0	2	1	1	0	0	0	7
	0	0	0	0	0	1	4	4	4	5	1	2	1	0	0	22
[07:00 AM-07:15 AM]	0	0	0	0	0	0	0	0	3	4	3	0	0	0	0	10
[07:15 AM-07:30 AM]	0	0	0	1	0	2	1	3	6	5	2	1	0	0	0	21
[07:30 AM-07:45 AM]	0	0	0	0	1	0	1	2	2	4	1	0	1	0	0	12
[07:45 AM-08:00 AM]	0	0	0	0	0	1	1	2	6	4	1	1	0	0	0	16



## Time/Speed Report

<b>Device ID:</b> 404022		<b>Location:</b> South of Cheyenne Animal Shelter										<b>Raw Count:</b> 860				
<b>Operator:</b> CTY		<b>Lane:</b> Southbound										<b>AADT Count:</b> 860				
<b>Begin:</b> 09/20/2022 12:00 AM		<b>Street:</b> Southwest Dr										<b>AADT Factor:</b> 1				
<b>End:</b> 09/21/2022 12:00 AM		<b>City:</b> Cheyenne										<b>Speed Limit:</b> 40				
<b>Hours:</b> 24.00		<b>County:</b> Laramie														
<b>Period (min):</b> 15		<b>State:</b> WY														
<b>Date And Time Range</b>	<b>&lt; to 9</b>	<b>10 to 14</b>	<b>15 to 19</b>	<b>20 to 24</b>	<b>25 to 29</b>	<b>30 to 34</b>	<b>35 to 39</b>	<b>40 to 44</b>	<b>45 to 49</b>	<b>50 to 54</b>	<b>55 to 59</b>	<b>60 to 64</b>	<b>65 to 69</b>	<b>70 to 74</b>	<b>75 to &gt;</b>	<b>Total</b>
Tue,09/20/2022	0	0	0	1	1	3	3	7	17	17	7	2	1	0	0	59
[08:00 AM-08:15 AM]	0	0	0	0	0	2	2	3	2	4	0	0	0	0	0	13
[08:15 AM-08:30 AM]	0	0	0	0	0	1	3	5	3	1	1	0	0	0	0	14
[08:30 AM-08:45 AM]	0	0	0	0	0	0	1	0	4	1	2	1	0	0	0	9
[08:45 AM-09:00 AM]	0	0	0	0	1	1	2	3	2	1	0	1	0	0	0	11
	0	0	0	0	1	4	8	11	11	7	3	2	0	0	0	47
[09:00 AM-09:15 AM]	0	0	0	0	0	0	2	3	4	4	4	1	0	0	0	18
[09:15 AM-09:30 AM]	0	0	0	0	0	0	1	2	1	2	3	1	0	0	0	10
[09:30 AM-09:45 AM]	0	0	0	0	0	1	2	4	3	3	0	0	0	0	1	14
[09:45 AM-10:00 AM]	0	0	0	0	0	1	0	1	0	1	1	0	0	0	0	4
	0	0	0	0	0	2	5	10	8	10	8	2	0	0	1	46
[10:00 AM-10:15 AM]	0	0	0	0	1	0	0	5	7	2	3	1	0	0	0	19
[10:15 AM-10:30 AM]	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	5
[10:30 AM-10:45 AM]	0	0	0	0	1	3	3	1	2	2	0	0	0	0	0	12
[10:45 AM-11:00 AM]	0	0	0	0	0	0	0	2	1	0	3	1	1	1	0	9
	0	0	0	0	2	3	4	9	11	5	7	2	1	1	0	45
[11:00 AM-11:15 AM]	0	0	0	0	1	0	2	3	3	2	2	0	0	0	0	13
[11:15 AM-11:30 AM]	0	0	0	0	1	0	4	7	5	4	0	0	0	0	0	21
[11:30 AM-11:45 AM]	0	0	0	0	1	1	1	1	2	2	0	1	1	0	1	11
[11:45 AM-12:00 PM]	0	0	0	0	0	1	2	7	11	8	1	0	0	0	1	31
	0	0	0	0	3	2	9	18	21	16	3	1	1	0	2	76
[12:00 PM-12:15 PM]	0	0	0	0	0	0	1	9	6	2	2	1	0	0	0	21
[12:15 PM-12:30 PM]	0	0	0	0	1	1	3	3	10	5	0	0	0	0	0	23
[12:30 PM-12:45 PM]	0	0	0	0	1	2	2	3	3	5	2	2	0	0	1	21
[12:45 PM-01:00 PM]	0	1	0	0	0	0	3	7	0	3	0	0	1	0	0	15
	0	1	0	0	2	3	9	22	19	15	4	3	1	0	1	80
[01:00 PM-01:15 PM]	0	0	0	0	2	2	1	3	5	2	2	0	0	0	0	17
[01:15 PM-01:30 PM]	0	0	0	1	0	3	0	7	4	3	0	0	0	0	0	18
[01:30 PM-01:45 PM]	0	0	0	0	1	2	2	3	2	0	2	1	0	0	0	13
[01:45 PM-02:00 PM]	0	0	0	0	1	1	2	1	9	2	2	0	0	0	0	18
	0	0	0	1	4	8	5	14	20	7	6	1	0	0	0	66
[02:00 PM-02:15 PM]	0	0	0	1	0	1	1	4	1	2	0	1	0	0	1	12
[02:15 PM-02:30 PM]	0	0	0	0	0	0	1	4	4	1	0	0	0	0	0	10
[02:30 PM-02:45 PM]	0	0	0	0	1	1	2	2	4	2	1	0	1	0	0	14
[02:45 PM-03:00 PM]	0	0	0	0	0	3	3	3	3	1	0	0	0	0	0	13
	0	0	0	1	1	5	7	13	12	6	1	1	1	0	1	49
[03:00 PM-03:15 PM]	0	0	0	0	0	0	3	4	5	2	2	2	1	0	0	19
[03:15 PM-03:30 PM]	0	0	0	1	0	1	0	1	6	6	1	1	0	0	0	17

## Time/Speed Report

Device ID: 404022 Operator: CTY Begin: 09/20/2022 12:00 AM End: 09/21/2022 12:00 AM Hours: 24.00 Period (min): 15				Location: South of Cheyenne Animal Shelter Lane: Southbound Street: Southwest Dr City: Cheyenne County: Laramie State: WY								Raw Count: 860 AADT Count: 860 AADT Factor: 1 Speed Limit: 40				
Date And Time Range	< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >	Total
Tue,09/20/2022																
[03:30 PM-03:45 PM]	0	0	0	0	2	0	0	3	12	5	2	0	1	0	1	26
[03:45 PM-04:00 PM]	0	0	0	0	0	1	2	5	6	4	2	3	1	0	0	24
	0	0	0	1	2	2	5	13	29	17	7	6	3	0	1	86
[04:00 PM-04:15 PM]	0	0	0	0	0	4	1	7	8	7	2	0	0	0	0	29
[04:15 PM-04:30 PM]	0	0	0	0	1	1	2	2	5	7	2	0	0	0	0	20
[04:30 PM-04:45 PM]	0	0	0	0	2	2	1	5	2	3	1	0	1	0	0	17
[04:45 PM-05:00 PM]	0	0	0	0	0	0	3	3	1	2	1	0	0	0	0	10
	0	0	0	0	3	7	7	17	16	19	6	0	1	0	0	76
[05:00 PM-05:15 PM]	0	0	0	1	0	2	1	8	8	3	3	1	2	0	0	29
[05:15 PM-05:30 PM]	0	0	0	0	1	2	4	2	4	1	1	1	0	0	0	16
[05:30 PM-05:45 PM]	0	0	0	0	1	2	2	7	2	2	2	2	0	1	0	21
[05:45 PM-06:00 PM]	0	0	0	0	0	2	3	2	0	3	0	1	0	0	0	11
	0	0	0	1	2	8	10	19	14	9	6	5	2	1	0	77
[06:00 PM-06:15 PM]	0	0	0	0	1	2	2	1	3	2	1	1	0	0	0	13
[06:15 PM-06:30 PM]	0	0	0	0	0	0	0	5	1	0	1	0	0	0	0	7
[06:30 PM-06:45 PM]	0	0	0	0	0	5	3	0	1	3	0	0	0	0	0	12
[06:45 PM-07:00 PM]	0	0	0	0	1	5	1	1	4	1	0	0	0	0	0	13
	0	0	0	0	2	12	6	7	9	6	2	1	0	0	0	45
[07:00 PM-07:15 PM]	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	3
[07:15 PM-07:30 PM]	0	0	0	0	0	0	2	1	1	2	3	0	0	0	0	9
[07:30 PM-07:45 PM]	0	0	0	0	1	2	1	0	1	0	0	0	0	0	0	5
[07:45 PM-08:00 PM]	0	0	0	1	1	0	0	1	1	1	0	0	0	0	0	5
	0	0	0	1	2	2	4	2	4	3	4	0	0	0	0	22
[08:00 PM-08:15 PM]	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
[08:15 PM-08:30 PM]	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	3
[08:30 PM-08:45 PM]	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	3
[08:45 PM-09:00 PM]	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	3
	0	0	0	0	1	1	2	1	2	0	1	1	0	1	0	10
[09:00 PM-09:15 PM]	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	4
[09:15 PM-09:30 PM]	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	2
[09:30 PM-09:45 PM]	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
[09:45 PM-10:00 PM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	1	0	0	3	2	1	0	1	0	0	0	0	8
[10:00 PM-10:15 PM]	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	2
[10:15 PM-10:30 PM]	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	3
[10:30 PM-10:45 PM]	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	3
[10:45 PM-11:00 PM]	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2
	0	0	0	0	1	0	0	2	3	2	2	0	0	0	0	10

## Time/Speed Report

<b>Device ID:</b> 404022				<b>Location:</b> South of Cheyenne Animal Shelter								<b>Raw Count:</b> 860					
<b>Operator:</b> CTY				<b>Lane:</b> Southbound								<b>AADT Count:</b> 860					
<b>Begin:</b> 09/20/2022 12:00 AM				<b>Street:</b> Southwest Dr								<b>AADT Factor:</b> 1					
<b>End:</b> 09/21/2022 12:00 AM				<b>City:</b> Cheyenne								<b>Speed Limit:</b> 40					
<b>Hours:</b> 24.00				<b>County:</b> Laramie													
<b>Period (min):</b> 15				<b>State:</b> WY													
	<b>Date</b>	<b>&lt;</b>	<b>10</b>	<b>15</b>	<b>20</b>	<b>25</b>	<b>30</b>	<b>35</b>	<b>40</b>	<b>45</b>	<b>50</b>	<b>55</b>	<b>60</b>	<b>65</b>	<b>70</b>	<b>75</b>	
	<b>And</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	
	<b>Time Range</b>	<b>9</b>	<b>14</b>	<b>19</b>	<b>24</b>	<b>29</b>	<b>34</b>	<b>39</b>	<b>44</b>	<b>49</b>	<b>54</b>	<b>59</b>	<b>64</b>	<b>69</b>	<b>74</b>	<b>&gt;</b>	<b>Total</b>
Tue,09/20/2022																	
	[11:00 PM-11:15 PM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	[11:15 PM-11:30 PM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	[11:30 PM-11:45 PM]	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
	[11:45 PM-12:00 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
09/20/2022 12:00 AM																	
	09/21/2022 12:00 AM	0	1	0	8	27	64	94	176	210	148	70	31	12	3	6	850

## Time/Speed Report

<b>Device ID:</b> 404055		<b>Location:</b> South of North American Rd										<b>Raw Count:</b> 654				
<b>Operator:</b> CTY		<b>Lane:</b> Northbound										<b>AADT Count:</b> 654				
<b>Begin:</b> 09/20/2022 12:00 AM		<b>Street:</b> Southwest Dr										<b>AADT Factor:</b> 1				
<b>End:</b> 09/21/2022 12:00 AM		<b>City:</b> Cheyenne										<b>Speed Limit:</b> 40				
<b>Hours:</b> 24.00		<b>County:</b> Laramie														
<b>Period (min):</b> 15		<b>State:</b> WY														
Date And Time Range	< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >	Total
Tue, 09/20/2022																
[12:00 AM-12:15 AM]	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
[12:15 AM-12:30 AM]	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
[12:30 AM-12:45 AM]	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
[12:45 AM-01:00 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	2	1	0	1	0	0	0	0	0	0	0	4
[01:00 AM-01:15 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[01:15 AM-01:30 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[01:30 AM-01:45 AM]	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
[01:45 AM-02:00 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
[02:00 AM-02:15 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[02:15 AM-02:30 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[02:30 AM-02:45 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[02:45 AM-03:00 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[03:00 AM-03:15 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[03:15 AM-03:30 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[03:30 AM-03:45 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[03:45 AM-04:00 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[04:00 AM-04:15 AM]	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
[04:15 AM-04:30 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[04:30 AM-04:45 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[04:45 AM-05:00 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
[05:00 AM-05:15 AM]	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
[05:15 AM-05:30 AM]	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
[05:30 AM-05:45 AM]	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
[05:45 AM-06:00 AM]	0	0	0	0	2	3	0	0	0	0	0	0	0	0	0	5
	0	0	0	0	2	6	0	1	0	0	1	0	0	0	0	10
[06:00 AM-06:15 AM]	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
[06:15 AM-06:30 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
[06:30 AM-06:45 AM]	0	0	0	2	2	0	2	1	1	0	0	0	0	0	0	8
[06:45 AM-07:00 AM]	0	0	0	0	0	2	4	3	1	0	0	0	0	0	0	10
	0	0	0	2	2	3	6	5	2	0	0	0	0	0	1	21
[07:00 AM-07:15 AM]	0	0	0	0	0	3	3	1	2	1	0	1	0	0	0	11
[07:15 AM-07:30 AM]	0	0	0	0	0	2	4	0	0	0	0	0	0	0	0	6
[07:30 AM-07:45 AM]	0	0	1	1	2	3	1	1	1	1	0	0	0	0	0	11
[07:45 AM-08:00 AM]	2	0	0	0	1	4	1	1	1	0	0	0	0	0	0	10

## Time/Speed Report

Device ID: 404055 Operator: CTY Begin: 09/20/2022 12:00 AM End: 09/21/2022 12:00 AM Hours: 24.00 Period (min): 15		Location: South of North American Rd Lane: Northbound Street: Southwest Dr City: Cheyenne County: Laramie State: WY										Raw Count: 654 AADT Count: 654 AADT Factor: 1 Speed Limit: 40				
Date And Time Range	< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >	Total
Tue,09/20/2022	2	0	1	1	3	12	9	3	4	2	0	1	0	0	0	38
[08:00 AM-08:15 AM]	0	0	0	0	1	4	6	2	1	0	1	0	0	0	0	15
[08:15 AM-08:30 AM]	0	0	0	1	1	4	6	4	0	0	0	0	0	0	0	16
[08:30 AM-08:45 AM]	0	0	0	0	0	4	6	5	0	1	0	0	0	0	0	16
[08:45 AM-09:00 AM]	0	0	0	0	0	0	3	0	5	0	0	0	0	0	0	8
	0	0	0	1	2	12	21	11	6	1	1	0	0	0	0	55
[09:00 AM-09:15 AM]	0	0	0	0	7	1	4	0	1	0	0	0	0	0	1	14
[09:15 AM-09:30 AM]	0	1	0	0	0	3	2	0	1	0	0	0	0	0	0	7
[09:30 AM-09:45 AM]	0	0	0	0	3	1	7	1	1	0	0	0	0	0	0	13
[09:45 AM-10:00 AM]	0	0	0	0	1	4	2	1	0	0	0	1	0	0	0	9
	0	1	0	0	11	9	15	2	3	0	0	1	0	0	1	43
[10:00 AM-10:15 AM]	0	0	0	0	0	4	2	1	1	0	0	0	0	0	0	8
[10:15 AM-10:30 AM]	0	0	0	0	1	1	3	3	0	0	0	0	0	0	0	8
[10:30 AM-10:45 AM]	0	0	0	0	1	6	3	0	0	0	0	0	0	0	0	10
[10:45 AM-11:00 AM]	0	0	0	2	1	3	5	2	0	2	0	0	0	0	0	15
	0	0	0	2	3	14	13	6	1	2	0	0	0	0	0	41
[11:00 AM-11:15 AM]	0	0	0	1	3	4	2	3	1	0	0	0	0	0	0	14
[11:15 AM-11:30 AM]	0	0	1	1	0	2	4	3	0	2	0	0	0	0	0	13
[11:30 AM-11:45 AM]	0	0	0	0	2	1	6	2	1	2	0	0	0	0	0	14
[11:45 AM-12:00 PM]	0	0	0	3	1	5	4	1	2	0	0	0	0	0	0	16
	0	0	1	5	6	12	16	9	4	4	0	0	0	0	0	57
[12:00 PM-12:15 PM]	0	0	0	0	3	4	4	2	1	1	0	0	0	0	0	15
[12:15 PM-12:30 PM]	0	0	0	0	1	4	8	2	0	0	0	0	0	0	0	15
[12:30 PM-12:45 PM]	0	0	0	0	0	2	8	3	0	0	0	0	0	0	0	13
[12:45 PM-01:00 PM]	0	0	0	1	1	6	1	3	1	0	0	0	0	0	0	13
	0	0	0	1	5	16	21	10	2	1	0	0	0	0	0	56
[01:00 PM-01:15 PM]	0	0	0	0	4	4	4	3	0	0	0	0	0	0	0	15
[01:15 PM-01:30 PM]	0	0	0	0	1	8	4	4	0	1	0	0	0	0	0	18
[01:30 PM-01:45 PM]	0	0	0	0	3	1	3	6	0	0	0	0	0	0	0	13
[01:45 PM-02:00 PM]	0	0	0	0	1	3	1	0	1	0	0	0	0	0	0	6
	0	0	0	0	9	16	12	13	1	1	0	0	0	0	0	52
[02:00 PM-02:15 PM]	0	0	0	0	2	3	2	2	1	0	0	0	0	0	0	10
[02:15 PM-02:30 PM]	0	0	0	0	1	3	5	1	1	0	0	0	0	0	0	11
[02:30 PM-02:45 PM]	0	0	0	1	1	3	4	3	3	0	0	0	0	0	0	15
[02:45 PM-03:00 PM]	0	0	1	0	2	1	7	1	0	1	0	0	0	0	0	13
	0	0	1	1	6	10	18	7	5	1	0	0	0	0	0	49
[03:00 PM-03:15 PM]	0	0	0	0	0	6	4	3	1	0	0	0	0	0	0	14
[03:15 PM-03:30 PM]	0	0	0	0	3	2	3	1	0	1	0	0	0	0	0	10



## Time/Speed Report

Device ID: 404055 Operator: CTY Begin: 09/20/2022 12:00 AM End: 09/21/2022 12:00 AM Hours: 24.00 Period (min): 15				Location: South of North American Rd Lane: Northbound Street: Southwest Dr City: Cheyenne County: Laramie State: WY								Raw Count: 654 AADT Count: 654 AADT Factor: 1 Speed Limit: 40				
Date And Time Range	< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >	Total
Tue,09/20/2022																
[03:30 PM-03:45 PM]	0	0	0	0	2	2	1	2	2	0	0	0	0	0	0	9
[03:45 PM-04:00 PM]	0	0	0	0	1	3	5	6	1	0	0	0	0	0	0	16
	0	0	0	0	6	13	13	12	4	1	0	0	0	0	0	49
[04:00 PM-04:15 PM]	0	0	0	0	0	4	4	5	0	0	0	0	0	0	0	13
[04:15 PM-04:30 PM]	0	0	0	2	0	2	7	1	0	1	0	0	0	0	0	13
[04:30 PM-04:45 PM]	0	0	0	0	1	4	6	4	2	0	1	0	0	0	0	18
[04:45 PM-05:00 PM]	0	0	0	0	0	1	6	6	0	0	0	0	0	0	0	13
	0	0	0	2	1	11	23	16	2	1	1	0	0	0	0	57
[05:00 PM-05:15 PM]	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	3
[05:15 PM-05:30 PM]	0	0	1	0	1	2	4	4	0	1	0	0	0	0	0	13
[05:30 PM-05:45 PM]	0	0	0	0	1	0	3	1	1	1	0	0	0	0	0	7
[05:45 PM-06:00 PM]	0	0	0	2	0	2	3	2	0	0	0	0	0	0	0	9
	0	0	1	2	2	4	11	8	2	2	0	0	0	0	0	32
[06:00 PM-06:15 PM]	0	0	0	0	0	2	3	1	2	0	0	0	0	0	0	8
[06:15 PM-06:30 PM]	0	0	0	0	0	2	2	2	2	2	0	0	0	0	0	10
[06:30 PM-06:45 PM]	0	0	0	0	1	3	2	1	2	0	0	1	0	0	0	10
[06:45 PM-07:00 PM]	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	3
	0	0	0	1	2	7	8	4	6	2	0	1	0	0	0	31
[07:00 PM-07:15 PM]	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	3
[07:15 PM-07:30 PM]	0	0	0	2	0	0	2	2	0	0	0	0	0	0	0	6
[07:30 PM-07:45 PM]	0	0	1	2	1	7	3	2	0	0	0	0	0	0	0	16
[07:45 PM-08:00 PM]	0	0	0	1	0	1	0	2	0	0	0	0	0	0	0	4
	0	0	2	5	1	8	6	6	1	0	0	0	0	0	0	29
[08:00 PM-08:15 PM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[08:15 PM-08:30 PM]	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	2
[08:30 PM-08:45 PM]	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
[08:45 PM-09:00 PM]	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
	0	0	0	0	2	1	0	1	1	0	0	0	0	0	1	6
[09:00 PM-09:15 PM]	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
[09:15 PM-09:30 PM]	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
[09:30 PM-09:45 PM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[09:45 PM-10:00 PM]	0	0	0	1	0	2	0	1	0	0	0	0	0	0	0	4
	0	0	0	2	1	3	0	1	0	0	0	0	0	0	0	7
[10:00 PM-10:15 PM]	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	3
[10:15 PM-10:30 PM]	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2
[10:30 PM-10:45 PM]	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	3
[10:45 PM-11:00 PM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	1	0	3	2	2	0	0	0	0	0	0	0	0	8

## Time/Speed Report

<b>Device ID:</b> 404055 <b>Operator:</b> CTY <b>Begin:</b> 09/20/2022 12:00 AM <b>End:</b> 09/21/2022 12:00 AM <b>Hours:</b> 24.00 <b>Period (min):</b> 15				<b>Location:</b> South of North American Rd <b>Lane:</b> Northbound <b>Street:</b> Southwest Dr <b>City:</b> Cheyenne <b>County:</b> Laramie <b>State:</b> WY							<b>Raw Count:</b> 654 <b>AADT Count:</b> 654 <b>AADT Factor:</b> 1 <b>Speed Limit:</b> 40					
<b>Date</b>	<b>&lt;</b>	<b>10</b>	<b>15</b>	<b>20</b>	<b>25</b>	<b>30</b>	<b>35</b>	<b>40</b>	<b>45</b>	<b>50</b>	<b>55</b>	<b>60</b>	<b>65</b>	<b>70</b>	<b>75</b>	
<b>And</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	
<b>Time Range</b>	<b>9</b>	<b>14</b>	<b>19</b>	<b>24</b>	<b>29</b>	<b>34</b>	<b>39</b>	<b>44</b>	<b>49</b>	<b>54</b>	<b>59</b>	<b>64</b>	<b>69</b>	<b>74</b>	<b>&gt;</b>	<b>Total</b>
Tue,09/20/2022																
[11:00 PM-11:15 PM]	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
[11:15 PM-11:30 PM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[11:30 PM-11:45 PM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[11:45 PM-12:00 AM]	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
09/20/2022 12:00 AM																
09/21/2022 12:00 AM	2	1	7	25	69	163	194	117	45	18	3	3	0	0	3	650

## Time/Speed Report

Device ID: 404061 Operator: CTY Begin: 09/20/2022 12:00 AM End: 09/21/2022 12:00 AM Hours: 24.00 Period (min): 15		Location: South of North American Rd Lane: Southbound Street: Southwest Dr City: Cheyenne County: Laramie State: WY										Raw Count: 708 AADT Count: 708 AADT Factor: 1 Speed Limit: 40				
Date And Time Range	< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >	Total
Tue,09/20/2022																
[12:00 AM-12:15 AM]	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
[12:15 AM-12:30 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[12:30 AM-12:45 AM]	0	0	0	1	0	1	1	0	1	0	0	0	0	0	0	4
[12:45 AM-01:00 AM]	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
	0	1	0	1	1	1	2	0	1	0	0	0	0	0	0	7
[01:00 AM-01:15 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[01:15 AM-01:30 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[01:30 AM-01:45 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[01:45 AM-02:00 AM]	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
[02:00 AM-02:15 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[02:15 AM-02:30 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[02:30 AM-02:45 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[02:45 AM-03:00 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[03:00 AM-03:15 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[03:15 AM-03:30 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[03:30 AM-03:45 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[03:45 AM-04:00 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[04:00 AM-04:15 AM]	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
[04:15 AM-04:30 AM]	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
[04:30 AM-04:45 AM]	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
[04:45 AM-05:00 AM]	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	3
	0	0	0	0	0	3	2	0	1	0	0	0	0	0	0	6
[05:00 AM-05:15 AM]	0	0	0	0	0	1	1	1	0	0	0	0	0	1	0	4
[05:15 AM-05:30 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[05:30 AM-05:45 AM]	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
[05:45 AM-06:00 AM]	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2
	0	0	0	0	0	2	4	1	0	0	0	0	0	1	0	8
[06:00 AM-06:15 AM]	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
[06:15 AM-06:30 AM]	0	0	1	0	0	2	4	3	0	0	0	0	0	0	0	10
[06:30 AM-06:45 AM]	0	0	0	0	0	1	5	1	0	1	0	0	0	0	0	8
[06:45 AM-07:00 AM]	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	3
	0	0	1	0	0	4	11	5	0	1	0	0	0	0	0	22
[07:00 AM-07:15 AM]	0	0	0	2	1	1	7	2	1	0	0	0	0	0	0	14
[07:15 AM-07:30 AM]	0	0	1	0	1	2	0	0	0	0	0	0	0	0	0	4
[07:30 AM-07:45 AM]	0	0	0	2	1	9	8	2	0	0	0	0	0	0	0	22
[07:45 AM-08:00 AM]	0	0	1	0	0	8	4	3	2	0	0	0	0	0	0	18

## Time/Speed Report

<b>Device ID:</b> 404061		<b>Location:</b> South of North American Rd										<b>Raw Count:</b> 708				
<b>Operator:</b> CTY		<b>Lane:</b> Southbound										<b>AADT Count:</b> 708				
<b>Begin:</b> 09/20/2022 12:00 AM		<b>Street:</b> Southwest Dr										<b>AADT Factor:</b> 1				
<b>End:</b> 09/21/2022 12:00 AM		<b>City:</b> Cheyenne										<b>Speed Limit:</b> 40				
<b>Hours:</b> 24.00		<b>County:</b> Laramie														
<b>Period (min):</b> 15		<b>State:</b> WY														
Date And Time Range	< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >	Total
Tue,09/20/2022	0	0	2	4	3	20	19	7	3	0	0	0	0	0	0	58
[08:00 AM-08:15 AM]	0	0	0	0	0	9	1	1	1	0	0	0	0	0	0	12
[08:15 AM-08:30 AM]	0	0	0	0	0	2	4	1	0	0	0	0	0	0	0	7
[08:30 AM-08:45 AM]	0	0	0	0	0	4	2	0	0	0	0	0	0	0	0	6
[08:45 AM-09:00 AM]	0	0	0	2	2	5	1	1	1	0	0	0	0	0	0	12
	0	0	0	2	2	20	8	3	2	0	0	0	0	0	0	37
[09:00 AM-09:15 AM]	0	0	0	2	2	4	6	3	0	0	0	0	0	0	0	17
[09:15 AM-09:30 AM]	0	1	0	3	1	1	1	0	0	0	0	0	0	0	0	7
[09:30 AM-09:45 AM]	0	0	0	0	4	3	5	0	1	0	0	0	0	0	0	13
[09:45 AM-10:00 AM]	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	3
	0	1	0	5	7	9	14	3	1	0	0	0	0	0	0	40
[10:00 AM-10:15 AM]	0	0	1	0	2	7	5	1	0	0	0	0	0	0	0	16
[10:15 AM-10:30 AM]	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	5
[10:30 AM-10:45 AM]	0	0	0	0	1	5	4	0	0	0	0	0	0	0	0	10
[10:45 AM-11:00 AM]	0	0	0	0	1	4	4	2	0	0	0	0	0	0	0	11
	0	0	1	0	4	19	15	3	0	0	0	0	0	0	0	42
[11:00 AM-11:15 AM]	0	0	0	0	1	5	8	0	0	0	0	0	0	0	0	14
[11:15 AM-11:30 AM]	0	0	0	0	1	4	8	1	0	0	0	0	0	0	0	14
[11:30 AM-11:45 AM]	0	0	0	0	3	3	5	2	0	0	0	0	0	0	0	13
[11:45 AM-12:00 PM]	0	0	0	0	1	7	6	1	1	0	0	0	0	0	0	16
	0	0	0	0	6	19	27	4	1	0	0	0	0	0	0	57
[12:00 PM-12:15 PM]	0	0	0	0	4	4	4	0	0	0	0	0	0	0	0	12
[12:15 PM-12:30 PM]	0	0	0	0	2	8	6	0	0	0	0	0	0	0	0	16
[12:30 PM-12:45 PM]	0	0	0	1	4	7	6	3	1	1	0	0	0	0	0	23
[12:45 PM-01:00 PM]	0	0	0	0	3	4	5	1	1	0	0	0	0	0	0	14
	0	0	0	1	13	23	21	4	2	1	0	0	0	0	0	65
[01:00 PM-01:15 PM]	0	0	0	0	4	4	7	1	0	0	0	0	0	0	0	16
[01:15 PM-01:30 PM]	0	0	0	2	4	6	5	1	0	0	0	0	1	0	0	19
[01:30 PM-01:45 PM]	0	0	0	1	5	7	3	1	0	0	0	0	0	0	0	17
[01:45 PM-02:00 PM]	0	0	0	4	1	1	2	2	0	0	0	0	0	0	0	10
	0	0	0	7	14	18	17	5	0	0	0	0	1	0	0	62
[02:00 PM-02:15 PM]	0	0	0	0	0	6	4	0	0	1	0	0	0	1	0	12
[02:15 PM-02:30 PM]	0	0	0	0	1	2	5	1	0	0	0	0	0	0	0	9
[02:30 PM-02:45 PM]	0	0	0	0	3	5	6	1	0	0	0	0	0	0	0	15
[02:45 PM-03:00 PM]	0	0	0	0	2	9	0	1	0	0	0	0	0	0	0	12
	0	0	0	0	6	22	15	3	0	1	0	0	0	1	0	48
[03:00 PM-03:15 PM]	0	0	0	0	1	6	5	3	0	0	0	0	0	0	0	15
[03:15 PM-03:30 PM]	0	0	0	0	5	3	9	1	0	0	0	0	0	0	0	18

## Time/Speed Report

<b>Device ID:</b> 404061		<b>Location:</b> South of North American Rd										<b>Raw Count:</b> 708				
<b>Operator:</b> CTY		<b>Lane:</b> Southbound										<b>AADT Count:</b> 708				
<b>Begin:</b> 09/20/2022 12:00 AM		<b>Street:</b> Southwest Dr										<b>AADT Factor:</b> 1				
<b>End:</b> 09/21/2022 12:00 AM		<b>City:</b> Cheyenne										<b>Speed Limit:</b> 40				
<b>Hours:</b> 24.00		<b>County:</b> Laramie														
<b>Period (min):</b> 15		<b>State:</b> WY														
Date And Time Range	< to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to >	Total
Tue, 09/20/2022																
[03:30 PM-03:45 PM]	0	0	0	2	3	2	7	1	0	1	0	0	0	0	0	16
[03:45 PM-04:00 PM]	0	0	0	2	3	5	3	0	1	0	0	0	0	0	0	14
	0	0	0	4	12	16	24	5	1	1	0	0	0	0	0	63
[04:00 PM-04:15 PM]	0	0	0	2	1	10	7	2	1	1	0	0	0	0	0	24
[04:15 PM-04:30 PM]	0	0	0	0	3	5	5	0	1	0	0	0	1	0	0	15
[04:30 PM-04:45 PM]	0	0	0	3	1	0	2	1	0	0	1	1	0	0	1	10
[04:45 PM-05:00 PM]	0	0	0	1	2	3	4	2	0	0	0	0	0	0	0	12
	0	0	0	6	7	18	18	5	2	1	1	1	1	0	1	61
[05:00 PM-05:15 PM]	0	0	0	1	6	8	1	0	2	0	0	0	0	0	0	18
[05:15 PM-05:30 PM]	0	0	0	2	4	4	0	0	0	0	0	0	0	0	1	11
[05:30 PM-05:45 PM]	0	0	1	1	4	2	3	4	0	0	0	0	0	0	0	15
[05:45 PM-06:00 PM]	0	0	0	1	3	1	0	1	0	0	0	0	0	0	0	6
	0	0	1	5	17	15	4	5	2	0	0	0	0	0	1	50
[06:00 PM-06:15 PM]	0	0	0	0	2	3	5	1	0	0	0	0	0	0	0	11
[06:15 PM-06:30 PM]	1	0	0	0	0	3	0	2	0	0	0	0	0	0	0	6
[06:30 PM-06:45 PM]	0	0	1	0	0	2	1	2	0	1	0	0	0	0	0	7
[06:45 PM-07:00 PM]	0	0	1	0	2	0	4	1	0	0	1	0	0	0	0	9
	1	0	2	0	4	8	10	6	0	1	1	0	0	0	0	33
[07:00 PM-07:15 PM]	0	0	0	1	0	2	1	0	0	0	0	0	0	0	0	4
[07:15 PM-07:30 PM]	0	0	0	0	2	2	3	1	0	0	0	0	0	0	0	8
[07:30 PM-07:45 PM]	0	0	0	1	0	3	0	0	0	0	0	0	0	0	0	4
[07:45 PM-08:00 PM]	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
	0	0	0	2	3	8	4	1	0	0	0	0	0	0	0	18
[08:00 PM-08:15 PM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[08:15 PM-08:30 PM]	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0	3
[08:30 PM-08:45 PM]	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
[08:45 PM-09:00 PM]	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	3
	0	0	0	0	1	1	2	1	2	0	0	0	0	0	0	7
[09:00 PM-09:15 PM]	0	0	0	0	4	0	1	0	0	0	0	0	0	0	0	5
[09:15 PM-09:30 PM]	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2
[09:30 PM-09:45 PM]	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
[09:45 PM-10:00 PM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	2	4	1	1	0	0	0	0	0	0	0	0	8
[10:00 PM-10:15 PM]	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
[10:15 PM-10:30 PM]	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	3
[10:30 PM-10:45 PM]	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
[10:45 PM-11:00 PM]	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
	0	0	0	1	3	2	1	1	0	0	0	0	0	0	0	8



## Time/Speed Report

<b>Device ID:</b> 404061 <b>Operator:</b> CTY <b>Begin:</b> 09/20/2022 12:00 AM <b>End:</b> 09/21/2022 12:00 AM <b>Hours:</b> 24.00 <b>Period (min):</b> 15				<b>Location:</b> South of North American Rd <b>Lane:</b> Southbound <b>Street:</b> Southwest Dr <b>City:</b> Cheyenne <b>County:</b> Laramie <b>State:</b> WY								<b>Raw Count:</b> 708 <b>AADT Count:</b> 708 <b>AADT Factor:</b> 1 <b>Speed Limit:</b> 40				
<b>Date</b>	<b>&lt;</b>	<b>10</b>	<b>15</b>	<b>20</b>	<b>25</b>	<b>30</b>	<b>35</b>	<b>40</b>	<b>45</b>	<b>50</b>	<b>55</b>	<b>60</b>	<b>65</b>	<b>70</b>	<b>75</b>	
<b>And</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	
<b>Time Range</b>	<b>9</b>	<b>14</b>	<b>19</b>	<b>24</b>	<b>29</b>	<b>34</b>	<b>39</b>	<b>44</b>	<b>49</b>	<b>54</b>	<b>59</b>	<b>64</b>	<b>69</b>	<b>74</b>	<b>&gt;</b>	<b>Total</b>
Tue,09/20/2022																
[11:00 PM-11:15 PM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[11:15 PM-11:30 PM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[11:30 PM-11:45 PM]	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
[11:45 PM-12:00 AM]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
09/20/2022 12:00 AM																
09/21/2022 12:00 AM	1	2	7	40	107	231	219	62	18	6	2	1	2	2	2	702

## APPENDIX D. CRASH DATA

INTERSECTION CRASH HISTORY REPORT FOR  
SOUTHWEST DR & 5TH ST (ID 14811)  
FOR THE YEARS 2018 - 2022

DATE	TIME	ID #	CRASH STEET	CROSS STREET	JUNCTION RELATION	INTERSECTION TYPE	MANNER OF COLLISION	CRASH SEVERITY	FATAL INJURY	FIRST HARMFUL EVENT (FHE)	FHE LOCATION	#	DIRECTION	VEHICLE MANEUVER	DRIVER ACTION	PERSON TYPE	SAFETY EQUIPMENT USED	INJURY STATUS	LIGHTING	WEATHER CONDITION	ROAD CONDITION	ALCOHOL INVOLVED	DRUGS INVOLVED	LATITUDE	LONGITUDE	CRASH CASE #

REPORT SUMMARY	
TOTAL CRASHES:	0
FATAL CRASHES:	0
INJURY CRASHES:	0
PDO CRASHES:	0

- \* PDO = Property Damage Only Crashes
- \* Critical Crashes = Fatal & Suspected Serious Injury Crashes
- \* Serious Crashes = Suspected Minor Injury & Possible Injury Crashes
- \* Damage Crashes = No Apparent Injury & Unknown Injury Crashes

2022 DATA IS PRELIMINARY AND SUBJECT TO CHANGE

# INTERSECTION CRASH HISTORY REPORT FOR SOUTHWEST DR & COLLEGE DR (ID 12640) FOR THE YEARS 2018 - 2022

DATE	TIME	ID #	CRASH STREET	CROSS STREET	JUNCTION RELATION	INTERSECTION TYPE	MANNER OF COLLISION	CRASH SEVERITY	FATAL	INJURY	FIRST HARMFUL EVENT (FHE)	FHE LOCATION	#	DIRECTION	VEHICLE MANEUVER	DRIVER ACTION	PERSON TYPE	SAFETY EQUIPMENT USED	INJURY STATUS	LIGHTING	WEATHER CONDITION	ROAD CONDITION	ALCOHOL INVOLVED	DRUGS INVOLVED	LATITUDE	LONGITUDE	CRASH CASE #
2018																											
08/27/2018	756	12640	COLLEGE DR	SOUTHWEST DR	Intersection Related	T Intersection	Rear End (Front to Rear)	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	1	East	Straight Ahead	1 Following too Close	1 Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Dry	N	N	41.099287	-104.847721	18-59607
				2									East	Turning Left	2 No Improper Driving	2 Driver	Shoulder and Lap Belt										
2019																											
02/08/2019	1200	12640	SOUTHWEST DR   CR 123-1		Intersection Related	T Intersection	Rear to Front (Normally Backing)	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	1	North	Backing	1 Improper Backing	1 Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Cloudy, Overcast	Wet Slush	N	N	41.099477	-104.847662	19-7673
				2									South	Stopped in Traffic	2 No Improper Driving	2 Driver	Shoulder and Lap Belt										
2020																											
09/02/2020	545	12640	COLLEGE DR   I 25 BUS WY 212					PROPERTY DAMAGE ONLY	0	0	Deer	On Roadway	1		Straight Ahead	1 No Improper Driving	1 Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Dry			41.099249	-104.847515	'202011892
12/03/2020	1609	12640	SOUTHWEST DR   CR 123-1	COLLEGE DR   I 25 BUS / WY 212	Intersection	T Intersection	Angle Right (Front to Side, includes Broadside)	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	1	South	Straight Ahead	1 Failed to Yield ROW	1 Driver	Shoulder and Lap Belt	No Apparent Injury	Dusk	Clear	Dry	N	N	41.099281	-104.847708	20-64855
				2									West	Straight Ahead	2 No Improper Driving	2 Driver	Shoulder and Lap Belt										
2021																											
08/01/2021	1526	12640	SOUTHWEST DR   CR 123-1	COLLEGE DR   I 25 BUS / WY 212	Intersection	T Intersection	Angle Right (Front to Side, includes Broadside)	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	1	South	Turning Left	1 Failed to Yield ROW	1 Driver	Lap Belt Only	No Apparent Injury	Daylight	Clear	Dry	N	N	41.099273	-104.847701	21-41129
				2									West	Straight Ahead	1 Ran Off Road	2 Driver	Shoulder and Lap Belt	No Apparent Injury									
															2 No Improper Driving												
09/09/2021	1316	12640	COLLEGE DR   I 25 BUS WY 212	SOUTHWEST DR   CF 123-1	Intersection	T Intersection	Sideswipe Opposite Direction (Meeting)	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	1	North	Turning Left	1 Failed to Yield ROW	1 Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Dry	N	N	41.099330	-104.847851	21-48843
				2									West	Stopped in Traffic	2 No Improper Driving	2 Driver	Shoulder and Lap Belt	No Apparent Injury									
11/09/2021	1205	12640	SOUTHWEST DR   CR 123-1	COLLEGE DR   I 25 BUS / WY 212	Intersection	T Intersection	Angle Right (Front to Side, includes Broadside)	SUSPECTED MINOR INJURY	0	4	Motor Vehicle in Transport on Roadway	On Roadway	1	South	Turning Left	1 Failed to Yield ROW	1 Driver	Shoulder and Lap Belt	Suspected Minor Injury Possible Injury	Daylight	Clear	Dry	N	N	41.099348	-104.847696	2021-60081
				2									West	Straight Ahead	2 No Improper Driving	1 Passenger	Shoulder and Lap Belt										
																1 Passenger	Shoulder and Lap Belt	Possible Injury									
																2 Driver	Shoulder and Lap Belt	Suspected Minor Injury									
2022																											
03/16/2022	826	12640	SOUTHWEST DR   CR 123-1	COLLEGE DR   I 25 BUS / WY 212	Intersection	T Intersection	Angle Right (Front to Side, includes Broadside)	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	1	Southeast	Turning Left	1 Failed to Yield ROW	1 Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Dry	N	N	41.099286	-104.847700	22-15132
				2									West	Straight Ahead	2 No Improper Driving	2 Driver	Shoulder and Lap Belt	No Apparent Injury									
06/24/2022	1240	12640	SOUTHWEST DR   CR 123-1	COLLEGE DR   I 25 BUS / WY 212	Intersection	T Intersection	Angle (Front to Side), Opposing Direction	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	1	East	Turning Left	1 Failed to Yield ROW	1 Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Dry	N	N	41.099365	-104.847656	22-38489
				2									West	Straight Ahead	2 No Improper Driving	2 Driver	Shoulder and Lap Belt	No Apparent Injury									
07/01/2022	1002	12640	SOUTHWEST DR   CR 123-1	COLLEGE DR   I 25 BUS / WY 212	Intersection	T Intersection	Angle Same Direction (Front to Side)	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	1	Southwest	Turning Left	1 Failed to Yield ROW	1 Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Dry	N	N	41.099276	-104.847708	22-40114
				2									West	Straight Ahead	2 No Improper Driving	2 Driver	Shoulder and Lap Belt	No Apparent Injury									

DATE	TIME	ID #	CRASH STEET	CROSS STREET	JUNCTION RELATION	INTERSECTION TYPE	MANNER OF COLLISION	CRASH SEVERITY	FATAL INJURY	FIRST HARMFUL EVENT (FHE)	FHE LOCATION	#	DIRECTION	VEHICLE MANEUVER	DRIVER ACTION	PERSON TYPE	SAFETY EQUIPMENT USED	INJURY STATUS	LIGHTING	WEATHER CONDITION	ROAD CONDITION	ALCOHOL INVOLVED	DRUGS INVOLVED	LATITUDE	LONGITUDE	CRASH CASE #
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REPORT SUMMARY	
TOTAL CRASHES:	10
FATAL CRASHES:	0
INJURY CRASHES:	1
PDO CRASHES:	9

\* PDO = Property Damage Only Crashes  
\* Critical Crashes = Fatal & Suspected Serious Injury Crashes  
\* Serious Crashes = Suspected Minor Injury & Possible Injury Crashes  
\* Damage Crashes = No Apparent Injury & Unknown Injury Crashes

CRASH COUNTS					SEVERITY COUNTS			INJURY COUNTS				
YEAR	FATAL CRASHES	INJURY CRASHES	PDO CRASHES	TOTAL CRASHES	CRITICAL CRASHES*	SERIOUS CRASHES*	DAMAGE CRASHES*	FATAL INJURIES	SERIOUS INJURIES	MINOR INJURIES	POSSIBLE INJURIES	NO INJURIES
2018	0	0	1	1	0	0	1	0	0	0	0	2
2019	0	0	1	1	0	0	1	0	0	0	0	2
2020	0	0	2	2	0	0	2	0	0	0	0	3
2021	0	1	2	3	0	1	2	0	0	2	2	4
2022	0	0	3	3	0	0	3	0	0	0	0	6
	0	1	9	10	0	1	9	0	0	2	2	17

2022 DATA IS PRELIMINARY AND SUBJECT TO CHANGE



INTERSECTION CRASH HISTORY REPORT FOR  
SOUTHWEST DR & LINCOLNWAY (ID 104259)  
FOR THE YEARS 2018 - 2022

DATE	TIME	ID #	CRASH STEET	CROSS STREET	JUNCTION RELATION	INTERSECTION TYPE	MANNER OF COLLISION	CRASH SEVERITY	FATAL	INJURY	FIRST HARMFUL EVENT (FHE)	FHE LOCATION	#	DIRECTION	VEHICLE MANEUVER	DRIVER ACTION	PERSON TYPE	SAFETY EQUIPMENT USED	INJURY STATUS	LIGHTING	WEATHER CONDITION	ROAD CONDITION	ALCOHOL INVOLVED	DRUGS INVOLVED	LATITUDE	LONGITUDE	CRASH CASE #		
2018																													
02/13/2018	1548	104259	W LINCOLNWAY	SOUTHWEST DR	Intersection	Four (4)-Way Intersection	Angle Right (Front to Side, includes Broadside)	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	1	East	Straight Ahead	1	Ran Red Light	1	Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Dry	N	N	41.123130	-104.840280	18-10109
													2	North	Turning Left	2	No Improper Driving	2	Driver	Shoulder and Lap Belt	No Apparent Injury								
2020																													
10/27/2020	1030	104259	SOUTHWEST DR   CR 123-1		Non-Junction	Not an Intersection	Not a Collision w/2 Vehicles in Transport	PROPERTY DAMAGE ONLY	0	0	Other Fixed Object	Off Roadway	1	North	Negotiating a Curve	1	No Improper Driving	1	Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Ice/Frost Snow	N	N	41.122795	-104.840104	20-58112
2021																													
03/19/2021	1059	104259	SOUTHWEST DR   CR 123-1	CUTLER RD	Intersection	Four (4)-Way Intersection	Angle (Front to Side), Opposing Direction	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	1	Southeast	Turning Left	1	No Improper Driving	1	Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Snow	N	N	41.123164	-104.840279	21-14305
													2	East	Straight Ahead	2	Unknown	2	Driver	Shoulder and Lap Belt	No Apparent Injury			Ice/Frost					
2022																													
02/04/2022	722	104259	SOUTHWEST DR   CR 123-1		Non-Junction	Not an Intersection	Not a Collision w/2 Vehicles in Transport	PROPERTY DAMAGE ONLY	0	0	Other Fixed Object	Off Roadway	1	Northeast	Straight Ahead	1	Ran Off Road	1	Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Ice/Frost	N	N	41.122794	-104.840095	22-6619
10/10/2022	754	104259	SOUTHWEST DR   CR 123-1		Railway Grade Crossing	Not an Intersection	Rear to Front (Normally Backing)	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	1	North	Backing	1	Improper Parking	1	Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Dry	N	N	41.122957	-104.840327	22-63659
													2	South	Stopped in Traffic	2	No Improper Driving	2	Driver	Shoulder and Lap Belt	No Apparent Injury								

REPORT SUMMARY	
TOTAL CRASHES:	5
FATAL CRASHES:	0
INJURY CRASHES:	0
PDO CRASHES:	5

YEAR	CRASH COUNTS				SEVERITY COUNTS			INJURY COUNTS				
	FATAL CRASHES	INJURY CRASHES	PDO CRASHES	TOTAL CRASHES	CRITICAL CRASHES*	SERIOUS CRASHES*	DAMAGE CRASHES*	FATAL INJURIES	SERIOUS INJURIES	MINOR INJURIES	POSSIBLE INJURIES	NO INJURIES
2018	0	0	1	1	0	0	1	0	0	0	0	2
2020	0	0	1	1	0	0	1	0	0	0	0	1
2021	0	0	1	1	0	0	1	0	0	0	0	2
2022	0	0	2	2	0	0	2	0	0	0	0	3
	0	0	5	5	0	0	5	0	0	0	0	8

\* PDO = Property Damage Only Crashes  
\* Critical Crashes = Fatal & Suspected Serious Injury Crashes  
\* Serious Crashes = Suspected Minor Injury & Possible Injury Crashes  
\* Damage Crashes = No Apparent Injury & Unknown Injury Crashes

2022 DATA IS PRELIMINARY AND SUBJECT TO CHANGE

INTERSECTION CRASH HISTORY REPORT FOR  
SOUTHWEST DR & NORTH AMERICAN RD (ID 14504)  
FOR THE YEARS 2018 - 2022

DATE	TIME	ID #	CRASH STREET	CROSS STREET	JUNCTION RELATION	INTERSECTION TYPE	MANNER OF COLLISION	CRASH SEVERITY	FATAL	INJURY	FIRST HARMFUL EVENT (FHE)	FHE LOCATION	#	DIRECTION	VEHICLE MANEUVER	DRIVER ACTION	PERSON TYPE	SAFETY EQUIPMENT USED	INJURY STATUS	LIGHTING	WEATHER CONDITION	ROAD CONDITION	ALCOHOL INVOLVED	DRUGS INVOLVED	LATITUDE	LONGITUDE	CRASH CASE #		
2020																													
02/04/2020	855	14504	NORTH AMERICAN RD		Intersection Related	Four (4)-Way Intersection	Head On (Front to Front)	SUSPECTED MINOR INJURY	0	1	Motor Vehicle in Transport on Roadway	On Roadway	1	Northwest	Turning Left	1	Failed to Keep Proper Lane	1	Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Snowing	Snow	N	N	41.119513	-104.842426	20-7110
													2	East	Stopped in Traffic	2	No Improper Driving	2	Driver	Shoulder and Lap Belt	Suspected Minor Injury								

REPORT SUMMARY			
TOTAL CRASHES:	1		
FATAL CRASHES:	0	TOTAL FATALITIES:	0
INJURY CRASHES:	1	TOTAL INJURIES:	1
PDO CRASHES:	0		

YEAR	CRASH COUNTS				SEVERITY COUNTS			INJURY COUNTS				
	FATAL CRASHES	INJURY CRASHES	PDO CRASHES	TOTAL CRASHES	CRITICAL CRASHES*	SERIOUS CRASHES*	DAMAGE CRASHES*	FATAL INJURIES	SERIOUS INJURIES	MINOR INJURIES	POSSIBLE INJURIES	NO INJURIES
2020	0	1	0	1	0	1	0	0	0	1	0	1
	0	1	0	1	0	1	0	0	0	1	0	1

- \* PDO = Property Damage Only Crashes  
\* Critical Crashes = Fatal & Suspected Serious Injury Crashes  
\* Serious Crashes = Suspected Minor Injury & Possible Injury Crashes  
\* Damage Crashes = No Apparent Injury & Unknown Injury Crashes

2022 DATA IS PRELIMINARY AND SUBJECT TO CHANGE

INTERSECTION CRASH HISTORY REPORT FOR  
SOUTHWEST DR & WOODENSHOE DR (ID 13824)  
FOR THE YEARS 2018 - 2022

DATE	TIME	ID #	CRASH STEET	CROSS STREET	JUNCTION RELATION	INTERSECTION TYPE	MANNER OF COLLISION	CRASH SEVERITY	FATAL INJURY	FIRST HARMFUL EVENT (FHE)	FHE LOCATION	#	DIRECTION	VEHICLE MANEUVER	DRIVER ACTION	PERSON TYPE	SAFETY EQUIPMENT USED	INJURY STATUS	LIGHTING	WEATHER CONDITION	ROAD CONDITION	ALCOHOL INVOLVED	DRUGS INVOLVED	LATITUDE	LONGITUDE	CRASH CASE #

REPORT SUMMARY	
TOTAL CRASHES:	0
FATAL CRASHES:	0
INJURY CRASHES:	0
PDO CRASHES:	0

- \* PDO = Property Damage Only Crashes
- \* Critical Crashes = Fatal & Suspected Serious Injury Crashes
- \* Serious Crashes = Suspected Minor Injury & Possible Injury Crashes
- \* Damage Crashes = No Apparent Injury & Unknown Injury Crashes

2022 DATA IS PRELIMINARY AND SUBJECT TO CHANGE

SEGMENT CRASH HISTORY REPORT FOR SOUTHWEST DR (ML6736B) FROM MILE POST 0.00 TO 1.73 FOR THE YEARS 2018 - 2022																																			
LRS ID	CRASH STREET	MILE POST	CROSS STREET	DATE	TIME	CRASH SEVERITY	FATAL	INJURY	FIRST HARMFUL EVENT (FHE)	FHE LOCATION	MANNER OF COLLISION	JUNCTION RELATION	#	DIRECTION	VEHICLE MANEUVER	DRIVER ACTION		PERSON TYPE	SAFETY EQUIPMENT USED	INJURY STATUS	LIGHTING	WEATHER CONDITION	ROAD CONDITION	ALCOHOL INVOLVED	DRUGS INVOLVED	LATITUDE	LONGITUDE	CRASH CASE #							
ML6736B	SOUTHWEST DR   CR 123-1	0.000	COLLEGE DR   I 25 BUS / WY 212	12/03/2020	1609	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	Angle Right (Front to Side, includes Broadside)	Intersection	1	South	Straight Ahead	1	Failed to Yield ROW	1	Driver	Shoulder and Lap Belt	No Apparent Injury	Dusk	Clear	Dry	N	N	41.099281	-104.847708	20-64855						
													2	West	Straight Ahead	2	No Improper Driving	2	Driver	Shoulder and Lap Belt	No Apparent Injury														
ML6736B	SOUTHWEST DR   CR 123-1	0.000	COLLEGE DR   I 25 BUS / WY 212	07/01/2022	1002	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	Angle Same Direction (Front to Side)	Intersection	1	Southwest	Turning Left	1	Failed to Yield ROW	1	Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Dry	N	N	41.099276	-104.847708	22-40114						
													2	West	Straight Ahead	2	No Improper Driving	2	Driver	Shoulder and Lap Belt	No Apparent Injury														
ML6736B	SOUTHWEST DR   CR 123-1	0.000	COLLEGE DR   I 25 BUS / WY 212	03/16/2022	826	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	Angle Right (Front to Side, includes Broadside)	Intersection	1	Southeast	Turning Left	1	Failed to Yield ROW	1	Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Dry	N	N	41.099286	-104.847700	22-15132						
													2	West	Straight Ahead	2	No Improper Driving	2	Driver	Shoulder and Lap Belt	No Apparent Injury														
ML6736B	SOUTHWEST DR   CR 123-1	0.002	COLLEGE DR   I 25 BUS / WY 212	08/01/2021	1526	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	Angle Right (Front to Side, includes Broadside)	Intersection	1	South	Turning Left	1	Failed to Yield ROW	1	Driver	Lap Belt Only	No Apparent Injury	Daylight	Clear	Dry	N	N	41.099273	-104.847701	21-41129						
													2	West	Straight Ahead	1	Ran Off Road	2	Driver	Shoulder and Lap Belt	No Apparent Injury														
ML6736B	SOUTHWEST DR   CR 123-1	0.005	COLLEGE DR   I 25 BUS / WY 212	11/09/2021	1205	SUSPECTED MINOR INJURY	0	4	Motor Vehicle in Transport on Roadway	On Roadway	Angle Right (Front to Side, includes Broadside)	Intersection	1	South	Turning Left	1	Failed to Yield ROW	1	Driver	Shoulder and Lap Belt	Suspected Minor Injury	Daylight	Clear	Dry	N	N	41.099348	-104.847696	2021-60081						
													2	West	Straight Ahead	2	No Improper Driving	1	Passenger	Shoulder and Lap Belt	Possible Injury														
																		1	Passenger	Shoulder and Lap Belt	Possible Injury														
																		2	Driver	Shoulder and Lap Belt	Suspected Minor Injury														
ML6736B	SOUTHWEST DR   CR 123-1	0.006	COLLEGE DR   I 25 BUS / WY 212	06/24/2022	1240	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	Angle (Front to Side), Opposing Direction	Intersection	1	East	Turning Left	1	Failed to Yield ROW	1	Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Dry	N	N	41.099365	-104.847656	22-38489						
													2	West	Straight Ahead	2	No Improper Driving	2	Driver	Shoulder and Lap Belt	No Apparent Injury														
ML6736B	SOUTHWEST DR   CR 123-1	0.013		02/08/2019	1200	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	Rear to Front (Normally Backing)	Intersection Related	1	North	Backing	1	Improper Backing	1	Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Cloudy, Overcast	Wet Slush	N	N	41.099477	-104.847662	19-7673						
													2	South	Stopped in Traffic	2	No Improper Driving	2	Driver	Shoulder and Lap Belt	No Apparent Injury														
ML6736B	SOUTHWEST DR   CR 123-1	0.068		07/03/2019	1726	POSSIBLE INJURY	0	1	Motor Vehicle in Transport on Roadway	On Roadway	Angle Right (Front to Side, includes Broadside)	Business Entrance	1	East	Straight Ahead	1	Disregarded Traffic Signs	1	Driver	None Used	No Apparent Injury	Daylight	Clear	Dry	N	N	41.100263	-104.847481	2019-037569						
													2	North	Straight Ahead	2	No Improper Driving	2	Driver	Shoulder and Lap Belt	Possible Injury														
ML6736B	SOUTHWEST DR   CR 123-1	0.071		10/26/2022	1826	POSSIBLE INJURY	0	1	Motor Vehicle in Transport on Roadway	On Roadway	Angle Same Direction (Front to Side)	Business Entrance	1	North	Changing Lanes	1	Failed to Keep Proper Lane	1	Driver	Shoulder and Lap Belt	No Apparent Injury	Darkness Unlighted	Clear	Dry	N	N	41.100298	-104.847475	22-67142						
													2	North	Straight Ahead	2	No Improper Driving	1	Passenger	Rear Facing Child Restraint	No Apparent Injury														
																		1	Passenger	Rear Facing Child Restraint	No Apparent Injury														
																		2	Driver	Shoulder and Lap Belt	Possible Injury														
																		2	Passenger	Rear Facing Child Restraint	No Apparent Injury														
																		2	Passenger	Rear Facing Child Restraint	No Apparent Injury														
ML6736B	SOUTHWEST DR	0.391		03/30/2018	1850	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	Angle (Front to Side), Opposing Direction	Driveway Related	1	South	Turning Left	1	Failed to Yield ROW	1	Driver	Unknown	No Apparent Injury	Daylight	Clear	Dry	N	N	41.104800	-104.846400	18-7047						
													2	North	Straight Ahead	1	Improper Turn or No Signal	2	Driver	Unknown	No Apparent Injury														
																		1	Failed to Keep Proper Lane																
																		2	No Improper Driving																

LRS ID	CRASH STREET	MILE POST	CROSS STREET	DATE	TIME	CRASH SEVERITY	FATAL	INJURY	FIRST HARMFUL EVENT (FHE)	FHE LOCATION	MANNER OF COLLISION	JUNCTION RELATION	#	DIRECTION	VEHICLE MANEUVER	DRIVER ACTION	PERSON TYPE	SAFETY EQUIPMENT USED	INJURY STATUS	LIGHTING	WEATHER CONDITION	ROAD CONDITION	ALCOHOL INVOLVED	DRUGS INVOLVED	LATITUDE	LONGITUDE	CRASH CASE #
ML6736B	SOUTHWEST DR   CR 123-1	1.139		11/18/2022	1709	PROPERTY DAMAGE ONLY	0	0	Bridge Overhead Structure	On Roadway	Not a Collision w/2 Vehicles in Transport	Non-Junction	1	South	Straight Ahead	1 No Improper Driving	1 Driver	Shoulder and Lap Belt	No Apparent Injury	Darkness Lighted	Clear	Ice/Frost	N	N	41.115223	-104.843706	22-71834
ML6736B	SOUTHWEST DR   CR 123-1	1.141		09/03/2019	1403	PROPERTY DAMAGE ONLY	0	0	Bridge Overhead Structure	Off Roadway	Not a Collision w/2 Vehicles in Transport	Non-Junction	1	North	Straight Ahead	1 Erratic/Reckless/Careless/Aggressive	1 Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Dry	N	N	41.115254	-104.843658	19-50888
ML6736B	SOUTHWEST DR   CR 123-1	1.339		02/06/2020	837	PROPERTY DAMAGE ONLY	0	0	Fence (including Post)	Off Roadway	Not a Collision w/2 Vehicles in Transport	Non-Junction	1	North	Negotiating a Curve	1 Unknown	1 Driver	Unknown	No Apparent Injury	Daylight	Clear	Snow	N	N	41.118032	-104.843189	20-7571
ML6736B	SOUTHWEST DR   CR 123-1	1.689		09/04/2022	2014	PROPERTY DAMAGE ONLY	0	0	Other Fixed Object	Off Roadway	Not a Collision w/2 Vehicles in Transport	Railway Grade Crossing	1	North	Straight Ahead	1 Ran Off Road	1 Driver	Rear Facing Child Restraint Shoulder and Lap Belt	No Apparent Injury	Darkness Unlighted	Clear	Dry	N	N	41.122606	-104.840122	22-55777
ML6736B	SOUTHWEST DR   CR 123-1	1.691		06/04/2022	1435	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	Rear End (Front to Rear)	Railway Grade Crossing	1	North	Stopped in Traffic	1 No Improper Driving	1 Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Dry	N	N	41.122633	-104.840112	22-33956
													2	North	Negotiating a Curve	2 Following too Close	1 Passenger	Shoulder and Lap Belt	No Apparent Injury								
																	2	Driver	Shoulder and Lap Belt	No Apparent Injury							
ML6736B	SOUTHWEST DR   CR 123-1	1.693		11/18/2022	1348	PROPERTY DAMAGE ONLY	0	0	Guardrail Face	Off Roadway	Not a Collision w/2 Vehicles in Transport	Non-Junction	1	Northeast	Negotiating a Curve	1 Ran Off Road	1 Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Ice/Frost	N	N	41.122670	-104.840105	22-71778
																1 Drove too Fast for Conditions						Snow					
ML6736B	SOUTHWEST DR   CR 123-1	1.700		10/27/2020	1030	PROPERTY DAMAGE ONLY	0	0	Other Fixed Object	Off Roadway	Not a Collision w/2 Vehicles in Transport	Non-Junction	1	North	Negotiating a Curve	1 No Improper Driving	1 Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Ice/Frost	N	N	41.122795	-104.840104	20-58112
																						Snow					
ML6736B	SOUTHWEST DR   CR 123-1	1.701		02/04/2022	722	PROPERTY DAMAGE ONLY	0	0	Other Fixed Object	Off Roadway	Not a Collision w/2 Vehicles in Transport	Non-Junction	1	Northeast	Straight Ahead	1 Ran Off Road	1 Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Ice/Frost	N	N	41.122794	-104.840095	22-6619
ML6736B	SOUTHWEST DR   CR 123-1	1.716		10/10/2022	754	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	Rear to Front (Normally Backing)	Railway Grade Crossing	1	North	Backing	1 Improper Parking	1 Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Dry	N	N	41.122957	-104.840327	22-63659
													2	South	Stopped in Traffic	2 No Improper Driving	2 Driver	Shoulder and Lap Belt	No Apparent Injury								
ML6736B	SOUTHWEST DR   CR 123-1	1.727	CUTLER RD	03/19/2021	1059	PROPERTY DAMAGE ONLY	0	0	Motor Vehicle in Transport on Roadway	On Roadway	Angle (Front to Side), Opposing Direction	Intersection	1	Southeast	Turning Left	1 No Improper Driving	1 Driver	Shoulder and Lap Belt	No Apparent Injury	Daylight	Clear	Snow	N	N	41.123164	-104.840279	21-14305
													2	East	Straight Ahead	2 Unknown	2 Driver	Shoulder and Lap Belt	No Apparent Injury			Ice/Frost					

REPORT SUMMARY			
TOTAL CRASHES:	20		
FATAL CRASHES:	0	TOTAL FATALITIES:	0
INJURY CRASHES:	3	TOTAL INJURIES:	6
PDO CRASHES:	17		

\* PDO = Property Damage Only Crashes  
\* Critical Crashes = Fatal & Suspected Serious Injury Crashes  
\* Serious Crashes = Suspected Minor Injury & Possible Injury Crashes  
\* Damage Crashes = No Apparent Injury & Unknown Injury Crashes

YEAR	CRASH COUNTS				SEVERITY COUNTS			INJURY COUNTS				
	FATAL CRASHES	INJURY CRASHES	PDO CRASHES	TOTAL CRASHES	CRITICAL CRASHES*	SERIOUS CRASHES*	DAMAGE CRASHES*	FATAL INJURIES	SERIOUS INJURIES	MINOR INJURIES	POSSIBLE INJURIES	NO INJURIES
2018	0	0	1	1	0	0	1	0	0	0	0	2
2019	0	1	2	3	0	1	2	0	0	0	1	4
2020	0	0	3	3	0	0	3	0	0	0	0	5
2021	0	1	2	3	0	1	2	0	0	2	2	4
2022	0	1	9	10	0	1	9	0	0	0	1	20
	0	3	17	20	0	3	17	0	0	2	4	35

2022 DATA IS PRELIMINARY AND SUBJECT TO CHANGE
























## APPENDIX E.      EXISTING CONDITIONS LEVEL OF SERVICE WORKSHEETS

# Timings

## 1: Southwest Dr & Lincolnway

# Existing Conditions

AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	171	28	48	186	15	18	3	29	7	2	7
Future Volume (vph)	18	171	28	48	186	15	18	3	29	7	2	7
Satd. Flow (prot)	1703	3505	1509	1703	3426	0	1626	1546	0	1583	1074	0
Flt Permitted	0.578			0.615			0.745			0.732		
Satd. Flow (perm)	1036	3505	1509	1102	3426	0	1275	1546	0	1220	1074	0
Satd. Flow (RTOR)			58		21			35			15	
Lane Group Flow (vph)	23	219	36	68	283	0	22	39	0	15	19	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	2	2	2	6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.3	20.3	20.3	21.3	21.3		8.2	8.2		8.2	8.2	
Total Split (s)	40.0	40.0	40.0	40.0	40.0		17.0	17.0		17.0	17.0	
Total Split (%)	66.7%	66.7%	66.7%	66.7%	66.7%		28.3%	28.3%		28.3%	28.3%	
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		3.2	3.2		3.2	3.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.3	5.3	5.3	5.3	5.3		4.2	4.2		4.2	4.2	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max	Max	Max	Max		Max	Max		Max	Max	
Act Effect Green (s)	34.7	34.7	34.7	34.7	34.7		12.8	12.8		12.8	12.8	
Actuated g/C Ratio	0.61	0.61	0.61	0.61	0.61		0.22	0.22		0.22	0.22	
v/c Ratio	0.04	0.10	0.04	0.10	0.14		0.08	0.10		0.05	0.08	
Control Delay	4.7	4.8	1.0	5.1	4.6		18.4	8.8		18.1	11.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	4.7	4.8	1.0	5.1	4.6		18.4	8.8		18.1	11.6	
LOS	A	A	A	A	A		B	A		B	B	
Approach Delay		4.3			4.7			12.2			14.5	
Approach LOS		A			A			B			B	

## Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 57

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.14

Intersection Signal Delay: 5.6

Intersection LOS: A

Intersection Capacity Utilization 45.0%

ICU Level of Service A




Analysis Period (min) 15

## Splits and Phases: 1: Southwest Dr & Lincolnway






HCM 6th TWSC  
2: Southwest Dr & North American Rd

Existing Conditions  
AM Peak

Intersection						
Int Delay, s/veh	2.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	7	22	36	56	21
Future Vol, veh/h	14	7	22	36	56	21
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	21	29	0	3	7	5
Mvmt Flow	18	9	28	45	70	26
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	184	83	96	0	-	0
Stage 1	83	-	-	-	-	-
Stage 2	101	-	-	-	-	-
Critical Hdwy	6.61	6.49	4.1	-	-	-
Critical Hdwy Stg 1	5.61	-	-	-	-	-
Critical Hdwy Stg 2	5.61	-	-	-	-	-
Follow-up Hdwy	3.689	3.561	2.2	-	-	-
Pot Cap-1 Maneuver	764	907	1510	-	-	-
Stage 1	894	-	-	-	-	-
Stage 2	878	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	749	907	1510	-	-	-
Mov Cap-2 Maneuver	749	-	-	-	-	-
Stage 1	877	-	-	-	-	-
Stage 2	878	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.7	2.8		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1510	-	795	-	-	
HCM Lane V/C Ratio	0.018	-	0.033	-	-	
HCM Control Delay (s)	7.4	0	9.7	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	




HCM 6th TWSC  
3: Southwest Dr & 5th Street

Existing Conditions  
AM Peak






Intersection						
Int Delay, s/veh	3.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	26	19	29	33	40	24
Future Vol, veh/h	26	19	29	33	40	24
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	4	21	3	0	13	4
Mvmt Flow	29	21	33	37	45	27
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	162	59	72	0	-	0
Stage 1	59	-	-	-	-	-
Stage 2	103	-	-	-	-	-
Critical Hdwy	6.44	6.41	4.13	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.489	2.227	-	-	-
Pot Cap-1 Maneuver	824	956	1522	-	-	-
Stage 1	959	-	-	-	-	-
Stage 2	916	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	806	956	1522	-	-	-
Mov Cap-2 Maneuver	806	-	-	-	-	-
Stage 1	938	-	-	-	-	-
Stage 2	916	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.4	3.5		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1522	-	863	-	-	
HCM Lane V/C Ratio	0.021	-	0.059	-	-	
HCM Control Delay (s)	7.4	0	9.4	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-	







HCM 6th TWSC  
4: Southwest Dr & Woodenshoe Dr

Existing Conditions  
AM Peak

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	0	62	5	0	59
Future Vol, veh/h	5	0	62	5	0	59
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	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	18
Mvmt Flow	5	0	87	7	0	83
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	174	91	0	0	94	0
Stage 1	91	-	-	-	-	-
Stage 2	83	-	-	-	-	-
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	816	967	-	-	1500	-
Stage 1	933	-	-	-	-	-
Stage 2	940	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	816	967	-	-	1500	-
Mov Cap-2 Maneuver	816	-	-	-	-	-
Stage 1	933	-	-	-	-	-
Stage 2	940	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.4	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	816	1500	-	
HCM Lane V/C Ratio	-	-	0.007	-	-	
HCM Control Delay (s)	-	-	9.4	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0	0	-	



Intersection						
Int Delay, s/veh	2.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	34	216	344	40	35	55
Future Vol, veh/h	34	216	344	40	35	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	75	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	81	81	73	73
Heavy Vehicles, %	9	4	7	3	9	24
Mvmt Flow	40	257	425	49	48	75
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	474	0	-	0	787	237
Stage 1	-	-	-	-	450	-
Stage 2	-	-	-	-	337	-
Critical Hdwy	4.235	-	-	-	6.735	7.26
Critical Hdwy Stg 1	-	-	-	-	5.935	-
Critical Hdwy Stg 2	-	-	-	-	5.535	-
Follow-up Hdwy	2.2855	-	-	-	3.5855	3.528
Pot Cap-1 Maneuver	1044	-	-	-	332	709
Stage 1	-	-	-	-	593	-
Stage 2	-	-	-	-	704	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1044	-	-	-	319	709
Mov Cap-2 Maneuver	-	-	-	-	319	-
Stage 1	-	-	-	-	570	-
Stage 2	-	-	-	-	704	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.2	0		13.7		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1044	-	-	-	319	709
HCM Lane V/C Ratio	0.039	-	-	-	0.15	0.106
HCM Control Delay (s)	8.6	-	-	-	18.3	10.7
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5	0.4

Intersection												
Int Delay, s/veh	3.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	217	61	20	365	14	61	3	25	8	1	35
Future Vol, veh/h	26	217	61	20	365	14	61	3	25	8	1	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	125	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	89	89	89	89	89	89	69	69	69
Heavy Vehicles, %	12	16	36	30	13	7	46	67	36	25	0	14
Mvmt Flow	37	306	86	22	410	16	69	3	28	12	1	51

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	426	0	0	392	0	0	630	850	306	901	928	213
Stage 1	-	-	-	-	-	-	380	380	-	462	462	-
Stage 2	-	-	-	-	-	-	250	470	-	439	466	-
Critical Hdwy	4.28	-	-	4.55	-	-	7.99	7.505	6.74	7.675	6.5	7.11
Critical Hdwy Stg 1	-	-	-	-	-	-	6.79	6.505	-	6.875	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.19	6.505	-	6.475	5.5	-
Follow-up Hdwy	2.314	-	-	2.485	-	-	3.937	4.6365	3.642	3.7375	4	3.433
Pot Cap-1 Maneuver	1072	-	-	1007	-	-	313	217	648	217	270	761
Stage 1	-	-	-	-	-	-	546	494	-	502	568	-
Stage 2	-	-	-	-	-	-	634	443	-	545	566	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1072	-	-	1007	-	-	277	203	648	195	253	761
Mov Cap-2 Maneuver	-	-	-	-	-	-	277	203	-	195	253	-
Stage 1	-	-	-	-	-	-	527	477	-	484	552	-
Stage 2	-	-	-	-	-	-	573	430	-	500	546	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.5			20.9			13.6		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	325	1072	-	-	1007	-	-	484
HCM Lane V/C Ratio	0.308	0.034	-	-	0.022	-	-	0.132
HCM Control Delay (s)	20.9	8.5	-	-	8.7	0.1	-	13.6
HCM Lane LOS	C	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	1.3	0.1	-	-	0.1	-	-	0.5

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	11	0	18	1	0	1	22	51	1	0	71	6
Future Vol, veh/h	11	0	18	1	0	1	22	51	1	0	71	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	50	50	50	88	88	88	72	72	72
Heavy Vehicles, %	18	0	78	0	0	0	64	3	0	0	14	50
Mvmt Flow	13	0	21	2	0	2	25	58	1	0	99	8

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	213	212	103	223	216	59	107	0	0	59	0	0
Stage 1	103	103	-	109	109	-	-	-	-	-	-	-
Stage 2	110	109	-	114	107	-	-	-	-	-	-	-
Critical Hdwy	7.28	6.5	6.98	7.1	6.5	6.2	4.74	-	-	4.1	-	-
Critical Hdwy Stg 1	6.28	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.28	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.662	4	4.002	3.5	4	3.3	2.776	-	-	2.2	-	-
Pot Cap-1 Maneuver	711	689	780	737	685	1012	1174	-	-	1558	-	-
Stage 1	865	814	-	901	809	-	-	-	-	-	-	-
Stage 2	858	809	-	896	811	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	698	675	780	705	671	1012	1174	-	-	1558	-	-
Mov Cap-2 Maneuver	698	675	-	705	671	-	-	-	-	-	-	-
Stage 1	847	814	-	882	792	-	-	-	-	-	-	-
Stage 2	838	792	-	872	811	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10		9.4		2.4		0	
HCM LOS	B		A					























Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1174	-	-	747 831	1558	-	-
HCM Lane V/C Ratio	0.021	-	-	0.045 0.005	-	-	-
HCM Control Delay (s)	8.1	-	-	10 9.4	0	-	-
HCM Lane LOS	A	-	-	B A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1 0	0	-	-

# Timings

## 1: Southwest Dr & Lincolnway

# Existing Conditions

Midday Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	235	22	47	237	20	19	0	36	10	1	6
Future Volume (vph)	13	235	22	47	237	20	19	0	36	10	1	6
Satd. Flow (prot)	1378	3471	1538	1805	3427	0	1805	1568	0	1641	1651	0
Flt Permitted	0.577			0.506			0.752			0.725		
Satd. Flow (perm)	837	3471	1538	961	3427	0	1429	1568	0	1252	1651	0
Satd. Flow (RTOR)			58		22			446			7	
Lane Group Flow (vph)	23	420	39	52	285	0	26	49	0	11	8	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	2	2	2	6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.3	20.3	20.3	21.3	21.3		8.2	8.2		8.2	8.2	
Total Split (s)	40.0	40.0	40.0	40.0	40.0		17.0	17.0		17.0	17.0	
Total Split (%)	66.7%	66.7%	66.7%	66.7%	66.7%		28.3%	28.3%		28.3%	28.3%	
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		3.2	3.2		3.2	3.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.3	5.3	5.3	5.3	5.3		4.2	4.2		4.2	4.2	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max	Max	Max	Max		Max	Max		Max	Max	
Act Effect Green (s)	34.7	34.7	34.7	34.7	34.7		12.8	12.8		12.8	12.8	
Actuated g/C Ratio	0.61	0.61	0.61	0.61	0.61		0.22	0.22		0.22	0.22	
v/c Ratio	0.05	0.20	0.04	0.09	0.14		0.08	0.07		0.04	0.02	
Control Delay	4.8	5.3	1.1	5.1	4.6		18.4	0.2		17.9	11.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	4.8	5.3	1.1	5.1	4.6		18.4	0.2		17.9	11.9	
LOS	A	A	A	A	A		B	A		B	B	
Approach Delay		4.9			4.7			6.5			15.4	
Approach LOS		A			A			A			B	

## Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 57

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.20

Intersection Signal Delay: 5.2

Intersection LOS: A

Intersection Capacity Utilization 45.1%

ICU Level of Service A




Analysis Period (min) 15

Splits and Phases: 1: Southwest Dr & Lincolnway



HCM 6th TWSC  
2: Southwest Dr & North American Rd




Existing Conditions  
Midday Peak

Intersection						
Int Delay, s/veh	2.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	10	12	42	63	8
Future Vol, veh/h	15	10	12	42	63	8
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	7	10	17	0	2	0
Mvmt Flow	17	11	13	47	71	9
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	149	76	80	0	-	0
Stage 1	76	-	-	-	-	-
Stage 2	73	-	-	-	-	-
Critical Hdwy	6.47	6.3	4.27	-	-	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-	-
Follow-up Hdwy	3.563	3.39	2.353	-	-	-
Pot Cap-1 Maneuver	831	963	1428	-	-	-
Stage 1	934	-	-	-	-	-
Stage 2	937	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	824	963	1428	-	-	-
Mov Cap-2 Maneuver	824	-	-	-	-	-
Stage 1	926	-	-	-	-	-
Stage 2	937	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.3	1.7		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1428	-	874	-	-	
HCM Lane V/C Ratio	0.009	-	0.032	-	-	
HCM Control Delay (s)	7.5	0	9.3	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	






HCM 6th TWSC  
3: Southwest Dr & 5th Street






Existing Conditions  
Midday Peak







Intersection						
Int Delay, s/veh	2.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	15	21	34	53	22
Future Vol, veh/h	20	15	21	34	53	22
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	7	0	6	4	0
Mvmt Flow	21	16	22	36	56	23
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	148	68	79	0	-	0
Stage 1	68	-	-	-	-	-
Stage 2	80	-	-	-	-	-
Critical Hdwy	6.4	6.27	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.363	2.2	-	-	-
Pot Cap-1 Maneuver	849	981	1532	-	-	-
Stage 1	960	-	-	-	-	-
Stage 2	948	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	836	981	1532	-	-	-
Mov Cap-2 Maneuver	836	-	-	-	-	-
Stage 1	946	-	-	-	-	-
Stage 2	948	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.2	2.8		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1532	-	893	-	-	
HCM Lane V/C Ratio	0.015	-	0.042	-	-	
HCM Control Delay (s)	7.4	0	9.2	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

HCM 6th TWSC  
4: Southwest Dr & Woodenshoe Dr

Existing Conditions  
Midday Peak

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	0	55	5	0	68
Future Vol, veh/h	5	0	55	5	0	68
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	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	4	2	2	17
Mvmt Flow	6	0	65	6	0	81
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	149	68	0	0	71	0
Stage 1	68	-	-	-	-	-
Stage 2	81	-	-	-	-	-
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	843	995	-	-	1529	-
Stage 1	955	-	-	-	-	-
Stage 2	942	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	843	995	-	-	1529	-
Mov Cap-2 Maneuver	843	-	-	-	-	-
Stage 1	955	-	-	-	-	-
Stage 2	942	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.3	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	843		1529	-	
HCM Lane V/C Ratio	-	0.007		-	-	
HCM Control Delay (s)	-	9.3		0	-	
HCM Lane LOS	-	A		A	-	
HCM 95th %tile Q(veh)	-	0		0	-	

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	52	253	230	38	46	42
Future Vol, veh/h	52	253	230	38	46	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	75	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	91	91	83	83
Heavy Vehicles, %	21	4	8	16	7	29
Mvmt Flow	60	294	253	42	55	51
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	295	0	-	0	688	148
Stage 1	-	-	-	-	274	-
Stage 2	-	-	-	-	414	-
Critical Hdwy	4.415	-	-	-	6.705	7.335
Critical Hdwy Stg 1	-	-	-	-	5.905	-
Critical Hdwy Stg 2	-	-	-	-	5.505	-
Follow-up Hdwy	2.3995	-	-	-	3.5665	3.5755
Pot Cap-1 Maneuver	1151	-	-	-	387	801
Stage 1	-	-	-	-	735	-
Stage 2	-	-	-	-	653	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1151	-	-	-	367	801
Mov Cap-2 Maneuver	-	-	-	-	367	-
Stage 1	-	-	-	-	697	-
Stage 2	-	-	-	-	653	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.4	0		13.3		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1151	-	-	-	367	801
HCM Lane V/C Ratio	0.053	-	-	-	0.151	0.063
HCM Control Delay (s)	8.3	-	-	-	16.5	9.8
HCM Lane LOS	A	-	-	-	C	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0.5	0.2

Intersection												
Int Delay, s/veh	7.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	253	111	31	227	14	123	5	34	18	0	43
Future Vol, veh/h	31	253	111	31	227	14	123	5	34	18	0	43
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	125	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	89	89	89	76	76	76	73	73	73
Heavy Vehicles, %	3	15	34	13	14	7	37	60	6	6	0	5
Mvmt Flow	34	281	123	35	255	16	162	7	45	25	0	59

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	271	0	0	404	0	0	547	690	281	770	805	136
Stage 1	-	-	-	-	-	-	349	349	-	333	333	-
Stage 2	-	-	-	-	-	-	198	341	-	437	472	-
Critical Hdwy	4.145	-	-	4.295	-	-	7.855	7.4	6.29	7.39	6.5	6.975
Critical Hdwy Stg 1	-	-	-	-	-	-	6.655	6.4	-	6.59	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.055	6.4	-	6.19	5.5	-
Follow-up Hdwy	2.2285	-	-	2.3235	-	-	3.8515	4.57	3.357	3.557	4.3	3.475
Pot Cap-1 Maneuver	1284	-	-	1087	-	-	374	286	746	298	318	880
Stage 1	-	-	-	-	-	-	588	524	-	646	647	-
Stage 2	-	-	-	-	-	-	704	529	-	588	562	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1284	-	-	1087	-	-	332	268	746	262	298	880
Mov Cap-2 Maneuver	-	-	-	-	-	-	332	268	-	262	298	-
Stage 1	-	-	-	-	-	-	573	510	-	629	622	-
Stage 2	-	-	-	-	-	-	632	509	-	531	547	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	1	26.8	13.3
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	373	1284	-	-	1087	-	-	519
HCM Lane V/C Ratio	0.571	0.027	-	-	0.032	-	-	0.161
HCM Control Delay (s)	26.8	7.9	-	-	8.4	0.1	-	13.3
HCM Lane LOS	D	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	3.4	0.1	-	-	0.1	-	-	0.6

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	11	2	22	8	3	5	21	64	5	3	58	13
Future Vol, veh/h	11	2	22	8	3	5	21	64	5	3	58	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	44	44	44	73	73	73	88	88	88
Heavy Vehicles, %	0	0	59	0	0	0	57	2	0	0	3	0
Mvmt Flow	13	2	25	18	7	11	29	88	7	3	66	15

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	239	233	74	243	237	92	81	0	0	95	0	0
Stage 1	80	80	-	150	150	-	-	-	-	-	-	-
Stage 2	159	153	-	93	87	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.79	7.1	6.5	6.2	4.67	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.831	3.5	4	3.3	2.713	-	-	2.2	-	-
Pot Cap-1 Maneuver	719	671	850	715	667	971	1231	-	-	1512	-	-
Stage 1	934	832	-	857	777	-	-	-	-	-	-	-
Stage 2	848	775	-	919	827	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	691	654	850	679	650	971	1231	-	-	1512	-	-
Mov Cap-2 Maneuver	691	654	-	679	650	-	-	-	-	-	-	-
Stage 1	912	830	-	836	758	-	-	-	-	-	-	-
Stage 2	811	756	-	888	825	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.9		10.1		1.9		0.3	
HCM LOS	A		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1231	-	-	780	743	1512	-	-
HCM Lane V/C Ratio	0.023	-	-	0.051	0.049	0.002	-	-
HCM Control Delay (s)	8	-	-	9.9	10.1	7.4	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.2	0	-	-

























# Timings

## 1: Southwest Dr & Lincolnway

# Existing Conditions

PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	255	21	24	269	8	22	0	40	7	0	22
Future Volume (vph)	10	255	21	24	269	8	22	0	40	7	0	22
Satd. Flow (prot)	1289	3505	1468	1805	3561	0	1805	1615	0	1805	1482	0
Flt Permitted	0.561			0.573			0.736			0.725		
Satd. Flow (perm)	761	3505	1468	1089	3561	0	1398	1615	0	1377	1482	0
Satd. Flow (RTOR)			58		8			584			569	
Lane Group Flow (vph)	11	293	24	27	315	0	27	49	0	11	33	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	2	2	2	6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.3	20.3	20.3	21.3	21.3		8.2	8.2		8.2	8.2	
Total Split (s)	40.0	40.0	40.0	40.0	40.0		17.0	17.0		17.0	17.0	
Total Split (%)	66.7%	66.7%	66.7%	66.7%	66.7%		28.3%	28.3%		28.3%	28.3%	
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		3.2	3.2		3.2	3.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.3	5.3	5.3	5.3	5.3		4.2	4.2		4.2	4.2	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max	Max	Max	Max		Max	Max		Max	Max	
Act Effect Green (s)	34.7	34.7	34.7	34.7	34.7		12.8	12.8		12.8	12.8	
Actuated g/C Ratio	0.61	0.61	0.61	0.61	0.61		0.22	0.22		0.22	0.22	
v/c Ratio	0.02	0.14	0.03	0.04	0.15		0.09	0.06		0.04	0.04	
Control Delay	4.7	5.0	0.5	4.7	4.9		18.4	0.1		17.7	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	4.7	5.0	0.5	4.7	4.9		18.4	0.1		17.7	0.1	
LOS	A	A	A	A	A		B	A		B	A	
Approach Delay		4.6			4.9			6.6			4.5	
Approach LOS		A			A			A			A	

## Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 57

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.15

Intersection Signal Delay: 4.9

Intersection LOS: A

Intersection Capacity Utilization 40.7%

ICU Level of Service A




Analysis Period (min) 15

## Splits and Phases: 1: Southwest Dr & Lincolnway






HCM 6th TWSC  
2: Southwest Dr & North American Rd

Existing Conditions  
PM Peak

Intersection						
Int Delay, s/veh	2.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	13	3	44	40	9
Future Vol, veh/h	22	13	3	44	40	9
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	8	0	2	5	11
Mvmt Flow	25	15	3	49	45	10
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	105	50	55	0	-	0
Stage 1	50	-	-	-	-	-
Stage 2	55	-	-	-	-	-
Critical Hdwy	6.4	6.28	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.372	2.2	-	-	-
Pot Cap-1 Maneuver	898	1002	1563	-	-	-
Stage 1	978	-	-	-	-	-
Stage 2	973	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	896	1002	1563	-	-	-
Mov Cap-2 Maneuver	896	-	-	-	-	-
Stage 1	976	-	-	-	-	-
Stage 2	973	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9	0.5		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1563	-	933	-	-	
HCM Lane V/C Ratio	0.002	-	0.042	-	-	
HCM Control Delay (s)	7.3	0	9	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	




HCM 6th TWSC  
3: Southwest Dr & 5th Street






Existing Conditions  
PM Peak

Intersection						
Int Delay, s/veh	2.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	17	7	31	48	5
Future Vol, veh/h	18	17	7	31	48	5
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	12	14	3	4	20
Mvmt Flow	22	20	8	37	58	6
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	114	61	64	0	-	0
Stage 1	61	-	-	-	-	-
Stage 2	53	-	-	-	-	-
Critical Hdwy	6.4	6.32	4.24	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.408	2.326	-	-	-
Pot Cap-1 Maneuver	887	977	1465	-	-	-
Stage 1	967	-	-	-	-	-
Stage 2	975	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	882	977	1465	-	-	-
Mov Cap-2 Maneuver	882	-	-	-	-	-
Stage 1	961	-	-	-	-	-
Stage 2	975	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.1	1.4		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1465	-	926	-	-	
HCM Lane V/C Ratio	0.006	-	0.046	-	-	
HCM Control Delay (s)	7.5	0	9.1	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	







HCM 6th TWSC  
4: Southwest Dr & Woodenshoe Dr

Existing Conditions  
PM Peak

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	0	38	5	0	65
Future Vol, veh/h	5	0	38	5	0	65
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	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	4	2	2	17
Mvmt Flow	6	0	45	6	0	77
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	125	48	0	0	51	0
Stage 1	48	-	-	-	-	-
Stage 2	77	-	-	-	-	-
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	870	1021	-	-	1555	-
Stage 1	974	-	-	-	-	-
Stage 2	946	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	870	1021	-	-	1555	-
Mov Cap-2 Maneuver	870	-	-	-	-	-
Stage 1	974	-	-	-	-	-
Stage 2	946	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.2	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	870		1555	-	
HCM Lane V/C Ratio	-	0.007		-	-	
HCM Control Delay (s)	-	9.2		0	-	
HCM Lane LOS	-	A		A	-	
HCM 95th %tile Q(veh)	-	0		0	-	

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	39	323	257	36	33	51
Future Vol, veh/h	39	323	257	36	33	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	75	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	82	82	75	75
Heavy Vehicles, %	26	2	5	6	3	24
Mvmt Flow	48	394	313	44	44	68
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	357	0	-	0	825	179
Stage 1	-	-	-	-	335	-
Stage 2	-	-	-	-	490	-
Critical Hdwy	4.49	-	-	-	6.645	7.26
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.447	-	-	-	3.5285	3.528
Pot Cap-1 Maneuver	1062	-	-	-	324	775
Stage 1	-	-	-	-	695	-
Stage 2	-	-	-	-	612	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1062	-	-	-	309	775
Mov Cap-2 Maneuver	-	-	-	-	309	-
Stage 1	-	-	-	-	664	-
Stage 2	-	-	-	-	612	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.9	0		13.4		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1062	-	-	-	309	775
HCM Lane V/C Ratio	0.045	-	-	-	0.142	0.088
HCM Control Delay (s)	8.5	-	-	-	18.6	10.1
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5	0.3



Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	43	318	54	24	270	14	59	2	25	19	0	44
Future Vol, veh/h	43	318	54	24	270	14	59	2	25	19	0	44
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	125	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	92	92	92	67	67	67	79	79	79
Heavy Vehicles, %	7	11	48	21	9	0	42	100	24	0	0	0
Mvmt Flow	44	328	56	26	293	15	88	3	37	24	0	56







Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	308	0	0	384	0	0	615	776	328	817	825	154
Stage 1	-	-	-	-	-	-	416	416	-	353	353	-
Stage 2	-	-	-	-	-	-	199	360	-	464	472	-
Critical Hdwy	4.205	-	-	4.415	-	-	7.93	8	6.56	7.3	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.73	7	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.13	7	-	6.1	5.5	-
Follow-up Hdwy	2.2665	-	-	2.3995	-	-	3.899	4.95	3.528	3.5	4	3.3
Pot Cap-1 Maneuver	1219	-	-	1062	-	-	326	211	656	284	310	871
Stage 1	-	-	-	-	-	-	527	425	-	642	634	-
Stage 2	-	-	-	-	-	-	692	458	-	582	562	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1219	-	-	1062	-	-	290	197	656	252	290	871
Mov Cap-2 Maneuver	-	-	-	-	-	-	290	197	-	252	290	-
Stage 1	-	-	-	-	-	-	508	410	-	619	615	-
Stage 2	-	-	-	-	-	-	628	444	-	525	542	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.8			0.7			21.7			13.6		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	342	1219	-	-	1062	-	-	500
HCM Lane V/C Ratio	0.375	0.036	-	-	0.025	-	-	0.159
HCM Control Delay (s)	21.7	8.1	-	-	8.5	0.1	-	13.6
HCM Lane LOS	C	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	1.7	0.1	-	-	0.1	-	-	0.6

HCM 6th TWSC  
17: Southwest Dr & Arby's Access

Existing Conditions  
PM Peak

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	0	27	3	0	3	21	51	3	6	54	5
Future Vol, veh/h	3	0	27	3	0	3	21	51	3	6	54	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	50	50	50	81	81	81	74	74	74
Heavy Vehicles, %	33	0	56	0	0	0	76	17	0	0	4	0
Mvmt Flow	4	0	34	6	0	6	26	63	4	8	73	7
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	213	212	77	227	213	65	80	0	0	67	0	0
Stage 1	93	93	-	117	117	-	-	-	-	-	-	-
Stage 2	120	119	-	110	96	-	-	-	-	-	-	-
Critical Hdwy	7.43	6.5	6.76	7.1	6.5	6.2	4.86	-	-	4.1	-	-
Critical Hdwy Stg 1	6.43	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.43	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.797	4	3.804	3.5	4	3.3	2.884	-	-	2.2	-	-
Pot Cap-1 Maneuver	682	689	853	733	688	1005	1157	-	-	1547	-	-
Stage 1	843	822	-	892	803	-	-	-	-	-	-	-
Stage 2	815	801	-	900	819	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	664	670	853	689	669	1005	1157	-	-	1547	-	-
Mov Cap-2 Maneuver	664	670	-	689	669	-	-	-	-	-	-	-
Stage 1	824	818	-	872	785	-	-	-	-	-	-	-
Stage 2	792	783	-	860	815	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	9.5		9.5			2.3			0.7			
HCM LOS	A		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1157	-	-	829	818	1547	-	-				
HCM Lane V/C Ratio	0.022	-	-	0.045	0.015	0.005	-	-				
HCM Control Delay (s)	8.2	-	-	9.5	9.5	7.3	-	-				
HCM Lane LOS	A	-	-	A	A	A	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0	0	-	-				






















## APPENDIX F. FUTURE (2045) NO ACTION LEVEL OF SERVICE WORKSHEETS

# Timings

## 1: Southwest Dr & Lincolnway

2045 No Action

AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	200	70	140	215	40	45	15	85	15	10	15
Future Volume (vph)	40	200	70	140	215	40	45	15	85	15	10	15
Satd. Flow (prot)	1703	3505	1509	1703	3376	0	1626	1564	0	1583	1208	0
Flt Permitted	0.547			0.593			0.736			0.679		
Satd. Flow (perm)	980	3505	1509	1063	3376	0	1260	1564	0	1132	1208	0
Satd. Flow (RTOR)			90		53			104			20	
Lane Group Flow (vph)	51	256	90	187	340	0	55	122	0	20	33	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	2	2	2	6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.3	20.3	20.3	21.3	21.3		8.2	8.2		8.2	8.2	
Total Split (s)	40.0	40.0	40.0	40.0	40.0		17.0	17.0		17.0	17.0	
Total Split (%)	66.7%	66.7%	66.7%	66.7%	66.7%		28.3%	28.3%		28.3%	28.3%	
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		3.2	3.2		3.2	3.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.3	5.3	5.3	5.3	5.3		4.2	4.2		4.2	4.2	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max	Max	Max	Max		Max	Max		Max	Max	
Act Effect Green (s)	34.7	34.7	34.7	34.7	34.7		12.8	12.8		12.8	12.8	
Actuated g/C Ratio	0.61	0.61	0.61	0.61	0.61		0.22	0.22		0.22	0.22	
v/c Ratio	0.09	0.12	0.09	0.29	0.16		0.20	0.28		0.08	0.12	
Control Delay	5.1	4.9	1.6	6.8	4.3		20.1	8.1		18.5	12.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	5.1	4.9	1.6	6.8	4.3		20.1	8.1		18.5	12.3	
LOS	A	A	A	A	A		C	A		B	B	
Approach Delay		4.2			5.2			11.8			14.6	
Approach LOS		A			A			B			B	

### Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 57

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.29

Intersection Signal Delay: 6.3

Intersection LOS: A

Intersection Capacity Utilization 46.5%

ICU Level of Service A




Analysis Period (min) 15




Splits and Phases: 1: Southwest Dr & Lincolnway



HCM 6th TWSC  
2: Southwest Dr & North American Rd

2045 No Action  
AM Peak

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	25	10	25	130	180	40
Future Vol, veh/h	25	10	25	130	180	40
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	21	29	0	3	7	5
Mvmt Flow	31	13	31	163	225	50
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	475	250	275	0	-	0
Stage 1	250	-	-	-	-	-
Stage 2	225	-	-	-	-	-
Critical Hdwy	6.61	6.49	4.1	-	-	-
Critical Hdwy Stg 1	5.61	-	-	-	-	-
Critical Hdwy Stg 2	5.61	-	-	-	-	-
Follow-up Hdwy	3.689	3.561	2.2	-	-	-
Pot Cap-1 Maneuver	515	727	1300	-	-	-
Stage 1	749	-	-	-	-	-
Stage 2	770	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	502	727	1300	-	-	-
Mov Cap-2 Maneuver	502	-	-	-	-	-
Stage 1	730	-	-	-	-	-
Stage 2	770	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	12.1	1.3		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1300	-	551	-	-	
HCM Lane V/C Ratio	0.024	-	0.079	-	-	
HCM Control Delay (s)	7.8	0	12.1	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-	

Intersection						
Int Delay, s/veh	2.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	50	20	35	115	125	45
Future Vol, veh/h	50	20	35	115	125	45
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	4	21	3	0	13	4
Mvmt Flow	56	22	39	129	140	51

Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	373	166	191	0	-	0
Stage 1	166	-	-	-	-	-
Stage 2	207	-	-	-	-	-
Critical Hdwy	6.44	6.41	4.13	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.489	2.227	-	-	-
Pot Cap-1 Maneuver	624	831	1377	-	-	-
Stage 1	859	-	-	-	-	-
Stage 2	823	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	605	831	1377	-	-	-
Mov Cap-2 Maneuver	605	-	-	-	-	-
Stage 1	832	-	-	-	-	-
Stage 2	823	-	-	-	-	-




Approach	EB	NB	SB
HCM Control Delay, s	11.2	1.8	0
HCM LOS	B		






Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1377	-	656	-	-
HCM Lane V/C Ratio	0.029	-	0.12	-	-
HCM Control Delay (s)	7.7	0	11.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-















HCM 6th TWSC  
4: Southwest Dr & Woodenshoe Dr

2045 No Action  
AM Peak

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	0	150	5	0	145
Future Vol, veh/h	5	0	150	5	0	145
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	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	75	75	75	75
Heavy Vehicles, %	2	2	2	2	2	18
Mvmt Flow	5	0	200	7	0	193
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	397	204	0	0	207	0
Stage 1	204	-	-	-	-	-
Stage 2	193	-	-	-	-	-
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	608	837	-	-	1364	-
Stage 1	830	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	608	837	-	-	1364	-
Mov Cap-2 Maneuver	608	-	-	-	-	-
Stage 1	830	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	11	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 608		1364	-	
HCM Lane V/C Ratio	-	- 0.009		-	-	
HCM Control Delay (s)	-	- 11		0	-	
HCM Lane LOS	-	- B		A	-	
HCM 95th %tile Q(veh)	-	- 0		0	-	

Intersection						
Int Delay, s/veh	6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	80	415	660	60	50	120
Future Vol, veh/h	80	415	660	60	50	120
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	75	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	81	81	75	75
Heavy Vehicles, %	9	4	7	3	9	24
Mvmt Flow	95	494	815	74	67	160
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	889	0	-	0	1536	445
Stage 1	-	-	-	-	852	-
Stage 2	-	-	-	-	684	-
Critical Hdwy	4.235	-	-	-	6.735	7.26
Critical Hdwy Stg 1	-	-	-	-	5.935	-
Critical Hdwy Stg 2	-	-	-	-	5.535	-
Follow-up Hdwy	2.2855	-	-	-	3.5855	3.528
Pot Cap-1 Maneuver	724	-	-	-	111	513
Stage 1	-	-	-	-	366	-
Stage 2	-	-	-	-	484	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	724	-	-	-	96	513
Mov Cap-2 Maneuver	-	-	-	-	96	-
Stage 1	-	-	-	-	318	-
Stage 2	-	-	-	-	484	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.7	0		40.7		
HCM LOS	E					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	724	-	-	-	96	513
HCM Lane V/C Ratio	0.132	-	-	-	0.694	0.312
HCM Control Delay (s)	10.7	-	-	-	102	15.2
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	0.5	-	-	-	3.5	1.3

Intersection												
Int Delay, s/veh	10											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	460	65	20	745	15	65	5	25	10	5	35
Future Vol, veh/h	30	460	65	20	745	15	65	5	25	10	5	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	89	89	89	89	89	89	75	75	75
Heavy Vehicles, %	12	16	36	30	13	7	46	67	36	25	0	14
Mvmt Flow	40	613	87	22	837	17	73	6	28	13	7	47
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	854	0	0	700	0	0	1159	1591	613	1644	1670	427
Stage 1	-	-	-	-	-	-	693	693	-	890	890	-
Stage 2	-	-	-	-	-	-	466	898	-	754	780	-
Critical Hdwy	4.28	-	-	4.55	-	-	7.99	7.505	6.74	7.675	6.5	7.11
Critical Hdwy Stg 1	-	-	-	-	-	-	6.79	6.505	-	6.875	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.19	6.505	-	6.475	5.5	-
Follow-up Hdwy	2.314	-	-	2.485	-	-	3.937	4.6365	3.642	3.7375	4	3.433
Pot Cap-1 Maneuver	732	-	-	754	-	-	123	66	421	60	97	549
Stage 1	-	-	-	-	-	-	353	336	-	270	364	-
Stage 2	-	-	-	-	-	-	460	259	-	358	409	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	732	-	-	754	-	-	97	59	421	48	87	549
Mov Cap-2 Maneuver	-	-	-	-	-	-	97	59	-	48	87	-
Stage 1	-	-	-	-	-	-	334	318	-	255	344	-
Stage 2	-	-	-	-	-	-	390	244	-	310	387	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			0.5			130.2			46		
HCM LOS							F			E		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	117	732	-	-	754	-	-	152				
HCM Lane V/C Ratio	0.912	0.055	-	-	0.03	-	-	0.439				
HCM Control Delay (s)	130.2	10.2	-	-	9.9	0.3	-	46				
HCM Lane LOS	F	B	-	-	A	A	-	E				
HCM 95th %tile Q(veh)	5.7	0.2	-	-	0.1	-	-	2				






















Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	0	20	5	0	5	25	110	5	0	145	10
Future Vol, veh/h	15	0	20	5	0	5	25	110	5	0	145	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	75	75	75	88	88	88	75	75	75
Heavy Vehicles, %	18	0	78	0	0	0	64	3	0	0	14	50
Mvmt Flow	17	0	23	7	0	7	28	125	6	0	193	13
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	388	387	200	395	390	128	206	0	0	131	0	0
Stage 1	200	200	-	184	184	-	-	-	-	-	-	-
Stage 2	188	187	-	211	206	-	-	-	-	-	-	-
Critical Hdwy	7.28	6.5	6.98	7.1	6.5	6.2	4.74	-	-	4.1	-	-
Critical Hdwy Stg 1	6.28	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.28	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.662	4	4.002	3.5	4	3.3	2.776	-	-	2.2	-	-
Pot Cap-1 Maneuver	543	551	681	568	548	927	1069	-	-	1467	-	-
Stage 1	766	739	-	822	751	-	-	-	-	-	-	-
Stage 2	778	749	-	796	735	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	528	537	681	538	534	927	1069	-	-	1467	-	-
Mov Cap-2 Maneuver	528	537	-	538	534	-	-	-	-	-	-	-
Stage 1	746	739	-	801	731	-	-	-	-	-	-	-
Stage 2	752	730	-	769	735	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	11.4		10.4			1.5			0			
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1069	-	-	606	681	1467	-	-				
HCM Lane V/C Ratio	0.027	-	-	0.067	0.02	-	-	-				
HCM Control Delay (s)	8.5	-	-	11.4	10.4	0	-	-				
HCM Lane LOS	A	-	-	B	B	A	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.1	0	-	-				

# Timings

## 1: Southwest Dr & Lincolnway

2045 No Action

Midday Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	260	55	130	260	50	50	5	105	25	5	15
Future Volume (vph)	30	260	55	130	260	50	50	5	105	25	5	15
Satd. Flow (prot)	1378	3471	1538	1805	3383	0	1805	1583	0	1641	1689	0
Flt Permitted	0.545			0.544			0.742			0.663		
Satd. Flow (perm)	790	3471	1538	1034	3383	0	1410	1583	0	1145	1689	0
Satd. Flow (RTOR)			73		56			140			17	
Lane Group Flow (vph)	40	347	73	144	345	0	67	147	0	28	23	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	2	2	2	6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.3	20.3	20.3	21.3	21.3		8.2	8.2		8.2	8.2	
Total Split (s)	40.0	40.0	40.0	40.0	40.0		17.0	17.0		17.0	17.0	
Total Split (%)	66.7%	66.7%	66.7%	66.7%	66.7%		28.3%	28.3%		28.3%	28.3%	
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		3.2	3.2		3.2	3.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.3	5.3	5.3	5.3	5.3		4.2	4.2		4.2	4.2	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max	Max	Max	Max		Max	Max		Max	Max	
Act Effect Green (s)	34.7	34.7	34.7	34.7	34.7		12.8	12.8		12.8	12.8	
Actuated g/C Ratio	0.61	0.61	0.61	0.61	0.61		0.22	0.22		0.22	0.22	
v/c Ratio	0.08	0.16	0.08	0.23	0.17		0.21	0.32		0.11	0.06	
Control Delay	5.2	5.1	1.6	6.2	4.3		20.1	6.7		19.0	11.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	5.2	5.1	1.6	6.2	4.3		20.1	6.7		19.0	11.2	
LOS	A	A	A	A	A		C	A		B	B	
Approach Delay		4.5			4.8			10.9			15.4	
Approach LOS		A			A			B			B	

### Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 57

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.32

Intersection Signal Delay: 6.2

Intersection LOS: A




Intersection Capacity Utilization 46.8%

ICU Level of Service A




Analysis Period (min) 15

Splits and Phases: 1: Southwest Dr & Lincolnway






Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	10	15	135	185	15
Future Vol, veh/h	30	10	15	135	185	15
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	7	10	17	0	2	0
Mvmt Flow	34	11	17	152	208	17
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	403	217	225	0	-	0
Stage 1	217	-	-	-	-	-
Stage 2	186	-	-	-	-	-
Critical Hdwy	6.47	6.3	4.27	-	-	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-	-
Follow-up Hdwy	3.563	3.39	2.353	-	-	-
Pot Cap-1 Maneuver	594	803	1260	-	-	-
Stage 1	807	-	-	-	-	-
Stage 2	834	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	585	803	1260	-	-	-
Mov Cap-2 Maneuver	585	-	-	-	-	-
Stage 1	795	-	-	-	-	-
Stage 2	834	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.2	0.8		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1260	-	628	-	-	
HCM Lane V/C Ratio	0.013	-	0.072	-	-	
HCM Control Delay (s)	7.9	0	11.2	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.2	-	-	














Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	15	25	110	155	45
Future Vol, veh/h	40	15	25	110	155	45
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	7	0	6	4	0
Mvmt Flow	43	16	27	120	168	49
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	367	193	217	0	-	0
Stage 1	193	-	-	-	-	-
Stage 2	174	-	-	-	-	-
Critical Hdwy	6.4	6.27	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.363	2.2	-	-	-
Pot Cap-1 Maneuver	637	836	1365	-	-	-
Stage 1	845	-	-	-	-	-
Stage 2	861	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	624	836	1365	-	-	-
Mov Cap-2 Maneuver	624	-	-	-	-	-
Stage 1	827	-	-	-	-	-
Stage 2	861	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	10.9	1.4		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1365	-	670	-	-	
HCM Lane V/C Ratio	0.02	-	0.089	-	-	
HCM Control Delay (s)	7.7	0	10.9	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-	







HCM 6th TWSC  
4: Southwest Dr & Woodenshoe Dr

2045 No Action  
Midday Peak

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	0	135	5	0	170
Future Vol, veh/h	5	0	135	5	0	170
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	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	4	2	2	17
Mvmt Flow	6	0	161	6	0	202
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	366	164	0	0	167	0
Stage 1	164	-	-	-	-	-
Stage 2	202	-	-	-	-	-
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	634	881	-	-	1411	-
Stage 1	865	-	-	-	-	-
Stage 2	832	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	634	881	-	-	1411	-
Mov Cap-2 Maneuver	634	-	-	-	-	-
Stage 1	865	-	-	-	-	-
Stage 2	832	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	10.7	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-		634	1411	
HCM Lane V/C Ratio	-	-		0.009	-	
HCM Control Delay (s)	-	-		10.7	0	
HCM Lane LOS	-	-		B	A	
HCM 95th %tile Q(veh)	-	-		0	0	

Intersection						
Int Delay, s/veh	6.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	110	490	445	55	70	95
Future Vol, veh/h	110	490	445	55	70	95
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	75	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	91	91	83	83
Heavy Vehicles, %	21	4	8	16	7	29
Mvmt Flow	128	570	489	60	84	114
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	549	0	-	0	1345	275
Stage 1	-	-	-	-	519	-
Stage 2	-	-	-	-	826	-
Critical Hdwy	4.415	-	-	-	6.705	7.335
Critical Hdwy Stg 1	-	-	-	-	5.905	-
Critical Hdwy Stg 2	-	-	-	-	5.505	-
Follow-up Hdwy	2.3995	-	-	-	3.5665	3.5755
Pot Cap-1 Maneuver	914	-	-	-	149	657
Stage 1	-	-	-	-	551	-
Stage 2	-	-	-	-	418	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	914	-	-	-	128	657
Mov Cap-2 Maneuver	-	-	-	-	128	-
Stage 1	-	-	-	-	474	-
Stage 2	-	-	-	-	418	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.8	0		38.8		
HCM LOS	E					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	914	-	-	-	128	657
HCM Lane V/C Ratio	0.14	-	-	-	0.659	0.174
HCM Control Delay (s)	9.6	-	-	-	75.7	11.6
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0.5	-	-	-	3.5	0.6

Intersection												
Int Delay, s/veh	36											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	545	115	35	490	15	125	5	35	20	0	45
Future Vol, veh/h	35	545	115	35	490	15	125	5	35	20	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	89	89	89	76	76	76	75	75	75
Heavy Vehicles, %	3	15	34	13	14	7	37	60	6	6	0	5
Mvmt Flow	39	606	128	39	551	17	164	7	46	27	0	60
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	568	0	0	734	0	0	1038	1330	606	1413	1450	284
Stage 1	-	-	-	-	-	-	684	684	-	638	638	-
Stage 2	-	-	-	-	-	-	354	646	-	775	812	-
Critical Hdwy	4.145	-	-	4.295	-	-	7.855	7.4	6.29	7.39	6.5	6.975
Critical Hdwy Stg 1	-	-	-	-	-	-	6.655	6.4	-	6.59	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.055	6.4	-	6.19	5.5	-
Follow-up Hdwy	2.2285	-	-	2.3235	-	-	3.8515	4.57	3.357	3.557	-	4.3475
Pot Cap-1 Maneuver	996	-	-	810	-	-	~ 161	106	487	103	132	706
Stage 1	-	-	-	-	-	-	372	349	-	424	474	-
Stage 2	-	-	-	-	-	-	561	366	-	382	395	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	996	-	-	810	-	-	~ 135	95	487	81	118	706
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 135	95	-	81	118	-
Stage 1	-	-	-	-	-	-	357	335	-	407	440	-
Stage 2	-	-	-	-	-	-	477	340	-	326	380	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.9			261.3			33.9		
HCM LOS							F			D		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	157	996	-	-	810	-	-	209				
HCM Lane V/C Ratio	1.383	0.039	-	-	0.049	-	-	0.415				
HCM Control Delay (s)	261.3	8.8	-	-	9.7	0.3	-	33.9				
HCM Lane LOS	F	A	-	-	A	A	-	D				
HCM 95th %tile Q(veh)	13.5	0.1	-	-	0.2	-	-	1.9				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			























Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	5	25	10	5	5	25	135	5	5	130	15
Future Vol, veh/h	15	5	25	10	5	5	25	135	5	5	130	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	75	75	75	75	75	75	88	88	88
Heavy Vehicles, %	0	0	59	0	0	0	57	2	0	0	3	0
Mvmt Flow	17	6	28	13	7	7	33	180	7	6	148	17
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	426	422	157	436	427	184	165	0	0	187	0	0
Stage 1	169	169	-	250	250	-	-	-	-	-	-	-
Stage 2	257	253	-	186	177	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.79	7.1	6.5	6.2	4.67	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.831	3.5	4	3.3	2.713	-	-	2.2	-	-
Pot Cap-1 Maneuver	542	526	759	534	523	864	1139	-	-	1399	-	-
Stage 1	838	763	-	759	704	-	-	-	-	-	-	-
Stage 2	752	701	-	820	756	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	519	509	759	497	506	864	1139	-	-	1399	-	-
Mov Cap-2 Maneuver	519	509	-	497	506	-	-	-	-	-	-	-
Stage 1	814	760	-	737	684	-	-	-	-	-	-	-
Stage 2	718	681	-	780	753	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	11.2		11.8			1.3			0.3			
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1139	-	-	628	559	1399	-	-				
HCM Lane V/C Ratio	0.029	-	-	0.081	0.048	0.004	-	-				
HCM Control Delay (s)	8.3	-	-	11.2	11.8	7.6	-	-				
HCM Lane LOS	A	-	-	B	B	A	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.1	0	-	-				

# Timings

2045 No Action

## 1: Southwest Dr & Lincolnway

PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	305	45	85	325	25	45	5	130	25	5	50
Future Volume (vph)	20	305	45	85	325	25	45	5	130	25	5	50
Satd. Flow (prot)	1289	3505	1468	1805	3537	0	1805	1624	0	1805	1518	0
Flt Permitted	0.518			0.541			0.709			0.639		
Satd. Flow (perm)	703	3505	1468	1028	3537	0	1347	1624	0	1214	1518	0
Satd. Flow (RTOR)			58		22			159			67	
Lane Group Flow (vph)	23	351	52	97	397	0	55	165	0	33	74	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	2	2	2	6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.3	20.3	20.3	21.3	21.3		8.2	8.2		8.2	8.2	
Total Split (s)	40.0	40.0	40.0	40.0	40.0		17.0	17.0		17.0	17.0	
Total Split (%)	66.7%	66.7%	66.7%	66.7%	66.7%		28.3%	28.3%		28.3%	28.3%	
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		3.2	3.2		3.2	3.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.3	5.3	5.3	5.3	5.3		4.2	4.2		4.2	4.2	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max	Max	Max	Max		Max	Max		Max	Max	
Act Effect Green (s)	34.7	34.7	34.7	34.7	34.7		12.8	12.8		12.8	12.8	
Actuated g/C Ratio	0.61	0.61	0.61	0.61	0.61		0.22	0.22		0.22	0.22	
v/c Ratio	0.05	0.16	0.06	0.16	0.18		0.18	0.34		0.12	0.19	
Control Delay	5.0	5.1	1.6	5.6	4.9		19.8	6.4		19.0	7.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	5.0	5.1	1.6	5.6	4.9		19.8	6.4		19.0	7.9	
LOS	A	A	A	A	A		B	A		B	A	
Approach Delay		4.6			5.0			9.8			11.3	
Approach LOS		A			A			A			B	

### Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 57

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.34

Intersection Signal Delay: 6.3

Intersection LOS: A

Intersection Capacity Utilization 52.5%

ICU Level of Service A

Analysis Period (min) 15




### Splits and Phases: 1: Southwest Dr & Lincolnway





HCM 6th TWSC  
2: Southwest Dr & North American Rd

2045 No Action  
PM Peak

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	45	15	5	125	125	15
Future Vol, veh/h	45	15	5	125	125	15
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	8	0	2	5	11
Mvmt Flow	51	17	6	140	140	17




Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	301	149	157	0	-	0
Stage 1	149	-	-	-	-	-
Stage 2	152	-	-	-	-	-
Critical Hdwy	6.4	6.28	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.372	2.2	-	-	-
Pot Cap-1 Maneuver	695	882	1435	-	-	-
Stage 1	884	-	-	-	-	-
Stage 2	881	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	692	882	1435	-	-	-
Mov Cap-2 Maneuver	692	-	-	-	-	-
Stage 1	880	-	-	-	-	-
Stage 2	881	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1435	-	731	-	-
HCM Lane V/C Ratio	0.004	-	0.092	-	-
HCM Control Delay (s)	7.5	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-




HCM 6th TWSC  
3: Southwest Dr & 5th Street






2045 No Action  
PM Peak







Intersection						
Int Delay, s/veh	2.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	20	10	85	130	10
Future Vol, veh/h	40	20	10	85	130	10
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	12	14	3	4	20
Mvmt Flow	48	24	12	102	157	12
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	289	163	169	0	-	0
Stage 1	163	-	-	-	-	-
Stage 2	126	-	-	-	-	-
Critical Hdwy	6.4	6.32	4.24	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.408	2.326	-	-	-
Pot Cap-1 Maneuver	706	856	1339	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	905	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	699	856	1339	-	-	-
Mov Cap-2 Maneuver	699	-	-	-	-	-
Stage 1	862	-	-	-	-	-
Stage 2	905	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	10.4	0.8		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1339	-	745	-	-	
HCM Lane V/C Ratio	0.009	-	0.097	-	-	
HCM Control Delay (s)	7.7	0	10.4	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.3	-	-	

HCM 6th TWSC  
4: Southwest Dr & Woodenshoe Dr

2045 No Action  
PM Peak

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	0	95	5	0	150
Future Vol, veh/h	5	0	95	5	0	150
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	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	4	2	2	17
Mvmt Flow	6	0	113	6	0	179
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	295	116	0	0	119	0
Stage 1	116	-	-	-	-	-
Stage 2	179	-	-	-	-	-
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	696	936	-	-	1469	-
Stage 1	909	-	-	-	-	-
Stage 2	852	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	696	936	-	-	1469	-
Mov Cap-2 Maneuver	696	-	-	-	-	-
Stage 1	909	-	-	-	-	-
Stage 2	852	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	10.2	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-		696	1469	
HCM Lane V/C Ratio	-	-		0.009	-	
HCM Control Delay (s)	-	-		10.2	0	
HCM Lane LOS	-	-		B	A	
HCM 95th %tile Q(veh)	-	-		0	0	

Intersection						
Int Delay, s/veh	5.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	90	625	495	50	45	110
Future Vol, veh/h	90	625	495	50	45	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	75	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	82	82	75	75
Heavy Vehicles, %	26	2	5	6	3	24
Mvmt Flow	110	762	604	61	60	147
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	665	0	-	0	1617	333
Stage 1	-	-	-	-	635	-
Stage 2	-	-	-	-	982	-
Critical Hdwy	4.49	-	-	-	6.645	7.26
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.447	-	-	-	3.5285	3.528
Pot Cap-1 Maneuver	798	-	-	-	103	611
Stage 1	-	-	-	-	489	-
Stage 2	-	-	-	-	360	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	798	-	-	-	89	611
Mov Cap-2 Maneuver	-	-	-	-	89	-
Stage 1	-	-	-	-	422	-
Stage 2	-	-	-	-	360	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.3	0		39.5		
HCM LOS	E					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	798	-	-	-	89	611
HCM Lane V/C Ratio	0.138	-	-	-	0.674	0.24
HCM Control Delay (s)	10.2	-	-	-	105	12.7
HCM Lane LOS	B	-	-	-	F	B
HCM 95th %tile Q(veh)	0.5	-	-	-	3.3	0.9

Intersection												
Int Delay, s/veh	11.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	670	55	25	565	15	60	2	25	20	0	45
Future Vol, veh/h	45	670	55	25	565	15	60	2	25	20	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	75	75	75	79	79	79
Heavy Vehicles, %	7	11	48	21	9	0	42	100	24	0	0	0
Mvmt Flow	49	728	60	27	614	16	80	3	33	25	0	57

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	630	0	0	788	0	0	1187	1510	728	1550	1562	315
Stage 1	-	-	-	-	-	-	826	826	-	676	676	-
Stage 2	-	-	-	-	-	-	361	684	-	874	886	-
Critical Hdwy	4.205	-	-	4.415	-	-	7.93	8	6.56	7.3	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.73	7	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.13	7	-	6.1	5.5	-
Follow-up Hdwy	2.2665	-	-	2.3995	-	-	3.899	4.95	3.528	3.5	4	3.3
Pot Cap-1 Maneuver	922	-	-	734	-	-	120	60	379	86	113	687
Stage 1	-	-	-	-	-	-	298	244	-	414	456	-
Stage 2	-	-	-	-	-	-	546	297	-	347	365	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	922	-	-	734	-	-	101	54	379	69	101	687
Mov Cap-2 Maneuver	-	-	-	-	-	-	101	54	-	69	101	-
Stage 1	-	-	-	-	-	-	282	231	-	392	430	-
Stage 2	-	-	-	-	-	-	472	280	-	296	346	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.7			128.5			39.8		
HCM LOS							F			E		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	125	922	-	-	734	-	-	183
HCM Lane V/C Ratio	0.928	0.053	-	-	0.037	-	-	0.45
HCM Control Delay (s)	128.5	9.1	-	-	10.1	0.3	-	39.8
HCM Lane LOS	F	A	-	-	B	A	-	E
HCM 95th %tile Q(veh)	6.1	0.2	-	-	0.1	-	-	2.1

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↖		↗	↖	
Traffic Vol, veh/h	5	0	30	5	0	5	25	110	5	10	120	5
Future Vol, veh/h	5	0	30	5	0	5	25	110	5	10	120	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	75	75	75	81	81	81	75	75	75
Heavy Vehicles, %	33	0	56	0	0	0	76	17	0	0	4	0
Mvmt Flow	6	0	38	7	0	7	31	136	6	13	160	7
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	395	394	164	410	394	139	167	0	0	142	0	0
Stage 1	190	190	-	201	201	-	-	-	-	-	-	-
Stage 2	205	204	-	209	193	-	-	-	-	-	-	-
Critical Hdwy	7.43	6.5	6.76	7.1	6.5	6.2	4.86	-	-	4.1	-	-
Critical Hdwy Stg 1	6.43	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.43	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.797	4	3.804	3.5	4	3.3	2.884	-	-	2.2	-	-
Pot Cap-1 Maneuver	513	546	758	556	546	915	1064	-	-	1453	-	-
Stage 1	745	747	-	805	739	-	-	-	-	-	-	-
Stage 2	731	737	-	798	745	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	495	525	758	513	525	915	1064	-	-	1453	-	-
Mov Cap-2 Maneuver	495	525	-	513	525	-	-	-	-	-	-	-
Stage 1	723	740	-	782	718	-	-	-	-	-	-	-
Stage 2	705	716	-	752	738	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10.4		10.6		1.5		0.6					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1064	-	-	705	657	1453	-	-				
HCM Lane V/C Ratio	0.029	-	-	0.062	0.02	0.009	-	-				
HCM Control Delay (s)	8.5	-	-	10.4	10.6	7.5	-	-				
HCM Lane LOS	A	-	-	B	B	A	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.1	0	-	-				

























## APPENDIX G. FUTURE (2045) BUILD ALTERNATIVES LEVEL OF SERVICE WORKSHEETS

# Timings

## 1: Southwest Dr & Lincolnway

2045 Action  
AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	220	85	180	225	40	85	20	180	30	20	25
Future Volume (vph)	40	220	85	180	225	40	85	20	180	30	20	25
Satd. Flow (prot)	1703	3505	1509	1703	3377	0	1626	1546	0	1583	1251	0
Flt Permitted	0.530			0.579			0.469			0.607		
Satd. Flow (perm)	950	3505	1509	1038	3377	0	803	1546	0	1012	1251	0
Satd. Flow (RTOR)			140		46			220			52	
Lane Group Flow (vph)	51	282	109	254	373	0	104	244	0	63	94	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	2	2	2	6	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0		5.0	4.0		4.0	4.0	
Minimum Split (s)	20.3	20.3	20.3	21.3	21.3		9.5	8.2		8.2	8.2	
Total Split (s)	34.0	34.0	34.0	34.0	34.0		12.0	23.0		11.0	11.0	
Total Split (%)	56.7%	56.7%	56.7%	56.7%	56.7%		20.0%	38.3%		18.3%	18.3%	
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		3.5	3.2		3.2	3.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.3	5.3	5.3	5.3	5.3		4.5	4.2		4.2	4.2	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Recall Mode	Max	Max	Max	Max	Max		None	Max		Max	Max	
Act Effect Green (s)	28.7	28.7	28.7	28.7	28.7		18.5	18.8		9.3	9.3	
Actuated g/C Ratio	0.50	0.50	0.50	0.50	0.50		0.32	0.33		0.16	0.16	
v/c Ratio	0.11	0.16	0.13	0.49	0.22		0.29	0.37		0.38	0.38	
Control Delay	8.2	8.0	1.5	13.3	7.2		16.4	5.1		33.5	18.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	8.2	8.0	1.5	13.3	7.2		16.4	5.1		33.5	18.0	
LOS	A	A	A	B	A		B	A		C	B	
Approach Delay		6.4			9.7			8.5			24.2	
Approach LOS		A			A			A			C	

### Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 57

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.49

Intersection Signal Delay: 9.9

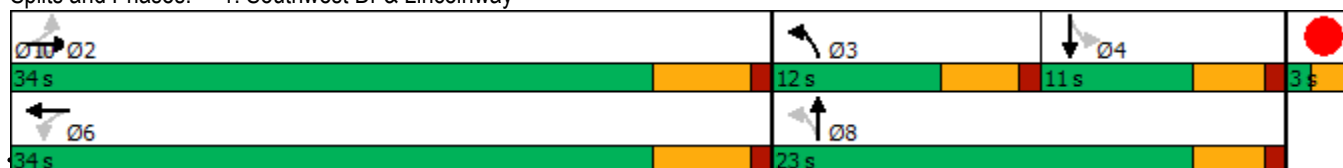
Intersection LOS: A

Intersection Capacity Utilization 56.3%

ICU Level of Service B




Analysis Period (min) 15




Splits and Phases: 1: Southwest Dr & Lincolnway



HCM 6th TWSC  
2: Southwest Dr & North American Rd

2045 Action  
AM Peak






Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	25	10	25	260	245	40
Future Vol, veh/h	25	10	25	260	245	40
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	21	29	0	3	7	5
Mvmt Flow	31	13	31	325	306	50
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	718	331	356	0	-	0
Stage 1	331	-	-	-	-	-
Stage 2	387	-	-	-	-	-
Critical Hdwy	6.61	6.49	4.1	-	-	-
Critical Hdwy Stg 1	5.61	-	-	-	-	-
Critical Hdwy Stg 2	5.61	-	-	-	-	-
Follow-up Hdwy	3.689	3.561	2.2	-	-	-
Pot Cap-1 Maneuver	369	653	1214	-	-	-
Stage 1	687	-	-	-	-	-
Stage 2	647	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	358	653	1214	-	-	-
Mov Cap-2 Maneuver	358	-	-	-	-	-
Stage 1	666	-	-	-	-	-
Stage 2	647	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	14.8	0.7		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1214	-	411	-	-	
HCM Lane V/C Ratio	0.026	-	0.106	-	-	
HCM Control Delay (s)	8	0	14.8	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-	

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	50	20	35	235	210	45
Future Vol, veh/h	50	20	35	235	210	45
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	4	21	3	0	13	4
Mvmt Flow	56	22	39	264	236	51

Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	604	262	287	0	-	0
Stage 1	262	-	-	-	-	-
Stage 2	342	-	-	-	-	-
Critical Hdwy	6.44	6.41	4.13	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.489	2.227	-	-	-
Pot Cap-1 Maneuver	458	733	1269	-	-	-
Stage 1	777	-	-	-	-	-
Stage 2	715	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	442	733	1269	-	-	-
Mov Cap-2 Maneuver	442	-	-	-	-	-
Stage 1	749	-	-	-	-	-
Stage 2	715	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.6	1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1269	-	499	-	-
HCM Lane V/C Ratio	0.031	-	0.158	-	-
HCM Control Delay (s)	7.9	0	13.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

Intersection						
Int Delay, s/veh	2.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	55	560	580	5	35	20
Future Vol, veh/h	55	560	580	5	35	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	75	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	81	81	73	73
Heavy Vehicles, %	9	4	7	3	9	24
Mvmt Flow	65	667	716	6	48	27
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	722	0	-	0	1516	361
Stage 1	-	-	-	-	719	-
Stage 2	-	-	-	-	797	-
Critical Hdwy	4.235	-	-	-	6.735	7.26
Critical Hdwy Stg 1	-	-	-	-	5.935	-
Critical Hdwy Stg 2	-	-	-	-	5.535	-
Follow-up Hdwy	2.2855	-	-	-	3.5855	3.528
Pot Cap-1 Maneuver	840	-	-	-	114	585
Stage 1	-	-	-	-	430	-
Stage 2	-	-	-	-	427	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	840	-	-	-	105	585
Mov Cap-2 Maneuver	-	-	-	-	105	-
Stage 1	-	-	-	-	397	-
Stage 2	-	-	-	-	427	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.9	0		45.7		
HCM LOS	E					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	840	-	-	-	105	585
HCM Lane V/C Ratio	0.078	-	-	-	0.457	0.047
HCM Control Delay (s)	9.6	-	-	-	65.3	11.5
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0.3	-	-	-	2	0.1









Intersection												
Int Delay, s/veh	9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↱			↱		↱		↱		↱	
Traffic Vol, veh/h	0	0	45	10	0	0	55	0	5	0	0	0
Future Vol, veh/h	0	0	45	10	0	0	55	0	5	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	50	50	50	88	88	88	72	72	72
Heavy Vehicles, %	18	0	78	0	0	0	64	3	0	0	14	50
Mvmt Flow	0	0	52	20	0	0	63	0	6	0	0	0
Major/Minor	Minor2		Minor1				Major2					
Conflicting Flow All	-	1	1	27	1	-				0	0	0
Stage 1	-	1	-	0	0	-				-	-	-
Stage 2	-	0	-	27	1	-				-	-	-
Critical Hdwy	-	6.5	6.98	7.1	6.5	-				4.1	-	-
Critical Hdwy Stg 1	-	5.5	-	-	-	-				-	-	-
Critical Hdwy Stg 2	-	-	-	6.1	5.5	-				-	-	-
Follow-up Hdwy	-	4	4.002	3.5	4	-				2.2	-	-
Pot Cap-1 Maneuver	0	899	898	988	899	0				-	-	-
Stage 1	0	899	-	-	-	0				-	-	-
Stage 2	0	-	-	996	899	0				-	-	-
Platoon blocked, %											-	-
Mov Cap-1 Maneuver	-	899	898	931	899	-				-	-	-
Mov Cap-2 Maneuver	-	899	-	931	899	-				-	-	-
Stage 1	-	899	-	-	-	-				-	-	-
Stage 2	-	-	-	938	899	-				-	-	-
Approach	EB		WB				SB					
HCM Control Delay, s	9.3		9				0					
HCM LOS	A		A									
Minor Lane/Major Mvmt	EBLn1WBLn1		SBL	SBT	SBR							
Capacity (veh/h)	898 931		-	-	-							
HCM Lane V/C Ratio	0.058 0.021		-	-	-							
HCM Control Delay (s)	9.3 9		0	-	-							
HCM Lane LOS	A A		A	-	-							
HCM 95th %tile Q(veh)	0.2 0.1		-	-	-							



Intersection												
Int Delay, s/veh	7.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↕			↕				↗
Traffic Vol, veh/h	0	590	65	20	555	25	65	5	25	0	0	35
Future Vol, veh/h	0	590	65	20	555	25	65	5	25	0	0	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	125	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	89	89	89	89	89	89	69	69	69
Heavy Vehicles, %	12	16	36	30	13	7	46	67	36	25	0	14
Mvmt Flow	0	831	92	22	624	28	73	6	28	0	0	51
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	923	0	0	1187	1527	831	-	-	326
Stage 1	-	-	-	-	-	-	831	831	-	-	-	-
Stage 2	-	-	-	-	-	-	356	696	-	-	-	-
Critical Hdwy	-	-	-	4.55	-	-	7.99	7.505	6.74	-	-	7.11
Critical Hdwy Stg 1	-	-	-	-	-	-	6.79	6.505	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.19	6.505	-	-	-	-
Follow-up Hdwy	-	-	-	2.485	-	-	3.937	4.6365	3.642	-	-	3.433
Pot Cap-1 Maneuver	0	-	-	610	-	-	117	74	308	0	0	641
Stage 1	0	-	-	-	-	-	290	282	-	0	0	-
Stage 2	0	-	-	-	-	-	542	334	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	610	-	-	103	70	308	-	-	641
Mov Cap-2 Maneuver	-	-	-	-	-	-	103	70	-	-	-	-
Stage 1	-	-	-	-	-	-	290	282	-	-	-	-
Stage 2	-	-	-	-	-	-	471	315	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.6			120.1			11.1		
HCM LOS							F			B		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1					
Capacity (veh/h)	121	-	-	610	-	-	641					
HCM Lane V/C Ratio	0.882	-	-	0.037	-	-	0.079					
HCM Control Delay (s)	120.1	-	-	11.1	0.3	-	11.1					
HCM Lane LOS	F	-	-	B	A	-	B					
HCM 95th %tile Q(veh)	5.5	-	-	0.1	-	-	0.3					









HCM 6th TWSC  
8: Wallick Rd/Broken Arrow Rd & College Dr

2045 Action  
AM Peak

Intersection												
Int Delay, s/veh	7.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	120	435	40	20	435	55	40	5	20	55	5	110
Future Vol, veh/h	120	435	40	20	435	55	40	5	20	55	5	110
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	130	473	43	22	473	60	43	5	22	60	5	120
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	533	0	0	516	0	0	1365	1332	495	1315	1323	503
Stage 1	-	-	-	-	-	-	755	755	-	547	547	-
Stage 2	-	-	-	-	-	-	610	577	-	768	776	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1035	-	-	1050	-	-	125	154	575	135	156	569
Stage 1	-	-	-	-	-	-	401	417	-	521	517	-
Stage 2	-	-	-	-	-	-	482	502	-	394	407	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1035	-	-	1050	-	-	85	132	575	112	134	569
Mov Cap-2 Maneuver	-	-	-	-	-	-	85	132	-	112	134	-
Stage 1	-	-	-	-	-	-	350	364	-	455	506	-
Stage 2	-	-	-	-	-	-	369	491	-	327	356	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.8			0.3			58.7			32.2		
HCM LOS							F			D		
Minor Lane/Major Mvmt	NBLn1 NBLn2		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	85	344	1035	-	-	1050	-	-	112	499		
HCM Lane V/C Ratio	0.512	0.079	0.126	-	-	0.021	-	-	0.534	0.251		
HCM Control Delay (s)	85.2	16.4	9	-	-	8.5	-	-	69.1	14.6		
HCM Lane LOS	F	C	A	-	-	A	-	-	F	B		
HCM 95th %tile Q(veh)	2.2	0.3	0.4	-	-	0.1	-	-	2.5	1		

HCM 6th TWSC  
9: Broken Arrow Rd & Swan Ranch Rd

2045 Action  
AM Peak

Intersection												
Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	5	5	45	5	105	5	140	35	85	120	20
Future Vol, veh/h	20	5	5	45	5	105	5	140	35	85	120	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	5	5	49	5	114	5	152	38	92	130	22
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	566	525	141	511	517	171	152	0	0	190	0	0
Stage 1	325	325	-	181	181	-	-	-	-	-	-	-
Stage 2	241	200	-	330	336	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	435	458	907	473	462	873	1429	-	-	1384	-	-
Stage 1	687	649	-	821	750	-	-	-	-	-	-	-
Stage 2	762	736	-	683	642	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	355	426	907	441	430	873	1429	-	-	1384	-	-
Mov Cap-2 Maneuver	355	426	-	441	430	-	-	-	-	-	-	-
Stage 1	685	606	-	819	748	-	-	-	-	-	-	-
Stage 2	655	734	-	628	600	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	14.3		11.2		0.2		2.9					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1429	-	-	355	580	441	834	1384	-	-		
HCM Lane V/C Ratio	0.004	-	-	0.061	0.019	0.111	0.143	0.067	-	-		
HCM Control Delay (s)	7.5	-	-	15.8	11.3	14.2	10	7.8	-	-		
HCM Lane LOS	A	-	-	C	B	B	B	A	-	-		
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0.4	0.5	0.2	-	-		























Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	20	0	5	20	0	0	5	5	0	5	0
Future Vol, veh/h	0	20	0	5	20	0	0	5	5	0	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	22	0	5	22	0	0	5	5	0	5	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	22	0	0	22	0	0	57	54	22	59	54	22
Stage 1	-	-	-	-	-	-	22	22	-	32	32	-
Stage 2	-	-	-	-	-	-	35	32	-	27	22	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1593	-	-	1593	-	-	940	837	1055	937	837	1055
Stage 1	-	-	-	-	-	-	996	877	-	984	868	-
Stage 2	-	-	-	-	-	-	981	868	-	990	877	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1593	-	-	1593	-	-	933	834	1055	926	834	1055
Mov Cap-2 Maneuver	-	-	-	-	-	-	933	834	-	926	834	-
Stage 1	-	-	-	-	-	-	996	877	-	984	865	-
Stage 2	-	-	-	-	-	-	972	865	-	979	877	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1.5			8.9			9.3		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	932	1593	-	-	1593	-	-	834				
HCM Lane V/C Ratio	0.012	-	-	-	0.003	-	-	0.007				
HCM Control Delay (s)	8.9	0	-	-	7.3	0	-	9.3				
HCM Lane LOS	A	A	-	-	A	A	-	A				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0				

Intersection						
Int Delay, s/veh	0.1					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↑	↑		↑	
Traffic Vol, veh/h	0	265	225	5	5	0
Future Vol, veh/h	0	265	225	5	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	288	245	5	5	0
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	536	-
Stage 1	-	-	-	-	248	-
Stage 2	-	-	-	-	288	-
Critical Hdwy	-	-	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	-	-	505	0
Stage 1	0	-	-	-	793	0
Stage 2	0	-	-	-	761	0
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	505	-
Mov Cap-2 Maneuver	-	-	-	-	505	-
Stage 1	-	-	-	-	793	-
Stage 2	-	-	-	-	761	-
Approach	NB	SB		NE		
HCM Control Delay, s	0	0		12.2		
HCM LOS	B					
Minor Lane/Major Mvmt	NELn1	NBT	SBT	SBR		
Capacity (veh/h)	505	-	-	-		
HCM Lane V/C Ratio	0.011	-	-	-		
HCM Control Delay (s)	12.2	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0	-	-	-		

# Timings

## 1: Southwest Dr & Lincolnway

2045 Action  
Midday Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	300	65	160	295	50	70	5	160	35	10	15
Future Volume (vph)	30	300	65	160	295	50	70	5	160	35	10	15
Satd. Flow (prot)	1378	3471	1538	1805	3390	0	1805	1579	0	1641	1727	0
Flt Permitted	0.524			0.444			0.530			0.617		
Satd. Flow (perm)	760	3471	1538	844	3390	0	1007	1579	0	1066	1727	0
Satd. Flow (RTOR)			140		41			219			17	
Lane Group Flow (vph)	54	536	116	178	384	0	96	226	0	40	28	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	2	2	2	6	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0		5.0	4.0		4.0	4.0	
Minimum Split (s)	20.3	20.3	20.3	21.3	21.3		9.5	8.2		8.2	8.2	
Total Split (s)	32.0	32.0	32.0	32.0	32.0		12.0	25.0		13.0	13.0	
Total Split (%)	53.3%	53.3%	53.3%	53.3%	53.3%		20.0%	41.7%		21.7%	21.7%	
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		3.5	3.2		3.2	3.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.3	5.3	5.3	5.3	5.3		4.5	4.2		4.2	4.2	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Recall Mode	Max	Max	Max	Max	Max		None	Max		Max	Max	
Act Effct Green (s)	26.7	26.7	26.7	26.7	26.7		20.5	20.8		11.4	11.4	
Actuated g/C Ratio	0.47	0.47	0.47	0.47	0.47		0.36	0.36		0.20	0.20	
v/c Ratio	0.15	0.33	0.15	0.45	0.24		0.21	0.32		0.19	0.08	
Control Delay	10.1	10.2	2.0	14.9	8.5		13.7	3.8		23.9	14.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	10.1	10.2	2.0	14.9	8.5		13.7	3.8		23.9	14.2	
LOS	B	B	A	B	A		B	A		C	B	
Approach Delay		8.9			10.5			6.8			19.9	
Approach LOS		A			B			A			B	

### Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 57

Natural Cycle: 50

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.45

Intersection Signal Delay: 9.5

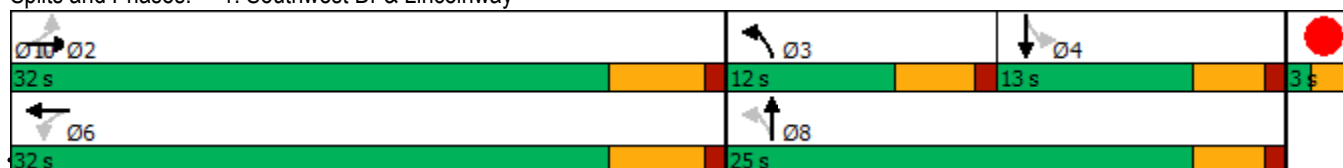
Intersection LOS: A

Intersection Capacity Utilization 54.3%




ICU Level of Service A




Analysis Period (min) 15

Splits and Phases: 1: Southwest Dr & Lincolnway





Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	10	15	205	220	15
Future Vol, veh/h	30	10	15	205	220	15
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	7	10	17	0	2	0
Mvmt Flow	34	11	17	230	247	17
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	520	256	264	0	-	0
Stage 1	256	-	-	-	-	-
Stage 2	264	-	-	-	-	-
Critical Hdwy	6.47	6.3	4.27	-	-	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-	-
Follow-up Hdwy	3.563	3.39	2.353	-	-	-
Pot Cap-1 Maneuver	508	764	1218	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	769	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	500	764	1218	-	-	-
Mov Cap-2 Maneuver	500	-	-	-	-	-
Stage 1	763	-	-	-	-	-
Stage 2	769	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	12.2	0.5		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1218	-	547	-	-	
HCM Lane V/C Ratio	0.014	-	0.082	-	-	
HCM Control Delay (s)	8	0	12.2	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.3	-	-	

Intersection						
Int Delay, s/veh	1.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	15	25	180	185	45
Future Vol, veh/h	40	15	25	180	185	45
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	7	0	6	4	0
Mvmt Flow	43	16	27	191	197	48

Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	466	221	245	0	-	0
Stage 1	221	-	-	-	-	-
Stage 2	245	-	-	-	-	-
Critical Hdwy	6.4	6.27	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.363	2.2	-	-	-
Pot Cap-1 Maneuver	559	806	1333	-	-	-
Stage 1	821	-	-	-	-	-
Stage 2	800	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	546	806	1333	-	-	-
Mov Cap-2 Maneuver	546	-	-	-	-	-
Stage 1	802	-	-	-	-	-
Stage 2	800	-	-	-	-	-






Approach	EB	NB	SB
HCM Control Delay, s	11.7	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1333	-	599	-	-
HCM Lane V/C Ratio	0.02	-	0.098	-	-
HCM Control Delay (s)	7.8	0	11.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-









HCM 6th TWSC  
6: Southwest Dr & Arby's Access

2045 Action  
Midday Peak

Intersection												
Int Delay, s/veh	9.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↱			↱		↱		↱		↱	
Traffic Vol, veh/h	0	5	60	15	5	0	75	0	10	0	0	0
Future Vol, veh/h	0	5	60	15	5	0	75	0	10	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	44	44	44	73	73	73	88	88	88
Heavy Vehicles, %	0	0	59	0	0	0	57	2	0	0	3	0
Mvmt Flow	0	6	68	34	11	0	103	0	14	0	0	0
Major/Minor	Minor2		Minor1				Major2					
Conflicting Flow All	-	1	1	38	1	-				0	0	0
Stage 1	-	1	-	0	0	-				-	-	-
Stage 2	-	0	-	38	1	-				-	-	-
Critical Hdwy	-	6.5	6.79	7.1	6.5	-				4.1	-	-
Critical Hdwy Stg 1	-	5.5	-	-	-	-				-	-	-
Critical Hdwy Stg 2	-	-	-	6.1	5.5	-				-	-	-
Follow-up Hdwy	-	4	3.831	3.5	4	-				2.2	-	-
Pot Cap-1 Maneuver	0	899	938	972	899	0				-	-	-
Stage 1	0	899	-	-	-	0				-	-	-
Stage 2	0	-	-	982	899	0				-	-	-
Platoon blocked, %											-	-
Mov Cap-1 Maneuver	-	899	938	897	899	-				-	-	-
Mov Cap-2 Maneuver	-	899	-	897	899	-				-	-	-
Stage 1	-	899	-	-	-	-				-	-	-
Stage 2	-	-	-	905	899	-				-	-	-
Approach	EB		WB				SB					
HCM Control Delay, s	9.2		9.2				0					
HCM LOS	A		A									
Minor Lane/Major Mvmt	EBLn1WBLn1		SBL	SBT	SBR							
Capacity (veh/h)	935 897		-	-	-							
HCM Lane V/C Ratio	0.079 0.051		-	-	-							
HCM Control Delay (s)	9.2 9.2		0	-	-							
HCM Lane LOS	A A		A	-	-							
HCM 95th %tile Q(veh)	0.3 0.2		-	-	-							

Intersection						
Int Delay, s/veh	2.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	60	405	425	25	45	30
Future Vol, veh/h	60	405	425	25	45	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	75	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	91	91	83	83
Heavy Vehicles, %	21	4	8	16	7	29
Mvmt Flow	70	471	467	27	54	36
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	494	0	-	0	1092	247
Stage 1	-	-	-	-	481	-
Stage 2	-	-	-	-	611	-
Critical Hdwy	4.415	-	-	-	6.705	7.335
Critical Hdwy Stg 1	-	-	-	-	5.905	-
Critical Hdwy Stg 2	-	-	-	-	5.505	-
Follow-up Hdwy	2.3995	-	-	-	3.5665	3.5755
Pot Cap-1 Maneuver	961	-	-	-	216	686
Stage 1	-	-	-	-	576	-
Stage 2	-	-	-	-	529	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	961	-	-	-	200	686
Mov Cap-2 Maneuver	-	-	-	-	200	-
Stage 1	-	-	-	-	534	-
Stage 2	-	-	-	-	529	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.2	0		22		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	961	-	-	-	200	686
HCM Lane V/C Ratio	0.073	-	-	-	0.271	0.053
HCM Control Delay (s)	9	-	-	-	29.6	10.5
HCM Lane LOS	A	-	-	-	D	B
HCM 95th %tile Q(veh)	0.2	-	-	-	1.1	0.2









Intersection												
Int Delay, s/veh	11.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↕			↕				↗
Traffic Vol, veh/h	0	430	115	35	405	15	125	5	35	0	0	45
Future Vol, veh/h	0	430	115	35	405	15	125	5	35	0	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	125	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	89	89	89	76	76	76	73	73	73
Heavy Vehicles, %	3	15	34	13	14	7	37	60	6	6	0	5
Mvmt Flow	0	478	128	39	455	17	164	7	46	0	0	62
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	606	0	0	784	1028	478	-	-	236
Stage 1	-	-	-	-	-	-	478	478	-	-	-	-
Stage 2	-	-	-	-	-	-	306	550	-	-	-	-
Critical Hdwy	-	-	-	4.295	-	-	7.855	7.4	6.29	-	-	6.975
Critical Hdwy Stg 1	-	-	-	-	-	-	6.655	6.4	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.055	6.4	-	-	-	-
Follow-up Hdwy	-	-	-	2.3235	-	-	3.8515	4.57	3.357	-	-	3.3475
Pot Cap-1 Maneuver	0	-	-	909	-	-	250	170	577	0	0	758
Stage 1	0	-	-	-	-	-	493	449	-	0	0	-
Stage 2	0	-	-	-	-	-	602	412	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	909	-	-	220	160	577	-	-	758
Mov Cap-2 Maneuver	-	-	-	-	-	-	220	160	-	-	-	-
Stage 1	-	-	-	-	-	-	493	449	-	-	-	-
Stage 2	-	-	-	-	-	-	521	388	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.9			70.4			10.2		
HCM LOS							F			B		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1					
Capacity (veh/h)	250	-	-	909	-	-	758					
HCM Lane V/C Ratio	0.868	-	-	0.043	-	-	0.081					
HCM Control Delay (s)	70.4	-	-	9.1	0.2	-	10.2					
HCM Lane LOS	F	-	-	A	A	-	B					
HCM 95th %tile Q(veh)	7.2	-	-	0.1	-	-	0.3					





Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	95	325	30	15	325	40	30	5	15	40	5	95
Future Vol, veh/h	95	325	30	15	325	40	30	5	15	40	5	95
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	103	353	33	16	353	43	33	5	16	43	5	103
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	396	0	0	386	0	0	1037	1004	370	993	999	375
Stage 1	-	-	-	-	-	-	576	576	-	407	407	-
Stage 2	-	-	-	-	-	-	461	428	-	586	592	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1163	-	-	1172	-	-	209	242	676	224	243	671
Stage 1	-	-	-	-	-	-	503	502	-	621	597	-
Stage 2	-	-	-	-	-	-	581	585	-	496	494	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1163	-	-	1172	-	-	160	217	676	198	218	671
Mov Cap-2 Maneuver	-	-	-	-	-	-	160	217	-	198	218	-
Stage 1	-	-	-	-	-	-	458	457	-	566	589	-
Stage 2	-	-	-	-	-	-	480	577	-	436	450	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.8			0.3			25.4			16.8		
HCM LOS							D			C		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	160	442	1163	-	-	1172	-	-	198	608		
HCM Lane V/C Ratio	0.204	0.049	0.089	-	-	0.014	-	-	0.22	0.179		
HCM Control Delay (s)	33.2	13.6	8.4	-	-	8.1	-	-	28.2	12.2		
HCM Lane LOS	D	B	A	-	-	A	-	-	D	B		
HCM 95th %tile Q(veh)	0.7	0.2	0.3	-	-	0	-	-	0.8	0.6		



HCM 6th TWSC  
9: Broken Arrow Rd & Swan Ranch Rd

2045 Action  
Midday Peak

Intersection												
Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	5	5	20	5	70	5	115	20	70	115	15
Future Vol, veh/h	15	5	5	20	5	70	5	115	20	70	115	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	5	5	22	5	76	5	125	22	76	125	16
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	472	442	133	436	439	136	141	0	0	147	0	0
Stage 1	285	285	-	146	146	-	-	-	-	-	-	-
Stage 2	187	157	-	290	293	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	502	510	916	531	512	913	1442	-	-	1435	-	-
Stage 1	722	676	-	857	776	-	-	-	-	-	-	-
Stage 2	815	768	-	718	670	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	437	481	916	501	483	913	1442	-	-	1435	-	-
Mov Cap-2 Maneuver	437	481	-	501	483	-	-	-	-	-	-	-
Stage 1	720	640	-	854	774	-	-	-	-	-	-	-
Stage 2	739	766	-	670	634	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	12.5		10.2		0.3		2.7					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1442	-	-	437	631	501	862	1435	-	-		
HCM Lane V/C Ratio	0.004	-	-	0.037	0.017	0.043	0.095	0.053	-	-		
HCM Control Delay (s)	7.5	-	-	13.6	10.8	12.5	9.6	7.6	-	-		
HCM Lane LOS	A	-	-	B	B	B	A	A	-	-		
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0.1	0.3	0.2	-	-		






















Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	20	0	5	20	0	0	5	5	0	5	0
Future Vol, veh/h	0	20	0	5	20	0	0	5	5	0	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	22	0	5	22	0	0	5	5	0	5	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	22	0	0	22	0	0	57	54	22	59	54	22
Stage 1	-	-	-	-	-	-	22	22	-	32	32	-
Stage 2	-	-	-	-	-	-	35	32	-	27	22	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1593	-	-	1593	-	-	940	837	1055	937	837	1055
Stage 1	-	-	-	-	-	-	996	877	-	984	868	-
Stage 2	-	-	-	-	-	-	981	868	-	990	877	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1593	-	-	1593	-	-	933	834	1055	926	834	1055
Mov Cap-2 Maneuver	-	-	-	-	-	-	933	834	-	926	834	-
Stage 1	-	-	-	-	-	-	996	877	-	984	865	-
Stage 2	-	-	-	-	-	-	972	865	-	979	877	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1.5			8.9			9.3		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	932	1593	-	-	1593	-	-	834				
HCM Lane V/C Ratio	0.012	-	-	-	0.003	-	-	0.007				
HCM Control Delay (s)	8.9	0	-	-	7.3	0	-	9.3				
HCM Lane LOS	A	A	-	-	A	A	-	A				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0				

Intersection						
Int Delay, s/veh	0.1					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↑	↑		↑	
Traffic Vol, veh/h	0	200	195	5	5	0
Future Vol, veh/h	0	200	195	5	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	217	212	5	5	0
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	432	-
Stage 1	-	-	-	-	215	-
Stage 2	-	-	-	-	217	-
Critical Hdwy	-	-	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	-	-	581	0
Stage 1	0	-	-	-	821	0
Stage 2	0	-	-	-	819	0
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	581	-
Mov Cap-2 Maneuver	-	-	-	-	581	-
Stage 1	-	-	-	-	821	-
Stage 2	-	-	-	-	819	-
Approach	NB	SB		NE		
HCM Control Delay, s	0	0		11.3		
HCM LOS	B					
Minor Lane/Major Mvmt	NELn1	NBT	SBT	SBR		
Capacity (veh/h)	581	-	-	-		
HCM Lane V/C Ratio	0.009	-	-	-		
HCM Control Delay (s)	11.3	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0	-	-	-		

# Timings

## 1: Southwest Dr & Lincolnway

2045 Action  
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	325	75	125	330	40	55	10	145	25	10	50
Future Volume (vph)	35	325	75	125	330	40	55	10	145	25	10	50
Satd. Flow (prot)	1289	3505	1468	1805	3521	0	1805	1634	0	1805	1546	0
Flt Permitted	0.506			0.530			0.534			0.639		
Satd. Flow (perm)	687	3505	1468	1007	3521	0	1015	1634	0	1214	1546	0
Satd. Flow (RTOR)			140		27			177			76	
Lane Group Flow (vph)	40	374	86	142	420	0	67	189	0	38	91	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	2	2	2	6	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0		5.0	4.0		4.0	4.0	
Minimum Split (s)	20.3	20.3	20.3	21.3	21.3		9.5	8.2		8.2	8.2	
Total Split (s)	31.0	31.0	31.0	31.0	31.0		12.0	26.0		14.0	14.0	
Total Split (%)	51.7%	51.7%	51.7%	51.7%	51.7%		20.0%	43.3%		23.3%	23.3%	
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		3.5	3.2		3.2	3.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.3	5.3	5.3	5.3	5.3		4.5	4.2		4.2	4.2	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Recall Mode	Max	Max	Max	Max	Max		None	Max		Max	Max	
Act Effect Green (s)	25.7	25.7	25.7	25.7	25.7		21.5	21.8		14.7	14.7	
Actuated g/C Ratio	0.45	0.45	0.45	0.45	0.45		0.38	0.38		0.26	0.26	
v/c Ratio	0.13	0.24	0.12	0.31	0.26		0.14	0.26		0.12	0.20	
Control Delay	10.5	10.1	1.1	12.4	9.6		12.4	3.8		21.0	9.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	10.5	10.1	1.1	12.4	9.6		12.4	3.8		21.0	9.2	
LOS	B	B	A	B	A		B	A		C	A	
Approach Delay		8.6			10.3			6.0			12.6	
Approach LOS		A			B			A			B	

### Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 57

Natural Cycle: 45

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.31

Intersection Signal Delay: 9.2

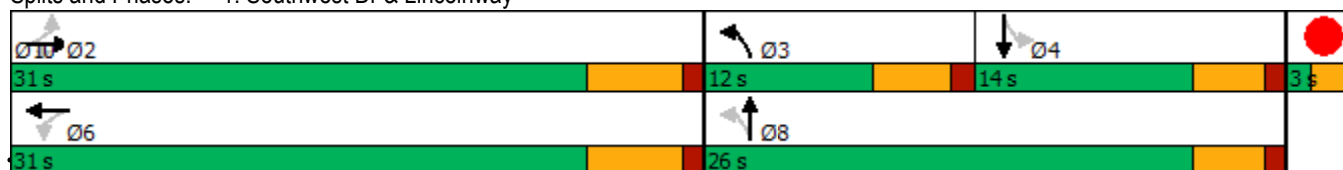
Intersection LOS: A

Intersection Capacity Utilization 53.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: Southwest Dr & Lincolnway









Southwest Dr Corridor Study  
FHU

Synchro 11 Report  
Page 1

HCM 6th TWSC  
2: Southwest Dr & North American Rd

2045 Action  
PM Peak

Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	45	15	5	165	195	15
Future Vol, veh/h	45	15	5	165	195	15
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	8	0	2	5	11
Mvmt Flow	51	17	6	185	219	17
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	425	228	236	0	-	0
Stage 1	228	-	-	-	-	-
Stage 2	197	-	-	-	-	-
Critical Hdwy	6.4	6.28	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.372	2.2	-	-	-
Pot Cap-1 Maneuver	590	797	1343	-	-	-
Stage 1	815	-	-	-	-	-
Stage 2	841	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	587	797	1343	-	-	-
Mov Cap-2 Maneuver	587	-	-	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	841	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.4	0.2		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1343	-	628	-	-	
HCM Lane V/C Ratio	0.004	-	0.107	-	-	
HCM Control Delay (s)	7.7	0	11.4	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.4	-	-	






Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	20	10	130	200	10
Future Vol, veh/h	40	20	10	130	200	10
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	12	14	3	4	20
Mvmt Flow	48	24	12	157	241	12

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	428	247	253	0	-	0
Stage 1	247	-	-	-	-	-
Stage 2	181	-	-	-	-	-
Critical Hdwy	6.4	6.32	4.24	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.408	2.326	-	-	-
Pot Cap-1 Maneuver	588	768	1245	-	-	-
Stage 1	799	-	-	-	-	-
Stage 2	855	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	582	768	1245	-	-	-
Mov Cap-2 Maneuver	582	-	-	-	-	-
Stage 1	790	-	-	-	-	-
Stage 2	855	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.4	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1245	-	633	-	-
HCM Lane V/C Ratio	0.01	-	0.114	-	-
HCM Control Delay (s)	7.9	0	11.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-











Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	70	480	500	20	35	30
Future Vol, veh/h	70	480	500	20	35	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	75	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	82	82	75	75
Heavy Vehicles, %	26	2	5	6	3	24
Mvmt Flow	85	585	610	24	47	40
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	634	0	-	0	1377	317
Stage 1	-	-	-	-	622	-
Stage 2	-	-	-	-	755	-
Critical Hdwy	4.49	-	-	-	6.645	7.26
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.447	-	-	-	3.5285	3.528
Pot Cap-1 Maneuver	821	-	-	-	146	626
Stage 1	-	-	-	-	496	-
Stage 2	-	-	-	-	461	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	821	-	-	-	131	626
Mov Cap-2 Maneuver	-	-	-	-	131	-
Stage 1	-	-	-	-	444	-
Stage 2	-	-	-	-	461	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.3	0		30.4		
HCM LOS				D		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	821	-	-	-	131	626
HCM Lane V/C Ratio	0.104	-	-	-	0.356	0.064
HCM Control Delay (s)	9.9	-	-	-	47	11.1
HCM Lane LOS	A	-	-	-	E	B
HCM 95th %tile Q(veh)	0.3	-	-	-	1.5	0.2

HCM 6th TWSC  
6: Southwest Dr & Arby's Access

2045 Action  
PM Peak









Intersection													
Int Delay, s/veh	9												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↱			↱		↱		↱		↱		
Traffic Vol, veh/h	0	0	55	10	0	0	75	0	15	0	0	0	
Future Vol, veh/h	0	0	55	10	0	0	75	0	15	0	0	0	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None	
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	80	80	80	50	50	50	81	81	81	74	74	74	
Heavy Vehicles, %	33	0	56	0	0	0	76	17	0	0	4	0	
Mvmt Flow	0	0	69	20	0	0	93	0	19	0	0	0	
Major/Minor	Minor2		Minor1				Major2						
Conflicting Flow All	-	1	1	36	1	-					0	0	0
Stage 1	-	1	-	0	0	-					-	-	-
Stage 2	-	0	-	36	1	-					-	-	-
Critical Hdwy	-	6.5	6.76	7.1	6.5	-					4.1	-	-
Critical Hdwy Stg 1	-	5.5	-	-	-	-					-	-	-
Critical Hdwy Stg 2	-	-	-	6.1	5.5	-					-	-	-
Follow-up Hdwy	-	4	3.804	3.5	4	-					2.2	-	-
Pot Cap-1 Maneuver	0	899	945	975	899	0					-	-	-
Stage 1	0	899	-	-	-	0					-	-	-
Stage 2	0	-	-	985	899	0					-	-	-
Platoon blocked, %											-	-	
Mov Cap-1 Maneuver	-	899	945	904	899	-					-	-	-
Mov Cap-2 Maneuver	-	899	-	904	899	-					-	-	-
Stage 1	-	899	-	-	-	-					-	-	-
Stage 2	-	-	-	913	899	-					-	-	-
Approach	EB		WB				SB						
HCM Control Delay, s	9.1		9.1				0						
HCM LOS	A		A										
Minor Lane/Major Mvmt	EBLn1WBLn1		SBL	SBT	SBR								
Capacity (veh/h)	945 904		-	-	-								
HCM Lane V/C Ratio	0.073 0.022		-	-	-								
HCM Control Delay (s)	9.1 9.1		0	-	-								
HCM Lane LOS	A A		A	-	-								
HCM 95th %tile Q(veh)	0.2 0.1		-	-	-								

Intersection												
Int Delay, s/veh	5.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↕			↕				↗
Traffic Vol, veh/h	0	525	55	25	490	15	60	5	25	0	0	45
Future Vol, veh/h	0	525	55	25	490	15	60	5	25	0	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	125	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	92	92	92	67	67	67	79	79	79
Heavy Vehicles, %	7	11	48	21	9	0	42	100	24	0	0	0
Mvmt Flow	0	541	57	27	533	16	90	7	37	0	0	57
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	598	0	0	862	1144	541	-	-	275
Stage 1	-	-	-	-	-	-	541	541	-	-	-	-
Stage 2	-	-	-	-	-	-	321	603	-	-	-	-
Critical Hdwy	-	-	-	4.415	-	-	7.93	8	6.56	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.73	7	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.13	7	-	-	-	-
Follow-up Hdwy	-	-	-	2.3995	-	-	3.899	4.95	3.528	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	874	-	-	213	114	491	0	0	729
Stage 1	0	-	-	-	-	-	444	360	-	0	0	-
Stage 2	0	-	-	-	-	-	579	331	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	874	-	-	190	109	491	-	-	729
Mov Cap-2 Maneuver	-	-	-	-	-	-	190	109	-	-	-	-
Stage 1	-	-	-	-	-	-	444	360	-	-	-	-
Stage 2	-	-	-	-	-	-	510	316	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.6			44.9			10.4		
HCM LOS							E			B		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1					
Capacity (veh/h)	218	-	-	874	-	-	729					
HCM Lane V/C Ratio	0.616	-	-	0.031	-	-	0.078					
HCM Control Delay (s)	44.9	-	-	9.3	0.2	-	10.4					
HCM Lane LOS	E	-	-	A	A	-	B					
HCM 95th %tile Q(veh)	3.6	-	-	0.1	-	-	0.3					

Intersection												
Int Delay, s/veh	5.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	100	380	35	20	380	50	35	5	20	50	5	105
Future Vol, veh/h	100	380	35	20	380	50	35	5	20	50	5	105
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	109	413	38	22	413	54	38	5	22	54	5	114
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	467	0	0	451	0	0	1194	1161	432	1148	1153	440
Stage 1	-	-	-	-	-	-	650	650	-	484	484	-
Stage 2	-	-	-	-	-	-	544	511	-	664	669	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1094	-	-	1109	-	-	163	195	624	176	197	617
Stage 1	-	-	-	-	-	-	458	465	-	564	552	-
Stage 2	-	-	-	-	-	-	523	537	-	450	456	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1094	-	-	1109	-	-	118	172	624	151	174	617
Mov Cap-2 Maneuver	-	-	-	-	-	-	118	172	-	151	174	-
Stage 1	-	-	-	-	-	-	412	419	-	508	541	-
Stage 2	-	-	-	-	-	-	414	526	-	386	410	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.7			0.4			34.8			22.2		
HCM LOS							D			C		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	118	409	1094	-	-	1109	-	-	151	553		
HCM Lane V/C Ratio	0.322	0.066	0.099	-	-	0.02	-	-	0.36	0.216		
HCM Control Delay (s)	49.4	14.4	8.7	-	-	8.3	-	-	41.7	13.3		
HCM Lane LOS	E	B	A	-	-	A	-	-	E	B		
HCM 95th %tile Q(veh)	1.3	0.2	0.3	-	-	0.1	-	-	1.5	0.8		

HCM 6th TWSC  
9: Broken Arrow Rd & Swan Ranch Rd

2045 Action  
PM Peak

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	5	10	25	5	30	10	95	50	75	125	15
Future Vol, veh/h	10	5	10	25	5	30	10	95	50	75	125	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	5	11	27	5	33	11	103	54	82	136	16

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	479	487	144	468	468	130	152	0	0	157	0	0
Stage 1	308	308	-	152	152	-	-	-	-	-	-	-
Stage 2	171	179	-	316	316	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	497	481	903	505	493	920	1429	-	-	1423	-	-
Stage 1	702	660	-	850	772	-	-	-	-	-	-	-
Stage 2	831	751	-	695	655	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	452	449	903	470	460	920	1429	-	-	1423	-	-
Mov Cap-2 Maneuver	452	449	-	470	460	-	-	-	-	-	-	-
Stage 1	696	622	-	843	766	-	-	-	-	-	-	-
Stage 2	790	745	-	641	617	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.6		11.1		0.5		2.7	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1429	-	-	452	675	470	805	1423	-	-
HCM Lane V/C Ratio	0.008	-	-	0.024	0.024	0.058	0.047	0.057	-	-
HCM Control Delay (s)	7.5	-	-	13.2	10.5	13.1	9.7	7.7	-	-
HCM Lane LOS	A	-	-	B	B	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0.2	0.1	0.2	-	-

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	20	0	5	25	0	0	5	5	0	5	0
Future Vol, veh/h	0	20	0	5	25	0	0	5	5	0	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	22	0	5	27	0	0	5	5	0	5	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	27	0	0	22	0	0	62	59	22	64	59	27
Stage 1	-	-	-	-	-	-	22	22	-	37	37	-
Stage 2	-	-	-	-	-	-	40	37	-	27	22	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1587	-	-	1593	-	-	933	832	1055	930	832	1048
Stage 1	-	-	-	-	-	-	996	877	-	978	864	-
Stage 2	-	-	-	-	-	-	975	864	-	990	877	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1587	-	-	1593	-	-	926	830	1055	919	830	1048
Mov Cap-2 Maneuver	-	-	-	-	-	-	926	830	-	919	830	-
Stage 1	-	-	-	-	-	-	996	877	-	978	861	-
Stage 2	-	-	-	-	-	-	966	861	-	979	877	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1.2			8.9			9.4		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	929	1587	-	-	1593	-	-	830				
HCM Lane V/C Ratio	0.012	-	-	-	0.003	-	-	0.007				
HCM Control Delay (s)	8.9	0	-	-	7.3	0	-	9.4				
HCM Lane LOS	A	A	-	-	A	A	-	A				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0				



Intersection						
Int Delay, s/veh	0.2					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↑	↑		↑	
Traffic Vol, veh/h	0	135	215	5	5	0
Future Vol, veh/h	0	135	215	5	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	147	234	5	5	0
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	384	-
Stage 1	-	-	-	-	237	-
Stage 2	-	-	-	-	147	-
Critical Hdwy	-	-	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	-	-	619	0
Stage 1	0	-	-	-	802	0
Stage 2	0	-	-	-	880	0
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	619	-
Mov Cap-2 Maneuver	-	-	-	-	619	-
Stage 1	-	-	-	-	802	-
Stage 2	-	-	-	-	880	-
Approach	NB	SB		NE		
HCM Control Delay, s	0	0		10.9		
HCM LOS	B					
Minor Lane/Major Mvmt	NELn1	NBT	SBT	SBR		
Capacity (veh/h)	619	-	-	-		
HCM Lane V/C Ratio	0.009	-	-	-		
HCM Control Delay (s)	10.9	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0	-	-	-		

## APPENDIX H. TRAIN CROSSING DATA

1. Name of Reporting Railroad Union Pacific Railroad Company [UP]				1a. Alphabetic Code UP				1b. Railroad Accident/Incident No. 0312DV018					
2. Name of Other Railroad or Other Entity Filling for Equipment Involved in Train Accident/Incident				2a. Alphabetic Code				2b. Railroad Accident/Incident No.					
3. Name of Railroad or Other Entity Responsible for Track Maintenance (single entry) Union Pacific Railroad Company [UP]				3a. Alphabetic Code UP				3b. Railroad Accident/Incident No. 0312DV018					
4. U.S. DOT Grade Crossing ID No.  810600N				5. Date of Accident/Incident month   day   year 0   3   3   0   2012				6. Time of Accident/Incident 4:40 AM <input type="checkbox"/> PM <input checked="" type="checkbox"/>					
7. Nearest Railroad Station WEST CHEYENNE				8. Subdivision LARAMIE SUB				9. County LARAMIE				10. State Abbr. WY Code 56	
11. City (if in a city) CHEYENNE				12. Highway Name or No. SOUTHWEST DRIVE				Public <input checked="" type="checkbox"/> Private <input type="checkbox"/>					
Highway User Involved				Rail Equipment Involved									
13. Type C. Truck-trailer F. Bus J. Other Motor Vehicle A. Auto D. Pick-up truck G. School Bus K. Pedestrian Code B. Truck E. Van H. Motorcycle M. Other (specify) A				17. Equipment 1. Train (units pulling) 2. Train (units pushing) 3. Train (standing)				4. Car(s) (moving) 5. Car(s) (standing) 6. Light loco(s) (moving) 7. Light loco(s) (standing) 8. Other (specify)				A. Train pulling- RCL B. Train pushing- RCL C. Train standing- RCL D. EMU Locomotive(s) E. DMU Locomotive(s) Code 2	
14. Vehicle Speed (est. mph at impact) 4		15. Direction (geographical) 1. North 2. South 3. East 4. West Code 1		18. Position of Car Unit in Train 1									
16. Position 1. Stalled or stuck on crossing 2. Stopped on Crossing 3. Moving over crossing		4. Trapped on crossing by traffic 5. Blocked on crossing by gates Code 3		19. Circumstance 1. Rail equipment struck highway user 2. Rail equipment struck by highway user Code 1									
20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials? 1. Highway User 2. Rail Equipment 3. Both 4. Neither Code 2				20b. Was there a hazardous materials release by 1. Highway User 2. Rail Equipment 3. Both 4. Neither Code 4									
20c. State here the name and quantity of the hazardous material released, if any													
21. Temperature (specify if minus) 60 °F		22. Visibility (single entry) 1. Dawn 2. Day 3. Dusk 4. Dark Code 2		23. Weather (single entry) 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow Code 2									
24. Type of Equipment Consist (single entry) 1. Freight Train 2. Passenger Train-Pulling 3. Commuter Train-Pulling 4. Work Train 5. Single Car 6. Cut of cars 7. Yard/Switching 8. Light loco(s) 9. Maint./inspect. car A. Spec. MoW Equip. B. Passenger Train-Pushing C. Commuter Train-Pushing D. EMU E. DMU Code 1				25. Track Type Used by Rail Equipment Involved 1. Main 2. Yard 3. Siding 4. Industry Code 1				26. Track Number or Name NO. 4 MAIN					
27. FRA Track Class (1-9,X) 1		28. Number of Locomotive Units 4		29. Number of Cars 77		30. Consist Speed (Recorded speed if available) R. Recorded E. Estimated 4 mph E		31. Time Table Direction 1. North 2. South 3. East 4. West Code 4					
32. Type of Crossing Warning 1. Gates 2. Cantilever FLS 3. Standard FLS 4. Wig wags 5. Hwy. traffic signals 6. Audible 7. Crossbucks 8. Stop signs 9. Watchman 10. Flagged by crew 11. Other (specify) 12. None Code(s) 01 03 05 06 07				33. Signaled Crossing Warning (See reverse side for instructions and codes) Code 1				34. Roadway Conditions A. Dry B. Wet C. Snow/Slush D. Ice E. Sand, Mud, Dirt, Oil, Gravel F. Water (Standing, Moving) Code A					
35. Location of Warning 1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach Code 1				36. Crossing Warning Interconnected with Highway Signals 1. Yes 2. No 3. Unknown Code 1				37. Crossing Illuminated by Street Lights or Special Lights 1. Yes 2. No 3. Unknown Code 2					
38. Highway User's Age 36		39. Highway User's Gender 1. Male 2. Female Code 2		40. Highway User Went Behind or in Front of Train and Struck or was Struck by Second Train 1. Yes 2. No 3. Unknown Code 2		41. Highway User 1. Went around the gate 2. Stopped and then proceeded 3. Did not stop 4. Stopped on crossing		5. Other (specify) 6. Went around/thru temporary barricade (if yes, see instructions) 7. Went thru the gate 8. Suicide/Attempted suicide Code 7					
42. Driver Passed Standing Highway Vehicle 1. Yes 2. No 3. Unknown Code 2				43. View of Track Obscured by (primary obstruction) 1. Permanent Structure 2. Standing railroad equipment 3. Passing Train 4. Topography 5. Vegetation 6. Highway Vehicles 7. Other (specify) 8. Not Obstructed Code 8									
Casualties to:		Killed	Injured	44. Driver was 1. Killed 2. Injured 3. Uninjured 3				45. Was Driver in the Vehicle? 1. Yes 2. No Code 1					
46. Highway-Rail Crossing Users		0	0	47. Highway Vehicle Property Damage (est. dollar damage) \$2,000				48. Total Number of Vehicle Occupants (including driver) 4					
49. Railroad Employees		0	0	50. Total Number of People on Train (include passengers and train crew) 2				51. Is a Rail Equipment Accident / Incident Report Being Filed 1. Yes 2. No Code 2					
53a. Special Study Block		Video Taken? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Video Used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		53b. Special Study Block									
54. Narrative Description (Be specific, and continue on separate sheet if necessary) HIGHWAY USER'S ACTIONS: WENT THROUGH THE GATE - MOVING. DRIVER WENT UNDER THE GATE.													
55. Typed Name and Title				56. Signature				57. Date					
NOTE: This report is part of the reporting railroad's accident report pursuant to the accident reports statute and, as such shall not "be admitted as evidence or used for any purpose in any suit or action for damages growing out of any matter mentioned in said report..." 49 U.S.C. 20903. See 49 C.F.R. 225.7 (b).													

1. Name of Reporting Railroad Union Pacific Railroad Company [UP]				1a. Alphabetic Code UP		1b. Railroad Accident/Incident No. 0785WY203	
2. Name of Other Railroad or Other Entity Filing for Equipment Involved in Train Accident/Incident				2a. Alphabetic Code		2b. Railroad Accident/Incident No.	
3. Name of Railroad or Other Entity Responsible for Track Maintenance (single entry) Union Pacific Railroad Company [UP]				3a. Alphabetic Code UP		3b. Railroad Accident/Incident No. 0785WY203	
4. U.S. DOT Grade Crossing ID No.  810600N				5. Date of Accident/Incident month   day   year 0   7   0   7   1985		6. Time of Accident/Incident 11:22 AM <input type="checkbox"/> PM <input checked="" type="checkbox"/>	
7. Nearest Railroad Station CHEYENNE		8. Subdivision		9. County LARAMIE		10. State Abbr. WY Code 56	
11. City (if in a city) CHEYENNE		12. Highway Name or No. SOUTHWEST DR Public <input checked="" type="checkbox"/> Private <input type="checkbox"/>					
Highway User Involved				Rail Equipment Involved			
13. Type C. Truck-trailer F. Bus J. Other Motor Vehicle A. Auto D. Pick-up truck G. School Bus K. Pedestrian Code B. Truck E. Van H. Motorcycle M. Other (specify) A				17. Equipment 1. Train (units pulling) 2. Train (units pushing) 3. Train (standing) 4. Car(s) (moving) 5. Car(s) (standing) 6. Light loco(s) (moving) 7. Light loco(s) (standing) 8. Other (specify) A. Train pulling- RCL B. Train pushing- RCL C. Train standing- RCL D. EMU Locomotive(s) E. DMU Locomotive(s) Code 1			
14. Vehicle Speed (est. mph at impact) 25		15. Direction (geographical) 1. North 2. South 3. East 4. West Code 1		18. Position of Car Unit in Train 1			
16. Position 1. Stalled or stuck on crossing 2. Stopped on Crossing 3. Moving over crossing		4. Trapped on crossing by traffic 5. Blocked on crossing by gates Code 3		19. Circumstance 1. Rail equipment struck highway user 2. Rail equipment struck by highway user Code 2			
20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials? 1. Highway User 2. Rail Equipment 3. Both 4. Neither Code 4		20b. Was there a hazardous materials release by 1. Highway User 2. Rail Equipment 3. Both 4. Neither Code					
20c. State here the name and quantity of the hazardous material released, if any							
21. Temperature (specify if minus) 70 °F		22. Visibility (single entry) 1. Dawn 2. Day 3. Dusk 4. Dark Code 4		23. Weather (single entry) 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow Code 1			
24. Type of Equipment Consist (single entry) 1. Freight Train 2. Passenger Train-Pulling 3. Commuter Train-Pulling 4. Work Train 5. Single Car 6. Cut of cars 7. Yard/Switching 8. Light loco(s) 9. Maint./inspect. car A. Spec. MoW Equip. B. Passenger Train-Pushing C. Commuter Train-Pushing D. EMU E. DMU Code 1		25. Track Type Used by Rail Equipment Involved 1. Main 2. Yard 3. Siding 4. Industry Code 1		26. Track Number or Name MAINLINE			
27. FRA Track Class (1-9,X) 5		28. Number of Locomotive Units 3		29. Number of Cars 68		30. Consist Speed (Recorded speed if available) R. Recorded 30 mph E. Estimated E	
31. Time Table Direction 1. North 2. South 3. East 4. West Code 4		32. Type of Crossing Warning 1. Gates 2. Cantilever FLS 3. Standard FLS 4. Wig wags 5. Hwy. traffic signals 6. Audible 7. Crossbucks 8. Stop signs 9. Watchman 10. Flagged by crew 11. Other (specify) 12. None Code(s) 01		33. Signaled Crossing Warning (See reverse side for instructions and codes) Code 1		34. Roadway Conditions A. Dry B. Wet C. Snow/Slush D. Ice E. Sand, Mud, Dirt, Oil, Gravel F. Water (Standing, Moving) Code	
35. Location of Warning 1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach Code 1		36. Crossing Warning Interconnected with Highway Signals 1. Yes 2. No 3. Unknown Code 1		37. Crossing Illuminated by Street Lights or Special Lights 1. Yes 2. No 3. Unknown Code 1			
38. Highway User's Age 1. Male 2. Female Code		39. Highway User's Gender Code		40. Highway User Went Behind or in Front of Train and Struck or was Struck by Second Train 1. Yes 2. No 3. Unknown Code 2		41. Highway User 1. Went around the gate 2. Stopped and then proceeded 3. Did not stop 4. Stopped on crossing 5. Other (specify) 6. Went around/thru temporary barricade (if yes, see instructions) 7. Went thru the gate 8. Suicide/Attempted suicide Code 1	
42. Driver Passed Standing Highway Vehicle 1. Yes 2. No 3. Unknown Code 3		43. View of Track Obscured by (primary obstruction) 1. Permanent Structure 2. Standing railroad equipment 3. Passing Train 4. Topography 5. Vegetation 6. Highway Vehicles 7. Other (specify) 8. Not Obstructed Code 8		44. Driver was 1. Killed 2. Injured 3. Uninjured Code 3			
45. Was Driver in the Vehicle? 1. Yes 2. No Code 1		46. Highway-Rail Crossing Users 0 0		47. Highway Vehicle Property Damage (est. dollar damage) \$500		48. Total Number of Vehicle Occupants (including driver) 2	
49. Railroad Employees 0 0		50. Total Number of People on Train (include passengers and train crew)		51. Is a Rail Equipment Accident / Incident Report Being Filed 1. Yes 2. No Code 2			
52. Passengers on Train 0 0		53a. Special Study Block Video Taken? <input type="checkbox"/> Yes <input type="checkbox"/> No Video Used? <input type="checkbox"/> Yes <input type="checkbox"/> No		53b. Special Study Block			
54. Narrative Description (Be specific, and continue on separate sheet if necessary)							
55. Typed Name and Title				56. Signature		57. Date	

NOTE: This report is part of the reporting railroad's accident report pursuant to the accident reports statute and, as such shall not "be admitted as evidence or used for any purpose in any suit or action for damages growing out of any matter mentioned in said report..." 49 U.S.C. 20903. See 49 C.F.R. 225.7 (b).

1. Name of Reporting Railroad Union Pacific Railroad Company [UP]				1a. Alphabetic Code UP				1b. Railroad Accident/Incident No. 0878WY215							
2. Name of Other Railroad or Other Entity Filing for Equipment Involved in Train Accident/Incident				2a. Alphabetic Code				2b. Railroad Accident/Incident No.							
3. Name of Railroad or Other Entity Responsible for Track Maintenance (single entry) Union Pacific Railroad Company [UP]				3a. Alphabetic Code UP				3b. Railroad Accident/Incident No. 0878WY215							
4. U.S. DOT Grade Crossing ID No.  810600N				5. Date of Accident/Incident month   day   year 0   8   3   1   1978				6. Time of Accident/Incident 1:25 AM <input type="checkbox"/> PM <input checked="" type="checkbox"/>							
7. Nearest Railroad Station CHEYENNE				8. Subdivision				9. County LARAMIE				10. State Abbr. WY Code 56			
11. City (if in a city)				12. Highway Name or No. SOUTHWEST DRIVE								Public <input checked="" type="checkbox"/> Private <input type="checkbox"/>			
Highway User Involved								Rail Equipment Involved							
13. Type C. Truck-trailer F. Bus J. Other Motor Vehicle A. Auto D. Pick-up truck G. School Bus K. Pedestrian Code B. Truck E. Van H. Motorcycle M. Other (specify) A				17. Equipment 1. Train (units pulling) 2. Train (units pushing) 3. Train (standing)				4. Car(s) (moving) 5. Car(s) (standing) 6. Light loco(s) (moving) 7. Light loco(s) (standing) 8. Other (specify)				A. Train pulling- RCL B. Train pushing- RCL C. Train standing- RCL D. EMU Locomotive(s) E. DMU Locomotive(s) Code 1			
14. Vehicle Speed (est. mph at impact) 25		15. Direction (geographical) 1. North 2. South 3. East 4. West Code 1		18. Position of Car Unit in Train 1											
16. Position 1. Stalled or stuck on crossing 2. Stopped on Crossing 3. Moving over crossing		4. Trapped on crossing by traffic 5. Blocked on crossing by gates Code 3		19. Circumstance 1. Rail equipment struck highway user 2. Rail equipment struck by highway user Code 1											
20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials? 1. Highway User 2. Rail Equipment 3. Both 4. Neither Code 4				20b. Was there a hazardous materials release by 1. Highway User 2. Rail Equipment 3. Both 4. Neither Code											
20c. State here the name and quantity of the hazardous material released, if any															
21. Temperature (specify if minus) 80 °F		22. Visibility (single entry) 1. Dawn 2. Day 3. Dusk 4. Dark Code 2		23. Weather (single entry) 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow Code 1											
24. Type of Equipment Consist (single entry) 1. Freight Train 2. Passenger Train-Pulling 3. Commuter Train-Pulling 4. Work Train 5. Single Car 6. Cut of cars 7. Yard/Switching 8. Light loco(s) 9. Maint./inspect. car A. Spec. MoW Equip. B. Passenger Train-Pushing C. Commuter Train-Pushing D. EMU E. DMU Code 1				25. Track Type Used by Rail Equipment Involved 1. Main 2. Yard 3. Siding 4. Industry Code 1				26. Track Number or Name DOUBLE MAIN							
27. FRA Track Class (1-9,X) 4		28. Number of Locomotive Units 4		29. Number of Cars 46		30. Consist Speed (Recorded speed if available) R. Recorded E. Estimated 5 mph E		31. Time Table Direction 1. North 2. South 3. East 4. West Code 3							
32. Type of Crossing Warning 1. Gates 2. Cantilever FLS 3. Standard FLS 4. Wig wags 5. Hwy. traffic signals 6. Audible 7. Crossbucks 8. Stop signs 9. Watchman 10. Flagged by crew 11. Other (specify) 12. None Code(s) 03				33. Signaled Crossing Warning (See reverse side for instructions and codes) Code 1				34. Roadway Conditions A. Dry B. Wet C. Snow/Slush D. Ice E. Sand, Mud, Dirt, Oil, Gravel F. Water (Standing, Moving) Code							
35. Location of Warning 1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach Code 1				36. Crossing Warning Interconnected with Highway Signals 1. Yes 2. No 3. Unknown Code				37. Crossing Illuminated by Street Lights or Special Lights 1. Yes 2. No 3. Unknown Code 2							
38. Highway User's Age 1. Male 2. Female Code		39. Highway User's Gender Code		40. Highway User Went Behind or in Front of Train and Struck or was Struck by Second Train 1. Yes 2. No 3. Unknown Code 2		41. Highway User 1. Went around the gate 2. Stopped and then proceeded 3. Did not stop 4. Stopped on crossing		5. Other (specify) 6. Went around/thru temporary barricade (if yes, see instructions) 7. Went thru the gate 8. Suicide/Attempted suicide Code 3							
42. Driver Passed Standing Highway Vehicle 1. Yes 2. No 3. Unknown Code 2				43. View of Track Obscured by (primary obstruction) 1. Permanent Structure 2. Standing railroad equipment 3. Passing Train 4. Topography 5. Vegetation 6. Highway Vehicles 7. Other (specify) 8. Not Obstructed Code 8											
Casualties to:		Killed	Injured	44. Driver was 1. Killed 2. Injured 3. Uninjured Code 3				45. Was Driver in the Vehicle? 1. Yes 2. No Code 1							
46. Highway-Rail Crossing Users		0	0	47. Highway Vehicle Property Damage (est. dollar damage) \$1,000				48. Total Number of Vehicle Occupants (including driver) 1							
49. Railroad Employees		0	0	50. Total Number of People on Train (include passengers and train crew)				51. Is a Rail Equipment Accident / Incident Report Being Filed 1. Yes 2. No Code 2							
52. Passengers on Train		0	0												
53a. Special Study Block Video Taken? <input type="checkbox"/> Yes <input type="checkbox"/> No Video Used? <input type="checkbox"/> Yes <input type="checkbox"/> No				53b. Special Study Block											
54. Narrative Description (Be specific, and continue on separate sheet if necessary)															
55. Typed Name and Title						56. Signature			57. Date						

NOTE: This report is part of the reporting railroad's accident report pursuant to the accident reports statute and, as such shall not "be admitted as evidence or used for any purpose in any suit or action for damages growing out of any matter mentioned in said report...." 49 U.S.C. 20903. See 49 C.F.R. 225.7 (b).

1. Name of Reporting Railroad Union Pacific Railroad Company [UP]				1a. Alphabetic Code UP				1b. Railroad Accident/Incident No. 0276W Y017					
2. Name of Other Railroad or Other Entity Filing for Equipment Involved in Train Accident/Incident				2a. Alphabetic Code				2b. Railroad Accident/Incident No.					
3. Name of Railroad or Other Entity Responsible for Track Maintenance (single entry)				3a. Alphabetic Code				3b. Railroad Accident/Incident No.					
4. U.S. DOT Grade Crossing ID No.  810600N				5. Date of Accident/Incident month   day   year 0   2   0   7   1976				6. Time of Accident/Incident 5:50 AM <input type="checkbox"/> PM <input checked="" type="checkbox"/>					
7. Nearest Railroad Station CHEYENNE				8. Subdivision				9. County LARAMIE				10. State Abbr. WY Code 56	
11. City (if in a city)				12. Highway Name or No. CROSSING 2101				Public <input checked="" type="checkbox"/> Private <input type="checkbox"/>					
Highway User Involved				Rail Equipment Involved									
13. Type C. Truck-trailer F. Bus J. Other Motor Vehicle A. Auto D. Pick-up truck G. School Bus K. Pedestrian Code B. Truck E. Van H. Motorcycle M. Other (specify) A				17. Equipment 1. Train (units pulling) 2. Train (units pushing) 3. Train (standing)				4. Car(s) (moving) 5. Car(s) (standing) 6. Light loco(s) (moving) 7. Light loco(s) (standing) 8. Other (specify)				A. Train pulling- RCL B. Train pushing- RCL C. Train standing- RCL D. EMU Locomotive(s) E. DMU Locomotive(s) Code 1	
14. Vehicle Speed (est. mph at impact) 20		15. Direction (geographical) 1. North 2. South 3. East 4. West Code 1		18. Position of Car Unit in Train 1									
16. Position 1. Stalled or stuck on crossing 2. Stopped on Crossing 3. Moving over crossing		4. Trapped on crossing by traffic 5. Blocked on crossing by gates Code 3		19. Circumstance 1. Rail equipment struck highway user 2. Rail equipment struck by highway user Code 1									
20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials? 1. Highway User 2. Rail Equipment 3. Both 4. Neither Code 4				20b. Was there a hazardous materials release by 1. Highway User 2. Rail Equipment 3. Both 4. Neither Code									
20c. State here the name and quantity of the hazardous material released, if any													
21. Temperature (specify if minus) 30 °F		22. Visibility (single entry) 1. Dawn 2. Day 3. Dusk 4. Dark Code 3		23. Weather (single entry) 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow Code 1									
24. Type of Equipment Consist (single entry) 1. Freight Train 2. Passenger Train-Pulling 3. Commuter Train-Pulling 4. Work Train 5. Single Car 6. Cut of cars 7. Yard/Switching 8. Light loco(s) 9. Maint./inspect. car A. Spec. MoW Equip. B. Passenger Train-Pushing C. Commuter Train-Pushing D. EMU E. DMU Code 1				25. Track Type Used by Rail Equipment Involved 1. Main 2. Yard 3. Siding 4. Industry Code 1				26. Track Number or Name DOUBLE MAIN TRACK					
27. FRA Track Class (1-9,X) 5		28. Number of Locomotive Units 2		29. Number of Cars 23		30. Consist Speed (Recorded speed if available) R. Recorded E. Estimated 30 mph E		31. Time Table Direction 1. North 2. South 3. East 4. West Code 4					
32. Type of Crossing Warning 1. Gates 2. Cantilever FLS 3. Standard FLS 4. Wig wags 5. Hwy. traffic signals 6. Audible 7. Crossbucks 8. Stop signs 9. Watchman 10. Flagged by crew 11. Other (specify) 12. None Code(s) 03 05 06 07				33. Signaled Crossing Warning (See reverse side for instructions and codes) Code 1				34. Roadway Conditions A. Dry B. Wet C. Snow/Slush D. Ice E. Sand, Mud, Dirt, Oil, Gravel F. Water (Standing, Moving) Code					
35. Location of Warning 1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach Code 1				36. Crossing Warning Interconnected with Highway Signals 1. Yes 2. No 3. Unknown Code 1				37. Crossing Illuminated by Street Lights or Special Lights 1. Yes 2. No 3. Unknown Code 2					
38. Highway User's Age 1. Male 2. Female Code		39. Highway User's Gender Code		40. Highway User Went Behind or in Front of Train and Struck or was Struck by Second Train 1. Yes 2. No 3. Unknown Code 1		41. Highway User 1. Went around the gate 2. Stopped and then proceeded 3. Did not stop 4. Stopped on crossing		5. Other (specify) 6. Went around/thru temporary barricade (if yes, see instructions) 7. Went thru the gate 8. Suicide/Attempted suicide Code 3					
42. Driver Passed Standing Highway Vehicle 1. Yes 2. No 3. Unknown Code 2				43. View of Track Obscured by (primary obstruction) 1. Permanent Structure 2. Standing railroad equipment 3. Passing Train 4. Topography 5. Vegetation 6. Highway Vehicles 7. Other (specify) 8. Not Obstructed Code 8									
Casualties to:		Killed	Injured	44. Driver was 1. Killed 2. Injured 3. Uninjured Code 1				45. Was Driver in the Vehicle? 1. Yes 2. No Code 1					
46. Highway-Rail Crossing Users		1	0	47. Highway Vehicle Property Damage (est. dollar damage) \$0				48. Total Number of Vehicle Occupants (including driver) 1					
49. Railroad Employees		0	0	50. Total Number of People on Train (include passengers and train crew)				51. Is a Rail Equipment Accident / Incident Report Being Filed 1. Yes 2. No Code 2					
52. Passengers on Train		0	0										
53a. Special Study Block Video Taken? <input type="checkbox"/> Yes <input type="checkbox"/> No Video Used? <input type="checkbox"/> Yes <input type="checkbox"/> No				53b. Special Study Block									
54. Narrative Description (Be specific, and continue on separate sheet if necessary)													
55. Typed Name and Title				56. Signature				57. Date					

NOTE: This report is part of the reporting railroad's accident report pursuant to the accident reports statute and, as such shall not "be admitted as evidence or used for any purpose in any suit or action for damages growing out of any matter mentioned in said report...." 49 U.S.C. 20903. See 49 C.F.R. 225.7 (b).



# U. S. DOT CROSSING INVENTORY FORM

## DEPARTMENT OF TRANSPORTATION

FEDERAL RAILROAD ADMINISTRATION

OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For Private pathway grade crossings, complete the Header, Parts I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 20 and Part III Item 2.K. are required unless otherwise noted. An asterisk \* denotes an optional field.

<b>A. Revision Date</b> (MM/DD/YYYY) 05 / 14 / 2021	<b>B. Reporting Agency</b> <input checked="" type="checkbox"/> Railroad <input type="checkbox"/> Transit <input type="checkbox"/> State <input type="checkbox"/> Other	<b>C. Reason for Update (Select only one)</b> <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Change in Data  <input type="checkbox"/> Re-Open         </div> <div> <input type="checkbox"/> New Crossing  <input type="checkbox"/> Date Change Only         </div> <div> <input type="checkbox"/> Closed  <input type="checkbox"/> Change in Primary Operating RR         </div> <div> <input type="checkbox"/> No Train Traffic  <input checked="" type="checkbox"/> Admin. Correction         </div> <div> <input type="checkbox"/> Quiet Zone Update         </div> </div>	<b>D. DOT Crossing Inventory Number</b> 810600N
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### Part I: Location and Classification Information

<b>1. Primary Operating Railroad</b> Union Pacific Railroad Company [UP]		<b>2. State</b> WYOMING		<b>3. County</b> LARAMIE	
<b>4. City / Municipality</b> <input checked="" type="checkbox"/> In <input type="checkbox"/> Near    CHEYENNE		<b>5. Street/Road Name &amp; Block Number</b> Southwest Drive (Street/Road Name)    * (Block Number)		<b>6. Highway Type &amp; No.</b> L	
<b>7. Do Other Railroads Operate a Separate Track at Crossing?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Specify RR			<b>8. Do Other Railroads Operate Over Your Track at Crossing?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Specify RR		
<b>9. Railroad Division or Region</b> <input type="checkbox"/> None    GREAT PLAINS		<b>10. Railroad Subdivision or District</b> <input type="checkbox"/> None    LARAMIE SUB		<b>11. Branch or Line Name</b> <input checked="" type="checkbox"/> None	
<b>12. RR Milepost</b> 0511.013 (prefix)   (nnnn.nnn)   (suffix)		<b>13. Line Segment</b> *			
<b>14. Nearest RR Timetable Station</b> *		<b>15. Parent RR (if applicable)</b> <input checked="" type="checkbox"/> N/A		<b>16. Crossing Owner (if applicable)</b> <input type="checkbox"/> N/A    UP	
<b>17. Crossing Type</b> <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private		<b>18. Crossing Purpose</b> <input checked="" type="checkbox"/> Highway <input type="checkbox"/> Pathway, Ped. <input type="checkbox"/> Station, Ped.		<b>19. Crossing Position</b> <input checked="" type="checkbox"/> At Grade <input type="checkbox"/> RR Under <input type="checkbox"/> RR Over	
<b>20. Public Access (if Private Crossing)</b> <input type="checkbox"/> Yes <input type="checkbox"/> No		<b>21. Type of Train</b> <input checked="" type="checkbox"/> Freight <input type="checkbox"/> Intercity Passenger <input type="checkbox"/> Commuter		<input type="checkbox"/> Transit <input type="checkbox"/> Shared Use Transit <input type="checkbox"/> Tourist/Other	
<b>22. Average Passenger Train Count Per Day</b> <input type="checkbox"/> Less Than One Per Day <input type="checkbox"/> Number Per Day 0					
<b>23. Type of Land Use</b> <input type="checkbox"/> Open Space <input type="checkbox"/> Farm <input type="checkbox"/> Residential <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Institutional <input type="checkbox"/> Recreational <input type="checkbox"/> RR Yard					
<b>24. Is there an Adjacent Crossing with a Separate Number?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No    If Yes, Provide Crossing Number			<b>25. Quiet Zone (FRA provided)</b> <input type="checkbox"/> No <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> Partial <input type="checkbox"/> Chicago Excused    Date Established 10/29/2014 12:00:		
<b>26. HSR Corridor ID</b> <input checked="" type="checkbox"/> N/A		<b>27. Latitude in decimal degrees</b> (WGS84 std: nn.nnnnnnn) 41.12287		<b>28. Longitude in decimal degrees</b> (WGS84 std: -nnn.nnnnnnn) -104.84021	
<b>29. Lat/Long Source</b> <input checked="" type="checkbox"/> Actual <input type="checkbox"/> Estimated					
<b>30.A. Railroad Use *</b>			<b>31.A. State Use *</b> ML		
<b>30.B. Railroad Use *</b>			<b>31.B. State Use *</b> 6736		
<b>30.C. Railroad Use *</b>			<b>31.C. State Use *</b> 1.711		
<b>30.D. Railroad Use *</b>			<b>31.D. State Use *</b> NOE 10/28/2014		
<b>32.A. Narrative (Railroad Use) *</b>			<b>32.B. Narrative (State Use) *</b>		
<b>33. Emergency Notification Telephone No. (posted)</b> 800-848-8715		<b>34. Railroad Contact (Telephone No.)</b> 402-544-3721		<b>35. State Contact (Telephone No.)</b> 307-777-4859	

### Part II: Railroad Information

<b>1. Estimated Number of Daily Train Movements</b>				
<b>1.A. Total Day Thru Trains (6 AM to 6 PM)</b> 13	<b>1.B. Total Night Thru Trains (6 PM to 6 AM)</b> 12	<b>1.C. Total Switching Trains</b> 14	<b>1.D. Total Transit Trains</b> 0	<b>1.E. Check if Less Than One Movement Per Day</b> <input type="checkbox"/> How many trains per week?
<b>2. Year of Train Count Data (YYYY)</b> 2019				
<b>3. Speed of Train at Crossing</b> 3.A. Maximum Timetable Speed (mph) 40 3.B. Typical Speed Range Over Crossing (mph) From 20 to 40				
<b>4. Type and Count of Tracks</b> Main 4    Siding 0    Yard 0    Transit 0    Industry 0				
<b>5. Train Detection (Main Track only)</b> <input checked="" type="checkbox"/> Constant Warning Time <input type="checkbox"/> Motion Detection <input type="checkbox"/> AFO <input type="checkbox"/> PTC <input type="checkbox"/> DC <input type="checkbox"/> Other <input type="checkbox"/> None				
<b>6. Is Track Signaled?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<b>7.A. Event Recorder</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<b>7.B. Remote Health Monitoring</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

# U. S. DOT CROSSING INVENTORY FORM

A. Revision Date (MM/DD/YYYY) 05/14/2021		PAGE 2		D. Crossing Inventory Number (7 char.) 810600N	
<b>Part III: Highway or Pathway Traffic Control Device Information</b>					
1. Are there Signs or Signals?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		2. Types of Passive Traffic Control Devices associated with the Crossing			
2.A. Crossbuck Assemblies (count) 0		2.B. STOP Signs (R1-1) (count) 0	2.C. YIELD Signs (R1-2) (count)	2.D. Advance Warning Signs (Check all that apply; include count) <input type="checkbox"/> None <input checked="" type="checkbox"/> W10-1 1 <input type="checkbox"/> W10-3 <input type="checkbox"/> W10-11 <input type="checkbox"/> W10-2 <input type="checkbox"/> W10-4 <input type="checkbox"/> W10-12	
2.E. Low Ground Clearance Sign (W10-5) <input type="checkbox"/> Yes (count 0) <input checked="" type="checkbox"/> No		2.F. Pavement Markings <input checked="" type="checkbox"/> Stop Lines <input type="checkbox"/> Dynamic Envelope <input checked="" type="checkbox"/> RR Xing Symbols <input type="checkbox"/> None		2.G. Channelization Devices/Medians <input checked="" type="checkbox"/> All Approaches <input type="checkbox"/> Median <input type="checkbox"/> One Approach <input type="checkbox"/> None	
2.H. EXEMPT Sign (R15-3) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		2.I. ENS Sign (I-13) Displayed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
2.J. Other MUTCD Signs  Specify Type _____ Count 2 Specify Type _____ Count 3 Specify Type _____ Count _____		2.K. Private Crossing Signs (if private)  <input type="checkbox"/> Yes <input type="checkbox"/> No		2.L. LED Enhanced Signs (List types)	
<b>3. Types of Train Activated Warning Devices at the Grade Crossing (specify count of each device for all that apply)</b>					
3.A. Gate Arms (count)  Roadway 2 Pedestrian _____		3.B. Gate Configuration <input checked="" type="checkbox"/> 2 Quad <input type="checkbox"/> Full (Barrier) <input type="checkbox"/> 3 Quad      Resistance <input type="checkbox"/> 4 Quad      Median Gates		3.C. Cantilevered (or Bridged) Flashing Light Structures (count) Over Traffic Lane 0 <input type="checkbox"/> Incandescent Not Over Traffic Lane 0 <input type="checkbox"/> LED	
3.D. Mast Mounted Flashing Lights (count of masts) 2 <input type="checkbox"/> Incandescent <input checked="" type="checkbox"/> LED <input checked="" type="checkbox"/> Back Lights Included <input type="checkbox"/> Side Lights Included		3.E. Total Count of Flashing Light Pairs 4			
3.F. Installation Date of Current Active Warning Devices: (MM/YYYY) _____/_____/_____ <input type="checkbox"/> Not Required		3.G. Wayside Horn  <input type="checkbox"/> Yes   Installed on (MM/YYYY) ____/____/_____ <input checked="" type="checkbox"/> No		3.H. Highway Traffic Signals Controlling Crossing  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
3.I. Bells (count) 2		3.J. Non-Train Active Warning <input type="checkbox"/> Flagging/Flagman <input type="checkbox"/> Manually Operated Signals <input type="checkbox"/> Watchman <input type="checkbox"/> Floodlighting <input type="checkbox"/> None			
3.K. Other Flashing Lights or Warning Devices Count 0      Specify type _____		3.L. Highway Traffic Pre-Signals <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Storage Distance * _____ Stop Line Distance * _____			
4.A. Does nearby Hwy Intersection have Traffic Signals?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		4.B. Hwy Traffic Signal Interconnection <input type="checkbox"/> Not Interconnected <input checked="" type="checkbox"/> For Traffic Signals <input type="checkbox"/> For Warning Signs		4.C. Hwy Traffic Signal Preemption <input checked="" type="checkbox"/> Simultaneous <input type="checkbox"/> Advance	
4.D. Highway Monitoring Devices (Check all that apply) <input type="checkbox"/> Yes - Photo/Video Recording <input type="checkbox"/> Yes - Vehicle Presence Detection <input type="checkbox"/> None		4.E. Highway Monitoring Devices (Check all that apply) <input type="checkbox"/> Yes - Photo/Video Recording <input type="checkbox"/> Yes - Vehicle Presence Detection <input type="checkbox"/> None			
<b>Part IV: Physical Characteristics</b>					
1. Traffic Lanes Crossing Railroad <input type="checkbox"/> One-way Traffic <input checked="" type="checkbox"/> Two-way Traffic Number of Lanes 2 <input type="checkbox"/> Divided Traffic		2. Is Roadway/Pathway Paved?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		3. Does Track Run Down a Street?  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
4. Is Crossing Illuminated? (Street lights within approx. 50 feet from nearest rail) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		5. Crossing Surface (on Main Track, multiple types allowed)   Installation Date * (MM/YYYY) ____/____/_____ <input type="checkbox"/> 1 Timber <input type="checkbox"/> 2 Asphalt <input type="checkbox"/> 3 Asphalt and Timber <input checked="" type="checkbox"/> 4 Concrete <input type="checkbox"/> 5 Concrete and Rubber <input type="checkbox"/> 6 Rubber <input type="checkbox"/> 7 Metal <input type="checkbox"/> 8 Unconsolidated <input type="checkbox"/> 9 Composite <input type="checkbox"/> 10 Other (specify) _____			
6. Intersecting Roadway within 500 feet?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No   If Yes, Approximate Distance (feet) _____		7. Smallest Crossing Angle  <input type="checkbox"/> 0° - 29° <input type="checkbox"/> 30° - 59° <input checked="" type="checkbox"/> 60° - 90°		8. Is Commercial Power Available? *  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Part V: Public Highway Information</b>					
1. Highway System  <input type="checkbox"/> (01) Interstate Highway System <input type="checkbox"/> (02) Other Nat Hwy System (NHS) <input type="checkbox"/> (03) Federal AID, Not NHS <input checked="" type="checkbox"/> (08) Non-Federal AID		2. Functional Classification of Road at Crossing <input type="checkbox"/> (0) Rural <input checked="" type="checkbox"/> (1) Urban <input type="checkbox"/> (1) Interstate <input checked="" type="checkbox"/> (5) Major Collector <input type="checkbox"/> (2) Other Freeways and Expressways <input type="checkbox"/> (3) Other Principal Arterial <input type="checkbox"/> (6) Minor Collector <input type="checkbox"/> (4) Minor Arterial <input type="checkbox"/> (7) Local		3. Is Crossing on State Highway System?  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
4. Highway Speed Limit 30 _____ MPH <input checked="" type="checkbox"/> Posted <input type="checkbox"/> Statutory		5. Linear Referencing System (LRS Route ID) * ML6736B			
6. LRS Milepost * 1.711		7. Annual Average Daily Traffic (AADT) Year 2019   AADT 1300			
8. Estimated Percent Trucks 13 _____ %		9. Regularly Used by School Buses?  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   Average Number per Day 0		10. Emergency Services Route  <input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Submission Information - This information is used for administrative purposes and is not available on the public website.</b>					
Submitted by _____ Organization _____ Phone _____ Date _____  Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.					

Events	41 Trains Pre Day Monday August 7th						Gap between Closures	Events	44 Trains Pre Day Tuesday August 8th						Gap between Closures
	Trains	Note	Time Start	Time End	Closure Duration				Trains	Note	Time Start	Time End	Closure Duration		
1	1	*	0:00:00	0:10:57	0:10:57			1	1		0:20:54	0:23:46	0:02:52		
2	1		1:03:06	1:09:11	0:06:05	0:52:09		2	1		1:11:48	1:19:33	0:07:45	0:48:02	
3	1		1:37:02	1:45:50	0:08:48	0:27:51		3	1		1:56:16	2:00:18	0:04:02	0:36:43	
4	1		1:48:15	2:03:49	0:15:34	0:02:25		4	1	***	2:16:42	2:17:42	0:01:00	0:16:24	
5	1		3:59:41	4:00:31	0:00:50	1:55:52		5	1	***	2:19:12	2:20:02	0:00:50	0:01:30	
6	1		4:13:39	4:20:34	0:06:55	0:13:08		6	1	***	4:36:18	4:37:24	0:01:06	2:16:16	
7	1		6:22:51	7:07:33	0:44:42	2:02:17		7	1	***	4:40:21	4:41:07	0:00:46	0:02:57	
8	2	**	7:45:33	7:57:58	0:12:25	0:38:00		8	1		4:45:15	5:11:48	0:26:33	0:04:08	
9	1		8:04:36	8:10:27	0:05:51	0:06:38		9	1		5:43:13	5:51:25	0:08:12	0:31:25	
10	1	***	8:32:57	8:33:23	0:00:26	0:22:30		10	1		6:00:20	6:18:16	0:17:56	0:08:55	
11	1		9:22:35	9:29:33	0:06:58	0:49:12		11	1		6:28:27	6:37:19	0:08:52	0:10:11	
12	1		10:11:20	10:18:15	0:06:55	0:41:47		12	1		7:25:53	7:31:57	0:06:04	0:48:34	
13	1		10:31:15	10:37:08	0:05:53	0:13:00		13	1		7:34:32	8:07:06	0:32:34	0:02:35	
14	5	**	10:44:00	11:53:18	1:09:18	0:06:52		14	1		8:36:29	8:45:30	0:09:01	0:29:23	
15	1		12:07:45	12:08:06	0:00:21	0:14:27		15	1		9:04:50	9:28:56	0:24:06	0:19:20	
16	1		12:13:55	12:14:23	0:00:28	0:05:49		16	1		9:37:08	9:45:16	0:08:08	0:08:12	
17	1		12:26:55	12:29:57	0:03:02	0:12:32		17	4	**	9:53:50	10:54:53	1:01:03	0:08:34	
18	1		12:41:39	12:48:00	0:06:21	0:11:42		18	1		12:23:34	12:27:49	0:04:15	1:28:41	
19	1		13:12:26	13:15:30	0:03:04	0:24:26		19	1		12:33:02	12:42:24	0:09:22	0:05:13	
20	1		13:31:24	13:34:45	0:03:21	0:15:54		20	2	**	12:55:10	13:24:49	0:29:39	0:12:46	
21	2	**	13:40:14	14:13:19	0:33:05	0:05:29		21	1		13:28:54	13:31:59	0:03:05	0:04:05	
22	1		15:22:51	15:27:07	0:04:16	1:09:32		22	1		13:38:57	13:40:29	0:01:32	0:06:58	
23	1		15:50:11	16:01:14	0:11:03	0:23:04		23	1		14:09:50	14:18:12	0:08:22	0:29:21	
24	1		16:40:18	16:53:03	0:12:45	0:39:04		24	1		15:10:21	15:12:08	0:01:47	0:52:09	
25	1		17:37:52	17:46:44	0:08:52	0:44:49		25	1		15:19:38	15:22:43	0:03:05	0:07:30	
26	1	***	17:55:13	17:55:35	0:00:22	0:08:29		26	1		15:50:07	15:53:14	0:03:07	0:27:24	
27	1		18:04:58	18:08:59	0:04:01	0:09:23		27	1		16:25:42	16:46:20	0:20:38	0:32:28	
28	1	***	18:10:45	18:11:03	0:00:18	0:01:46		28	1		16:52:14	16:55:52	0:03:38	0:05:54	
29	1		18:40:57	18:48:08	0:07:11	0:29:54		29	1		17:22:02	17:31:02	0:09:00	0:26:10	
30	1		18:56:00	18:57:24	0:01:24	0:07:52		30	1		17:59:21	18:01:07	0:01:46	0:28:19	
31	1		20:08:35	20:11:47	0:03:12	1:11:11		31	1		18:49:39	18:52:56	0:03:17	0:48:32	
32	1		21:42:16	21:45:05	0:02:49	1:30:29		32	1		19:01:31	19:10:51	0:09:20	0:08:35	
33	1		21:53:50	21:57:26	0:03:36	0:08:45		33	2	**	19:29:03	20:51:19	1:22:16	0:18:12	
34	1		22:15:59	22:23:19	0:07:20	0:18:33		34	1		20:56:52	21:04:15	0:07:23	0:05:33	
35	1		23:18:04	23:20:29	0:02:25	0:54:45		35	1		21:11:50	21:15:24	0:03:34	0:07:35	
36	1		23:33:35	23:41:26	0:07:51	0:13:06		36	1		21:35:17	21:38:01	0:02:44	0:19:53	
37								37	1		21:52:00	21:56:48	0:04:48	0:13:59	
38								38	1		22:14:50	22:28:47	0:13:57	0:18:02	
39								39	1		22:59:19	23:03:52	0:04:33	0:30:32	
40								40							
41								41							
42								42							
43								43							
44								44							
45								45							
46								46							
47								47							
48								48							
49								49							
50								50							

Monday August 7th		Closure Duration	Gap between Closures
Total Closure Time:		5:28:44	18:12:42
Average:		0:09:08	0:31:13
Median:		0:05:59	0:18:33
Max:		1:09:18	2:02:17
Min:		0:00:18	0:01:46
Closure Events:		36	
# of Trains:		41	

Note:

\* Road Closure started the day before.

\*\* RXR Crossing Closure while multiple trains pass.

\*\*\* Engine Only causing RxR Crossing Closure.

Tuesday August 8th		Closure Duration	Gap between Closures
Total Closure Time:		7:31:58	15:11:00
Average:		0:11:35	0:23:58
Median:		0:06:04	0:17:13
Max:		1:22:16	2:16:16
Min:		0:00:46	0:01:30
Closure Events:		39	
# of Trains:		44	

Note:

\*

\*\* RXR Crossing Closure while multiple trains pass.

\*\*\* Engine Only causing RxR Crossing Closure.

Events	48 Trains Pre Day Wednesday August 9th						Gap between Closures	Events	51 Trains Pre Day Thursday August 10th						Gap between Closures
	Trains	Note	Time Start	Time End	Closure Duration				Trains	Note	Time Start	Time End	Closure Duration		
1	1		0:18:02	0:19:49	0:01:47			1	1	*	0:00:00	0:15:47	0:15:47		
2	1	***	1:02:40	1:03:29	0:00:49	0:42:51		2	1		1:33:01	1:38:03	0:05:02	1:17:14	
3	1		1:25:17	1:43:30	0:18:13	0:21:48		3	1		1:49:53	1:56:05	0:06:12	0:11:50	
4	1		2:28:47	2:35:01	0:06:14	0:45:17		4	1		1:59:03	2:21:10	0:22:07	0:02:58	
5	1		2:37:16	2:44:46	0:07:30	0:02:15		5	1		2:28:50	2:37:58	0:09:08	0:07:40	
6	1		2:54:47	3:20:49	0:26:02	0:10:01		6	2	**	2:45:36	2:57:00	0:11:24	0:07:38	
7	1		3:36:29	3:54:42	0:18:13	0:15:40		7	1		3:44:42	3:52:50	0:08:08	0:47:42	
8	1		5:21:06	5:29:47	0:08:41	1:26:24		8	1		5:51:13	6:01:12	0:09:59	1:58:23	
9	1		5:56:38	6:09:03	0:12:25	0:26:51		9	1		6:07:49	6:21:53	0:14:04	0:06:37	
10	1		6:16:51	6:21:04	0:04:13	0:07:48		10	1		6:47:03	6:52:20	0:05:17	0:25:10	
11	1		6:38:47	6:42:15	0:03:28	0:17:43		11	2	**	6:52:47	7:37:37	0:44:50	0:00:27	
12	1		7:08:50	7:11:26	0:02:36	0:26:35		12	2	**	7:46:15	8:52:50	1:06:35	0:08:38	
13	1		8:17:16	8:26:20	0:09:04	1:05:50		13	1		9:05:54	9:13:14	0:07:20	0:13:04	
14	1	***	8:33:49	8:35:11	0:01:22	0:07:29		14	1		11:30:02	11:37:26	0:07:24	2:16:48	
15	1		9:39:01	9:43:48	0:04:47	1:03:50		15	1		11:42:10	11:47:37	0:05:27	0:04:44	
16	2	**	10:17:44	10:34:10	0:16:26	0:33:56		16	1		12:25:27	12:30:09	0:04:42	0:37:50	
17	1		10:41:03	10:44:26	0:03:23	0:06:53		17	1		12:40:25	12:44:12	0:03:47	0:10:16	
18	1		10:49:25	10:55:45	0:06:20	0:04:59		18	1		12:50:49	12:56:40	0:05:51	0:06:37	
19	1		11:39:02	11:43:24	0:04:22	0:43:17		19	1	***	13:39:59	13:41:57	0:01:58	0:43:19	
20	1		11:51:52	11:59:37	0:07:45	0:08:28		20	1	***	13:45:00	13:46:22	0:01:22	0:03:03	
21	1		12:11:19	12:38:15	0:26:56	0:11:42		21	1		13:49:37	13:54:16	0:04:39	0:03:15	
22	1		13:07:33	13:13:05	0:05:32	0:29:18		22	2	**	14:05:33	14:22:08	0:16:35	0:11:17	
23	1		13:41:01	13:46:30	0:05:29	0:27:56		23	2	**	15:16:43	15:39:50	0:23:07	0:54:35	
24	1	***	13:50:51	13:51:34	0:00:43	0:04:21		24	1	***	15:49:40	15:50:49	0:01:09	0:09:50	
25	1	***	13:55:15	13:56:04	0:00:49	0:03:41		25	1		16:49:26	16:51:21	0:01:55	0:58:37	
26	1		14:15:24	14:21:59	0:06:35	0:19:20		26	1		17:46:05	17:53:20	0:07:15	0:54:44	
27	1		14:47:02	14:52:34	0:05:32	0:25:03		27	1		18:01:48	18:07:24	0:05:36	0:08:28	
28	1		15:29:23	15:41:21	0:11:58	0:36:49		28	1		18:46:58	18:49:28	0:02:30	0:39:34	
29	1		16:18:30	16:22:26	0:03:56	0:37:09		29	1		19:37:33	19:45:52	0:08:19	0:48:05	
30	1		16:45:02	16:47:16	0:02:14	0:22:36		30	4	**	19:54:29	20:27:02	0:32:33	0:08:37	
31	1		16:59:06	17:17:35	0:18:29	0:11:50		31	1	***	20:38:13	20:38:44	0:00:31	0:11:11	
32	1		17:21:47	17:26:57	0:05:10	0:04:12		32	1		20:39:32	20:44:34	0:05:02	0:00:48	
33	1		17:32:34	17:33:12	0:00:38	0:05:37		33	1		20:49:31	20:57:39	0:08:08	0:04:57	
34	1		18:03:03	18:10:20	0:07:17	0:29:51		34	1		21:48:13	21:58:50	0:10:37	0:50:34	
35	1	***	18:29:51	18:30:20	0:00:29	0:19:31		35	1		22:05:39	22:10:16	0:04:37	0:06:49	
36	1		18:35:28	18:40:11	0:04:43	0:05:08		36	3		22:11:00	22:21:46	0:10:46	0:00:44	
37	1		18:54:28	19:00:20	0:05:52	0:14:17		37	1		22:29:45	22:35:05	0:05:20	0:07:59	
38	1		19:08:35	19:16:26	0:07:51	0:08:15		38	1		22:42:41	22:47:44	0:05:03	0:07:36	
39	2	**	20:05:42	20:53:22	0:47:40	0:49:16		39	1		22:51:55	23:00:21	0:08:26	0:04:11	
40	1		20:59:35	21:18:42	0:19:07	0:06:13		40	1		23:15:28	23:17:35	0:02:07	0:15:07	
41	3	**	21:19:07	22:08:42	0:49:35	0:00:25		41	1		23:59:50	0:00:00	0:00:10	0:42:15	
42	1		22:43:51	23:03:29	0:19:38	0:35:09		42							
43	1		23:24:51	23:27:07	0:02:16	0:21:22		43							
44	1	*	23:47:29	0:00:00	0:12:31	0:20:22		44							
45								45							
46								46							
47								47							
48								48							
49								49							
50								50							

Wednesday August 9th	Closure Duration	Gap between Closures
Total Closure Time:	7:14:40	16:27:18
Average:	0:09:53	0:22:58
Median:	0:06:03	0:19:31
Max:	0:49:35	1:26:24
Min:	0:00:29	0:00:25
Closure Events:	44	
# of Trains:	48	

Note:

\*

Last RXR Crossing closure continued to next day.

\*\* RXR Crossing Closure while multiple trains pass.

\*\*\* Engine Only causing RxR Crossing Closure.

Thursday August 10th	Closure Duration	Gap between Closures
Total Closure Time:	7:00:49	16:59:11
Average:	0:10:16	0:25:29
Median:	0:06:12	0:10:03
Max:	1:06:35	2:16:48
Min:	0:00:10	0:00:27
Closure Events:	41	
# of Trains:	51	

Note:

\* Road Closure started the day before an/or Road Closure continue to next day.

\*\* RXR Crossing Closure while multiple trains pass.

\*\*\* Engine Only and/or Maintenance Crew Equipment causing RxR Crossing Closure.



Events	60 Trains Pre Day Friday August 11th						Gap between Closures	Events	49 Trains Pre Day Saturday August 12th						Gap between Closures
	Trains	Note	Time Start	Time End	Closure Duration	Trains			Note	Time Start	Time End	Closure Duration			
1	1	*	0:00:00	0:08:01	0:08:01			1	2	* & **	0:00:00	0:29:49	0:29:49		
2	1		0:14:32	0:16:43	0:02:11	0:06:31		2	1		0:40:39	0:51:55	0:11:16	0:10:50	
3	1		0:26:09	0:32:53	0:06:44	0:09:26		3	1		1:33:32	1:39:39	0:06:07	0:41:37	
4	1		0:36:22	0:58:26	0:22:04	0:03:29		4	1		1:46:15	1:50:59	0:04:44	0:06:36	
5	2	**	1:07:14	1:32:53	0:25:39	0:08:48		5	1		1:52:35	2:02:18	0:09:43	0:01:36	
6	1		1:38:35	1:46:12	0:07:37	0:05:42		6	1		2:08:26	2:18:01	0:09:35	0:06:08	
7	1		1:47:52	1:55:09	0:07:17	0:01:40		7	2	**	2:25:57	2:55:12	0:29:15	0:07:56	
8	1		2:15:14	2:23:22	0:08:08	0:20:05		8	1		3:02:58	3:14:00	0:11:02	0:07:46	
9	1		2:26:48	2:31:03	0:04:15	0:03:26		9	1		3:34:56	3:45:35	0:10:39	0:20:56	
10	1		3:08:06	3:32:29	0:24:23	0:37:03		10	2	**	3:48:40	4:36:39	0:47:59	0:03:05	
11	1		4:27:35	4:38:12	0:10:37	0:55:06		11	1		5:04:23	5:09:40	0:05:17	0:27:44	
12	1		5:03:25	5:15:34	0:12:09	0:25:13		12	1		6:20:27	6:28:54	0:08:27	1:10:47	
13	1		5:37:05	5:45:27	0:08:22	0:21:31		13	1		6:59:39	7:11:47	0:12:08	0:30:45	
14	1		6:16:04	6:21:39	0:05:35	0:30:37		14	2	**	7:17:31	7:40:54	0:23:23	0:05:44	
15	1		6:52:44	6:54:56	0:02:12	0:31:05		15	1	***	8:45:47	8:48:05	0:02:18	1:04:53	
16	2	**	7:00:38	7:09:31	0:08:53	0:05:42		16	1	***	8:49:39	8:50:24	0:00:45	0:01:34	
17	1		7:28:58	7:36:35	0:07:37	0:19:27		17	2	**	9:14:31	9:41:56	0:27:25	0:24:07	
18	1	***	8:07:00	8:08:30	0:01:30	0:30:25		18	1		9:45:53	9:49:16	0:03:23	0:03:57	
19	1	***	8:09:09	8:11:06	0:01:57	0:00:39		19	1		9:54:09	10:08:54	0:14:45	0:04:53	
20	1	***	8:30:25	8:32:21	0:01:56	0:19:19		20	1		11:25:20	11:53:24	0:28:04	1:16:26	
21	1	***	8:36:27	8:37:24	0:00:57	0:04:06		21	2	**	12:20:07	12:37:07	0:17:00	0:26:43	
22	1		9:19:08	9:29:40	0:10:32	0:41:44		22	1		12:43:58	12:58:09	0:14:11	0:06:51	
23	2		10:10:25	10:40:34	0:30:09	0:40:45		23	1		13:04:05	13:18:34	0:14:29	0:05:56	
24	1	***	11:53:04	11:57:15	0:04:11	1:12:30		24	3	**	13:30:54	15:10:15	1:39:21	0:12:20	
25	1	***	12:01:12	12:01:52	0:00:40	0:03:57		25	2	**	15:27:25	15:39:20	0:11:55	0:17:10	
26	1	***	12:09:02	12:10:10	0:01:08	0:07:10		26	1		15:59:47	16:03:54	0:04:07	0:20:27	
27	1	***	12:26:14	12:27:25	0:01:11	0:16:04		27	1		16:33:21	16:39:42	0:06:21	0:29:27	
28	2	**	14:14:12	14:23:24	0:09:12	1:46:47		28	1		17:03:36	17:07:20	0:03:44	0:23:54	
29	1		14:46:24	14:52:30	0:06:06	0:23:00		29	1		17:10:55	17:49:30	0:38:35	0:03:35	
30	1		14:57:09	15:03:48	0:06:39	0:04:39		30	1		18:11:21	18:32:26	0:21:05	0:21:51	
31	1		15:11:49	15:17:57	0:06:08	0:08:01		31	3	**	19:13:35	19:56:07	0:42:32	0:41:09	
32	1		15:20:49	15:27:08	0:06:19	0:02:52		32	1		21:23:28	21:27:35	0:04:07	1:27:21	
33	1		15:44:09	15:49:39	0:05:30	0:17:01		33	1	***	21:53:11	21:54:15	0:01:04	0:25:36	
34	3	**	15:55:25	16:26:59	0:31:34	0:05:46		34	1	***	21:56:02	21:56:42	0:00:40	0:01:47	
35	2	**	16:39:58	16:54:28	0:14:30	0:12:59		35	2	**	22:58:30	23:12:24	0:13:54	1:01:48	
36	1		17:33:02	17:41:48	0:08:46	0:38:34		36	2	**	23:48:45	23:57:27	0:08:42	0:36:21	
37	2	**	18:18:27	19:00:32	0:42:05	0:36:39		37							
38	1		19:04:34	19:10:59	0:06:25	0:04:02		38							
39	2	**	19:16:05	19:35:56	0:19:51	0:05:06		39							
40	1		19:40:22	19:42:57	0:02:35	0:04:26		40							
41	3	**	19:58:39	20:16:20	0:17:41	0:15:42		41							
42	1		21:08:30	21:10:06	0:01:36	0:52:10		42							
43	1		21:26:53	21:33:31	0:06:38	0:16:47		43							
44	2	**	22:13:10	22:22:27	0:09:17	0:39:39		44							
45	1		22:27:16	23:17:08	0:49:52	0:04:49		45							
46	1		23:29:01	23:30:34	0:01:33	0:11:53		46							
47	2	* & **	23:56:22	0:00:00	0:03:38	0:25:48		47							
48								48							
49								49							
50								50							

Friday August 11th		Gap between Closures	
Total Closure Time:	8:01:50	15:58:10	
Average:	0:10:15	0:20:50	
Median:	0:06:44	0:15:53	
Max:	0:49:52	1:46:47	
Min:	0:00:40	0:00:39	
Closure Events:	47		
# of Trains:	60		

Note:

- \* Road Closure started the day before an/or Road Closure continue to next day.
- \*\* RXR Crossing Closure while multiple trains pass.
- \*\*\* Engine Only and/or Maintenance Crew Equipment causing RxR Crossing Closure.

Saturday August 12th		Gap between Closures	
Total Closure Time:	9:57:51	13:59:36	
Average:	0:16:36	0:23:59	
Median:	0:11:09	0:20:27	
Max:	1:39:21	1:27:21	
Min:	0:00:40	0:01:34	
Closure Events:	36		
# of Trains:	49		

Note:

- \* Road Closure started the day before an/or Road Closure continue to next day.
- \*\* RXR Crossing Closure while multiple trains pass.
- \*\*\* Engine Only and/or Maintenance Crew Equipment causing RxR Crossing Closure.

	47 Trains Pre Day			Sunday	August 13th	Gap between
Events	Trains	Note	Time Start	Time End	Closure Duration	Closures
1	1		0:06:03	1:24:24	1:18:21	
2	1		2:32:45	2:44:00	0:11:15	1:08:21
3	1		2:58:47	3:02:39	0:03:52	0:14:47
4	1		3:57:26	4:15:22	0:17:56	0:54:47
5	1	***	4:38:34	4:41:54	0:03:20	0:23:12
6	1		4:51:21	5:04:33	0:13:12	0:09:27
7	2		5:53:08	6:06:28	0:13:20	0:48:35
8	1		6:10:35	6:20:12	0:09:37	0:04:07
9	1		6:28:21	6:32:02	0:03:41	0:08:09
10	1		7:09:48	7:19:58	0:10:10	0:37:46
11	1		7:51:12	7:57:02	0:05:50	0:31:14
12	1		8:11:17	8:15:09	0:03:52	0:14:15
13	1		8:21:55	8:25:08	0:03:13	0:06:46
14	1		8:38:53	8:42:57	0:04:04	0:13:45
15	1		10:11:40	10:18:18	0:06:38	1:28:43
16	1		10:32:49	10:36:39	0:03:50	0:14:31
17	1		10:39:55	10:43:52	0:03:57	0:03:16
18	1		11:02:39	11:09:54	0:07:15	0:18:47
19	1		11:19:28	11:26:37	0:07:09	0:09:34
20	1		11:32:46	11:39:59	0:07:13	0:06:09
21	1		12:07:21	12:15:32	0:08:11	0:27:22
22	1		12:16:32	12:22:33	0:06:01	0:01:00
23	2	**	12:24:46	12:35:05	0:10:19	0:02:13
24	1		12:53:15	13:00:38	0:07:23	0:18:10
25	2	**	13:02:18	13:38:56	0:36:38	0:01:40
26	2	**	16:07:20	16:27:18	0:19:58	2:28:24
27	1		16:41:49	17:00:39	0:18:50	0:14:31
28	2	**	17:47:21	18:14:32	0:27:11	0:46:42
29	2	**	18:44:24	19:07:30	0:23:06	0:29:52
30	1		19:10:12	19:16:04	0:05:52	0:02:42
31	1		19:25:49	19:34:18	0:08:29	0:09:45
32	2	**	19:39:18	19:57:17	0:17:59	0:05:00
33	1		20:07:54	20:11:35	0:03:41	0:10:37
34	1		20:16:06	20:21:02	0:04:56	0:04:31
35	1		20:24:45	20:31:31	0:06:46	0:03:43
36	1		21:12:28	21:19:22	0:06:54	0:40:57
37	2	**	21:39:25	21:52:49	0:13:24	0:20:03
38	1		23:28:21	23:36:37	0:08:16	1:35:32
39	1		23:37:29	23:41:46	0:04:17	0:00:52
40						
41						
42						
43						
44						
45						
46						
47						
48						
49						
50						

Sunday August 13th		Gap between
Closure Duration	Closures	
Total Closure Time:	7:35:56	15:59:47
Average:	0:11:41	0:25:15
Median:	0:07:15	0:14:23
Max:	1:18:21	2:28:24
Min:	0:03:13	0:00:52
Closure Events:	39	
# of Trains:	47	

Note:

- \* Road Closure started the day before an/or Road Closure continue to next day.
- \*\* RXR Crossing Closure while multiple trains pass.
- \*\*\* Engine Only and/or Maintenance Crew Equipment causing RxR Crossing Closure.
























## APPENDIX I. FUTURE (2030) BUILD ALTERNATIVE LEVEL OF SERVICE WORKSHEETS

## Queues

2030 Build

## 1: Southwest Dr &amp; Lincolnway

AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	180	40	70	195	20	30	5	55	10	5	10
Future Volume (vph)	20	180	40	70	195	20	30	5	55	10	5	10
Satd. Flow (prot)	1703	3505	1509	1703	3413	0	1626	1539	0	1583	1173	0
Flt Permitted	0.576			0.608			0.582			0.709		
Satd. Flow (perm)	1032	3505	1509	1090	3413	0	996	1539	0	1182	1173	0
Satd. Flow (RTOR)			140		24			67			13	
Lane Group Flow (vph)	26	231	51	93	287	0	37	73	0	13	20	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	2	2	2	6	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0		5.0	4.0		4.0	4.0	
Minimum Split (s)	20.3	20.3	20.3	21.3	21.3		9.5	8.2		8.2	8.2	
Total Split (s)	32.0	32.0	32.0	32.0	32.0		13.0	25.0		12.0	12.0	
Total Split (%)	53.3%	53.3%	53.3%	53.3%	53.3%		21.7%	41.7%		20.0%	20.0%	
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		3.5	3.2		3.2	3.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.3	5.3	5.3	5.3	5.3		4.5	4.2		4.2	4.2	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Recall Mode	Max	Max	Max	Max	Max		None	Max		Max	Max	
Act Effect Green (s)	26.7	26.7	26.7	26.7	26.7		20.5	20.8		16.1	16.1	
Actuated g/C Ratio	0.47	0.47	0.47	0.47	0.47		0.36	0.36		0.28	0.28	
v/c Ratio	0.05	0.14	0.07	0.18	0.18		0.09	0.12		0.04	0.06	
Control Delay	8.7	8.9	0.1	10.0	8.4		12.6	4.9		20.0	14.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	8.7	8.9	0.1	10.0	8.4		12.6	4.9		20.0	14.3	
LOS	A	A	A	B	A		B	A		B	B	
Approach Delay		7.5			8.8			7.5			16.5	
Approach LOS		A			A			A			B	

## Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 57

Natural Cycle: 45

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.18

Intersection Signal Delay: 8.4

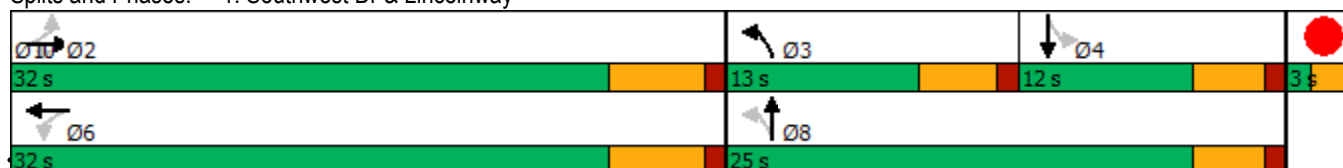
Intersection LOS: A




Intersection Capacity Utilization 45.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: Southwest Dr &amp; Lincolnway






Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	10	25	75	90	25
Future Vol, veh/h	15	10	25	75	90	25
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	21	29	0	3	7	5
Mvmt Flow	19	13	31	94	113	31

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	285	129	144	0	-	0
Stage 1	129	-	-	-	-	-
Stage 2	156	-	-	-	-	-
Critical Hdwy	6.61	6.49	4.1	-	-	-
Critical Hdwy Stg 1	5.61	-	-	-	-	-
Critical Hdwy Stg 2	5.61	-	-	-	-	-
Follow-up Hdwy	3.689	3.561	2.2	-	-	-
Pot Cap-1 Maneuver	667	853	1451	-	-	-
Stage 1	852	-	-	-	-	-
Stage 2	828	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	652	853	1451	-	-	-
Mov Cap-2 Maneuver	652	-	-	-	-	-
Stage 1	832	-	-	-	-	-
Stage 2	828	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	1.9	0
HCM LOS	B		






Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1451	-	720	-	-
HCM Lane V/C Ratio	0.022	-	0.043	-	-
HCM Control Delay (s)	7.5	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection						
Int Delay, s/veh	3.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	35	20	30	65	70	30
Future Vol, veh/h	35	20	30	65	70	30
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	4	21	3	0	13	4
Mvmt Flow	39	22	34	73	79	34

Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	237	96	113	0	-	0
Stage 1	96	-	-	-	-	-
Stage 2	141	-	-	-	-	-
Critical Hdwy	6.44	6.41	4.13	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.489	2.227	-	-	-
Pot Cap-1 Maneuver	747	911	1470	-	-	-
Stage 1	923	-	-	-	-	-
Stage 2	881	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	729	911	1470	-	-	-
Mov Cap-2 Maneuver	729	-	-	-	-	-
Stage 1	901	-	-	-	-	-
Stage 2	881	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	2.4	0
HCM LOS	B		






Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1470	-	786	-	-
HCM Lane V/C Ratio	0.023	-	0.079	-	-
HCM Control Delay (s)	7.5	0	10	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	55	355	380	5	35	20
Future Vol, veh/h	55	355	380	5	35	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	75	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	81	81	75	75
Heavy Vehicles, %	9	4	7	3	9	24
Mvmt Flow	65	423	469	6	47	27
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	475	0	-	0	1025	238
Stage 1	-	-	-	-	472	-
Stage 2	-	-	-	-	553	-
Critical Hdwy	4.235	-	-	-	6.735	7.26
Critical Hdwy Stg 1	-	-	-	-	5.935	-
Critical Hdwy Stg 2	-	-	-	-	5.535	-
Follow-up Hdwy	2.2855	-	-	-	3.5855	3.528
Pot Cap-1 Maneuver	1043	-	-	-	235	708
Stage 1	-	-	-	-	578	-
Stage 2	-	-	-	-	558	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1043	-	-	-	220	708
Mov Cap-2 Maneuver	-	-	-	-	220	-
Stage 1	-	-	-	-	542	-
Stage 2	-	-	-	-	558	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.2	0		20.1		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1043	-	-	-	220	708
HCM Lane V/C Ratio	0.063	-	-	-	0.212	0.038
HCM Control Delay (s)	8.7	-	-	-	25.7	10.3
HCM Lane LOS	A	-	-	-	D	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.8	0.1

Intersection												
Int Delay, s/veh	9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↱			↰		↰		↱		↰	
Traffic Vol, veh/h	0	0	45	10	0	0	55	0	5	0	0	0
Future Vol, veh/h	0	0	45	10	0	0	55	0	5	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	75	75	75	88	88	88	75	75	75
Heavy Vehicles, %	18	0	78	0	0	0	64	3	0	0	14	50
Mvmt Flow	0	0	52	13	0	0	63	0	6	0	0	0
Major/Minor	Minor2		Minor1				Major2					
Conflicting Flow All	-	1	1	27	1	-				-	-	0
Stage 1	-	1	-	0	0	-				-	-	-
Stage 2	-	0	-	27	1	-				-	-	-
Critical Hdwy	-	6.5	6.98	7.1	6.5	-				-	-	-
Critical Hdwy Stg 1	-	5.5	-	-	-	-				-	-	-
Critical Hdwy Stg 2	-	-	-	6.1	5.5	-				-	-	-
Follow-up Hdwy	-	4	4.002	3.5	4	-				-	-	-
Pot Cap-1 Maneuver	0	899	898	988	899	0				0	-	0
Stage 1	0	899	-	-	-	0				0	-	0
Stage 2	0	-	-	996	899	0				0	-	0
Platoon blocked, %											-	
Mov Cap-1 Maneuver	-	899	898	931	899	-				-	-	-
Mov Cap-2 Maneuver	-	899	-	931	899	-				-	-	-
Stage 1	-	899	-	-	-	-				-	-	-
Stage 2	-	-	-	938	899	-				-	-	-
Approach	EB		WB				SB					
HCM Control Delay, s	9.3		8.9				0					
HCM LOS	A		A									
Minor Lane/Major Mvmt	EBLn1WBLn1		SBT									
Capacity (veh/h)	898		931		-							
HCM Lane V/C Ratio	0.058		0.014		-							
HCM Control Delay (s)	9.3		8.9		-							
HCM Lane LOS	A		A		-							
HCM 95th %tile Q(veh)	0.2		0		-							



Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↕			↕				↗
Traffic Vol, veh/h	0	385	65	20	355	25	65	5	25	0	0	35
Future Vol, veh/h	0	385	65	20	355	25	65	5	25	0	0	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	89	89	89	89	89	89	75	75	75
Heavy Vehicles, %	12	16	36	30	13	7	46	67	36	25	0	14
Mvmt Flow	0	513	87	22	399	28	73	6	28	0	0	47
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	600	0	0	757	984	513	-	-	214
Stage 1	-	-	-	-	-	-	513	513	-	-	-	-
Stage 2	-	-	-	-	-	-	244	471	-	-	-	-
Critical Hdwy	-	-	-	4.55	-	-	7.99	7.505	6.74	-	-	7.11
Critical Hdwy Stg 1	-	-	-	-	-	-	6.79	6.505	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.19	6.505	-	-	-	-
Follow-up Hdwy	-	-	-	2.485	-	-	3.937	4.6365	3.642	-	-	3.433
Pot Cap-1 Maneuver	0	-	-	829	-	-	251	176	485	0	0	760
Stage 1	0	-	-	-	-	-	454	420	-	0	0	-
Stage 2	0	-	-	-	-	-	640	442	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	829	-	-	229	170	485	-	-	760
Mov Cap-2 Maneuver	-	-	-	-	-	-	229	170	-	-	-	-
Stage 1	-	-	-	-	-	-	454	420	-	-	-	-
Stage 2	-	-	-	-	-	-	580	427	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.6			28.2			10		
HCM LOS							D			B		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1					
Capacity (veh/h)	260	-	-	829	-	-	760					
HCM Lane V/C Ratio	0.411	-	-	0.027	-	-	0.061					
HCM Control Delay (s)	28.2	-	-	9.5	0.1	-	10					
HCM Lane LOS	D	-	-	A	A	-	B					
HCM 95th %tile Q(veh)	1.9	-	-	0.1	-	-	0.2					

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	60	330	330	30	30	55
Future Vol, veh/h	60	330	330	30	30	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	65	359	359	33	33	60
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	392	0	-	0	865	376
Stage 1	-	-	-	-	376	-
Stage 2	-	-	-	-	489	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1167	-	-	-	324	670
Stage 1	-	-	-	-	694	-
Stage 2	-	-	-	-	616	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1167	-	-	-	306	670
Mov Cap-2 Maneuver	-	-	-	-	306	-
Stage 1	-	-	-	-	655	-
Stage 2	-	-	-	-	616	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.3	0		13.5		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1167	-	-	-	306	670
HCM Lane V/C Ratio	0.056	-	-	-	0.107	0.089
HCM Control Delay (s)	8.3	-	-	-	18.2	10.9
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.4	0.3























Intersection						
Int Delay, s/veh	0.3					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↑	↑		↑	
Traffic Vol, veh/h	0	90	85	5	5	0
Future Vol, veh/h	0	90	85	5	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	98	92	5	5	0
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	-	0	-	0	193	-
Stage 1	-	-	-	-	95	-
Stage 2	-	-	-	-	98	-
Critical Hdwy	-	-	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	-	-	796	0
Stage 1	0	-	-	-	929	0
Stage 2	0	-	-	-	926	0
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	796	-
Mov Cap-2 Maneuver	-	-	-	-	796	-
Stage 1	-	-	-	-	929	-
Stage 2	-	-	-	-	926	-
Approach	NB	SB		NE		
HCM Control Delay, s	0	0		9.6		
HCM LOS	A					
Minor Lane/Major Mvmt	NELn1	NBT	SBT	SBR		
Capacity (veh/h)	796	-	-	-		
HCM Lane V/C Ratio	0.007	-	-	-		
HCM Control Delay (s)	9.6	-	-	-		
HCM Lane LOS	A	-	-	-		
HCM 95th %tile Q(veh)	0	-	-	-		

## Queues

2030 Build

## 1: Southwest Dr &amp; Lincolnway

Midday Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	245	35	85	245	30	35	5	65	20	5	10
Future Volume (vph)	20	245	35	85	245	30	35	5	65	20	5	10
Satd. Flow (prot)	1378	3471	1538	1805	3412	0	1805	1592	0	1641	1716	0
Flt Permitted	0.566			0.554			0.583			0.696		
Satd. Flow (perm)	821	3471	1538	1053	3412	0	1108	1592	0	1202	1716	0
Satd. Flow (RTOR)			140		28			87			11	
Lane Group Flow (vph)	27	327	47	94	305	0	47	94	0	23	17	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	2	2	2	6	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0		5.0	4.0		4.0	4.0	
Minimum Split (s)	20.3	20.3	20.3	21.3	21.3		9.5	8.2		8.2	8.2	
Total Split (s)	32.0	32.0	32.0	32.0	32.0		13.0	25.0		12.0	12.0	
Total Split (%)	53.3%	53.3%	53.3%	53.3%	53.3%		21.7%	41.7%		20.0%	20.0%	
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		3.5	3.2		3.2	3.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.3	5.3	5.3	5.3	5.3		4.5	4.2		4.2	4.2	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Recall Mode	Max	Max	Max	Max	Max		None	Max		Max	Max	
Act Effect Green (s)	26.7	26.7	26.7	26.7	26.7		20.5	20.8		16.0	16.0	
Actuated g/C Ratio	0.47	0.47	0.47	0.47	0.47		0.36	0.36		0.28	0.28	
v/c Ratio	0.07	0.20	0.06	0.19	0.19		0.10	0.15		0.07	0.03	
Control Delay	9.1	9.3	0.1	10.2	8.4		12.7	4.6		20.1	14.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	9.1	9.3	0.1	10.2	8.4		12.7	4.6		20.1	14.3	
LOS	A	A	A	B	A		B	A		C	B	
Approach Delay		8.2			8.8			7.3			17.6	
Approach LOS		A			A			A			B	

## Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 57

Natural Cycle: 45

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.20

Intersection Signal Delay: 8.7

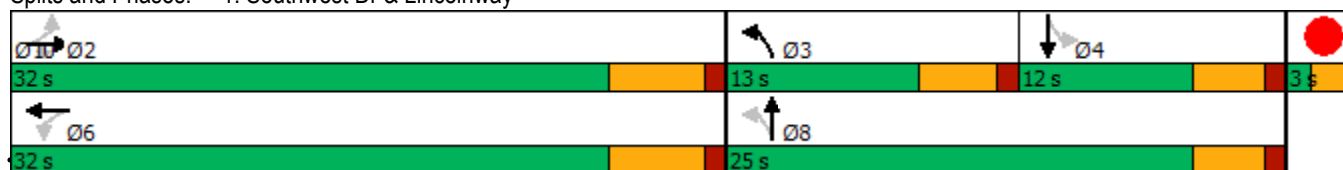
Intersection LOS: A




Intersection Capacity Utilization 45.9%




ICU Level of Service A

Analysis Period (min) 15






## Splits and Phases: 1: Southwest Dr &amp; Lincolnway



Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	10	15	85	115	10
Future Vol, veh/h	20	10	15	85	115	10
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	7	10	17	0	2	0
Mvmt Flow	22	11	17	96	129	11
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	265	135	140	0	-	0
Stage 1	135	-	-	-	-	-
Stage 2	130	-	-	-	-	-
Critical Hdwy	6.47	6.3	4.27	-	-	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-	-
Follow-up Hdwy	3.563	3.39	2.353	-	-	-
Pot Cap-1 Maneuver	713	893	1356	-	-	-
Stage 1	879	-	-	-	-	-
Stage 2	884	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	704	893	1356	-	-	-
Mov Cap-2 Maneuver	704	-	-	-	-	-
Stage 1	868	-	-	-	-	-
Stage 2	884	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	10	1.2		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1356	-	757	-	-	
HCM Lane V/C Ratio	0.012	-	0.045	-	-	
HCM Control Delay (s)	7.7	0	10	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	






Intersection						
Int Delay, s/veh	2.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	25	15	25	75	95	30
Future Vol, veh/h	25	15	25	75	95	30
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	7	0	6	4	0
Mvmt Flow	27	16	27	82	103	33
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	256	120	136	0	-	0
Stage 1	120	-	-	-	-	-
Stage 2	136	-	-	-	-	-
Critical Hdwy	6.4	6.27	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.363	2.2	-	-	-
Pot Cap-1 Maneuver	737	918	1461	-	-	-
Stage 1	910	-	-	-	-	-
Stage 2	895	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	723	918	1461	-	-	-
Mov Cap-2 Maneuver	723	-	-	-	-	-
Stage 1	893	-	-	-	-	-
Stage 2	895	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.8	1.9		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1461	-	786	-	-	
HCM Lane V/C Ratio	0.019	-	0.055	-	-	
HCM Control Delay (s)	7.5	0	9.8	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-	



Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	60	245	270	25	45	30
Future Vol, veh/h	60	245	270	25	45	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	75	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	91	91	83	83
Heavy Vehicles, %	21	4	8	16	7	29
Mvmt Flow	70	285	297	27	54	36
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	324	0	-	0	736	162
Stage 1	-	-	-	-	311	-
Stage 2	-	-	-	-	425	-
Critical Hdwy	4.415	-	-	-	6.705	7.335
Critical Hdwy Stg 1	-	-	-	-	5.905	-
Critical Hdwy Stg 2	-	-	-	-	5.505	-
Follow-up Hdwy	2.3995	-	-	-	3.5665	3.5755
Pot Cap-1 Maneuver	1121	-	-	-	361	784
Stage 1	-	-	-	-	704	-
Stage 2	-	-	-	-	646	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1121	-	-	-	339	784
Mov Cap-2 Maneuver	-	-	-	-	339	-
Stage 1	-	-	-	-	660	-
Stage 2	-	-	-	-	646	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.7	0		14.5		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1121	-	-	-	339	784
HCM Lane V/C Ratio	0.062	-	-	-	0.16	0.046
HCM Control Delay (s)	8.4	-	-	-	17.6	9.8
HCM Lane LOS	A	-	-	-	C	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0.6	0.1

Intersection												
Int Delay, s/veh	9.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↱			↱		↱		↱		↱	
Traffic Vol, veh/h	0	5	60	15	5	0	75	0	10	0	0	0
Future Vol, veh/h	0	5	60	15	5	0	75	0	10	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	75	75	75	75	75	75	88	88	88
Heavy Vehicles, %	0	0	59	0	0	0	57	2	0	0	3	0
Mvmt Flow	0	6	68	20	7	0	100	0	13	0	0	0
Major/Minor	Minor2			Minor1			Major2					
Conflicting Flow All	-	1	1	38	1	-				-	-	0
Stage 1	-	1	-	0	0	-				-	-	-
Stage 2	-	0	-	38	1	-				-	-	-
Critical Hdwy	-	6.5	6.79	7.1	6.5	-				-	-	-
Critical Hdwy Stg 1	-	5.5	-	-	-	-				-	-	-
Critical Hdwy Stg 2	-	-	-	6.1	5.5	-				-	-	-
Follow-up Hdwy	-	4	3.831	3.5	4	-				-	-	-
Pot Cap-1 Maneuver	0	899	938	972	899	0				0	-	0
Stage 1	0	899	-	-	-	0				0	-	0
Stage 2	0	-	-	982	899	0				0	-	0
Platoon blocked, %											-	
Mov Cap-1 Maneuver	-	899	938	897	899	-				-	-	-
Mov Cap-2 Maneuver	-	899	-	897	899	-				-	-	-
Stage 1	-	899	-	-	-	-				-	-	-
Stage 2	-	-	-	905	899	-				-	-	-
Approach	EB			WB			SB					
HCM Control Delay, s	9.2			9.1			0					
HCM LOS	A			A								
Minor Lane/Major Mvmt	EBLn1WBLn1			SBT								
Capacity (veh/h)	935			897								
HCM Lane V/C Ratio	0.079			0.03								
HCM Control Delay (s)	9.2			9.1								
HCM Lane LOS	A			A								
HCM 95th %tile Q(veh)	0.3			0.1								

Intersection												
Int Delay, s/veh	6.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↕			↕				↗
Traffic Vol, veh/h	0	270	115	35	250	15	125	5	35	0	0	45
Future Vol, veh/h	0	270	115	35	250	15	125	5	35	0	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	89	89	89	76	76	76	75	75	75
Heavy Vehicles, %	3	15	34	13	14	7	37	60	6	6	0	5
Mvmt Flow	0	300	128	39	281	17	164	7	46	0	0	60
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	428	0	0	519	676	300	-	-	149
Stage 1	-	-	-	-	-	-	300	300	-	-	-	-
Stage 2	-	-	-	-	-	-	219	376	-	-	-	-
Critical Hdwy	-	-	-	4.295	-	-	7.855	7.4	6.29	-	-	6.975
Critical Hdwy Stg 1	-	-	-	-	-	-	6.655	6.4	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.055	6.4	-	-	-	-
Follow-up Hdwy	-	-	-	2.3235	-	-	3.8515	4.57	3.357	-	-	3.3475
Pot Cap-1 Maneuver	0	-	-	1064	-	-	393	292	728	0	0	863
Stage 1	0	-	-	-	-	-	628	556	-	0	0	-
Stage 2	0	-	-	-	-	-	683	508	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	1064	-	-	353	279	728	-	-	863
Mov Cap-2 Maneuver	-	-	-	-	-	-	353	279	-	-	-	-
Stage 1	-	-	-	-	-	-	628	556	-	-	-	-
Stage 2	-	-	-	-	-	-	608	486	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1.1			24.9			9.5		
HCM LOS							C			A		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1					
Capacity (veh/h)	393	-	-	1064	-	-	863					
HCM Lane V/C Ratio	0.552	-	-	0.037	-	-	0.07					
HCM Control Delay (s)	24.9	-	-	8.5	0.1	-	9.5					
HCM Lane LOS	C	-	-	A	A	-	A					
HCM 95th %tile Q(veh)	3.2	-	-	0.1	-	-	0.2					

Intersection						
Int Delay, s/veh	2.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	60	230	230	35	40	65
Future Vol, veh/h	60	230	230	35	40	65
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	65	250	250	38	43	71
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	288	0	-	0	649	269
Stage 1	-	-	-	-	269	-
Stage 2	-	-	-	-	380	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1274	-	-	-	434	770
Stage 1	-	-	-	-	776	-
Stage 2	-	-	-	-	691	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1274	-	-	-	412	770
Mov Cap-2 Maneuver	-	-	-	-	412	-
Stage 1	-	-	-	-	736	-
Stage 2	-	-	-	-	691	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.7	0		11.9		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1274	-	-	-	412	770
HCM Lane V/C Ratio	0.051	-	-	-	0.106	0.092
HCM Control Delay (s)	8	-	-	-	14.8	10.1
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.4	0.3






















Intersection						
Int Delay, s/veh	0.2					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↑	↑		↑	
Traffic Vol, veh/h	0	95	105	5	5	0
Future Vol, veh/h	0	95	105	5	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	103	114	5	5	0
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	220	-
Stage 1	-	-	-	-	117	-
Stage 2	-	-	-	-	103	-
Critical Hdwy	-	-	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	-	-	768	0
Stage 1	0	-	-	-	908	0
Stage 2	0	-	-	-	921	0
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	768	-
Mov Cap-2 Maneuver	-	-	-	-	768	-
Stage 1	-	-	-	-	908	-
Stage 2	-	-	-	-	921	-
Approach	NB	SB		NE		
HCM Control Delay, s	0	0		9.7		
HCM LOS	A					
Minor Lane/Major Mvmt	NELn1	NBT	SBT	SBR		
Capacity (veh/h)	768	-	-	-		
HCM Lane V/C Ratio	0.007	-	-	-		
HCM Control Delay (s)	9.7	-	-	-		
HCM Lane LOS	A	-	-	-		
HCM 95th %tile Q(veh)	0	-	-	-		

## Queues

2030 Build

## 1: Southwest Dr &amp; Lincolnway

PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	275	30	50	295	15	30	5	85	15	5	35
Future Volume (vph)	15	275	30	50	295	15	30	5	85	15	5	35
Satd. Flow (prot)	1289	3505	1468	1805	3551	0	1805	1630	0	1805	1531	0
Flt Permitted	0.541			0.560			0.572			0.686		
Satd. Flow (perm)	734	3505	1468	1064	3551	0	1087	1630	0	1303	1531	0
Satd. Flow (RTOR)			140		11			104			47	
Lane Group Flow (vph)	17	316	34	57	352	0	37	110	0	20	54	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2		2	6			8			4		
Detector Phase	2	2	2	6	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0		5.0	4.0		4.0	4.0	
Minimum Split (s)	20.3	20.3	20.3	21.3	21.3		9.5	8.2		8.2	8.2	
Total Split (s)	31.0	31.0	31.0	31.0	31.0		12.0	26.0		14.0	14.0	
Total Split (%)	51.7%	51.7%	51.7%	51.7%	51.7%		20.0%	43.3%		23.3%	23.3%	
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		3.5	3.2		3.2	3.2	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.3	5.3	5.3	5.3	5.3		4.5	4.2		4.2	4.2	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Recall Mode	Max	Max	Max	Max	Max		None	Max		Max	Max	
Act Effect Green (s)	25.7	25.7	25.7	25.7	25.7		21.5	21.8		17.2	17.2	
Actuated g/C Ratio	0.45	0.45	0.45	0.45	0.45		0.38	0.38		0.30	0.30	
v/c Ratio	0.05	0.20	0.05	0.12	0.22		0.08	0.16		0.05	0.11	
Control Delay	9.5	9.9	0.1	10.0	9.7		11.8	4.0		18.9	9.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	9.5	9.9	0.1	10.0	9.7		11.8	4.0		18.9	9.1	
LOS	A	A	A	A	A		B	A		B	A	
Approach Delay		9.0			9.7			6.0			11.7	
Approach LOS		A			A			A			B	

## Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 57

Natural Cycle: 45

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.22

Intersection Signal Delay: 9.0

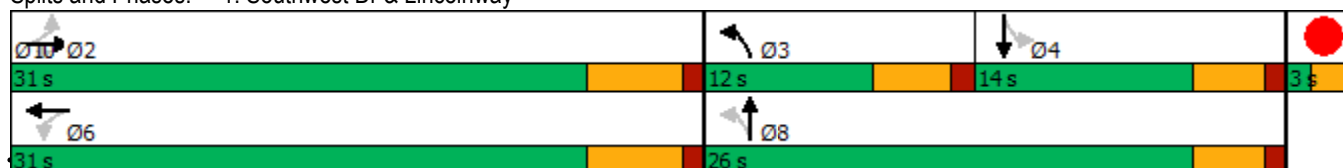
Intersection LOS: A

Intersection Capacity Utilization 45.7%




ICU Level of Service A




Analysis Period (min) 15






## Splits and Phases: 1: Southwest Dr &amp; Lincolnway





Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	15	5	90	75	10
Future Vol, veh/h	30	15	5	90	75	10
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	8	0	2	5	11
Mvmt Flow	34	17	6	101	84	11
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	203	90	95	0	-	0
Stage 1	90	-	-	-	-	-
Stage 2	113	-	-	-	-	-
Critical Hdwy	6.4	6.28	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.372	2.2	-	-	-
Pot Cap-1 Maneuver	790	951	1512	-	-	-
Stage 1	939	-	-	-	-	-
Stage 2	917	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	787	951	1512	-	-	-
Mov Cap-2 Maneuver	787	-	-	-	-	-
Stage 1	935	-	-	-	-	-
Stage 2	917	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.6	0.4		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1512	-	835	-	-	
HCM Lane V/C Ratio	0.004	-	0.061	-	-	
HCM Control Delay (s)	7.4	0	9.6	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.2	-	-	

Intersection						
Int Delay, s/veh	2.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	25	20	10	70	80	10
Future Vol, veh/h	25	20	10	70	80	10
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	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	12	14	3	4	20
Mvmt Flow	30	24	12	84	96	12
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	210	102	108	0	-	0
Stage 1	102	-	-	-	-	-
Stage 2	108	-	-	-	-	-
Critical Hdwy	6.4	6.32	4.24	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.408	2.326	-	-	-
Pot Cap-1 Maneuver	783	926	1411	-	-	-
Stage 1	927	-	-	-	-	-
Stage 2	921	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	776	926	1411	-	-	-
Mov Cap-2 Maneuver	776	-	-	-	-	-
Stage 1	919	-	-	-	-	-
Stage 2	921	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.6	0.9		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1411	-	836	-	-	
HCM Lane V/C Ratio	0.009	-	0.065	-	-	
HCM Control Delay (s)	7.6	0	9.6	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.2	-	-	

Intersection						
Int Delay, s/veh	2.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	70	305	330	20	35	30
Future Vol, veh/h	70	305	330	20	35	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	75	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	82	82	75	75
Heavy Vehicles, %	26	2	5	6	3	24
Mvmt Flow	85	372	402	24	47	40
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	426	0	-	0	956	213
Stage 1	-	-	-	-	414	-
Stage 2	-	-	-	-	542	-
Critical Hdwy	4.49	-	-	-	6.645	7.26
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.447	-	-	-	3.5285	3.528
Pot Cap-1 Maneuver	996	-	-	-	269	736
Stage 1	-	-	-	-	634	-
Stage 2	-	-	-	-	579	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	996	-	-	-	246	736
Mov Cap-2 Maneuver	-	-	-	-	246	-
Stage 1	-	-	-	-	580	-
Stage 2	-	-	-	-	579	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.7	0		17.1		
HCM LOS	C					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	996	-	-	-	246	736
HCM Lane V/C Ratio	0.086	-	-	-	0.19	0.054
HCM Control Delay (s)	9	-	-	-	23	10.2
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.7	0.2

HCM 6th TWSC  
6: Southwest Dr & Arby's Access

2030 Build  
PM Peak






Intersection												
Int Delay, s/veh	8.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗			↖		↖		↗		↖	
Traffic Vol, veh/h	0	0	55	10	0	0	75	0	15	0	0	0
Future Vol, veh/h	0	0	55	10	0	0	75	0	15	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	75	75	75	81	81	81	75	75	75
Heavy Vehicles, %	33	0	56	0	0	0	76	17	0	0	4	0
Mvmt Flow	0	0	69	13	0	0	93	0	19	0	0	0

Major/Minor	Minor2		Minor1				Major2					
Conflicting Flow All	-	1	1	36	1	-	-	-	-	-	-	0
Stage 1	-	1	-	0	0	-	-	-	-	-	-	-
Stage 2	-	0	-	36	1	-	-	-	-	-	-	-
Critical Hdwy	-	6.5	6.76	7.1	6.5	-	-	-	-	-	-	-
Critical Hdwy Stg 1	-	5.5	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	-	4	3.804	3.5	4	-	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	899	945	975	899	0	-	-	-	0	-	0
Stage 1	0	899	-	-	-	0	-	-	-	0	-	0
Stage 2	0	-	-	985	899	0	-	-	-	0	-	0
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	899	945	904	899	-	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	899	-	904	899	-	-	-	-	-	-	-
Stage 1	-	899	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	913	899	-	-	-	-	-	-	-

Approach	EB		WB				SB					
HCM Control Delay, s	9.1		9				0					
HCM LOS	A		A									

Minor Lane/Major Mvmt	EBLn1WBLn1		SBT									
Capacity (veh/h)	945 904		-									
HCM Lane V/C Ratio	0.073 0.015		-									
HCM Control Delay (s)	9.1 9		-									
HCM Lane LOS	A A		-									
HCM 95th %tile Q(veh)	0.2 0		-									

Intersection												
Int Delay, s/veh	3.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↕			↕				↗
Traffic Vol, veh/h	0	350	55	25	320	15	60	5	25	0	0	45
Future Vol, veh/h	0	350	55	25	320	15	60	5	25	0	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	75	75	75	79	79	79
Heavy Vehicles, %	7	11	48	21	9	0	42	100	24	0	0	0
Mvmt Flow	0	380	60	27	348	16	80	7	33	0	0	57
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	440	0	0	608	798	380	-	-	182
Stage 1	-	-	-	-	-	-	380	380	-	-	-	-
Stage 2	-	-	-	-	-	-	228	418	-	-	-	-
Critical Hdwy	-	-	-	4.415	-	-	7.93	8	6.56	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.73	7	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.13	7	-	-	-	-
Follow-up Hdwy	-	-	-	2.3995	-	-	3.899	4.95	3.528	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	1009	-	-	330	203	612	0	0	836
Stage 1	0	-	-	-	-	-	554	446	-	0	0	-
Stage 2	0	-	-	-	-	-	663	424	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	1009	-	-	300	196	612	-	-	836
Mov Cap-2 Maneuver	-	-	-	-	-	-	300	196	-	-	-	-
Stage 1	-	-	-	-	-	-	554	446	-	-	-	-
Stage 2	-	-	-	-	-	-	597	410	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.7			21.4			9.6		
HCM LOS							C			A		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1					
Capacity (veh/h)	338	-	-	1009	-	-	836					
HCM Lane V/C Ratio	0.355	-	-	0.027	-	-	0.068					
HCM Control Delay (s)	21.4	-	-	8.7	0.1	-	9.6					
HCM Lane LOS	C	-	-	A	A	-	A					
HCM 95th %tile Q(veh)	1.6	-	-	0.1	-	-	0.2					

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	50	290	290	25	35	60
Future Vol, veh/h	50	290	290	25	35	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	54	315	315	27	38	65
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	342	0	-	0	752	329
Stage 1	-	-	-	-	329	-
Stage 2	-	-	-	-	423	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1217	-	-	-	378	712
Stage 1	-	-	-	-	729	-
Stage 2	-	-	-	-	661	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1217	-	-	-	361	712
Mov Cap-2 Maneuver	-	-	-	-	361	-
Stage 1	-	-	-	-	697	-
Stage 2	-	-	-	-	661	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.2	0		12.6		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1217	-	-	-	361	712
HCM Lane V/C Ratio	0.045	-	-	-	0.105	0.092
HCM Control Delay (s)	8.1	-	-	-	16.1	10.6
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3	0.3

Intersection						
Int Delay, s/veh	0.3					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↑	↑		↑	
Traffic Vol, veh/h	0	75	95	5	5	0
Future Vol, veh/h	0	75	95	5	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	82	103	5	5	0
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	188	-
Stage 1	-	-	-	-	106	-
Stage 2	-	-	-	-	82	-
Critical Hdwy	-	-	-	-	6.42	-
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	-
Pot Cap-1 Maneuver	0	-	-	-	801	0
Stage 1	0	-	-	-	918	0
Stage 2	0	-	-	-	941	0
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	801	-
Mov Cap-2 Maneuver	-	-	-	-	801	-
Stage 1	-	-	-	-	918	-
Stage 2	-	-	-	-	941	-
Approach	NB		SB		NE	
HCM Control Delay, s	0		0		9.5	
HCM LOS					A	
Minor Lane/Major Mvmt	NELn1	NBT	SBT	SBR		
Capacity (veh/h)	801	-	-	-		
HCM Lane V/C Ratio	0.007	-	-	-		
HCM Control Delay (s)	9.5	-	-	-		
HCM Lane LOS	A	-	-	-		
HCM 95th %tile Q(veh)	0	-	-	-		



# APPENDIX V

## STORM DRAINAGE STUDY



## Final S.W. Drive Corridor Storm Drainage Study



*Prepared for:*

BenchMark Engineers, PC  
1920 Thomes Avenue, Suite 320  
Cheyenne, Wyoming 82001

*January 2024*



January 16, 2024

Mr. Ryan Rasmussen, PE  
Project Manager  
BenchMark Engineers, PC  
1920 Thomes Avenue, Suite 200  
Cheyenne, WY 82001

**RE: Final Drainage Study for the S.W. Drive Corridor**

Dear Ryan:

GLM Design Group, LLC is pleased to submit the final drainage study for the S.W. Drive Corridor Study. The final study provides a conceptual drainage plan for the corridor and contributing drainage basins. We have also evaluated downstream discharge points for both the existing and proposed conditions.

The intent of this report is to provide a practical direction for stormwater conveyance for the S.W. Drive corridor along with a discussion of constraints and potential downstream impacts.

If you should have any questions or comments as you review this report, please feel free to contact me at your convenience.

Sincerely,

A handwritten signature in blue ink that reads "Gene MacDonald".

Gene L. MacDonald, PE  
Managing Principal  
**GLM Design Group, LLC**



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## APPENDICES

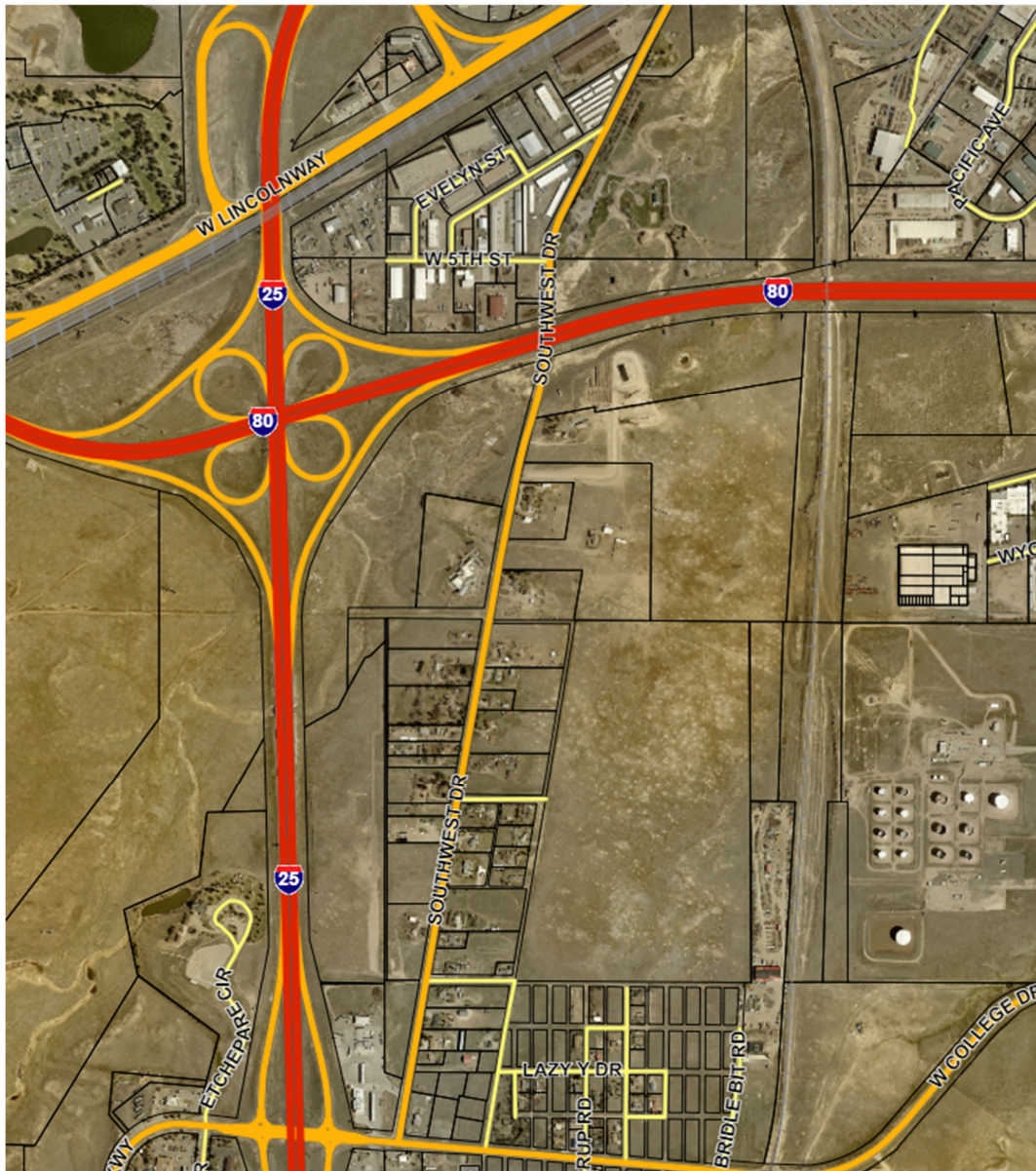
APPENDIX A - SWMM Drainage Model Input Data and Output Summaries



## I. General Location and Description

### A. Location

Storm drainage has been an issue within the S.W. Drive corridor and the adjacent Broken Arrow Rd. corridor due to inadequate drainage conveyance and a lack of good conveyance paths to Clear Creek. Older residential neighborhoods along Broken Arrow Rd. to the east of S.W. Drive have been impacted by poor drainage for decades, with the problem being exacerbated somewhat by development along College Drive.



*Figure 1. Vicinity Map*

### **Description of Project Corridor**

Currently, borrow ditches in the County section of the project area are not well maintained and do not have effective discharge points when they are flowing. Effective conveyance of stormwater runoff to the receiving Clear Creek drainage is problematic for the existing conditions, particularly for the Broken Arrow Rd. corridor. The conceptual design efforts have included an evaluation of effective conveyance routes to Clear Creek as appropriate for the proposed reconstruction of both the S.W. Drive and Broken Arrow Rd. corridors.

The Southwest Drive corridor is a well-travelled route with existing roadway surfaces in fair to poor condition. Southwest Drive is a two-lane collector roadway with storm drainage runoff managed by borrow ditches on either side of the roadway with culverts under drive approaches that are in poor maintained condition. The Broken Arrow Road corridor to the east is an unimproved dirt road where storm drainage conveyance consists of a series of ponded areas where runoff seeps into the ground or, in larger events, overtops and continues towards Clear Creek to the north.

Over the last two decades, the developments along West College Drive have added additional drainage concerns to both corridors. Anticipated development adjacent to Broken Arrow Rd. will only increase this impact. The following is a summary of the existing conditions:

*Grades* – In general, both corridors drain to the north within poorly maintained or nonexistent borrow ditches along moderate to flat grades.

*Soil Type* – in general, NRCS hydrologic soil group (HSG) B is the predominant soil condition. HSG D is predominant within the Clear Creek floodplain. The project area generally consists of Urban Land-Evanston Complex, a deep and well-drained soil, Proposhia-Trimad Complex at the border of the Clear Creek floodplain, and Merdan Silty Clay Loam located within the Clear Creek floodplain and formed in silty alluvium.

*Storm Drainage Facilities* – There are no existing storm drainage facilities in either corridor south of Clear Creek other than drive approach culverts primarily in the S.W. Drive corridor. North of I-80, there are culvert crossings at North American Rd. and just north of I-80.

### **B. Description of Overall Project Improvements**

The project corridor is proposed to be updated to a two-lane Collector Road for Broken Arrow and a two-lane rural Local Road for S.W. Drive south of Clear Creek. A complete streets design will be used for the Broken Arrow corridor while a rural feeling will be maintained for S.W. Drive south of the creek. Improved outfalls to Clear Creek are proposed for both the upper end of the rural section of S.W. Drive corridor and for the Broken Arrow Corridor as it transitions back into S.W. Drive north of Clear Creek.

## **II. Drainage Basins and Sub-Basins**

### **A. Major Basin Description**

The project area is in the Clear Creek Drainage Basin. Clear Creek is a tributary of Crow Creek and has a drainage area of 24.0 square miles. Approximately 85% of the Clear Creek Basin is rural and located upstream of I-25. The Clear Creek channel crosses S.W. Drive immediately downstream of I-80. S.W.

Drive was identified as a high life-safety area in the 1988 Clear Creek Drainage Master Plan Report due to overtopping depths of 3.5-feet for less frequent flood events. Additional berms along with an extension of the existing culvert was a recommendation of the 1988 report. Given the rural characteristics of the drainage basin upstream of S.W. Drive, this report does not address the potential Clear Creek overtopping of S.W. Drive. Improvements to this structure could very well be cost-effective and eligible for outside funding under the Stafford Act but should be more appropriately addressed as a separate project.

The downstream BNSF Railroad embankment creates an approximate 750 Ac-ft storage volume that backs flow up through the I-80 culverts for less frequent flood events. This sump condition can impact conveyance of flow from S.W. Drive and sub-basins west of S.W. Drive into Clear Creek north of I-80. During times of significant impoundment of water up against the BNSF Railroad embankment, stormwater can overtop and inundate S.W. Drive between I-80 and the Union Pacific Railroad crossing.

There is adequate capacity within the Clear Creek channel Clear Creek Park at this location for stormwater discharge from the project corridor and adjacent sub-basins for the more frequent storm events. The existing constraint revolves around insufficient conveyance capacities for the BNSF Railroad culvert for the less frequent flood events. The SWMM, Version 5.1.015 software model was used to model both the proposed conditions for the S.W. Drive and Broken Arrow Rd. corridors and adjacent drainage sub-basins. The SWMM model evaluates 72 sub-basins, developing peak discharges for analysis of the recommended storm drainage systems for the corridors.

The Clear Creek Basin has historically been evaluated using a 4-hour design storm interpolated from the 2-hour and 24-hour data developed by J.B. Lindner-Lunsford (1987). The Lindner-Lunsford study remains the basis for the design storms used in studies for the City of Cheyenne. For this report, we have elected to use a more conservative 2-hour design storm as the study corridors form the boundary between the rural and urbanized portions of the Clear Creek Basin.

## **B. Pre-Project Drainage Patterns**

Runoff from adjacent corridor sub-basins and an estimate of flow conditions for the existing borrow ditches were evaluated in the project SWMM model. Existing conditions were noted for both the S.W. Drive and Broken Arrow Rd. corridors. A lack of overall maintenance of the county borrow ditches has limited conveyance capacities. This is particularly true of the Broken Arrow Rd. corridor where a conveyance path to Clear Creek is problematic due to ponded conditions within the corridor. North of I-80 street conveyance is impacted by a flat road grade with ponding occurring at 5<sup>th</sup> Street and at North American Drive.

# **III. Drainage Design Criteria**

## **A. Guidelines for Corridor Update**

Our design approach meets the proposed design standards as set forth for the S.W. Drive Corridor Plan by the BenchMark Engineer's project team. We are basing our proposed conditions model on a 70' to 80' ROW with a 48' back-of-curb to back-of-curb roadway section. The proposed model incorporates curb and gutter along with storm sewer for the two-lane collector roadway section Broken Arrow Rd. into S.W. Drive. Borrow ditches are incorporated for conveyance of flow for the rural S.W. Drive road section.



## B. Development of Design Models

We are incorporating the EPA SWMM, Version 5.1.015 modeling software to model both the proposed conditions for the corridor and adjacent sub-basins.

## C. Hydrological Criteria

Development (Type)	Minor Storm Design	Major Storm Design
Infrastructure	10-Year	100-Year

The proposed new conveyance elements, including water quality allowances and downstream mitigation, will be designed using the US EPA Stormwater Management Model (SWMM, ver. 5.1.015) software.

EPA SWMM sub-catchment rainfall-to-runoff algorithms and dynamic wave routing within the SWMM model were used to address interconnections and interactions between all collection, conveyance, storage, and regulatory elements.

## IV. Drainage Facility Design

### A. Preliminary Drainage Plan Overview

The design approach for selecting cost-efficient storm drainage facilities for the proposed conditions was to Provide effective conveyance for both Broken Arrow Rd. and southern S.W. Drive corridors to Clear Creek. North of I-80, accommodations were made to better convey flow into the Clear Creek Park open spaces. Our SWMM modeling indicates that for proposed corridor conditions, we can conveyance requirements for major collector and rural roadway cross sections and efficiently convey stormwater runoff from the corridors into Clear Creek. Our conceptual plan is for a 10-year storm sewer system design.

#### S.W. Drive, North of I-80

CONDUIT	CONDUIT CHARACTERISTICS	10-YEAR PEAK FLOW	100-YEAR PEAK FLOW
<b>C-3</b>	2' Dia. RCP, 75' Length Intercepts flow from borrow ditches and adjacent west sub-basins located at northern end of S.W. Drive corridor	5.18 cfs	19.03 cfs 0.73 Full Flow
<b>C-2</b>	2' Dia. RCP, 140' Length Intercepts flow from west adjacent sub-basin at North American Rd.	4.77 cfs	18.46 cfs 0.39 Full Flow
<b>C-17</b>	30" Dia. RCP, 140' Length Intercepts street flow and west adjacent sub-basins south of North American Rd.	39.23 cfs	56.60 cfs 0.85 Full Flow
<b>C-21</b>	2' Dia. RCP, 242' Length Intercepts street flow and west adjacent sub-basins north of 5 <sup>th</sup> Street	11.67 cfs	22.95 cfs 0.71 Full Flow
<b>C-26, 28, 29</b>	2' Dia. RCP Storm Sewer System, 179' Total Length. Intercepts street flow and west adjacent sub-basins at 5 <sup>th</sup> Street	34.50 cfs	44.11 cfs 1.23 Full Flow
<b>C35, 36, 38</b>	30" to 36" Dia. RCP Storm Sewer System, 235' Total Length. Intercepts street flow and west adjacent sub-basins north of I-80	61.76 cfs	87.88 cfs 2.36 Full Flow

### Broken Arrow, South of I-80

CONDUIT	CONDUIT CHARACTERISTICS	10-YEAR PEAK FLOW	100-YEAR PEAK FLOW
C-104, 108, 101, 92, 86, 76, 70, 55, 54, 51,	18' to 24" to 30" Dia. RCP Storm Sewer System, 5,133' Total Length from Lazy Y Drive to Clear Creek. Intercepts street flow and adjacent sub-basins. Outlet to Clear Creek.	41.06 cfs	48.71 cfs 0.62 Full Flow

### S.W. Drive, South of Clear Creek

CONDUIT	CONDUIT CHARACTERISTICS	10-YEAR PEAK FLOW	100-YEAR PEAK FLOW
C-176	3' Dia. RCP, 137' Length Intercepts flow from borrow ditches and adjacent sub-basins. Outlets into Clear Creek	10.38 cfs	18.60 cfs 3.26 Full Flow
Approach Drive Culverts	Thirty-Four (34) 18" to 24" Dia. RCP Culverts Conveying flow in borrow ditches	Varies	Varies

## B. Detention System Design

The stormwater runoff from these corridors is conveyed to the Clear Creek Park sump where both water quality and detention storage are addressed. An inlet sediment control BMP should be considered for these inlets to reduce sediment transport into Clear Creek.

## C. Impacts on Downstream Facilities.

There will be increases in discharge to Clear Creek with the proposed corridor improvements, but this will be offset by the elimination of existing drainage issues within the corridor. Downstream impacts within Clear Creek are expected to be negligible.

## V. Sediment/Erosion Control

The site falls under the requirements the Wyoming Discharge Pollutant Prevention Discharge (WyPDES) program for a large construction site (> 5 acres). A formal state notice of coverage is not required but the site will require a Storm Water Pollution Prevention Plan (SWPPP) developed to follow the requirements of the general state permit. The SWPPP will include more detailed information on sediment and erosion control items for this project. A short summary of the recommended temporary BMP's for the site to control on-site erosion and prevent sediment from traveling off-site during construction include:

- Silt Fence – a woven synthetic fabric that filters runoff. The silt fence is a temporary barrier that is placed at the base of a disturbed area. This feature is proposed for the west, south, and east sides of the site.
- Vehicle Tracking Control – a stabilized stone pad or prefabricated metal (rattle mat) located at points of ingress and egress on a construction site. The pad is designed to reduce the amount of mud transported onto public roads by construction traffic.
- Inlet Protection – acts as a sediment filter. It is a temporary BMP and requires proper installation and regular maintenance to ensure their performance.

The contractor should store all construction materials and equipment and provide maintenance and fueling of equipment in confined areas on-site from which runoff will be contained and filtered. The temporary Best Management Practices (BMP's) are required to be inspected by the contractor at a minimum of once every two weeks and after each significant storm event.

Construction activities including excavation often increase compaction which reduces both soil hydraulic conductivity and porosity which result in standing water. Landscape planting in the base of the detention ponds should specify a tolerance for highly saturated soil conditions. As mentioned earlier in the report, permitting through state and federal agencies will be discussed in the final report with recommendations as to proceeding with design and construction.

## **VI. Conclusions**

### **A. Compliance with Standards**

Storm drainage calculations have followed the guidelines provided by the applicable sections of the City of Cheyenne Unified Development Code. The design approach is fully compliant with the restrictions and constraints of the City and County.

### **B. Drainage Plan**

The drainage system is designed to convey stormwater more efficiently from the corridor and contributing offsite basins to the receiving catchment, Clear Creek. We are proposing a 5,133-foot storm sewer for the improved Broken Arrow Rd. corridor to convey stormwater more effectively to Crow Creek. We are proposing a series of shorter culverts/storm sewers for S.W. Drive north of I-80 to convey stormwater more effectively from the corridor and adjacent sub-basins to the open sump area within Clear Creek Park. For the rural section of S.W. Drive south of Clear Creek, we are proposing improved borrow ditches and driveway culverts to convey flow north into Clear Creek.

## **VII. References**

1. Urban Storm Drainage Criteria Manuals 2 and 3, Urban Drainage and Flood Control District, Denver, Colorado, November 2010 as currently (Feb 2018) amended.
2. Storm Water Management Model, Reference Manual Volume I, Hydrology, U.S. Environmental Protection Agency, January 2016.
3. Storm Water Management Model, Reference Manual Volume II, Hydraulics, U.S. Environmental Protection Agency, May 2017.
4. Conversion of Natural Watershed to Kinematic Wave Cascading Plane, Guo, J.C.Y. and Urbonas, B., Journal of Hydrologic Engineering, Vol. 14, No. 8, pp. 839-846, July/August 2009.
5. CH2M HILL 2 1988: CH2M HILL & States West Water Resources Corporation: Drainage Master Plan – Clear Creek.
6. U.S.G.S 1988: U.S. Geological Survey: Precipitation Records and Flood-Producing Storms in Cheyenne, Wyoming, Water-Resources Investigations Report 87-4225, 1988.

## VIII. Certification

"I hereby attest that the Preliminary Drainage Report for the proposed Walterscheid corridor improvements plan was prepared by me, or under my direct supervision, in accordance with the provisions of City of Cheyenne Unified Development Code for the responsible parties thereof and that I am a duly registered Professional Engineer under the laws of the State of Wyoming. I understand that the City of Cheyenne does not and shall not assume liability for drainage facilities designed by others."

A handwritten signature in blue ink, reading "Gene MacDonald", is positioned above a horizontal line.

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Gene L. MacDonald  
Registered Professional Engineer  
State of Wyoming # 8891

# APPENDIX A

## SWMM Drainage Model Output Summaries

- SWMM Model Results Summary
  - Subcatchment Runoff
  - Link Flow

10 YR Subcatchment Runoff										
Subcatch	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Imperv Runoff in	Perv Runoff in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Basin_10	1.65	0.00	0.00	0.49	1.12	0.01	1.13	0.07	7.84	0.683
Basin_11	1.65	0.00	0.00	0.24	1.35	0.00	1.35	0.71	55.08	0.820
Basin_12	1.65	0.00	0.00	0.24	1.35	0.01	1.36	0.12	13.44	0.825
Basin_13	1.65	0.00	0.00	0.24	1.35	0.00	1.35	0.25	20.04	0.820
Basin_14	1.65	0.00	0.00	0.39	1.20	0.00	1.21	0.81	57.64	0.732
Basin_15	1.65	0.00	0.00	0.98	0.64	0.01	0.65	0.02	2.26	0.392
Basin_16	1.65	0.00	0.00	0.16	1.43	0.01	1.44	0.09	9.13	0.872
Basin_17	1.65	0.00	0.00	0.08	1.51	0.00	1.51	0.13	12.51	0.918
Basin_18	1.65	0.00	0.00	0.82	0.79	0.00	0.80	0.01	1.14	0.484
Basin_19	1.65	0.00	0.00	1.24	0.40	0.00	0.40	0.05	5.02	0.242
Basin_2	1.65	0.00	0.00	0.98	0.64	0.01	0.65	0.01	1.09	0.392
Basin_20	1.65	0.00	0.00	0.32	1.27	0.01	1.29	0.11	13.08	0.780
Basin_21	1.65	0.00	0.00	1.02	0.60	0.00	0.61	0.04	3.85	0.368
Basin_22	1.65	0.00	0.00	0.90	0.72	0.00	0.72	0.03	2.51	0.437
Basin_23	1.65	0.00	0.00	1.20	0.43	0.01	0.44	0.02	2.07	0.267
Basin_24	1.65	0.00	0.00	1.36	0.27	0.01	0.28	0.06	7.11	0.168

									10 YR Subcatchment Runoff	
Basin_25	1.65	0.00	0.00	1.41	0.22	0.01	0.23	0.02	2.47	0.139
Basin_26	1.65	0.00	0.00	0.81	0.80	0.02	0.81	0.11	14.13	0.493
Basin_28	1.65	0.00	0.00	0.81	0.80	0.01	0.81	0.11	13.67	0.491
Basin_29	1.65	0.00	0.00	1.24	0.40	0.00	0.40	0.00	0.27	0.242
basin_30	1.65	0.00	0.00	0.59	1.02	0.01	1.03	0.05	5.67	0.624
Basin_31	1.65	0.00	0.00	1.13	0.49	0.01	0.50	0.01	1.53	0.303
Basin_32	1.65	0.00	0.00	1.18	0.45	0.01	0.46	0.02	2.58	0.276
Basin_33	1.65	0.00	0.00	0.98	0.64	0.02	0.65	0.01	1.05	0.396
Basin_34	1.65	0.00	0.00	1.45	0.19	0.01	0.20	0.01	0.98	0.120
Basin_35	1.65	0.00	0.00	0.90	0.72	0.01	0.73	0.02	3.11	0.443
Basin_36	1.65	0.00	0.00	0.90	0.72	0.01	0.73	0.02	2.99	0.443
Basin_37	1.65	0.00	0.00	1.35	0.29	0.00	0.29	0.08	9.37	0.176
Basin_38	1.65	0.00	0.00	1.18	0.45	0.01	0.45	0.02	2.57	0.274
Basin_39	1.65	0.00	0.00	1.18	0.45	0.01	0.46	0.03	3.28	0.276
Basin_4	1.65	0.00	0.00	0.98	0.64	0.01	0.65	0.00	0.29	0.394
Basin_40	1.65	0.00	0.00	0.91	0.71	0.00	0.72	0.00	0.24	0.433
Basin_42	1.65	0.00	0.00	1.38	0.25	0.01	0.27	0.02	2.37	0.161
Basin_43	1.65	0.00	0.00	1.51	0.13	0.01	0.13	0.03	4.13	0.081
Basin_45	1.65	0.00	0.00	1.24	0.38	0.01	0.40	0.01	0.84	0.240



10 YR Subcatchment Runoff										
Basin_46	1.65	0.00	0.00	0.89	0.71	0.03	0.74	0.01	1.44	0.450
Basin_48	1.65	0.00	0.00	1.08	0.54	0.01	0.55	0.03	3.06	0.332
Basin_49	1.65	0.00	0.00	1.45	0.19	0.00	0.20	0.03	3.32	0.119
Basin_5	1.65	0.00	0.00	0.24	1.35	0.01	1.36	0.01	1.29	0.827
Basin_5_1	1.65	0.00	0.00	0.98	0.64	0.01	0.65	0.01	1.00	0.392
Basin_5_2	1.65	0.00	0.00	0.98	0.64	0.01	0.65	0.01	0.81	0.391
Basin_50	1.65	0.00	0.00	0.89	0.72	0.02	0.74	0.01	1.53	0.447
Basin_51	1.65	0.00	0.00	1.41	0.22	0.01	0.23	0.04	5.03	0.140
Basin_52	1.65	0.00	0.00	1.28	0.35	0.01	0.36	0.01	0.87	0.217
Basin_53	1.65	0.00	0.00	0.98	0.64	0.01	0.65	0.01	1.16	0.393
Basin_55_1	1.65	0.00	0.00	1.35	0.29	0.01	0.29	0.06	7.97	0.177
Basin_55_2	1.65	0.00	0.00	0.16	1.43	0.01	1.44	0.01	1.55	0.874
Basin_56	1.65	0.00	0.00	0.72	0.87	0.03	0.90	0.01	1.03	0.545
bASIN_57	1.65	0.00	0.00	0.23	1.35	0.02	1.37	0.01	1.81	0.828
Basin_58	1.65	0.00	0.00	1.38	0.25	0.01	0.26	0.04	4.65	0.159
Basin_59	1.65	0.00	0.00	1.02	0.61	0.01	0.61	0.03	3.70	0.371
Basin_6	1.65	0.00	0.00	1.23	0.40	0.01	0.41	0.00	0.57	0.248
Basin_61	1.65	0.00	0.00	1.51	0.13	0.01	0.13	0.01	1.72	0.082
Basin_62	1.65	0.00	0.00	1.34	0.29	0.01	0.30	0.06	7.64	0.179

									10 YR Subcatchment Runoff	
Basin_63	1.65	0.00	0.00	1.35	0.29	0.01	0.29	0.06	7.78	0.177
Basin_64	1.65	0.00	0.00	1.43	0.19	0.03	0.22	0.00	0.30	0.134
Basin_65	1.65	0.00	0.00	1.26	0.35	0.03	0.38	0.00	0.31	0.232
Basin_66	1.65	0.00	0.00	1.50	0.13	0.02	0.15	0.00	0.49	0.089
Basin_67	1.65	0.00	0.00	1.35	0.29	0.00	0.29	0.03	3.77	0.177
Basin_68	1.65	0.00	0.00	0.40	1.19	0.02	1.21	0.00	0.55	0.734
Basin_69	1.65	0.00	0.00	0.81	0.79	0.02	0.82	0.00	0.58	0.497
Basin_70	1.65	0.00	0.00	1.44	0.19	0.01	0.20	0.08	10.37	0.121
Basin_8	1.65	0.00	0.00	1.45	0.19	0.00	0.19	0.16	18.96	0.118
Basin_9_2	1.65	0.00	0.00	0.41	1.19	0.01	1.20	0.10	11.68	0.729
Basin-47	1.65	0.00	0.00	1.35	0.29	0.00	0.29	0.07	8.89	0.176
S27	1.65	0.00	0.00	1.51	0.13	0.01	0.13	0.05	6.01	0.081
S3	1.65	0.00	0.00	0.98	0.64	0.01	0.65	0.01	0.68	0.394
S41	1.65	0.00	0.00	1.41	0.22	0.01	0.24	0.02	2.36	0.142
S44	1.65	0.00	0.00	1.51	0.13	0.01	0.13	0.21	26.43	0.080
S54	1.65	0.00	0.00	0.88	0.71	0.03	0.74	0.01	0.99	0.450
S60	1.65	0.00	0.00	0.21	1.38	0.00	1.38	0.13	9.55	0.838
S7	1.65	0.00	0.00	0.98	0.64	0.02	0.65	0.00	0.61	0.396

100 YR Subcatchment Runoff										
Subcatch	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Imperv Runoff in	Perv Runoff in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
Basin_10	3.68	0.00	0.00	0.82	2.54	0.30	2.84	0.17	15.35	0.772
Basin_11	3.68	0.00	0.00	0.42	3.08	0.14	3.22	1.70	113.40	0.875
Basin_12	3.68	0.00	0.00	0.41	3.09	0.15	3.24	0.29	25.15	0.881
Basin_13	3.68	0.00	0.00	0.41	3.08	0.14	3.22	0.59	40.76	0.876
Basin_14	3.68	0.00	0.00	0.68	2.75	0.20	2.96	1.98	122.16	0.803
Basin_15	3.68	0.00	0.00	1.70	1.45	0.53	1.98	0.06	4.73	0.538
Basin_16	3.68	0.00	0.00	0.27	3.27	0.10	3.37	0.21	16.99	0.916
Basin_17	3.68	0.00	0.00	0.13	3.45	0.05	3.50	0.30	23.08	0.951
Basin_18	3.68	0.00	0.00	1.49	1.81	0.36	2.17	0.04	2.30	0.589
Basin_19	3.68	0.00	0.00	2.40	0.91	0.36	1.27	0.17	10.10	0.344
Basin_2	3.68	0.00	0.00	1.70	1.45	0.53	1.98	0.03	2.28	0.538
Basin_20	3.68	0.00	0.00	0.54	2.91	0.21	3.11	0.26	24.79	0.846
Basin_21	3.68	0.00	0.00	1.90	1.38	0.39	1.77	0.12	7.75	0.480
Basin_22	3.68	0.00	0.00	1.62	1.63	0.41	2.04	0.07	4.99	0.554
Basin_23	3.68	0.00	0.00	2.08	0.98	0.62	1.60	0.06	4.76	0.436
Basin_24	3.68	0.00	0.00	2.46	0.62	0.60	1.22	0.25	16.22	0.330

									100 YR Subcatchment Runoff	
Basin_25	3.68	0.00	0.00	2.54	0.51	0.64	1.15	0.10	6.16	0.312
Basin_26	3.68	0.00	0.00	1.37	1.81	0.49	2.31	0.31	31.43	0.627
Basin_28	3.68	0.00	0.00	1.38	1.82	0.47	2.29	0.31	28.84	0.622
Basin_29	3.68	0.00	0.00	2.38	0.91	0.38	1.29	0.01	0.54	0.350
basin_30	3.68	0.00	0.00	0.99	2.32	0.34	2.67	0.13	11.19	0.725
Basin_31	3.68	0.00	0.00	2.03	1.13	0.51	1.64	0.04	3.12	0.446
Basin_32	3.68	0.00	0.00	2.06	1.02	0.61	1.62	0.07	5.79	0.441
Basin_33	3.68	0.00	0.00	1.66	1.45	0.57	2.03	0.03	2.46	0.551
Basin_34	3.68	0.00	0.00	2.61	0.44	0.63	1.07	0.04	2.51	0.291
Basin_35	3.68	0.00	0.00	1.53	1.63	0.52	2.15	0.07	6.73	0.584
Basin_36	3.68	0.00	0.00	1.53	1.63	0.52	2.15	0.07	6.46	0.584
Basin_37	3.68	0.00	0.00	2.58	0.65	0.44	1.09	0.32	18.94	0.296
Basin_38	3.68	0.00	0.00	2.12	1.02	0.54	1.55	0.07	5.32	0.422
Basin_39	3.68	0.00	0.00	2.06	1.02	0.61	1.63	0.09	7.37	0.442
Basin_4	3.68	0.00	0.00	1.68	1.45	0.55	2.00	0.01	0.62	0.543
Basin_40	3.68	0.00	0.00	1.73	1.63	0.30	1.93	0.01	0.52	0.523
Basin_42	3.68	0.00	0.00	2.40	0.58	0.71	1.29	0.09	6.76	0.351
Basin_43	3.68	0.00	0.00	2.75	0.29	0.64	0.93	0.23	12.60	0.254
Basin_45	3.68	0.00	0.00	2.13	0.87	0.68	1.55	0.03	2.22	0.423

100 YR Subcatchment Runoff										
Basin_46	3.68	0.00	0.00	1.50	1.63	0.56	2.19	0.03	3.73	0.596
Basin_48	3.68	0.00	0.00	1.93	1.24	0.51	1.74	0.09	6.20	0.473
Basin_49	3.68	0.00	0.00	2.70	0.44	0.54	0.98	0.13	7.56	0.266
Basin_5	3.68	0.00	0.00	0.41	3.09	0.16	3.25	0.03	2.39	0.882
Basin_5_1	3.68	0.00	0.00	1.70	1.45	0.52	1.97	0.03	2.07	0.536
Basin_5_2	3.68	0.00	0.00	1.71	1.45	0.51	1.96	0.02	1.66	0.533
Basin_50	3.68	0.00	0.00	1.50	1.63	0.55	2.18	0.03	3.73	0.593
Basin_51	3.68	0.00	0.00	2.51	0.51	0.66	1.17	0.20	13.19	0.319
Basin_52	3.68	0.00	0.00	2.27	0.80	0.61	1.41	0.03	1.97	0.384
Basin_53	3.68	0.00	0.00	1.68	1.45	0.54	1.99	0.03	2.48	0.542
Basin_55_1	3.68	0.00	0.00	2.45	0.65	0.57	1.23	0.27	17.55	0.333
Basin_55_2	3.68	0.00	0.00	0.27	3.26	0.11	3.37	0.03	2.70	0.916
Basin_56	3.68	0.00	0.00	1.22	1.99	0.47	2.46	0.02	2.40	0.669
bASIN_57	3.68	0.00	0.00	0.40	3.08	0.16	3.24	0.03	3.30	0.882
Basin_58	3.68	0.00	0.00	2.47	0.58	0.63	1.21	0.17	11.15	0.329
Basin_59	3.68	0.00	0.00	1.79	1.38	0.51	1.89	0.10	7.54	0.513
Basin_6	3.68	0.00	0.00	2.12	0.91	0.65	1.56	0.02	1.38	0.424
Basin_61	3.68	0.00	0.00	2.71	0.29	0.69	0.98	0.10	5.94	0.266
Basin_62	3.68	0.00	0.00	2.36	0.65	0.67	1.32	0.27	19.45	0.360

									100 YR Subcatchment Runoff	
Basin_63	3.68	0.00	0.00	2.45	0.65	0.58	1.23	0.26	17.20	0.334
Basin_64	3.68	0.00	0.00	2.42	0.43	0.86	1.30	0.01	1.70	0.352
Basin_65	3.68	0.00	0.00	2.13	0.80	0.78	1.58	0.01	1.24	0.429
Basin_66	3.68	0.00	0.00	2.56	0.29	0.85	1.14	0.03	2.96	0.309
Basin_67	3.68	0.00	0.00	2.49	0.65	0.53	1.19	0.13	8.01	0.322
Basin_68	3.68	0.00	0.00	0.68	2.72	0.26	2.99	0.01	1.08	0.812
Basin_69	3.68	0.00	0.00	1.36	1.81	0.51	2.32	0.01	1.38	0.631
Basin_70	3.68	0.00	0.00	2.57	0.44	0.68	1.11	0.45	28.82	0.302
Basin_8	3.68	0.00	0.00	2.81	0.44	0.43	0.87	0.72	39.54	0.236
Basin_9_2	3.68	0.00	0.00	0.69	2.72	0.25	2.97	0.26	22.49	0.807
Basin-47	3.68	0.00	0.00	2.51	0.65	0.51	1.17	0.30	18.62	0.317
S27	3.68	0.00	0.00	2.77	0.29	0.62	0.91	0.32	17.15	0.247
S3	3.68	0.00	0.00	1.68	1.45	0.55	2.00	0.02	1.48	0.543
S41	3.68	0.00	0.00	2.44	0.51	0.74	1.25	0.10	7.43	0.339
S44	3.68	0.00	0.00	2.80	0.29	0.60	0.89	1.39	71.92	0.241
S54	3.68	0.00	0.00	1.49	1.63	0.56	2.20	0.02	2.58	0.597
S60	3.68	0.00	0.00	0.36	3.15	0.12	3.27	0.32	20.09	0.890
S7	3.68	0.00	0.00	1.66	1.45	0.57	2.03	0.01	1.44	0.551

10 YR Link Flow
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Link	Type	Maximum (Flow) CFS	Day of Maximum Flow	Hour of Maximum Flow	Maximum (Velocity) ft/sec	Max / Full Flow	Max / Full Depth
C1	CONDUIT	4.44	0	01:03	5.10	0.13	0.32
C10	CONDUIT	9.82	0	00:53	2.08	0.00	0.01
C100	CONDUIT	0.50	0	00:31	3.84	0.04	1.00
C101	CONDUIT	36.41	0	00:57	12.18	0.58	0.59
C102	CHANNEL	2.08	0	00:52	1.53	0.00	0.05
C103	CONDUIT	19.33	0	00:55	1.10	0.00	0.14
C104	CONDUIT	41.06	0	00:58	10.55	0.52	0.74
C105	CONDUIT	41.06	0	00:58	8.40	0.83	0.99
C106	CONDUIT	1.14	0	01:00	1.10	0.02	0.64
C107	CONDUIT	2.04	0	01:00	1.99	0.03	0.56
C108	CONDUIT	38.14	0	00:57	9.97	0.72	0.81
C109	CONDUIT	2.04	0	01:00	1.83	0.00	0.00
C11	CONDUIT	0.40	0	00:57	0.62	0.00	0.00
C110	CONDUIT	1.13	0	01:00	1.42	0.00	0.00
C111	CHANNEL	3.31	0	00:51	2.44	0.00	0.05
C112	CONDUIT	1.22	0	00:52	1.58	0.00	0.00



10 YR Link Flow
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C113	CONDUIT	1.22	0	00:52	1.76	0.00	0.05
C114	CONDUIT	2.67	0	00:52	1.55	0.00	0.10
C115	CONDUIT	2.40	0	00:55	4.90	0.11	0.35
C116	CONDUIT	2.29	0	00:53	2.12	0.00	0.07
C117	CONDUIT	2.88	0	00:54	1.36	0.00	0.12
C118	CONDUIT	2.94	0	00:55	4.97	0.24	0.38
C119	CONDUIT	6.39	0	00:56	5.40	0.61	0.63
C12	CONDUIT	0.20	0	00:54	0.48	0.00	0.00
C120	CHANNEL	4.05	0	00:51	2.82	0.00	0.05
C121	CONDUIT	6.93	0	00:53	1.52	0.00	0.19
C122	CONDUIT	3.24	0	00:52	2.65	0.00	0.07
C123	CONDUIT	2.74	0	00:57	1.02	0.00	0.12
C124	CONDUIT	3.52	0	00:57	4.40	0.18	0.47
C125	CONDUIT	3.19	0	00:58	1.09	0.00	0.14
C126	CHANNEL	2.05	0	00:55	1.43	0.00	0.05
C127	CONDUIT	6.42	0	00:59	1.39	0.01	0.20
C128	CONDUIT	2.87	0	01:03	4.71	0.18	0.42
C129	CONDUIT	2.85	0	01:04	1.02	0.00	0.13
C13	CONDUIT	6.60	0	00:54	1.74	0.00	0.01

10 YR Link Flow
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C130	CONDUIT	2.88	0	01:08	4.72	0.53	0.42
C131	CONDUIT	6.19	0	01:04	5.13	1.23	0.65
C132	CONDUIT	6.20	0	01:05	3.02	0.00	0.10
C133	CONDUIT	6.27	0	01:05	2.79	0.00	0.11
C134	CONDUIT	2.88	0	01:08	1.35	0.00	0.12
C135	CONDUIT	2.94	0	01:09	4.34	0.16	0.42
C136	CONDUIT	6.38	0	00:56	3.18	0.00	0.10
C137	CONDUIT	6.86	0	00:56	3.01	0.01	0.11
C138	CONDUIT	6.23	0	01:06	2.39	0.01	0.12
C139	CONDUIT	6.66	0	01:06	1.29	0.01	0.21
C14	CHANNEL	6.85	0	00:52	1.51	0.01	0.12
C140	CONDUIT	6.62	0	01:07	4.84	0.45	0.72
C141	CONDUIT	2.81	0	01:14	4.51	0.21	0.42
C142	CONDUIT	2.83	0	01:07	0.70	0.02	0.18
C143	CONDUIT	2.88	0	01:09	0.95	0.00	0.14
C144	CHANNEL	1.99	0	00:52	1.63	0.00	0.04
C145	CONDUIT	6.57	0	01:08	1.42	0.01	0.21
C146	CONDUIT	6.18	0	01:12	4.99	0.34	0.66
C147	CONDUIT	6.50	0	01:13	1.46	0.01	0.20

10 YR Link Flow
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C148	CONDUIT	6.36	0	01:14	4.74	0.49	0.71
C149	CONDUIT	3.23	0	01:16	5.22	0.60	0.40
C15	CONDUIT	38.87	0	00:59	7.92	0.40	1.00
C150	CONDUIT	2.94	0	01:15	3.70	0.12	0.47
C151	CONDUIT	3.11	0	01:16	5.00	0.69	0.77
C152	CONDUIT	2.80	0	01:14	1.59	0.00	0.12
C153	CHANNEL	2.33	0	00:51	1.48	0.00	0.05
C154	CHANNEL	2.94	0	00:51	1.56	0.00	0.06
C155	CONDUIT	6.34	0	01:15	1.52	0.01	0.16
C156	CONDUIT	6.52	0	01:17	6.89	0.55	0.63
C157	CONDUIT	9.97	0	01:15	1.54	0.01	0.23
C158	CHANNEL	2.34	0	00:51	1.84	0.00	0.05
C159	CONDUIT	3.06	0	01:17	1.16	0.00	0.13
C16	CONDUIT	38.87	0	00:59	8.35	0.60	0.90
C160	CONDUIT	6.61	0	01:20	4.08	0.36	0.86
C161	CONDUIT	3.95	0	01:00	4.94	0.20	0.50
C162	CONDUIT	4.12	0	01:00	1.06	0.00	0.17
C163	CONDUIT	4.80	0	00:59	5.00	0.26	0.56
C164	CONDUIT	6.31	0	01:22	1.88	0.03	0.14

10 YR Link Flow
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C165	CHANNEL	6.26	0	01:22	0.76	0.00	0.21
C166	CONDUIT	6.17	0	01:24	5.39	0.31	0.62
C167	CONDUIT	4.80	0	00:59	2.91	0.00	0.09
C168	CHANNEL	0.00	0	00:00	0.00	0.00	0.41
C169	CHANNEL	1.46	0	00:50	1.90	0.00	0.03
C17	CONDUIT	39.23	0	00:59	11.10	0.59	0.68
C170	CHANNEL	6.50	0	00:51	3.48	0.00	0.06
C171	CONDUIT	8.61	0	00:56	2.63	0.01	0.14
C172	CONDUIT	6.20	0	01:27	3.01	0.01	0.10
C173	CONDUIT	6.15	0	01:26	3.10	0.00	0.10
C174	CONDUIT	4.77	0	01:00	1.91	0.00	0.12
C175	CONDUIT	8.61	0	00:56	2.10	0.03	0.56
C176	CONDUIT	10.38	0	01:03	2.06	1.82	0.67
C177	CONDUIT	0.18	0	00:57	0.58	0.00	0.00
C178	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
C18	CONDUIT	0.41	0	00:55	0.32	0.00	0.00
C19	CHANNEL	38.87	0	00:59	2.67	0.04	0.25
C2	CONDUIT	4.77	0	01:01	5.27	0.10	0.33
C20	CONDUIT	11.49	0	00:54	6.75	0.31	0.53

10 YR Link Flow
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C21	CONDUIT	11.67	0	00:54	8.70	0.36	0.44
C22	CHANNEL	12.53	0	00:51	3.37	0.01	0.10
C23	CONDUIT	11.49	0	00:54	2.14	0.00	0.01
C24	CONDUIT	0.28	0	01:02	0.20	0.00	0.00
C25	CONDUIT	18.47	0	00:55	6.23	0.54	1.00
C26	CONDUIT	28.00	0	00:55	8.91	0.58	1.00
C27	CONDUIT	6.16	0	00:56	2.12	0.12	1.00
C28	CONDUIT	34.09	0	00:56	11.51	1.32	0.89
C29	CONDUIT	34.50	0	00:56	13.01	0.96	0.79
C3	CONDUIT	5.18	0	00:58	5.51	0.20	0.34
C30	CONDUIT	9.24	0	00:56	3.00	0.00	0.01
C31	CONDUIT	6.12	0	00:56	2.59	0.00	0.01
C32	CHANNEL	18.50	0	00:55	2.87	0.01	0.15
C33	CONDUIT	0.43	0	00:53	0.78	0.00	0.00
C34	CONDUIT	0.32	0	00:55	0.59	0.00	0.00
C35	CONDUIT	11.57	0	00:51	3.51	0.28	1.00
C36	CONDUIT	55.78	0	00:57	7.89	0.45	1.00
C37	CONDUIT	60.27	0	00:56	8.53	0.56	1.00
C38	CONDUIT	61.76	0	00:56	9.07	1.66	0.92

10 YR Link Flow
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C39	CHANNEL	12.02	0	00:51	3.31	0.01	0.10
C4	CONDUIT	4.44	0	01:03	1.19	0.00	0.06
C40	CHANNEL	48.15	0	00:58	3.79	0.03	0.23
C41	CONDUIT	0.81	0	00:57	1.03	0.00	0.00
C42	CONDUIT	1.57	0	00:54	1.39	0.00	0.00
C43	CHANNEL	1.27	0	00:53	1.69	0.00	0.03
C44	CONDUIT	1.27	0	00:53	2.03	0.06	0.49
C45	CONDUIT	6.60	0	00:51	5.22	0.37	0.68
C46	CHANNEL	6.60	0	00:51	3.37	0.00	0.06
C47	CONDUIT	0.23	0	00:54	0.58	0.00	0.00
C48	CONDUIT	0.65	0	00:55	0.51	0.03	0.78
C49	CONDUIT	6.33	0	00:53	3.75	0.43	0.91
C5	CONDUIT	1.27	0	00:50	5.56	0.24	0.33
C50	CHANNEL	0.25	0	00:55	0.77	0.00	0.01
C51	CONDUIT	7.78	0	00:52	5.23	0.73	0.79
C52	CHANNEL	0.41	0	00:55	0.98	0.00	0.02
C53	CHANNEL	6.10	0	00:53	2.91	0.00	0.07
C54	CONDUIT	14.66	0	00:53	8.43	0.78	0.54
C55	CONDUIT	15.58	0	00:53	11.29	0.26	0.45

10 YR Link Flow
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C56	CONDUIT	0.50	0	00:45	3.70	0.03	0.86
C57	CONDUIT	4.18	0	00:56	2.37	0.35	1.00
C58	CONDUIT	0.47	0	00:52	0.94	0.03	0.41
C59	CONDUIT	0.51	0	00:51	1.36	0.02	0.29
C6	CONDUIT	0.98	0	00:50	5.09	0.19	0.29
C60	CONDUIT	0.47	0	00:51	0.96	0.00	0.00
C61	CONDUIT	0.51	0	00:51	1.01	0.00	0.00
C62	CHANNEL	6.77	0	00:52	1.76	0.00	0.13
C63	CONDUIT	1.26	0	00:51	1.17	0.00	0.21
C64	CHANNEL	3.31	0	00:51	1.14	0.00	0.12
C65	CONDUIT	4.75	0	00:59	1.28	0.01	0.23
C66	CONDUIT	0.45	0	00:56	0.68	0.00	0.00
C67	CONDUIT	0.47	0	00:56	0.63	0.01	0.69
C68	CONDUIT	7.93	0	00:53	4.98	0.36	0.91
C69	CHANNEL	7.95	0	00:53	2.72	0.00	0.09
C7	CONDUIT	16.39	0	00:53	6.31	0.35	0.77
C70	CONDUIT	16.05	0	00:53	7.26	0.56	0.68
C71	CHANNEL	3.61	0	00:52	3.52	0.00	0.04
C72	CONDUIT	2.09	0	00:59	1.28	0.00	0.00



10 YR Link Flow
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C73	CONDUIT	2.11	0	00:59	3.02	0.11	0.62
C74	CONDUIT	1.71	0	00:57	2.82	0.04	0.50
C75	CONDUIT	1.71	0	00:57	1.22	0.00	0.00
C76	CONDUIT	24.02	0	00:56	10.61	0.92	0.71
C77	CHANNEL	10.79	0	00:53	2.80	0.01	0.19
C78	CONDUIT	8.62	0	00:52	2.94	1.95	1.00
C79	CHANNEL	2.29	0	00:56	1.35	0.00	0.15
C8	CONDUIT	16.94	0	00:54	7.10	0.68	0.71
C80	CONDUIT	6.32	0	00:54	2.09	0.38	1.00
C81	CONDUIT	9.06	0	01:23	4.14	0.24	1.00
C82	CONDUIT	27.33	0	00:55	16.53	0.53	0.82
C83	CONDUIT	9.84	0	01:23	3.13	0.39	1.00
C84	CHANNEL	4.74	0	00:51	1.98	0.00	0.08
C85	CHANNEL	4.23	0	00:53	1.36	0.00	0.09
C86	CONDUIT	21.43	0	01:00	7.47	1.39	0.86
C87	CONDUIT	6.16	0	00:58	4.50	0.19	0.74
C88	CONDUIT	1.07	0	00:59	1.09	0.03	0.64
C89	CONDUIT	12.62	0	00:51	7.14	0.48	1.00
C9	CHANNEL	11.46	0	00:50	3.33	0.01	0.10

10 YR Link Flow
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C90	CONDUIT	0.49	0	00:58	1.83	0.02	0.63
C91	CONDUIT	12.88	0	00:51	7.57	0.70	0.93
C92	CONDUIT	28.61	0	00:59	12.53	0.85	0.70
C93	CONDUIT	1.12	0	00:59	0.93	0.00	0.00
C94	CONDUIT	1.07	0	00:59	0.92	0.00	0.00
C95	CONDUIT	12.63	0	00:51	2.43	0.00	0.01
C96	CHANNEL	0.89	0	00:50	1.37	0.00	0.03
C97	CONDUIT	0.49	0	00:58	0.64	0.00	0.00
C98	CHANNEL	5.05	0	00:57	1.46	0.00	0.10
C99	CONDUIT	2.07	0	00:52	1.88	0.08	0.79

100 YR Link Flow
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Link	Type	Maximum (Flow) CFS	Day of Maximum Flow	Hour of Maximum Flow	Maximum (Velocity) ft/sec	Max / Full Flow	Max / Full Depth
C1	CONDUIT	18.10	0	01:04	5.87	0.52	0.96
C10	CONDUIT	20.27	0	00:47	2.67	0.00	0.02
C100	CONDUIT	0.50	0	00:12	4.89	0.04	1.00
C101	CONDUIT	53.76	0	00:56	13.04	0.86	1.00
C102	CHANNEL	6.67	0	00:47	2.14	0.00	0.10
C103	CONDUIT	40.19	0	00:50	1.10	0.00	0.33
C104	CONDUIT	48.71	0	01:10	11.78	0.62	0.79
C105	CONDUIT	48.71	0	01:10	9.92	0.98	1.00
C106	CONDUIT	3.27	0	00:44	1.92	0.06	1.00
C107	CONDUIT	5.53	0	00:53	4.18	0.09	0.70
C108	CONDUIT	52.14	0	00:46	10.85	0.98	1.00
C109	CONDUIT	5.53	0	00:53	2.71	0.00	0.00
C11	CONDUIT	1.12	0	00:51	0.93	0.00	0.00
C110	CONDUIT	3.16	0	00:54	2.22	0.00	0.00
C111	CHANNEL	6.92	0	00:46	3.05	0.00	0.07
C112	CONDUIT	2.22	0	00:46	2.06	0.00	0.00

								100 YR Link Flow
C113	CONDUIT	2.21	0	00:47	2.07	0.00	0.06	
C114	CONDUIT	4.93	0	00:46	1.66	0.00	0.15	
C115	CONDUIT	4.14	0	00:49	5.14	0.19	0.50	
C116	CONDUIT	4.13	0	00:50	2.38	0.00	0.09	
C117	CONDUIT	5.61	0	00:49	1.36	0.00	0.18	
C118	CONDUIT	5.27	0	00:52	5.28	0.44	0.57	
C119	CONDUIT	13.91	0	00:55	10.14	1.32	0.72	
C12	CONDUIT	0.50	0	00:48	0.68	0.00	0.00	
C120	CHANNEL	10.42	0	00:47	3.74	0.00	0.08	
C121	CONDUIT	16.87	0	00:49	1.62	0.01	0.37	
C122	CONDUIT	6.82	0	00:47	3.10	0.00	0.11	
C123	CONDUIT	5.22	0	00:53	1.03	0.00	0.19	
C124	CONDUIT	6.61	0	00:54	4.77	0.35	0.73	
C125	CONDUIT	6.59	0	00:55	1.12	0.01	0.21	
C126	CHANNEL	6.10	0	00:52	2.00	0.00	0.09	
C127	CONDUIT	14.62	0	00:57	1.34	0.01	0.38	
C128	CONDUIT	6.35	0	00:58	5.13	0.41	0.66	
C129	CONDUIT	6.31	0	00:59	1.00	0.01	0.21	
C13	CONDUIT	13.76	0	00:47	2.09	0.00	0.01	

								100 YR Link Flow
C130	CONDUIT	6.83	0	01:01	5.36	1.25	0.68	
C131	CONDUIT	14.08	0	01:09	9.82	2.79	0.76	
C132	CONDUIT	14.08	0	01:09	3.73	0.01	0.15	
C133	CONDUIT	14.53	0	01:09	3.46	0.01	0.16	
C134	CONDUIT	6.82	0	01:01	1.39	0.01	0.20	
C135	CONDUIT	6.67	0	01:04	4.62	0.36	0.78	
C136	CONDUIT	13.91	0	00:55	3.92	0.01	0.15	
C137	CONDUIT	14.82	0	00:54	3.54	0.01	0.16	
C138	CONDUIT	14.52	0	01:10	2.26	0.02	0.34	
C139	CONDUIT	16.01	0	01:10	1.23	0.02	0.61	
C14	CHANNEL	14.21	0	00:46	1.95	0.02	0.16	
C140	CONDUIT	15.80	0	01:15	9.89	1.06	0.85	
C141	CONDUIT	6.64	0	01:08	5.11	0.50	0.69	
C142	CONDUIT	6.67	0	01:07	0.70	0.05	0.30	
C143	CONDUIT	6.60	0	01:05	1.03	0.01	0.24	
C144	CHANNEL	6.34	0	00:48	2.30	0.00	0.08	
C145	CONDUIT	15.79	0	01:17	1.37	0.02	0.42	
C146	CONDUIT	14.70	0	01:32	9.78	0.81	0.79	
C147	CONDUIT	15.57	0	01:32	1.36	0.02	0.43	

								100 YR Link Flow
C148	CONDUIT	20.69	0	01:39	11.71	1.60	1.00	
C149	CONDUIT	6.21	0	01:22	5.53	1.15	0.61	
C15	CONDUIT	59.51	0	01:00	12.12	0.62	1.00	
C150	CONDUIT	5.17	0	01:28	3.53	0.22	1.00	
C151	CONDUIT	6.21	0	01:22	7.91	1.39	1.00	
C152	CONDUIT	6.63	0	01:09	1.46	0.01	0.41	
C153	CHANNEL	4.98	0	00:46	1.88	0.00	0.08	
C154	CHANNEL	6.90	0	00:46	2.02	0.01	0.10	
C155	CONDUIT	19.76	0	01:39	1.44	0.03	0.52	
C156	CONDUIT	14.87	0	01:46	8.42	1.27	1.00	
C157	CONDUIT	14.59	0	01:48	1.48	0.01	0.57	
C158	CHANNEL	5.43	0	00:46	2.34	0.00	0.07	
C159	CONDUIT	6.21	0	01:23	1.23	0.00	0.22	
C16	CONDUIT	56.06	0	01:10	11.42	0.86	1.00	
C160	CONDUIT	14.28	0	01:59	8.33	0.78	0.93	
C161	CONDUIT	8.76	0	00:57	6.46	0.44	0.72	
C162	CONDUIT	9.14	0	00:57	1.04	0.01	0.28	
C163	CONDUIT	10.73	0	00:57	7.84	0.59	0.72	
C164	CONDUIT	14.28	0	02:01	3.14	0.06	0.17	

								100 YR Link Flow
C165	CHANNEL	14.28	0	02:01	0.73	0.01	0.43	
C166	CONDUIT	14.05	0	02:10	10.16	0.71	0.73	
C167	CONDUIT	10.73	0	00:58	3.60	0.01	0.13	
C168	CHANNEL	0.00	0	00:00	0.00	0.00	0.50	
C169	CHANNEL	3.01	0	00:45	2.36	0.00	0.05	
C17	CONDUIT	56.60	0	00:52	13.80	0.85	0.85	
C170	CHANNEL	15.44	0	00:46	4.46	0.00	0.10	
C171	CONDUIT	22.82	0	00:53	3.41	0.03	0.49	
C172	CONDUIT	15.45	0	02:29	2.71	0.01	0.88	
C173	CONDUIT	14.05	0	02:11	3.16	0.01	0.45	
C174	CONDUIT	10.72	0	00:59	2.44	0.01	0.18	
C175	CONDUIT	27.53	0	00:59	4.09	0.11	1.00	
C176	CONDUIT	18.60	0	02:14	3.36	3.26	0.73	
C177	CONDUIT	0.43	0	00:51	0.80	0.00	0.00	
C178	CONDUIT	0.00	0	00:00	0.00	0.00	0.01	
C18	CONDUIT	1.17	0	00:48	0.53	0.00	0.00	
C19	CHANNEL	115.55	0	00:48	3.32	0.11	0.46	
C2	CONDUIT	18.46	0	01:03	6.18	0.39	0.96	
C20	CONDUIT	22.10	0	00:47	7.52	0.61	0.88	



								100 YR Link Flow
C21	CONDUIT	22.95	0	00:48	9.86	0.71	0.69	
C22	CHANNEL	23.51	0	00:46	3.97	0.02	0.14	
C23	CONDUIT	22.10	0	00:47	2.69	0.00	0.02	
C24	CONDUIT	1.21	0	00:54	0.43	0.00	0.01	
C25	CONDUIT	29.28	0	01:08	9.32	0.86	1.00	
C26	CONDUIT	42.87	0	00:50	13.65	0.88	1.00	
C27	CONDUIT	11.77	0	01:07	3.75	0.23	1.00	
C28	CONDUIT	43.17	0	01:01	13.74	1.67	1.00	
C29	CONDUIT	44.11	0	00:48	14.04	1.23	1.00	
C3	CONDUIT	19.03	0	01:02	7.04	0.73	0.82	
C30	CONDUIT	18.61	0	00:48	3.88	0.00	0.01	
C31	CONDUIT	14.55	0	00:47	3.38	0.00	0.01	
C32	CHANNEL	38.60	0	00:46	3.19	0.03	0.32	
C33	CONDUIT	1.13	0	00:48	1.24	0.00	0.00	
C34	CONDUIT	1.11	0	00:50	0.95	0.00	0.00	
C35	CONDUIT	37.18	0	01:19	7.57	0.89	1.00	
C36	CONDUIT	82.14	0	00:54	11.62	0.67	1.00	
C37	CONDUIT	85.95	0	01:02	12.16	0.80	1.00	
C38	CONDUIT	87.88	0	01:00	12.55	2.36	0.97	

								100 YR Link Flow
C39	CHANNEL	23.71	0	00:45	3.54	0.01	0.34	
C4	CONDUIT	18.10	0	01:04	1.88	0.02	0.14	
C40	CHANNEL	110.49	0	00:50	4.49	0.07	0.39	
C41	CONDUIT	2.00	0	00:49	1.36	0.00	0.01	
C42	CONDUIT	3.82	0	00:48	1.98	0.00	0.00	
C43	CHANNEL	5.65	0	00:52	2.59	0.00	0.07	
C44	CONDUIT	5.68	0	01:16	3.21	0.28	1.00	
C45	CONDUIT	12.63	0	00:57	7.15	0.71	1.00	
C46	CHANNEL	18.69	0	00:46	4.08	0.01	0.20	
C47	CONDUIT	1.01	0	00:48	1.09	0.00	0.00	
C48	CONDUIT	3.86	0	00:50	2.19	0.18	1.00	
C49	CONDUIT	11.77	0	01:05	6.66	0.81	1.00	
C5	CONDUIT	2.36	0	00:45	6.57	0.45	0.47	
C50	CHANNEL	1.62	0	00:46	1.24	0.00	0.12	
C51	CONDUIT	12.95	0	01:15	7.33	1.22	1.00	
C52	CHANNEL	2.89	0	00:50	1.85	0.00	0.05	
C53	CHANNEL	15.47	0	00:48	3.66	0.01	0.15	
C54	CONDUIT	24.67	0	00:52	9.21	1.31	0.88	
C55	CONDUIT	26.38	0	00:49	12.29	0.44	0.88	

								100 YR Link Flow
C56	CONDUIT	0.50	0	00:25	1.40	0.03	1.00	
C57	CONDUIT	3.38	0	00:40	2.30	0.28	1.00	
C58	CONDUIT	0.92	0	00:46	1.00	0.06	0.92	
C59	CONDUIT	1.25	0	00:46	1.89	0.04	0.57	
C6	CONDUIT	2.05	0	00:45	6.24	0.39	0.44	
C60	CONDUIT	0.95	0	00:46	1.38	0.00	0.00	
C61	CONDUIT	1.25	0	00:46	1.61	0.00	0.00	
C62	CHANNEL	15.80	0	00:48	1.76	0.01	0.32	
C63	CONDUIT	2.12	0	00:47	1.05	0.00	0.51	
C64	CHANNEL	7.32	0	00:47	1.20	0.00	0.32	
C65	CONDUIT	5.23	0	00:45	1.20	0.01	0.54	
C66	CONDUIT	1.52	0	00:51	1.12	0.00	0.00	
C67	CONDUIT	6.37	0	00:44	3.76	0.16	1.00	
C68	CONDUIT	15.34	0	01:41	8.68	0.69	1.00	
C69	CHANNEL	27.69	0	00:49	3.21	0.01	0.30	
C7	CONDUIT	29.26	0	00:45	9.31	0.62	1.00	
C70	CONDUIT	26.88	0	00:49	8.56	0.93	1.00	
C71	CHANNEL	12.81	0	00:50	4.78	0.01	0.09	
C72	CONDUIT	12.07	0	00:53	2.26	0.00	0.02	

								100 YR Link Flow
C73	CONDUIT	10.03	0	01:45	5.67	0.51	1.00	
C74	CONDUIT	4.72	0	01:46	3.14	0.12	1.00	
C75	CONDUIT	4.55	0	00:51	1.78	0.00	0.01	
C76	CONDUIT	29.67	0	00:45	10.29	1.13	1.00	
C77	CHANNEL	27.96	0	00:49	2.67	0.01	0.56	
C78	CONDUIT	11.62	0	02:45	3.95	2.62	1.00	
C79	CHANNEL	7.86	0	01:05	1.75	0.01	0.75	
C8	CONDUIT	30.30	0	00:50	9.75	1.22	0.97	
C80	CONDUIT	10.87	0	02:22	3.46	0.65	1.00	
C81	CONDUIT	12.18	0	02:47	4.83	0.33	1.00	
C82	CONDUIT	37.27	0	00:48	14.91	0.73	1.00	
C83	CONDUIT	17.44	0	02:26	5.55	0.69	1.00	
C84	CHANNEL	13.20	0	00:47	2.65	0.01	0.13	
C85	CHANNEL	12.50	0	00:49	1.93	0.01	0.15	
C86	CONDUIT	25.42	0	01:18	8.30	1.64	1.00	
C87	CONDUIT	16.71	0	01:14	9.46	0.52	1.00	
C88	CONDUIT	3.78	0	01:18	2.16	0.12	1.00	
C89	CONDUIT	16.62	0	00:46	9.40	0.63	1.00	
C9	CHANNEL	22.12	0	00:45	3.96	0.02	0.14	

								100 YR Link Flow
C90	CONDUIT	4.85	0	01:09	3.09	0.17	1.00	
C91	CONDUIT	17.84	0	00:46	10.10	0.97	1.00	
C92	CONDUIT	42.11	0	01:14	13.79	1.25	1.00	
C93	CONDUIT	4.24	0	00:51	1.37	0.00	0.01	
C94	CONDUIT	3.57	0	00:53	1.49	0.00	0.01	
C95	CONDUIT	28.13	0	00:45	2.79	0.00	0.04	
C96	CHANNEL	2.38	0	00:47	1.87	0.00	0.05	
C97	CONDUIT	2.09	0	00:54	1.13	0.00	0.00	
C98	CHANNEL	13.37	0	00:53	1.95	0.01	0.15	
C99	CONDUIT	7.76	0	00:47	4.39	0.31	1.00	

## SWMM MODEL RESULTS SUMMARY 10-YEAR, 2-HOUR DESIGN STORM

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### Element Count

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Number of rain gages ..... 1

Number of subcatchments ... 72

Number of nodes ..... 189

Number of links ..... 178

Number of pollutants ..... 0

Number of land uses ..... 0

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### Raingage Summary

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Data    Recording



Name	Data Source	Type	Interval
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Raingage	10 YEAR 2 HOUR	VOLUME	5 min.

10 YR 2 HR SWMM RESULTS
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### Subcatchment Summary

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Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
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Basin_10	2.16	691.84	70.00	2.1000	Raingage	J11
Basin_11	19.41	1691.00	85.00	2.6000	Raingage	J22
Basin_12	3.27	1139.53	85.00	1.3000	Raingage	J28
Basin_13	6.79	845.06	85.00	1.5000	Raingage	J35
Basin_14	24.62	2144.89	76.00	1.5000	Raingage	J46
Basin_15	1.06	307.82	40.00	1.2000	Raingage	J47
Basin_16	2.25	478.10	90.00	2.3000	Raingage	J37
Basin_17	3.11	492.62	95.00	3.1000	Raingage	J36
Basin_18	0.60	60.00	50.00	1.2000	Raingage	J48

Basin_19	5.00	500.00	25.00	0.4000	Raingage	J42
Basin_2	0.51	296.21	40.00	0.3000	Raingage	J27
Basin_20	3.12	906.05	80.00	3.8000	Raingage	J45
Basin_21	2.54	340.44	38.00	0.5000	Raingage	J116
Basin_22	1.30	251.68	45.00	0.5000	Raingage	J117
Basin_23	1.37	342.22	27.00	1.8000	Raingage	J184
Basin_24	7.54	853.12	17.00	2.8000	Raingage	J181
Basin_25	3.10	613.80	14.00	1.2000	Raingage	J110
Basin_26	5.00	2904.00	50.00	1.5000	Raingage	J109
Basin_28	5.00	2904.00	50.00	0.7000	Raingage	J103
Basin_29	0.26	25.78	25.00	0.5000	Raingage	J189
basin_30	1.75	412.05	64.00	2.5000	Raingage	J179
Basin_31	0.98	98.00	31.00	3.1000	Raingage	J180
Basin_32	1.66	438.24	28.00	1.4000	Raingage	J169
Basin_33	0.46	267.17	40.00	1.2000	Raingage	J167
Basin_34	1.43	280.59	12.00	1.0400	Raingage	J102
Basin_35	1.25	726.00	45.00	0.7000	Raingage	J100
Basin_36	1.20	696.96	45.00	0.7000	Raingage	J101
Basin_37	10.71	1029.86	18.00	0.8000	Raingage	J105

10 YR 2 HR SWMM RESULTS
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Basin_38	1.77	283.46	28.00	1.3300	Raingage	J164
Basin_39	2.11	581.72	28.00	1.3000	Raingage	J165
Basin_4	0.13	75.50	40.00	0.5000	Raingage	J13
Basin_40	0.18	18.00	45.00	0.3500	Raingage	J155
Basin_42	2.56	590.02	16.00	2.6400	Raingage	J149
Basin_43	8.93	781.11	8.00	4.8000	Raingage	J91
Basin_45	0.61	168.18	24.00	3.1000	Raingage	J148
Basin_46	0.55	480.55	45.00	2.2000	Raingage	J142
Basin_48	1.80	318.73	34.00	1.1000	Raingage	J89
Basin_49	5.00	435.60	12.00	2.2000	Raingage	J139
Basin_5	0.29	168.43	85.00	1.1000	Raingage	J6
Basin_5_1	0.47	136.49	40.00	1.1000	Raingage	J7
Basin_5_2	0.39	147.72	40.00	0.5000	Raingage	J16
Basin_50	0.59	514.01	45.00	1.2000	Raingage	J136
Basin_51	6.28	1179.12	14.00	1.8000	Raingage	J79
Basin_52	0.71	147.59	22.00	1.4000	Raingage	J76
Basin_53	0.53	184.69	40.00	1.2000	Raingage	J70
Basin_55_1	8.12	707.41	18.00	3.8000	Raingage	J72
Basin_55_2	0.30	261.36	90.00	3.8000	Raingage	J121

10 YR 2 HR SWMM RESULTS
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Basin_56	0.32	282.97	55.00	2.1000	Raingage	J131
bASIN_57	0.37	322.34	85.00	4.2000	Raingage	J130
Basin_58	5.15	552.93	16.00	4.1000	Raingage	J132
Basin_59	1.91	260.96	38.00	2.8000	Raingage	J120
Basin_6	0.40	139.39	25.00	1.2000	Raingage	J39
Basin_61	3.69	430.93	8.00	4.2000	Raingage	J53
Basin_62	7.44	1045.44	18.00	4.7000	Raingage	J52
Basin_63	7.92	711.33	18.00	3.7000	Raingage	J59
Basin_64	0.42	365.90	12.00	1.8000	Raingage	J57
Basin_65	0.24	209.09	22.00	2.5000	Raingage	J58
Basin_66	1.04	383.92	8.00	3.6000	Raingage	J60
Basin_67	3.95	392.84	18.00	1.9000	Raingage	J69
Basin_68	0.13	70.78	75.00	3.4000	Raingage	J67
Basin_69	0.20	116.16	50.00	3.7000	Raingage	J68
Basin_70	15.00	1654.18	12.00	5.2000	Raingage	J77
Basin_8	30.57	2663.26	12.00	0.8000	Raingage	J1
Basin_9_2	3.21	932.18	75.00	1.5000	Raingage	J14
Basin-47	9.45	823.66	18.00	2.0400	Raingage	J92
S27	13.05	1136.85	8.00	3.8000	Raingage	J123

10 YR 2 HR SWMM RESULTS
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S3	0.31	180.05	40.00	0.5000	Raingage	J21
S41	2.90	1684.32	14.00	0.5000	Raingage	J82
S44	57.56	5014.63	8.00	3.1000	Raingage	J122
S54	0.38	331.06	45.00	2.3000	Raingage	J134
S60	3.57	311.02	87.00	1.9500	Raingage	J187
S7	0.27	156.82	40.00	1.2000	Raingage	J38

10 YR 2 HR SWMM RESULTS
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## Node Summary

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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
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J1	JUNCTION	6112.00	5.00	0.0	
J100	JUNCTION	6138.01	25.50	0.0	
J101	JUNCTION	6138.01	25.50	0.0	
J102	JUNCTION	6136.36	4.00	0.0	
J103	JUNCTION	6133.96	25.50	0.0	

J104	JUNCTION	6134.55	25.50	0.0
J105	JUNCTION	6139.24	4.00	0.0
J106	JUNCTION	6124.70	8.00	0.0
J107	JUNCTION	6124.00	4.57	0.0
J108	JUNCTION	6124.31	29.50	0.0
J109	JUNCTION	6128.95	25.50	0.0
J11	JUNCTION	6105.21	4.00	0.0
J110	JUNCTION	6131.85	4.00	0.0
J111	JUNCTION	6102.00	29.50	0.0
J112	JUNCTION	6098.20	4.00	0.0
J113	JUNCTION	6100.47	29.50	0.0
J114	JUNCTION	6097.40	7.00	0.0
J116	JUNCTION	6129.37	25.50	0.0
J117	JUNCTION	6128.70	25.50	0.0
J118	JUNCTION	6193.95	9.00	0.0
J119	JUNCTION	6193.00	30.50	0.0
J12	JUNCTION	6103.89	25.50	0.0
J120	JUNCTION	6212.13	4.00	0.0
J121	JUNCTION	6204.78	25.50	0.0

10 YR 2 HR SWMM RESULTS
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J124	JUNCTION	6175.01	5.00	0.0
J125	JUNCTION	6166.63	5.00	0.0
J126	JUNCTION	6165.24	5.00	0.0
J127	JUNCTION	6164.58	5.00	0.0
J128	JUNCTION	6164.61	5.00	0.0
J129	JUNCTION	6173.46	5.00	0.0
J13	JUNCTION	6102.93	25.50	0.0
J130	JUNCTION	6183.47	5.00	0.0
J131	JUNCTION	6170.00	5.00	0.0
J132	JUNCTION	6197.44	4.00	0.0
J133	JUNCTION	6170.84	9.00	0.0
J134	JUNCTION	6158.87	5.00	0.0
J135	JUNCTION	6155.09	5.00	0.0
J136	JUNCTION	6155.00	5.00	0.0
J137	JUNCTION	6154.03	5.00	0.0
J138	JUNCTION	6152.80	5.00	0.0
J139	JUNCTION	6159.54	4.00	0.0
J14	JUNCTION	6106.72	4.00	0.0
J140	JUNCTION	6147.15	9.00	0.0

10 YR 2 HR SWMM RESULTS
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J141	JUNCTION	6151.88	5.00	0.0
J142	JUNCTION	6146.95	5.00	0.0
J143	JUNCTION	6146.81	5.00	0.0
J144	JUNCTION	6141.75	5.00	0.0
J145	JUNCTION	6139.66	5.00	0.0
J146	JUNCTION	6140.99	5.00	0.0
J147	JUNCTION	6147.03	5.00	0.0
J148	JUNCTION	6144.83	5.00	0.0
J149	JUNCTION	6148.59	4.00	0.0
J15	JUNCTION	6105.00	25.50	0.0
J150	JUNCTION	6139.00	9.00	0.0
J151	JUNCTION	6138.00	5.50	0.0
J152	JUNCTION	6139.00	5.00	0.0
J153	JUNCTION	6138.60	5.39	0.0
J154	JUNCTION	6137.00	5.00	0.0
J155	JUNCTION	6138.98	5.00	0.0
J156	JUNCTION	6134.60	5.00	0.0
J157	JUNCTION	6133.70	9.00	0.0
J158	JUNCTION	6131.00	5.00	0.0

10 YR 2 HR SWMM RESULTS
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J159	JUNCTION	6130.50	5.00	0.0
J16	JUNCTION	6104.03	25.50	0.0
J160	JUNCTION	6131.15	5.00	0.0
J161	JUNCTION	6131.05	5.00	0.0
J162	JUNCTION	6135.01	5.00	0.0
J163	JUNCTION	6134.20	9.00	0.0
J164	JUNCTION	6140.24	4.00	0.0
J165	JUNCTION	6140.76	4.00	0.0
J166	JUNCTION	6128.00	6.00	0.0
J167	JUNCTION	6129.00	7.00	0.0
J168	JUNCTION	6128.50	7.00	0.0
J169	JUNCTION	6138.00	4.00	0.0
J17	JUNCTION	6096.85	10.00	0.0
J170	JUNCTION	6129.05	9.00	0.0
J171	JUNCTION	6124.90	5.00	0.0
J172	JUNCTION	6125.29	30.50	0.0
J173	JUNCTION	6120.00	5.00	0.0
J174	JUNCTION	6117.78	5.00	0.0
J175	JUNCTION	6120.22	5.00	0.0

10 YR 2 HR SWMM RESULTS
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J176	JUNCTION	6123.00	8.00	0.0
J177	JUNCTION	6121.86	5.00	0.0
J178	JUNCTION	6124.81	9.00	0.0
J179	JUNCTION	6124.66	4.00	0.0
J18	JUNCTION	6096.00	6.63	0.0
J180	JUNCTION	6131.89	4.00	0.0
J181	JUNCTION	6133.82	4.00	0.0
J182	JUNCTION	6100.68	10.00	0.0
J183	JUNCTION	6095.00	14.98	0.0
J184	JUNCTION	6105.50	5.00	0.0
J185	JUNCTION	6108.09	9.00	0.0
J188	JUNCTION	6099.00	25.50	0.0
J189	JUNCTION	6134.04	25.50	0.0
J19	JUNCTION	6095.50	32.15	0.0
J2	JUNCTION	6097.20	9.71	0.0
J21	JUNCTION	6102.13	25.50	0.0
J22	JUNCTION	6111.99	4.00	0.0
J23	JUNCTION	6094.52	31.50	0.0
J24	JUNCTION	6094.00	33.50	0.0

10 YR 2 HR SWMM RESULTS
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J26	JUNCTION	6101.50	25.50	0.0
J27	JUNCTION	6101.95	25.50	0.0
J28	JUNCTION	6107.95	4.00	0.0
J29	JUNCTION	6095.00	9.00	0.0
J3	JUNCTION	6096.90	6.00	0.0
J30	JUNCTION	6094.00	31.19	0.0
J31	JUNCTION	6093.50	5.87	0.0
J32	JUNCTION	6094.00	30.74	0.0
J33	JUNCTION	6092.50	31.28	0.0
J35	JUNCTION	6107.42	4.00	0.0
J36	JUNCTION	6113.94	25.50	0.0
J37	JUNCTION	6114.07	25.50	0.0
J38	JUNCTION	6101.14	25.50	0.0
J39	JUNCTION	6101.10	25.50	0.0
J4	JUNCTION	6096.00	7.00	0.0
J40	JUNCTION	6092.50	9.00	0.0
J41	JUNCTION	6091.75	10.17	0.0
J42	JUNCTION	6091.25	32.22	0.0
J43	JUNCTION	6090.75	32.49	0.0

10 YR 2 HR SWMM RESULTS
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J45	JUNCTION	6107.68	4.00	0.0
J46	JUNCTION	6121.91	4.00	0.0
J47	JUNCTION	6101.96	25.50	0.0
J48	JUNCTION	6101.98	25.50	0.0
J49	JUNCTION	6170.94	8.00	0.0
J50	JUNCTION	6170.50	4.30	0.0
J51	JUNCTION	6171.10	8.00	0.0
J52	JUNCTION	6204.01	4.00	0.0
J53	JUNCTION	6192.14	4.00	0.0
J54	JUNCTION	6168.00	29.50	0.0
J55	JUNCTION	6167.50	4.50	0.0
J56	JUNCTION	6168.00	8.00	0.0
J57	JUNCTION	6174.71	4.00	0.0
J58	JUNCTION	6173.40	25.50	0.0
J59	JUNCTION	6202.32	4.00	0.0
J6	JUNCTION	6104.00	1.00	0.0
J60	JUNCTION	6176.23	4.00	0.0
J61	JUNCTION	6161.00	9.00	0.0
J62	JUNCTION	6160.50	9.00	0.0

10 YR 2 HR SWMM RESULTS
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J63	JUNCTION	6160.00	4.81	0.0
J64	JUNCTION	6165.26	29.50	0.0
J65	JUNCTION	6165.00	4.44	0.0
J66	JUNCTION	6166.86	29.50	0.0
J67	JUNCTION	6172.13	25.50	0.0
J68	JUNCTION	6173.79	25.50	0.0
J69	JUNCTION	6174.44	4.00	0.0
J7	JUNCTION	6103.98	1.00	0.0
J70	JUNCTION	6166.20	5.00	0.0
J71	JUNCTION	6165.47	5.00	0.0
J72	JUNCTION	6181.96	4.00	0.0
J73	JUNCTION	6154.10	29.50	0.0
J74	JUNCTION	6153.00	5.00	0.0
J75	JUNCTION	6153.97	8.00	0.0
J76	JUNCTION	6160.05	25.50	0.0
J77	JUNCTION	6177.43	4.00	0.0
J78	JUNCTION	6155.99	4.00	0.0
J79	JUNCTION	6161.16	4.00	0.0
J8	JUNCTION	6098.43	30.50	0.0

10 YR 2 HR SWMM RESULTS
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J80	JUNCTION	6137.00	8.00	0.0
J81	JUNCTION	6137.00	8.00	0.0
J82	JUNCTION	6143.00	4.00	0.0
J83	JUNCTION	6136.00	11.16	0.0
J84	JUNCTION	6135.00	11.67	0.0
J85	JUNCTION	6134.50	11.57	0.0
J86	JUNCTION	6141.80	5.00	0.0
J87	JUNCTION	6143.03	29.50	0.0
J88	JUNCTION	6142.54	29.50	0.0
J89	JUNCTION	6150.86	25.50	0.0
J9	JUNCTION	6097.50	30.33	0.0
J90	JUNCTION	6150.00	25.50	0.0
J91	JUNCTION	6175.36	4.00	0.0
J92	JUNCTION	6152.64	4.00	0.0
J93	JUNCTION	6128.80	29.50	0.0
J94	JUNCTION	6129.39	29.50	0.0
J95	JUNCTION	6128.13	5.00	0.0
J96	JUNCTION	6127.00	5.50	0.0
J97	JUNCTION	6129.80	29.50	0.0

10 YR 2 HR SWMM RESULTS
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J98	JUNCTION	6128.71	5.00	0.0
J99	JUNCTION	6129.68	29.50	0.0
J10	OUTFALL	6096.00	2.00	0.0
J115	OUTFALL	6096.00	2.50	0.0
J122	OUTFALL	6128.24	0.00	0.0
J123	OUTFALL	6130.89	0.00	0.0
J186	OUTFALL	6094.00	3.00	0.0
J187	OUTFALL	6178.00	0.00	0.0
J20	OUTFALL	6091.82	2.50	0.0
J25	OUTFALL	6089.00	2.00	0.0
J34	OUTFALL	6091.25	2.00	0.0
J44	OUTFALL	6090.50	3.00	0.0
J5	OUTFALL	6095.00	2.00	0.0

10 YR 2 HR SWMM RESULTS
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## Link Summary

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Name	From Node	To Node	Type	Length	%Slope Roughness
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10 YR 2 HR SWMM RESULTS
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C1	J2	J3	CONDUIT	21.7	1.3825	0.0100
C10	J15	J8	CONDUIT	253.0	0.6206	0.0160
C100	J108	J107	CONDUIT	21.0	1.4764	0.0130
C101	J96	J107	CONDUIT	215.9	1.3896	0.0100
C102	J110	J106	CONDUIT	234.0	1.3463	0.0350
C103	J109	J108	CONDUIT	67.0	0.9553	0.0160
C104	J114	J115	CONDUIT	64.7	2.1633	0.0100
C105	J112	J114	CONDUIT	55.0	1.4547	0.0130
C106	J113	J112	CONDUIT	13.6	16.9993	0.0100
C107	J111	J112	CONDUIT	20.5	18.8890	0.0100
C108	J107	J112	CONDUIT	1546.0	1.6691	0.0130
C109	J116	J111	CONDUIT	803.0	2.9113	0.0160
C11	J16	J9	CONDUIT	243.5	0.6993	0.0160
C110	J117	J113	CONDUIT	794.0	3.0529	0.0160
C111	J120	J118	CONDUIT	316.0	4.1745	0.0350
C112	J121	J119	CONDUIT	174.0	3.8995	0.0160
C113	J119	J130	CONDUIT	188.0	5.0757	0.0350
C114	J130	J124	CONDUIT	245.0	3.4551	0.0350

C115	J124	J129	CONDUIT	35.0	4.4329	0.0130
C116	J129	J131	CONDUIT	147.0	2.3544	0.0350
C117	J131	J125	CONDUIT	176.0	1.9151	0.0350
C118	J125	J128	CONDUIT	65.0	3.1092	0.0200
C119	J126	J127	CONDUIT	66.0	1.0001	0.0130
C12	J13	J9	CONDUIT	82.0	0.7317	0.0160
C120	J132	J133	CONDUIT	408.0	5.3016	0.0350
C121	J133	J126	CONDUIT	169.0	3.3154	0.0350
C122	J118	J133	CONDUIT	610.0	3.7912	0.0200
C123	J128	J136	CONDUIT	352.0	2.7311	0.0350
C124	J136	J137	CONDUIT	49.8	1.9489	0.0100
C125	J137	J138	CONDUIT	227.0	0.5419	0.0350
C126	J139	J140	CONDUIT	633.0	1.1671	0.0350
C127	J135	J140	CONDUIT	626.0	1.2685	0.0350
C128	J138	J141	CONDUIT	42.0	2.1910	0.0130
C129	J141	J142	CONDUIT	318.0	1.5505	0.0350
C13	J12	J8	CONDUIT	83.0	0.5542	0.0160
C130	J142	J143	CONDUIT	52.0	0.2692	0.0130
C131	J140	J147	CONDUIT	52.0	0.2308	0.0130

10 YR 2 HR SWMM RESULTS
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C132	J147	J148	CONDUIT	108.0	2.0375	0.0350
C133	J148	J146	CONDUIT	152.0	2.5271	0.0350
C134	J143	J144	CONDUIT	230.0	2.2005	0.0350
C135	J144	J145	CONDUIT	69.0	3.0304	0.0130
C136	J127	J134	CONDUIT	168.0	3.4008	0.0350
C137	J134	J135	CONDUIT	179.0	2.1122	0.0350
C138	J146	J150	CONDUIT	162.0	1.2285	0.0350
C139	J150	J151	CONDUIT	79.0	1.2659	0.0350
C14	J11	J12	CONDUIT	291.0	0.4536	0.0350
C140	J151	J154	CONDUIT	50.0	2.0004	0.0130
C141	J152	J153	CONDUIT	42.9	0.9320	0.0100
C142	J155	J152	CONDUIT	90.0	-0.0222	0.0350
C143	J145	J155	CONDUIT	85.0	0.8000	0.0350
C144	J149	J150	CONDUIT	271.0	1.6940	0.0350
C145	J154	J156	CONDUIT	371.0	0.6469	0.0350
C146	J156	J157	CONDUIT	30.0	3.0014	0.0130
C147	J157	J158	CONDUIT	201.0	1.3434	0.0350
C148	J158	J159	CONDUIT	33.0	1.5153	0.0130
C149	J160	J161	CONDUIT	38.0	0.2632	0.0130

10 YR 2 HR SWMM RESULTS
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C15	J17	J18	CONDUIT	26.0	3.2702	0.0100
C150	J162	J163	CONDUIT	26.6	3.0508	0.0100
C151	J163	J160	CONDUIT	326.2	0.9349	0.0100
C152	J153	J162	CONDUIT	262.0	1.3704	0.0350
C153	J164	J157	CONDUIT	140.0	1.1001	0.0350
C154	J165	J163	CONDUIT	150.0	1.0381	0.0350
C155	J159	J167	CONDUIT	251.0	0.5976	0.0350
C156	J167	J168	CONDUIT	40.0	1.2501	0.0130
C157	J168	J166	CONDUIT	130.6	0.3827	0.0100
C158	J169	J170	CONDUIT	185.0	2.1356	0.0350
C159	J161	J170	CONDUIT	425.8	0.4698	0.0100
C16	J18	J19	CONDUIT	33.6	1.4897	0.0100
C160	J166	J171	CONDUIT	103.0	3.0111	0.0130
C161	J170	J172	CONDUIT	104.0	3.6177	0.0130
C162	J172	J176	CONDUIT	134.0	1.7092	0.0350
C163	J176	J177	CONDUIT	38.0	3.0014	0.0130
C164	J171	J178	CONDUIT	127.0	0.0732	0.0350
C165	J178	J173	CONDUIT	97.0	4.9618	0.0350
C166	J173	J174	CONDUIT	63.0	3.5260	0.0130

10 YR 2 HR SWMM RESULTS
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C167	J177	J175	CONDUIT	77.0	2.1304	0.0350
C168	J179	J178	CONDUIT	136.0	-3.7873	0.0350
C169	J180	J176	CONDUIT	119.0	4.1127	0.0350
C17	J19	J20	CONDUIT	140.0	2.6295	0.0130
C170	J181	J185	CONDUIT	326.0	6.3718	0.0350
C171	J185	J182	CONDUIT	256.0	0.9414	0.0350
C172	J184	J183	CONDUIT	279.0	1.9717	0.0350
C173	J174	J184	CONDUIT	390.0	3.1503	0.0350
C174	J175	J185	CONDUIT	436.0	2.7832	0.0350
C175	J182	J183	CONDUIT	42.0	13.6492	0.0130
C176	J183	J186	CONDUIT	137.0	0.7299	0.1300
C177	J189	J172	CONDUIT	170.0	2.2064	0.0160
C178	J188	J42	CONDUIT	249.0	0.4137	0.0160
C18	J21	J19	CONDUIT	70.0	-0.0229	0.0160
C19	J22	J17	CONDUIT	1337.0	0.6836	0.0350
C2	J3	J4	CONDUIT	34.7	2.5909	0.0100
C20	J23	J24	CONDUIT	33.7	1.5411	0.0100
C21	J24	J25	CONDUIT	242.0	2.0666	0.0130
C22	J28	J26	CONDUIT	446.0	1.4463	0.0350

10 YR 2 HR SWMM RESULTS
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C23	J26	J23	CONDUIT	175.0	0.5600	0.0160
C24	J27	J24	CONDUIT	180.0	-0.0278	0.0160
C25	J29	J30	CONDUIT	44.0	2.2733	0.0130
C26	J30	J31	CONDUIT	18.3	2.7349	0.0100
C27	J32	J31	CONDUIT	10.0	5.0063	0.0130
C28	J31	J33	CONDUIT	77.0	1.2988	0.0130
C29	J33	J34	CONDUIT	83.8	1.4910	0.0100
C3	J4	J5	CONDUIT	75.0	1.3335	0.0130
C30	J36	J30	CONDUIT	671.0	2.1242	0.0160
C31	J37	J32	CONDUIT	673.0	2.2041	0.0160
C32	J35	J29	CONDUIT	530.0	1.4001	0.0350
C33	J38	J33	CONDUIT	155.0	1.8474	0.0160
C34	J39	J30	CONDUIT	175.0	0.8057	0.0160
C35	J40	J41	CONDUIT	122.9	0.6100	0.0100
C36	J41	J42	CONDUIT	25.0	1.9990	0.0100
C37	J42	J43	CONDUIT	32.4	1.5430	0.0100
C38	J43	J44	CONDUIT	80.0	0.3125	0.0130
C39	J45	J40	CONDUIT	301.0	3.3840	0.0350
C4	J1	J2	CONDUIT	2275.0	0.4435	0.0350

10 YR 2 HR SWMM RESULTS
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C40	J46	J41	CONDUIT	1495.0	1.6049	0.0350
C41	J48	J42	CONDUIT	254.0	1.5789	0.0160
C42	J47	J43	CONDUIT	258.0	1.6359	0.0160
C43	J53	J49	CONDUIT	553.0	3.1118	0.0350
C44	J49	J50	CONDUIT	12.0	3.6691	0.0130
C45	J51	J50	CONDUIT	21.0	2.8583	0.0130
C46	J52	J51	CONDUIT	505.0	5.7342	0.0350
C47	J58	J54	CONDUIT	104.0	1.3463	0.0160
C48	J54	J55	CONDUIT	12.0	4.1703	0.0130
C49	J56	J55	CONDUIT	26.0	1.9234	0.0130
C5	J6	J3	CONDUIT	160.2	1.3106	0.0100
C50	J57	J56	CONDUIT	182.0	1.4914	0.0350
C51	J50	J55	CONDUIT	295.0	1.0170	0.0130
C52	J60	J54	CONDUIT	241.0	1.7555	0.0350
C53	J59	J56	CONDUIT	747.0	4.0622	0.0350
C54	J55	J65	CONDUIT	358.0	0.6983	0.0130
C55	J65	J63	CONDUIT	70.0	7.1611	0.0130
C56	J62	J63	CONDUIT	27.0	1.8522	0.0130
C57	J61	J62	CONDUIT	38.0	1.3159	0.0130

10 YR 2 HR SWMM RESULTS
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C58	J64	J65	CONDUIT	11.0	2.3643	0.0130
C59	J66	J65	CONDUIT	23.0	8.1135	0.0130
C6	J7	J4	CONDUIT	156.9	1.2624	0.0100
C60	J67	J64	CONDUIT	77.0	3.7299	0.0160
C61	J68	J66	CONDUIT	72.0	4.0728	0.0160
C62	J72	J71	CONDUIT	754.0	2.1875	0.0350
C63	J70	J62	CONDUIT	308.0	0.5520	0.0350
C64	J69	J71	CONDUIT	460.0	1.9504	0.0350
C65	J71	J61	CONDUIT	201.0	0.2338	0.0350
C66	J76	J73	CONDUIT	238.0	0.8194	0.0160
C67	J73	J74	CONDUIT	13.1	8.4293	0.0100
C68	J75	J74	CONDUIT	22.0	4.4134	0.0130
C69	J77	J75	CONDUIT	748.0	2.6025	0.0350
C7	J8	J9	CONDUIT	36.4	2.5590	0.0100
C70	J63	J74	CONDUIT	433.0	1.6168	0.0130
C71	J91	J90	CONDUIT	668.0	3.7991	0.0350
C72	J90	J88	CONDUIT	410.0	0.8439	0.0160
C73	J88	J86	CONDUIT	21.0	3.5260	0.0130
C74	J87	J86	CONDUIT	15.0	8.2277	0.0100

10 YR 2 HR SWMM RESULTS
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C75	J89	J87	CONDUIT	411.0	0.9319	0.0160
C76	J74	J86	CONDUIT	834.0	1.3430	0.0130
C77	J92	J81	CONDUIT	524.0	2.2215	0.0350
C78	J81	J83	CONDUIT	360.0	0.2778	0.0350
C79	J82	J80	CONDUIT	198.0	1.0081	0.0350
C8	J9	J10	CONDUIT	124.0	1.2098	0.0130
C80	J80	J84	CONDUIT	363.0	0.5510	0.0130
C81	J83	J84	CONDUIT	37.0	2.7037	0.0130
C82	J86	J85	CONDUIT	64.0	5.1631	0.0130
C83	J84	J85	CONDUIT	40.0	1.2501	0.0130
C84	J79	J78	CONDUIT	341.4	1.5140	0.0350
C85	J78	J92	CONDUIT	250.1	1.3416	0.0350
C86	J85	J98	CONDUIT	1239.0	0.4673	0.0130
C87	J97	J98	CONDUIT	19.5	5.5985	0.0100
C88	J99	J98	CONDUIT	18.9	5.1492	0.0100
C89	J93	J95	CONDUIT	18.1	3.7126	0.0100
C9	J14	J15	CONDUIT	140.0	1.2287	0.0350
C90	J94	J95	CONDUIT	28.9	4.3648	0.0100
C91	J95	J96	CONDUIT	62.3	1.8151	0.0100

10 YR 2 HR SWMM RESULTS
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C92	J98	J96	CONDUIT	77.0	2.2213	0.0130
C93	J100	J97	CONDUIT	609.1	0.6912	0.0160
C94	J101	J99	CONDUIT	610.0	0.7099	0.0160
C95	J103	J93	CONDUIT	154.0	0.7533	0.0160
C96	J102	J104	CONDUIT	178.0	1.0147	0.0350
C97	J104	J94	CONDUIT	199.0	0.5829	0.0160
C98	J105	J97	CONDUIT	829.0	0.6565	0.0350
C99	J106	J107	CONDUIT	12.0	5.8433	0.0130

10 YR 2 HR SWMM RESULTS
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# Cross Section Summary

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	Full	Full	Hyd.	Max.	No. of	Full	
Conduit	Shape	Depth	Area	Rad.	Width	Barrels	Flow
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C1	CIRCULAR	2.00	3.14	0.50	2.00	1	34.58
C10	Street	25.50	3411.52	5.56	236.00	1	78312.88
C100	CIRCULAR	1.50	1.77	0.38	1.50	1	12.76

C101	CIRCULAR	2.50	4.91	0.62	2.50	1	62.86
C102	Overland	4.00	180.00	2.10	85.00	1	1453.79
C103	Street	25.50	3411.52	5.56	236.00	1	97163.23
C104	CIRCULAR	2.50	4.91	0.62	2.50	1	78.43
C105	CIRCULAR	2.50	4.91	0.62	2.50	1	49.47
C106	CIRCULAR	1.50	1.77	0.38	1.50	1	56.30
C107	CIRCULAR	1.50	1.77	0.38	1.50	1	59.35
C108	CIRCULAR	2.50	4.91	0.62	2.50	1	52.99
C109	Street	25.50	3411.52	5.56	236.00	1	169622.87
C11	Street	25.50	3411.52	5.56	236.00	1	83135.33
C110	Street	25.50	3411.52	5.56	236.00	1	173699.30
C111	Overland	4.00	180.00	2.10	85.00	1	2559.99
C112	Street	25.50	3411.52	5.56	236.00	1	196311.00
C113	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1961.05
C114	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1617.98
C115	CIRCULAR	1.50	1.77	0.38	1.50	1	22.12
C116	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1335.61
C117	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1204.59
C118	CIRCULAR	1.50	1.77	0.38	1.50	1	12.04

10 YR 2 HR SWMM RESULTS
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C119	CIRCULAR	1.50	1.77	0.38	1.50	1	10.50
C12	Street	25.50	3411.52	5.56	236.00	1	85038.18
C120	Overland	4.00	180.00	2.10	85.00	1	2884.94
C121	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1584.93
C122	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	2965.99
C123	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1438.51
C124	CIRCULAR	1.50	1.77	0.38	1.50	1	19.06
C125	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	640.74
C126	Overland	4.00	180.00	2.10	85.00	1	1353.58
C127	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	980.35
C128	CIRCULAR	1.50	1.77	0.38	1.50	1	15.55
C129	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1083.87
C13	Street	25.50	3411.52	5.56	236.00	1	74008.68
C130	CIRCULAR	1.50	1.77	0.38	1.50	1	5.45
C131	CIRCULAR	1.50	1.77	0.38	1.50	1	5.05
C132	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1242.47
C133	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1383.74
C134	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1291.23
C135	CIRCULAR	1.50	1.77	0.38	1.50	1	18.29

10 YR 2 HR SWMM RESULTS
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C136	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1605.20
C137	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1265.05
C138	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	964.78
C139	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	979.37
C14	Overland	4.00	180.00	2.10	85.00	1	843.88
C140	CIRCULAR	1.50	1.77	0.38	1.50	1	14.86
C141	CIRCULAR	1.50	1.77	0.38	1.50	1	13.18
C142	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	129.76
C143	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	778.56
C144	Overland	4.00	180.00	2.10	85.00	1	1630.75
C145	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	700.11
C146	CIRCULAR	1.50	1.77	0.38	1.50	1	18.20
C147	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1008.89
C148	CIRCULAR	1.50	1.77	0.38	1.50	1	12.93
C149	CIRCULAR	1.50	1.77	0.38	1.50	1	5.39
C15	CIRCULAR	2.50	4.91	0.62	2.50	1	96.43
C150	CIRCULAR	1.50	1.77	0.38	1.50	1	23.85
C151	CIRCULAR	1.00	0.79	0.25	1.00	1	4.48
C152	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1018.96

10 YR 2 HR SWMM RESULTS
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C153	Overland	4.00	180.00	2.10	85.00	1	1314.15
C154	Overland	4.00	180.00	2.10	85.00	1	1276.57
C155	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	672.91
C156	CIRCULAR	1.50	1.77	0.38	1.50	1	11.74
C157	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1884.70
C158	Overland	4.00	180.00	2.10	85.00	1	1831.04
C159	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	2088.09
C16	CIRCULAR	2.50	4.91	0.62	2.50	1	65.08
C160	CIRCULAR	1.50	1.77	0.38	1.50	1	18.23
C161	CIRCULAR	1.50	1.77	0.38	1.50	1	19.98
C162	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1137.99
C163	CIRCULAR	1.50	1.77	0.38	1.50	1	18.20
C164	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	235.55
C165	Overland	4.00	180.00	2.10	85.00	1	2790.96
C166	CIRCULAR	1.50	1.77	0.38	1.50	1	19.72
C167	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1270.48
C168	Overland	4.00	180.00	2.10	85.00	1	2438.37
C169	Overland	4.00	180.00	2.10	85.00	1	2540.97
C17	CIRCULAR	2.50	4.91	0.62	2.50	1	66.51

10 YR 2 HR SWMM RESULTS
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C170	Overland	4.00	180.00	2.10	85.00	1	3162.76
C171	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	844.58
C172	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1222.26
C173	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1544.96
C174	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1452.15
C175	CIRCULAR	3.00	7.07	0.75	3.00	1	246.42
C176	CIRCULAR	3.00	7.07	0.75	3.00	1	5.70
C177	Street	25.50	3411.52	5.56	236.00	1	147667.00
C178	Street	25.50	3411.52	5.56	236.00	1	63938.17
C18	Street	25.50	3411.52	5.56	236.00	1	15029.70
C19	Overland	4.00	180.00	2.10	85.00	1	1035.97
C2	CIRCULAR	2.00	3.14	0.50	2.00	1	47.34
C20	CIRCULAR	2.00	3.14	0.50	2.00	1	36.51
C21	CIRCULAR	2.00	3.14	0.50	2.00	1	32.52
C22	Overland	4.00	180.00	2.10	85.00	1	1506.85
C23	Street	25.50	3411.52	5.56	236.00	1	74393.82
C24	Street	25.50	3411.52	5.56	236.00	1	16568.69
C25	CIRCULAR	2.00	3.14	0.50	2.00	1	34.11
C26	CIRCULAR	2.00	3.14	0.50	2.00	1	48.64

10 YR 2 HR SWMM RESULTS
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C27	CIRCULAR	2.00	3.14	0.50	2.00	1	50.62
C28	CIRCULAR	2.00	3.14	0.50	2.00	1	25.78
C29	CIRCULAR	2.00	3.14	0.50	2.00	1	35.91
C3	CIRCULAR	2.00	3.14	0.50	2.00	1	26.12
C30	Street	25.50	3411.52	5.56	236.00	1	144888.72
C31	Street	25.50	3411.52	5.56	236.00	1	147589.41
C32	Overland	4.00	180.00	2.10	85.00	1	1482.59
C33	Street	25.50	3411.52	5.56	236.00	1	135120.52
C34	Street	25.50	3411.52	5.56	236.00	1	89235.37
C35	CIRCULAR	2.50	4.91	0.62	2.50	1	41.65
C36	CIRCULAR	3.00	7.07	0.75	3.00	1	122.59
C37	CIRCULAR	3.00	7.07	0.75	3.00	1	107.71
C38	CIRCULAR	3.00	7.07	0.75	3.00	1	37.29
C39	Overland	4.00	180.00	2.10	85.00	1	2304.89
C4	TRAPEZOIDAL	5.00	200.00	2.82	70.00	1	1129.77
C40	Overland	4.00	180.00	2.10	85.00	1	1587.30
C41	Street	25.50	3411.52	5.56	236.00	1	124917.08
C42	Street	25.50	3411.52	5.56	236.00	1	127149.56
C43	Overland	4.00	180.00	2.10	85.00	1	2210.25

10 YR 2 HR SWMM RESULTS
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C44	CIRCULAR	1.50	1.77	0.38	1.50	1	20.12
C45	CIRCULAR	1.50	1.77	0.38	1.50	1	17.76
C46	Overland	4.00	180.00	2.10	85.00	1	3000.34
C47	Street	25.50	3411.52	5.56	236.00	1	115347.04
C48	CIRCULAR	1.50	1.77	0.38	1.50	1	21.45
C49	CIRCULAR	1.50	1.77	0.38	1.50	1	14.57
C5	CIRCULAR	1.00	0.79	0.25	1.00	1	5.30
C50	Overland	4.00	180.00	2.10	85.00	1	1530.13
C51	CIRCULAR	1.50	1.77	0.38	1.50	1	10.59
C52	Overland	4.00	180.00	2.10	85.00	1	1660.09
C53	Overland	4.00	180.00	2.10	85.00	1	2525.33
C54	CIRCULAR	2.00	3.14	0.50	2.00	1	18.90
C55	CIRCULAR	2.00	3.14	0.50	2.00	1	60.54
C56	CIRCULAR	1.50	1.77	0.38	1.50	1	14.30
C57	CIRCULAR	1.50	1.77	0.38	1.50	1	12.05
C58	CIRCULAR	1.50	1.77	0.38	1.50	1	16.15
C59	CIRCULAR	1.50	1.77	0.38	1.50	1	29.92
C6	CIRCULAR	1.00	0.79	0.25	1.00	1	5.20
C60	Street	25.50	3411.52	5.56	236.00	1	191993.25

10 YR 2 HR SWMM RESULTS
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C61	Street	25.50	3411.52	5.56	236.00	1	200625.88
C62	Overland	4.00	180.00	2.10	85.00	1	1853.16
C63	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	646.69
C64	Overland	4.00	180.00	2.10	85.00	1	1749.82
C65	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	420.91
C66	Street	25.50	3411.52	5.56	236.00	1	89986.12
C67	CIRCULAR	1.50	1.77	0.38	1.50	1	39.65
C68	CIRCULAR	1.50	1.77	0.38	1.50	1	22.07
C69	Overland	4.00	180.00	2.10	85.00	1	2021.30
C7	CIRCULAR	2.00	3.14	0.50	2.00	1	47.05
C70	CIRCULAR	2.00	3.14	0.50	2.00	1	28.77
C71	Overland	4.00	180.00	2.10	85.00	1	2442.19
C72	Street	25.50	3411.52	5.56	236.00	1	91325.76
C73	CIRCULAR	1.50	1.77	0.38	1.50	1	19.72
C74	CIRCULAR	1.50	1.77	0.38	1.50	1	39.17
C75	Street	25.50	3411.52	5.56	236.00	1	95968.20
C76	CIRCULAR	2.00	3.14	0.50	2.00	1	26.22
C77	Overland	4.00	180.00	2.10	85.00	1	1867.51
C78	CIRCULAR	2.00	3.14	0.50	2.00	1	4.43

10 YR 2 HR SWMM RESULTS
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C79	Overland	4.00	180.00	2.10	85.00	1	1258.04
C8	CIRCULAR	2.00	3.14	0.50	2.00	1	24.88
C80	CIRCULAR	2.00	3.14	0.50	2.00	1	16.79
C81	CIRCULAR	2.00	3.14	0.50	2.00	1	37.20
C82	CIRCULAR	2.00	3.14	0.50	2.00	1	51.40
C83	CIRCULAR	2.00	3.14	0.50	2.00	1	25.29
C84	Overland	4.00	180.00	2.10	85.00	1	1541.70
C85	Overland	4.00	180.00	2.10	85.00	1	1451.25
C86	CIRCULAR	2.00	3.14	0.50	2.00	1	15.46
C87	CIRCULAR	1.50	1.77	0.38	1.50	1	32.31
C88	CIRCULAR	1.50	1.77	0.38	1.50	1	30.99
C89	CIRCULAR	1.50	1.77	0.38	1.50	1	26.31
C9	Overland	4.00	180.00	2.10	85.00	1	1388.84
C90	CIRCULAR	1.50	1.77	0.38	1.50	1	28.53
C91	CIRCULAR	1.50	1.77	0.38	1.50	1	18.40
C92	CIRCULAR	2.00	3.14	0.50	2.00	1	33.72
C93	Street	25.50	3411.52	5.56	236.00	1	82649.72
C94	Street	25.50	3411.52	5.56	236.00	1	83757.54
C95	Street	25.50	3411.52	5.56	236.00	1	86280.81

10 YR 2 HR SWMM RESULTS
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C96	Overland	4.00	180.00	2.10	85.00	1	1262.11
C97	Street	25.50	3411.52	5.56	236.00	1	75900.66
C98	Overland	4.00	180.00	2.10	85.00	1	1015.18
C99	CIRCULAR	1.50	1.77	0.38	1.50	1	25.39

10 YR 2 HR SWMM RESULTS
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#### Transect Summary

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#### Transect Overland

Area:

0.0026	0.0059	0.0099	0.0146	0.0200
0.0261	0.0330	0.0405	0.0488	0.0578
0.0675	0.0779	0.0890	0.1008	0.1133
0.1266	0.1405	0.1552	0.1706	0.1867
0.2035	0.2210	0.2392	0.2581	0.2778
0.2981	0.3192	0.3410	0.3635	0.3867
0.4106	0.4352	0.4605	0.4866	0.5133

0.5408	0.5690	0.5979	0.6275	0.6578
0.6888	0.7205	0.7530	0.7861	0.8200
0.8546	0.8899	0.9259	0.9626	1.0000

10 YR 2 HR SWMM RESULTS
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Hrad:

0.0333	0.0610	0.0858	0.1089	0.1310
0.1524	0.1732	0.1938	0.2140	0.2341
0.2540	0.2737	0.2933	0.3129	0.3324
0.3518	0.3712	0.3905	0.4097	0.4290
0.4482	0.4674	0.4866	0.5057	0.5248
0.5439	0.5630	0.5821	0.6012	0.6202
0.6393	0.6583	0.6773	0.6964	0.7154
0.7344	0.7534	0.7724	0.7914	0.8104
0.8293	0.8483	0.8673	0.8863	0.9052
0.9242	0.9431	0.9621	0.9810	1.0000

Width:

0.0776	0.0965	0.1153	0.1341	0.1529
0.1718	0.1906	0.2094	0.2282	0.2471
0.2659	0.2847	0.3035	0.3224	0.3412
0.3600	0.3788	0.3976	0.4165	0.4353

0.4541	0.4729	0.4918	0.5106	0.5294
0.5482	0.5671	0.5859	0.6047	0.6235
0.6424	0.6612	0.6800	0.6988	0.7176
0.7365	0.7553	0.7741	0.7929	0.8118
0.8306	0.8494	0.8682	0.8871	0.9059
0.9247	0.9435	0.9624	0.9812	1.0000

10 YR 2 HR SWMM RESULTS
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## Street Summary

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## Street Street

Area:

0.0035	0.0092	0.0155	0.0224	0.0299
0.0381	0.0468	0.0562	0.0662	0.0767
0.0879	0.0997	0.1121	0.1251	0.1388
0.1530	0.1679	0.1833	0.1994	0.2161
0.2333	0.2512	0.2697	0.2889	0.3086

0.3289	0.3499	0.3714	0.3936	0.4164
0.4398	0.4638	0.4884	0.5136	0.5394
0.5658	0.5929	0.6205	0.6488	0.6777
0.7072	0.7373	0.7680	0.7993	0.8312
0.8638	0.8969	0.9307	0.9650	1.0000

10 YR 2 HR SWMM RESULTS
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Hrad:

0.0575	0.1405	0.2141	0.2803	0.3401
0.3947	0.4449	0.4912	0.5343	0.5745
0.6123	0.6479	0.6816	0.7136	0.7442
0.7734	0.8015	0.8285	0.8546	0.8798
0.9042	0.9279	0.9510	0.9735	0.9955
1.0169	1.0380	1.0586	1.0788	1.0987
1.1182	1.1375	1.1564	1.1751	1.1936
1.2118	1.2299	1.2477	1.2653	1.2828
1.3001	1.3172	1.3342	1.3511	1.3679
1.3845	1.4010	1.4174	1.4337	1.0000

Width:

0.1529	0.1702	0.1875	0.2047	0.2220
0.2393	0.2566	0.2739	0.2912	0.3085

0.3258	0.3431	0.3603	0.3776	0.3949
0.4122	0.4295	0.4468	0.4641	0.4814
0.4986	0.5159	0.5332	0.5505	0.5678
0.5851	0.6024	0.6197	0.6369	0.6542
0.6715	0.6888	0.7061	0.7234	0.7407
0.7580	0.7753	0.7925	0.8098	0.8271
0.8444	0.8617	0.8790	0.8963	0.9136
0.9308	0.9481	0.9654	0.9827	1.0000

10 YR 2 HR SWMM RESULTS
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## Analysis Options

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Flow Units ..... CFS

Process Models:

Rainfall/Runoff ..... YES

RDII ..... NO

Snowmelt ..... NO

Groundwater ..... NO



Flow Routing ..... YES

Ponding Allowed ..... NO

Water Quality ..... NO

Infiltration Method ..... GREEN\_AMPT

Flow Routing Method ..... DYNWAVE

Surcharge Method ..... EXTRAN

Starting Date ..... 01/06/2024 00:00:00

Ending Date ..... 01/07/2024 00:00:00

Antecedent Dry Days ..... 0.0

Report Time Step ..... 00:01:00

Wet Time Step ..... 00:05:00

Dry Time Step ..... 00:05:00

Routing Time Step ..... 5.00 sec

Variable Time Step ..... YES

Maximum Trials ..... 8

Number of Threads ..... 8

Head Tolerance ..... 0.005000 ft

10 YR 2 HR SWMM RESULTS
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*****	Volume	Depth
Runoff Quantity Continuity	acre-feet	inches
*****	-----	-----
Total Precipitation .....	45.132	1.650
Evaporation Loss .....	0.000	0.000
Infiltration Loss .....	30.942	1.131
Surface Runoff .....	13.694	0.501
Final Storage .....	0.642	0.023
Continuity Error (%) .....	-0.324	

10 YR 2 HR SWMM RESULTS
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*****	Volume	Volume
Flow Routing Continuity	acre-feet	10^6 gal
*****	-----	-----
Dry Weather Inflow .....	0.000	0.000
Wet Weather Inflow .....	13.690	4.461
Groundwater Inflow .....	0.000	0.000
RDII Inflow .....	0.000	0.000
External Inflow .....	0.000	0.000

External Outflow .....	13.528	4.408
Flooding Loss .....	0.000	0.000
Evaporation Loss .....	0.000	0.000
Exfiltration Loss .....	0.000	0.000
Initial Stored Volume ....	0.001	0.000
Final Stored Volume .....	0.200	0.065
Continuity Error (%) .....	-0.275	

10 YR 2 HR SWMM RESULTS
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#### Highest Continuity Errors

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Node J179 (100.00%)

Node J27 (13.57%)

Node J71 (5.54%)

Node J92 (3.17%)

Node J21 (2.87%)

10 YR 2 HR  
SWMM RESULTS

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Time-Step Critical Elements

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Link C100 (31.48%)

Link C26 (15.92%)

Link C27 (2.88%)

Link C89 (2.79%)

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Highest Flow Instability Indexes

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Link C103 (14)

Link C149 (5)

Link C140 (3)

Link C167 (3)

Link C119 (3)

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Most Frequent Nonconverging Nodes

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Node J10 (0.20%)

Node J115 (0.20%)

Node J122 (0.20%)

Node J123 (0.20%)

Node J186 (0.20%)

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Routing Time Step Summary

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Minimum Time Step : 0.50 sec

Average Time Step : 3.46 sec

Maximum Time Step : 5.00 sec

% of Time in Steady State : 0.00

Average Iterations per Step : 2.03

% of Steps Not Converging : 0.20

Time Step Frequencies :

5.000 - 3.155 sec : 45.90 %

3.155 - 1.991 sec : 34.41 %

1.991 - 1.256 sec : 11.08 %

1.256 - 0.792 sec : 6.50 %

0.792 - 0.500 sec : 2.10 %

10 YR 2 HR SWMM RESULTS
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Analysis begun on: Sun Jan 21 18:03:20 2024

Analysis ended on: Sun Jan 21 18:03:24 2024

Total elapsed time: 00:00:04

## SWMM MODEL RESULTS SUMMARY 100-YEAR, 2-HOUR DESIGN STORM

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### Element Count

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Number of rain gages ..... 1

Number of subcatchments ... 72

Number of nodes ..... 189

Number of links ..... 178

Number of pollutants ..... 0

Number of land uses ..... 0

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### Raingage Summary

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Data    Recording



Name	Data Source	Type	Interval
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Raingage	100-YEAR-2 HOUR	VOLUME	5 min.

100 YR 2 HR SWMM RESULTS
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### Subcatchment Summary

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Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
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Basin_10	2.16	691.84	70.00	2.1000	Raingage	J11
Basin_11	19.41	1691.00	85.00	2.6000	Raingage	J22
Basin_12	3.27	1139.53	85.00	1.3000	Raingage	J28
Basin_13	6.79	845.06	85.00	1.5000	Raingage	J35
Basin_14	24.62	2144.89	76.00	1.5000	Raingage	J46
Basin_15	1.06	307.82	40.00	1.2000	Raingage	J47
Basin_16	2.25	478.10	90.00	2.3000	Raingage	J37
Basin_17	3.11	492.62	95.00	3.1000	Raingage	J36
Basin_18	0.60	60.00	50.00	1.2000	Raingage	J48

Basin_19	5.00	500.00	25.00	0.4000	Raingage	J42
Basin_2	0.51	296.21	40.00	0.3000	Raingage	J27
Basin_20	3.12	906.05	80.00	3.8000	Raingage	J45
Basin_21	2.54	340.44	38.00	0.5000	Raingage	J116
Basin_22	1.30	251.68	45.00	0.5000	Raingage	J117
Basin_23	1.37	342.22	27.00	1.8000	Raingage	J184
Basin_24	7.54	853.12	17.00	2.8000	Raingage	J181
Basin_25	3.10	613.80	14.00	1.2000	Raingage	J110
Basin_26	5.00	2904.00	50.00	1.5000	Raingage	J109
Basin_28	5.00	2904.00	50.00	0.7000	Raingage	J103
Basin_29	0.26	25.78	25.00	0.5000	Raingage	J189
basin_30	1.75	412.05	64.00	2.5000	Raingage	J179
Basin_31	0.98	98.00	31.00	3.1000	Raingage	J180
Basin_32	1.66	438.24	28.00	1.4000	Raingage	J169
Basin_33	0.46	267.17	40.00	1.2000	Raingage	J167
Basin_34	1.43	280.59	12.00	1.0400	Raingage	J102
Basin_35	1.25	726.00	45.00	0.7000	Raingage	J100
Basin_36	1.20	696.96	45.00	0.7000	Raingage	J101
Basin_37	10.71	1029.86	18.00	0.8000	Raingage	J105

100 YR 2 HR SWMM RESULTS
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Basin_38	1.77	283.46	28.00	1.3300	Raingage	J164
Basin_39	2.11	581.72	28.00	1.3000	Raingage	J165
Basin_4	0.13	75.50	40.00	0.5000	Raingage	J13
Basin_40	0.18	18.00	45.00	0.3500	Raingage	J155
Basin_42	2.56	590.02	16.00	2.6400	Raingage	J149
Basin_43	8.93	781.11	8.00	4.8000	Raingage	J91
Basin_45	0.61	168.18	24.00	3.1000	Raingage	J148
Basin_46	0.55	480.55	45.00	2.2000	Raingage	J142
Basin_48	1.80	318.73	34.00	1.1000	Raingage	J89
Basin_49	5.00	435.60	12.00	2.2000	Raingage	J139
Basin_5	0.29	168.43	85.00	1.1000	Raingage	J6
Basin_5_1	0.47	136.49	40.00	1.1000	Raingage	J7
Basin_5_2	0.39	147.72	40.00	0.5000	Raingage	J16
Basin_50	0.59	514.01	45.00	1.2000	Raingage	J136
Basin_51	6.28	1179.12	14.00	1.8000	Raingage	J79
Basin_52	0.71	147.59	22.00	1.4000	Raingage	J76
Basin_53	0.53	184.69	40.00	1.2000	Raingage	J70
Basin_55_1	8.12	707.41	18.00	3.8000	Raingage	J72
Basin_55_2	0.30	261.36	90.00	3.8000	Raingage	J121

100 YR 2 HR SWMM RESULTS
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Basin_56	0.32	282.97	55.00	2.1000	Raingage	J131
bASIN_57	0.37	322.34	85.00	4.2000	Raingage	J130
Basin_58	5.15	552.93	16.00	4.1000	Raingage	J132
Basin_59	1.91	260.96	38.00	2.8000	Raingage	J120
Basin_6	0.40	139.39	25.00	1.2000	Raingage	J39
Basin_61	3.69	430.93	8.00	4.2000	Raingage	J53
Basin_62	7.44	1045.44	18.00	4.7000	Raingage	J52
Basin_63	7.92	711.33	18.00	3.7000	Raingage	J59
Basin_64	0.42	365.90	12.00	1.8000	Raingage	J57
Basin_65	0.24	209.09	22.00	2.5000	Raingage	J58
Basin_66	1.04	383.92	8.00	3.6000	Raingage	J60
Basin_67	3.95	392.84	18.00	1.9000	Raingage	J69
Basin_68	0.13	70.78	75.00	3.4000	Raingage	J67
Basin_69	0.20	116.16	50.00	3.7000	Raingage	J68
Basin_70	15.00	1654.18	12.00	5.2000	Raingage	J77
Basin_8	30.57	2663.26	12.00	0.8000	Raingage	J1
Basin_9_2	3.21	932.18	75.00	1.5000	Raingage	J14
Basin-47	9.45	823.66	18.00	2.0400	Raingage	J92
S27	13.05	1136.85	8.00	3.8000	Raingage	J123

100 YR 2 HR SWMM RESULTS
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S3	0.31	180.05	40.00	0.5000	Raingage	J21
S41	2.90	1684.32	14.00	0.5000	Raingage	J82
S44	57.56	5014.63	8.00	3.1000	Raingage	J122
S54	0.38	331.06	45.00	2.3000	Raingage	J134
S60	3.57	311.02	87.00	1.9500	Raingage	J187
S7	0.27	156.82	40.00	1.2000	Raingage	J38

100 YR 2 HR SWMM RESULTS
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## Node Summary

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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J1	JUNCTION	6112.00	5.00	0.0	
J100	JUNCTION	6138.01	25.50	0.0	
J101	JUNCTION	6138.01	25.50	0.0	
J102	JUNCTION	6136.36	4.00	0.0	
J103	JUNCTION	6133.96	25.50	0.0	

J104	JUNCTION	6134.55	25.50	0.0
J105	JUNCTION	6139.24	4.00	0.0
J106	JUNCTION	6124.70	8.00	0.0
J107	JUNCTION	6124.00	4.57	0.0
J108	JUNCTION	6124.31	29.50	0.0
J109	JUNCTION	6128.95	25.50	0.0
J11	JUNCTION	6105.21	4.00	0.0
J110	JUNCTION	6131.85	4.00	0.0
J111	JUNCTION	6102.00	29.50	0.0
J112	JUNCTION	6098.20	4.00	0.0
J113	JUNCTION	6100.47	29.50	0.0
J114	JUNCTION	6097.40	7.00	0.0
J116	JUNCTION	6129.37	25.50	0.0
J117	JUNCTION	6128.70	25.50	0.0
J118	JUNCTION	6193.95	9.00	0.0
J119	JUNCTION	6193.00	30.50	0.0
J12	JUNCTION	6103.89	25.50	0.0
J120	JUNCTION	6212.13	4.00	0.0
J121	JUNCTION	6204.78	25.50	0.0

100 YR 2 HR SWMM RESULTS
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J124	JUNCTION	6175.01	5.00	0.0
J125	JUNCTION	6166.63	5.00	0.0
J126	JUNCTION	6165.24	5.00	0.0
J127	JUNCTION	6164.58	5.00	0.0
J128	JUNCTION	6164.61	5.00	0.0
J129	JUNCTION	6173.46	5.00	0.0
J13	JUNCTION	6102.93	25.50	0.0
J130	JUNCTION	6183.47	5.00	0.0
J131	JUNCTION	6170.00	5.00	0.0
J132	JUNCTION	6197.44	4.00	0.0
J133	JUNCTION	6170.84	9.00	0.0
J134	JUNCTION	6158.87	5.00	0.0
J135	JUNCTION	6155.09	5.00	0.0
J136	JUNCTION	6155.00	5.00	0.0
J137	JUNCTION	6154.03	5.00	0.0
J138	JUNCTION	6152.80	5.00	0.0
J139	JUNCTION	6159.54	4.00	0.0
J14	JUNCTION	6106.72	4.00	0.0
J140	JUNCTION	6147.15	9.00	0.0

100 YR 2 HR SWMM RESULTS
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J141	JUNCTION	6151.88	5.00	0.0
J142	JUNCTION	6146.95	5.00	0.0
J143	JUNCTION	6146.81	5.00	0.0
J144	JUNCTION	6141.75	5.00	0.0
J145	JUNCTION	6139.66	5.00	0.0
J146	JUNCTION	6140.99	5.00	0.0
J147	JUNCTION	6147.03	5.00	0.0
J148	JUNCTION	6144.83	5.00	0.0
J149	JUNCTION	6148.59	4.00	0.0
J15	JUNCTION	6105.00	25.50	0.0
J150	JUNCTION	6139.00	9.00	0.0
J151	JUNCTION	6138.00	5.50	0.0
J152	JUNCTION	6139.00	5.00	0.0
J153	JUNCTION	6138.60	5.39	0.0
J154	JUNCTION	6137.00	5.00	0.0
J155	JUNCTION	6138.98	5.00	0.0
J156	JUNCTION	6134.60	5.00	0.0
J157	JUNCTION	6133.70	9.00	0.0
J158	JUNCTION	6131.00	5.00	0.0

100 YR 2 HR SWMM RESULTS
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J159	JUNCTION	6130.50	5.00	0.0
J16	JUNCTION	6104.03	25.50	0.0
J160	JUNCTION	6131.15	5.00	0.0
J161	JUNCTION	6131.05	5.00	0.0
J162	JUNCTION	6135.01	5.00	0.0
J163	JUNCTION	6134.20	9.00	0.0
J164	JUNCTION	6140.24	4.00	0.0
J165	JUNCTION	6140.76	4.00	0.0
J166	JUNCTION	6128.00	6.00	0.0
J167	JUNCTION	6129.00	7.00	0.0
J168	JUNCTION	6128.50	7.00	0.0
J169	JUNCTION	6138.00	4.00	0.0
J17	JUNCTION	6096.85	10.00	0.0
J170	JUNCTION	6129.05	9.00	0.0
J171	JUNCTION	6124.90	5.00	0.0
J172	JUNCTION	6125.29	30.50	0.0
J173	JUNCTION	6120.00	5.00	0.0
J174	JUNCTION	6117.78	5.00	0.0
J175	JUNCTION	6120.22	5.00	0.0

100 YR 2 HR SWMM RESULTS
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J176	JUNCTION	6123.00	8.00	0.0
J177	JUNCTION	6121.86	5.00	0.0
J178	JUNCTION	6124.81	9.00	0.0
J179	JUNCTION	6124.66	4.00	0.0
J18	JUNCTION	6096.00	6.63	0.0
J180	JUNCTION	6131.89	4.00	0.0
J181	JUNCTION	6133.82	4.00	0.0
J182	JUNCTION	6100.68	10.00	0.0
J183	JUNCTION	6095.00	14.98	0.0
J184	JUNCTION	6105.50	5.00	0.0
J185	JUNCTION	6108.09	9.00	0.0
J188	JUNCTION	6099.00	25.50	0.0
J189	JUNCTION	6134.04	25.50	0.0
J19	JUNCTION	6095.50	32.15	0.0
J2	JUNCTION	6097.20	9.71	0.0
J21	JUNCTION	6102.13	25.50	0.0
J22	JUNCTION	6111.99	4.00	0.0
J23	JUNCTION	6094.52	31.50	0.0
J24	JUNCTION	6094.00	33.50	0.0

100 YR 2 HR SWMM RESULTS
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J26	JUNCTION	6101.50	25.50	0.0
J27	JUNCTION	6101.95	25.50	0.0
J28	JUNCTION	6107.95	4.00	0.0
J29	JUNCTION	6095.00	9.00	0.0
J3	JUNCTION	6096.90	6.00	0.0
J30	JUNCTION	6094.00	31.19	0.0
J31	JUNCTION	6093.50	5.87	0.0
J32	JUNCTION	6094.00	30.74	0.0
J33	JUNCTION	6092.50	31.28	0.0
J35	JUNCTION	6107.42	4.00	0.0
J36	JUNCTION	6113.94	25.50	0.0
J37	JUNCTION	6114.07	25.50	0.0
J38	JUNCTION	6101.14	25.50	0.0
J39	JUNCTION	6101.10	25.50	0.0
J4	JUNCTION	6096.00	7.00	0.0
J40	JUNCTION	6092.50	9.00	0.0
J41	JUNCTION	6091.75	10.17	0.0
J42	JUNCTION	6091.25	32.22	0.0
J43	JUNCTION	6090.75	32.49	0.0

100 YR 2 HR SWMM RESULTS
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J45	JUNCTION	6107.68	4.00	0.0
J46	JUNCTION	6121.91	4.00	0.0
J47	JUNCTION	6101.96	25.50	0.0
J48	JUNCTION	6101.98	25.50	0.0
J49	JUNCTION	6170.94	8.00	0.0
J50	JUNCTION	6170.50	4.30	0.0
J51	JUNCTION	6171.10	8.00	0.0
J52	JUNCTION	6204.01	4.00	0.0
J53	JUNCTION	6192.14	4.00	0.0
J54	JUNCTION	6168.00	29.50	0.0
J55	JUNCTION	6167.50	4.50	0.0
J56	JUNCTION	6168.00	8.00	0.0
J57	JUNCTION	6174.71	4.00	0.0
J58	JUNCTION	6173.40	25.50	0.0
J59	JUNCTION	6202.32	4.00	0.0
J6	JUNCTION	6104.00	1.00	0.0
J60	JUNCTION	6176.23	4.00	0.0
J61	JUNCTION	6161.00	9.00	0.0
J62	JUNCTION	6160.50	9.00	0.0

100 YR 2 HR SWMM RESULTS
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J63	JUNCTION	6160.00	4.81	0.0
J64	JUNCTION	6165.26	29.50	0.0
J65	JUNCTION	6165.00	4.44	0.0
J66	JUNCTION	6166.86	29.50	0.0
J67	JUNCTION	6172.13	25.50	0.0
J68	JUNCTION	6173.79	25.50	0.0
J69	JUNCTION	6174.44	4.00	0.0
J7	JUNCTION	6103.98	1.00	0.0
J70	JUNCTION	6166.20	5.00	0.0
J71	JUNCTION	6165.47	5.00	0.0
J72	JUNCTION	6181.96	4.00	0.0
J73	JUNCTION	6154.10	29.50	0.0
J74	JUNCTION	6153.00	5.00	0.0
J75	JUNCTION	6153.97	8.00	0.0
J76	JUNCTION	6160.05	25.50	0.0
J77	JUNCTION	6177.43	4.00	0.0
J78	JUNCTION	6155.99	4.00	0.0
J79	JUNCTION	6161.16	4.00	0.0
J8	JUNCTION	6098.43	30.50	0.0

100 YR 2 HR SWMM RESULTS
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J80	JUNCTION	6137.00	8.00	0.0
J81	JUNCTION	6137.00	8.00	0.0
J82	JUNCTION	6143.00	4.00	0.0
J83	JUNCTION	6136.00	11.16	0.0
J84	JUNCTION	6135.00	11.67	0.0
J85	JUNCTION	6134.50	11.57	0.0
J86	JUNCTION	6141.80	5.00	0.0
J87	JUNCTION	6143.03	29.50	0.0
J88	JUNCTION	6142.54	29.50	0.0
J89	JUNCTION	6150.86	25.50	0.0
J9	JUNCTION	6097.50	30.33	0.0
J90	JUNCTION	6150.00	25.50	0.0
J91	JUNCTION	6175.36	4.00	0.0
J92	JUNCTION	6152.64	4.00	0.0
J93	JUNCTION	6128.80	29.50	0.0
J94	JUNCTION	6129.39	29.50	0.0
J95	JUNCTION	6128.13	5.00	0.0
J96	JUNCTION	6127.00	5.50	0.0
J97	JUNCTION	6129.80	29.50	0.0

100 YR 2 HR SWMM RESULTS
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J98	JUNCTION	6128.71	5.00	0.0
J99	JUNCTION	6129.68	29.50	0.0
J10	OUTFALL	6096.00	2.00	0.0
J115	OUTFALL	6096.00	2.50	0.0
J122	OUTFALL	6128.24	0.00	0.0
J123	OUTFALL	6130.89	0.00	0.0
J186	OUTFALL	6094.00	3.00	0.0
J187	OUTFALL	6178.00	0.00	0.0
J20	OUTFALL	6091.82	2.50	0.0
J25	OUTFALL	6089.00	2.00	0.0
J34	OUTFALL	6091.25	2.00	0.0
J44	OUTFALL	6090.50	3.00	0.0
J5	OUTFALL	6095.00	2.00	0.0

100 YR 2 HR SWMM RESULTS
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Link Summary

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Name	From Node	To Node	Type	Length	%Slope Roughness
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100 YR 2 HR SWMM RESULTS
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C1	J2	J3	CONDUIT	21.7	1.3825	0.0100
C10	J15	J8	CONDUIT	253.0	0.6206	0.0160
C100	J108	J107	CONDUIT	21.0	1.4764	0.0130
C101	J96	J107	CONDUIT	215.9	1.3896	0.0100
C102	J110	J106	CONDUIT	234.0	1.3463	0.0350
C103	J109	J108	CONDUIT	67.0	0.9553	0.0160
C104	J114	J115	CONDUIT	64.7	2.1633	0.0100
C105	J112	J114	CONDUIT	55.0	1.4547	0.0130
C106	J113	J112	CONDUIT	13.6	16.9993	0.0100
C107	J111	J112	CONDUIT	20.5	18.8890	0.0100
C108	J107	J112	CONDUIT	1546.0	1.6691	0.0130
C109	J116	J111	CONDUIT	803.0	2.9113	0.0160
C11	J16	J9	CONDUIT	243.5	0.6993	0.0160
C110	J117	J113	CONDUIT	794.0	3.0529	0.0160
C111	J120	J118	CONDUIT	316.0	4.1745	0.0350
C112	J121	J119	CONDUIT	174.0	3.8995	0.0160
C113	J119	J130	CONDUIT	188.0	5.0757	0.0350
C114	J130	J124	CONDUIT	245.0	3.4551	0.0350



C115	J124	J129	CONDUIT	35.0	4.4329	0.0130
C116	J129	J131	CONDUIT	147.0	2.3544	0.0350
C117	J131	J125	CONDUIT	176.0	1.9151	0.0350
C118	J125	J128	CONDUIT	65.0	3.1092	0.0200
C119	J126	J127	CONDUIT	66.0	1.0001	0.0130
C12	J13	J9	CONDUIT	82.0	0.7317	0.0160
C120	J132	J133	CONDUIT	408.0	5.3016	0.0350
C121	J133	J126	CONDUIT	169.0	3.3154	0.0350
C122	J118	J133	CONDUIT	610.0	3.7912	0.0200
C123	J128	J136	CONDUIT	352.0	2.7311	0.0350
C124	J136	J137	CONDUIT	49.8	1.9489	0.0100
C125	J137	J138	CONDUIT	227.0	0.5419	0.0350
C126	J139	J140	CONDUIT	633.0	1.1671	0.0350
C127	J135	J140	CONDUIT	626.0	1.2685	0.0350
C128	J138	J141	CONDUIT	42.0	2.1910	0.0130
C129	J141	J142	CONDUIT	318.0	1.5505	0.0350
C13	J12	J8	CONDUIT	83.0	0.5542	0.0160
C130	J142	J143	CONDUIT	52.0	0.2692	0.0130
C131	J140	J147	CONDUIT	52.0	0.2308	0.0130

100 YR 2 HR SWMM RESULTS
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C132	J147	J148	CONDUIT	108.0	2.0375	0.0350
C133	J148	J146	CONDUIT	152.0	2.5271	0.0350
C134	J143	J144	CONDUIT	230.0	2.2005	0.0350
C135	J144	J145	CONDUIT	69.0	3.0304	0.0130
C136	J127	J134	CONDUIT	168.0	3.4008	0.0350
C137	J134	J135	CONDUIT	179.0	2.1122	0.0350
C138	J146	J150	CONDUIT	162.0	1.2285	0.0350
C139	J150	J151	CONDUIT	79.0	1.2659	0.0350
C14	J11	J12	CONDUIT	291.0	0.4536	0.0350
C140	J151	J154	CONDUIT	50.0	2.0004	0.0130
C141	J152	J153	CONDUIT	42.9	0.9320	0.0100
C142	J155	J152	CONDUIT	90.0	-0.0222	0.0350
C143	J145	J155	CONDUIT	85.0	0.8000	0.0350
C144	J149	J150	CONDUIT	271.0	1.6940	0.0350
C145	J154	J156	CONDUIT	371.0	0.6469	0.0350
C146	J156	J157	CONDUIT	30.0	3.0014	0.0130
C147	J157	J158	CONDUIT	201.0	1.3434	0.0350
C148	J158	J159	CONDUIT	33.0	1.5153	0.0130
C149	J160	J161	CONDUIT	38.0	0.2632	0.0130

100 YR 2 HR SWMM RESULTS
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C15	J17	J18	CONDUIT	26.0	3.2702	0.0100
C150	J162	J163	CONDUIT	26.6	3.0508	0.0100
C151	J163	J160	CONDUIT	326.2	0.9349	0.0100
C152	J153	J162	CONDUIT	262.0	1.3704	0.0350
C153	J164	J157	CONDUIT	140.0	1.1001	0.0350
C154	J165	J163	CONDUIT	150.0	1.0381	0.0350
C155	J159	J167	CONDUIT	251.0	0.5976	0.0350
C156	J167	J168	CONDUIT	40.0	1.2501	0.0130
C157	J168	J166	CONDUIT	130.6	0.3827	0.0100
C158	J169	J170	CONDUIT	185.0	2.1356	0.0350
C159	J161	J170	CONDUIT	425.8	0.4698	0.0100
C16	J18	J19	CONDUIT	33.6	1.4897	0.0100
C160	J166	J171	CONDUIT	103.0	3.0111	0.0130
C161	J170	J172	CONDUIT	104.0	3.6177	0.0130
C162	J172	J176	CONDUIT	134.0	1.7092	0.0350
C163	J176	J177	CONDUIT	38.0	3.0014	0.0130
C164	J171	J178	CONDUIT	127.0	0.0732	0.0350
C165	J178	J173	CONDUIT	97.0	4.9618	0.0350
C166	J173	J174	CONDUIT	63.0	3.5260	0.0130

100 YR 2 HR SWMM RESULTS
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C167	J177	J175	CONDUIT	77.0	2.1304	0.0350
C168	J179	J178	CONDUIT	136.0	-3.7873	0.0350
C169	J180	J176	CONDUIT	119.0	4.1127	0.0350
C17	J19	J20	CONDUIT	140.0	2.6295	0.0130
C170	J181	J185	CONDUIT	326.0	6.3718	0.0350
C171	J185	J182	CONDUIT	256.0	0.9414	0.0350
C172	J184	J183	CONDUIT	279.0	1.9717	0.0350
C173	J174	J184	CONDUIT	390.0	3.1503	0.0350
C174	J175	J185	CONDUIT	436.0	2.7832	0.0350
C175	J182	J183	CONDUIT	42.0	13.6492	0.0130
C176	J183	J186	CONDUIT	137.0	0.7299	0.1300
C177	J189	J172	CONDUIT	170.0	2.2064	0.0160
C178	J188	J42	CONDUIT	249.0	0.4137	0.0160
C18	J21	J19	CONDUIT	70.0	-0.0229	0.0160
C19	J22	J17	CONDUIT	1337.0	0.6836	0.0350
C2	J3	J4	CONDUIT	34.7	2.5909	0.0100
C20	J23	J24	CONDUIT	33.7	1.5411	0.0100
C21	J24	J25	CONDUIT	242.0	2.0666	0.0130
C22	J28	J26	CONDUIT	446.0	1.4463	0.0350

100 YR 2 HR SWMM RESULTS
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C23	J26	J23	CONDUIT	175.0	0.5600	0.0160
C24	J27	J24	CONDUIT	180.0	-0.0278	0.0160
C25	J29	J30	CONDUIT	44.0	2.2733	0.0130
C26	J30	J31	CONDUIT	18.3	2.7349	0.0100
C27	J32	J31	CONDUIT	10.0	5.0063	0.0130
C28	J31	J33	CONDUIT	77.0	1.2988	0.0130
C29	J33	J34	CONDUIT	83.8	1.4910	0.0100
C3	J4	J5	CONDUIT	75.0	1.3335	0.0130
C30	J36	J30	CONDUIT	671.0	2.1242	0.0160
C31	J37	J32	CONDUIT	673.0	2.2041	0.0160
C32	J35	J29	CONDUIT	530.0	1.4001	0.0350
C33	J38	J33	CONDUIT	155.0	1.8474	0.0160
C34	J39	J30	CONDUIT	175.0	0.8057	0.0160
C35	J40	J41	CONDUIT	122.9	0.6100	0.0100
C36	J41	J42	CONDUIT	25.0	1.9990	0.0100
C37	J42	J43	CONDUIT	32.4	1.5430	0.0100
C38	J43	J44	CONDUIT	80.0	0.3125	0.0130
C39	J45	J40	CONDUIT	301.0	3.3840	0.0350
C4	J1	J2	CONDUIT	2275.0	0.4435	0.0350

100 YR 2 HR SWMM RESULTS
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C40	J46	J41	CONDUIT	1495.0	1.6049	0.0350
C41	J48	J42	CONDUIT	254.0	1.5789	0.0160
C42	J47	J43	CONDUIT	258.0	1.6359	0.0160
C43	J53	J49	CONDUIT	553.0	3.1118	0.0350
C44	J49	J50	CONDUIT	12.0	3.6691	0.0130
C45	J51	J50	CONDUIT	21.0	2.8583	0.0130
C46	J52	J51	CONDUIT	505.0	5.7342	0.0350
C47	J58	J54	CONDUIT	104.0	1.3463	0.0160
C48	J54	J55	CONDUIT	12.0	4.1703	0.0130
C49	J56	J55	CONDUIT	26.0	1.9234	0.0130
C5	J6	J3	CONDUIT	160.2	1.3106	0.0100
C50	J57	J56	CONDUIT	182.0	1.4914	0.0350
C51	J50	J55	CONDUIT	295.0	1.0170	0.0130
C52	J60	J54	CONDUIT	241.0	1.7555	0.0350
C53	J59	J56	CONDUIT	747.0	4.0622	0.0350
C54	J55	J65	CONDUIT	358.0	0.6983	0.0130
C55	J65	J63	CONDUIT	70.0	7.1611	0.0130
C56	J62	J63	CONDUIT	27.0	1.8522	0.0130
C57	J61	J62	CONDUIT	38.0	1.3159	0.0130

100 YR 2 HR SWMM RESULTS
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C58	J64	J65	CONDUIT	11.0	2.3643	0.0130
C59	J66	J65	CONDUIT	23.0	8.1135	0.0130
C6	J7	J4	CONDUIT	156.9	1.2624	0.0100
C60	J67	J64	CONDUIT	77.0	3.7299	0.0160
C61	J68	J66	CONDUIT	72.0	4.0728	0.0160
C62	J72	J71	CONDUIT	754.0	2.1875	0.0350
C63	J70	J62	CONDUIT	308.0	0.5520	0.0350
C64	J69	J71	CONDUIT	460.0	1.9504	0.0350
C65	J71	J61	CONDUIT	201.0	0.2338	0.0350
C66	J76	J73	CONDUIT	238.0	0.8194	0.0160
C67	J73	J74	CONDUIT	13.1	8.4293	0.0100
C68	J75	J74	CONDUIT	22.0	4.4134	0.0130
C69	J77	J75	CONDUIT	748.0	2.6025	0.0350
C7	J8	J9	CONDUIT	36.4	2.5590	0.0100
C70	J63	J74	CONDUIT	433.0	1.6168	0.0130
C71	J91	J90	CONDUIT	668.0	3.7991	0.0350
C72	J90	J88	CONDUIT	410.0	0.8439	0.0160
C73	J88	J86	CONDUIT	21.0	3.5260	0.0130
C74	J87	J86	CONDUIT	15.0	8.2277	0.0100

100 YR 2 HR SWMM RESULTS
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C75	J89	J87	CONDUIT	411.0	0.9319	0.0160
C76	J74	J86	CONDUIT	834.0	1.3430	0.0130
C77	J92	J81	CONDUIT	524.0	2.2215	0.0350
C78	J81	J83	CONDUIT	360.0	0.2778	0.0350
C79	J82	J80	CONDUIT	198.0	1.0081	0.0350
C8	J9	J10	CONDUIT	124.0	1.2098	0.0130
C80	J80	J84	CONDUIT	363.0	0.5510	0.0130
C81	J83	J84	CONDUIT	37.0	2.7037	0.0130
C82	J86	J85	CONDUIT	64.0	5.1631	0.0130
C83	J84	J85	CONDUIT	40.0	1.2501	0.0130
C84	J79	J78	CONDUIT	341.4	1.5140	0.0350
C85	J78	J92	CONDUIT	250.1	1.3416	0.0350
C86	J85	J98	CONDUIT	1239.0	0.4673	0.0130
C87	J97	J98	CONDUIT	19.5	5.5985	0.0100
C88	J99	J98	CONDUIT	18.9	5.1492	0.0100
C89	J93	J95	CONDUIT	18.1	3.7126	0.0100
C9	J14	J15	CONDUIT	140.0	1.2287	0.0350
C90	J94	J95	CONDUIT	28.9	4.3648	0.0100
C91	J95	J96	CONDUIT	62.3	1.8151	0.0100

100 YR 2 HR SWMM RESULTS
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C92	J98	J96	CONDUIT	77.0	2.2213	0.0130
C93	J100	J97	CONDUIT	609.1	0.6912	0.0160
C94	J101	J99	CONDUIT	610.0	0.7099	0.0160
C95	J103	J93	CONDUIT	154.0	0.7533	0.0160
C96	J102	J104	CONDUIT	178.0	1.0147	0.0350
C97	J104	J94	CONDUIT	199.0	0.5829	0.0160
C98	J105	J97	CONDUIT	829.0	0.6565	0.0350
C99	J106	J107	CONDUIT	12.0	5.8433	0.0130

100 YR 2 HR SWMM RESULTS
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# Cross Section Summary

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Conduit	Shape	Full Depth	Full Hyd. Area	Full Max. Rad.	No. of Width	Full Barrels	Flow
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C1	CIRCULAR	2.00	3.14	0.50	2.00	1	34.58
C10	Street	25.50	3411.52	5.56	236.00	1	78312.88
C100	CIRCULAR	1.50	1.77	0.38	1.50	1	12.76

C101	CIRCULAR	2.50	4.91	0.62	2.50	1	62.86
C102	Overland	4.00	180.00	2.10	85.00	1	1453.79
C103	Street	25.50	3411.52	5.56	236.00	1	97163.23
C104	CIRCULAR	2.50	4.91	0.62	2.50	1	78.43
C105	CIRCULAR	2.50	4.91	0.62	2.50	1	49.47
C106	CIRCULAR	1.50	1.77	0.38	1.50	1	56.30
C107	CIRCULAR	1.50	1.77	0.38	1.50	1	59.35
C108	CIRCULAR	2.50	4.91	0.62	2.50	1	52.99
C109	Street	25.50	3411.52	5.56	236.00	1	169622.87
C11	Street	25.50	3411.52	5.56	236.00	1	83135.33
C110	Street	25.50	3411.52	5.56	236.00	1	173699.30
C111	Overland	4.00	180.00	2.10	85.00	1	2559.99
C112	Street	25.50	3411.52	5.56	236.00	1	196311.00
C113	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1961.05
C114	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1617.98
C115	CIRCULAR	1.50	1.77	0.38	1.50	1	22.12
C116	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1335.61
C117	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1204.59
C118	CIRCULAR	1.50	1.77	0.38	1.50	1	12.04

100 YR 2 HR SWMM RESULTS
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C119	CIRCULAR	1.50	1.77	0.38	1.50	1	10.50
C12	Street	25.50	3411.52	5.56	236.00	1	85038.18
C120	Overland	4.00	180.00	2.10	85.00	1	2884.94
C121	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1584.93
C122	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	2965.99
C123	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1438.51
C124	CIRCULAR	1.50	1.77	0.38	1.50	1	19.06
C125	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	640.74
C126	Overland	4.00	180.00	2.10	85.00	1	1353.58
C127	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	980.35
C128	CIRCULAR	1.50	1.77	0.38	1.50	1	15.55
C129	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1083.87
C13	Street	25.50	3411.52	5.56	236.00	1	74008.68
C130	CIRCULAR	1.50	1.77	0.38	1.50	1	5.45
C131	CIRCULAR	1.50	1.77	0.38	1.50	1	5.05
C132	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1242.47
C133	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1383.74
C134	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1291.23
C135	CIRCULAR	1.50	1.77	0.38	1.50	1	18.29

100 YR 2 HR SWMM RESULTS
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C136	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1605.20
C137	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1265.05
C138	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	964.78
C139	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	979.37
C14	Overland	4.00	180.00	2.10	85.00	1	843.88
C140	CIRCULAR	1.50	1.77	0.38	1.50	1	14.86
C141	CIRCULAR	1.50	1.77	0.38	1.50	1	13.18
C142	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	129.76
C143	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	778.56
C144	Overland	4.00	180.00	2.10	85.00	1	1630.75
C145	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	700.11
C146	CIRCULAR	1.50	1.77	0.38	1.50	1	18.20
C147	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1008.89
C148	CIRCULAR	1.50	1.77	0.38	1.50	1	12.93
C149	CIRCULAR	1.50	1.77	0.38	1.50	1	5.39
C15	CIRCULAR	2.50	4.91	0.62	2.50	1	96.43
C150	CIRCULAR	1.50	1.77	0.38	1.50	1	23.85
C151	CIRCULAR	1.00	0.79	0.25	1.00	1	4.48
C152	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1018.96

100 YR 2 HR SWMM RESULTS
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C153	Overland	4.00	180.00	2.10	85.00	1	1314.15
C154	Overland	4.00	180.00	2.10	85.00	1	1276.57
C155	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	672.91
C156	CIRCULAR	1.50	1.77	0.38	1.50	1	11.74
C157	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1884.70
C158	Overland	4.00	180.00	2.10	85.00	1	1831.04
C159	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	2088.09
C16	CIRCULAR	2.50	4.91	0.62	2.50	1	65.08
C160	CIRCULAR	1.50	1.77	0.38	1.50	1	18.23
C161	CIRCULAR	1.50	1.77	0.38	1.50	1	19.98
C162	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1137.99
C163	CIRCULAR	1.50	1.77	0.38	1.50	1	18.20
C164	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	235.55
C165	Overland	4.00	180.00	2.10	85.00	1	2790.96
C166	CIRCULAR	1.50	1.77	0.38	1.50	1	19.72
C167	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1270.48
C168	Overland	4.00	180.00	2.10	85.00	1	2438.37
C169	Overland	4.00	180.00	2.10	85.00	1	2540.97
C17	CIRCULAR	2.50	4.91	0.62	2.50	1	66.51

100 YR 2 HR SWMM RESULTS
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C170	Overland	4.00	180.00	2.10	85.00	1	3162.76
C171	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	844.58
C172	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1222.26
C173	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1544.96
C174	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	1452.15
C175	CIRCULAR	3.00	7.07	0.75	3.00	1	246.42
C176	CIRCULAR	3.00	7.07	0.75	3.00	1	5.70
C177	Street	25.50	3411.52	5.56	236.00	1	147667.00
C178	Street	25.50	3411.52	5.56	236.00	1	63938.17
C18	Street	25.50	3411.52	5.56	236.00	1	15029.70
C19	Overland	4.00	180.00	2.10	85.00	1	1035.97
C2	CIRCULAR	2.00	3.14	0.50	2.00	1	47.34
C20	CIRCULAR	2.00	3.14	0.50	2.00	1	36.51
C21	CIRCULAR	2.00	3.14	0.50	2.00	1	32.52
C22	Overland	4.00	180.00	2.10	85.00	1	1506.85
C23	Street	25.50	3411.52	5.56	236.00	1	74393.82
C24	Street	25.50	3411.52	5.56	236.00	1	16568.69
C25	CIRCULAR	2.00	3.14	0.50	2.00	1	34.11
C26	CIRCULAR	2.00	3.14	0.50	2.00	1	48.64

100 YR 2 HR SWMM RESULTS
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C27	CIRCULAR	2.00	3.14	0.50	2.00	1	50.62
C28	CIRCULAR	2.00	3.14	0.50	2.00	1	25.78
C29	CIRCULAR	2.00	3.14	0.50	2.00	1	35.91
C3	CIRCULAR	2.00	3.14	0.50	2.00	1	26.12
C30	Street	25.50	3411.52	5.56	236.00	1	144888.72
C31	Street	25.50	3411.52	5.56	236.00	1	147589.41
C32	Overland	4.00	180.00	2.10	85.00	1	1482.59
C33	Street	25.50	3411.52	5.56	236.00	1	135120.52
C34	Street	25.50	3411.52	5.56	236.00	1	89235.37
C35	CIRCULAR	2.50	4.91	0.62	2.50	1	41.65
C36	CIRCULAR	3.00	7.07	0.75	3.00	1	122.59
C37	CIRCULAR	3.00	7.07	0.75	3.00	1	107.71
C38	CIRCULAR	3.00	7.07	0.75	3.00	1	37.29
C39	Overland	4.00	180.00	2.10	85.00	1	2304.89
C4	TRAPEZOIDAL	5.00	200.00	2.82	70.00	1	1129.77
C40	Overland	4.00	180.00	2.10	85.00	1	1587.30
C41	Street	25.50	3411.52	5.56	236.00	1	124917.08
C42	Street	25.50	3411.52	5.56	236.00	1	127149.56
C43	Overland	4.00	180.00	2.10	85.00	1	2210.25

100 YR 2 HR SWMM RESULTS
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C44	CIRCULAR	1.50	1.77	0.38	1.50	1	20.12
C45	CIRCULAR	1.50	1.77	0.38	1.50	1	17.76
C46	Overland	4.00	180.00	2.10	85.00	1	3000.34
C47	Street	25.50	3411.52	5.56	236.00	1	115347.04
C48	CIRCULAR	1.50	1.77	0.38	1.50	1	21.45
C49	CIRCULAR	1.50	1.77	0.38	1.50	1	14.57
C5	CIRCULAR	1.00	0.79	0.25	1.00	1	5.30
C50	Overland	4.00	180.00	2.10	85.00	1	1530.13
C51	CIRCULAR	1.50	1.77	0.38	1.50	1	10.59
C52	Overland	4.00	180.00	2.10	85.00	1	1660.09
C53	Overland	4.00	180.00	2.10	85.00	1	2525.33
C54	CIRCULAR	2.00	3.14	0.50	2.00	1	18.90
C55	CIRCULAR	2.00	3.14	0.50	2.00	1	60.54
C56	CIRCULAR	1.50	1.77	0.38	1.50	1	14.30
C57	CIRCULAR	1.50	1.77	0.38	1.50	1	12.05
C58	CIRCULAR	1.50	1.77	0.38	1.50	1	16.15
C59	CIRCULAR	1.50	1.77	0.38	1.50	1	29.92
C6	CIRCULAR	1.00	0.79	0.25	1.00	1	5.20
C60	Street	25.50	3411.52	5.56	236.00	1	191993.25

100 YR 2 HR SWMM RESULTS
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C61	Street	25.50	3411.52	5.56	236.00	1	200625.88
C62	Overland	4.00	180.00	2.10	85.00	1	1853.16
C63	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	646.69
C64	Overland	4.00	180.00	2.10	85.00	1	1749.82
C65	TRAPEZOIDAL	5.00	110.00	2.54	42.00	1	420.91
C66	Street	25.50	3411.52	5.56	236.00	1	89986.12
C67	CIRCULAR	1.50	1.77	0.38	1.50	1	39.65
C68	CIRCULAR	1.50	1.77	0.38	1.50	1	22.07
C69	Overland	4.00	180.00	2.10	85.00	1	2021.30
C7	CIRCULAR	2.00	3.14	0.50	2.00	1	47.05
C70	CIRCULAR	2.00	3.14	0.50	2.00	1	28.77
C71	Overland	4.00	180.00	2.10	85.00	1	2442.19
C72	Street	25.50	3411.52	5.56	236.00	1	91325.76
C73	CIRCULAR	1.50	1.77	0.38	1.50	1	19.72
C74	CIRCULAR	1.50	1.77	0.38	1.50	1	39.17
C75	Street	25.50	3411.52	5.56	236.00	1	95968.20
C76	CIRCULAR	2.00	3.14	0.50	2.00	1	26.22
C77	Overland	4.00	180.00	2.10	85.00	1	1867.51
C78	CIRCULAR	2.00	3.14	0.50	2.00	1	4.43

100 YR 2 HR SWMM RESULTS
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C79	Overland	4.00	180.00	2.10	85.00	1	1258.04
C8	CIRCULAR	2.00	3.14	0.50	2.00	1	24.88
C80	CIRCULAR	2.00	3.14	0.50	2.00	1	16.79
C81	CIRCULAR	2.00	3.14	0.50	2.00	1	37.20
C82	CIRCULAR	2.00	3.14	0.50	2.00	1	51.40
C83	CIRCULAR	2.00	3.14	0.50	2.00	1	25.29
C84	Overland	4.00	180.00	2.10	85.00	1	1541.70
C85	Overland	4.00	180.00	2.10	85.00	1	1451.25
C86	CIRCULAR	2.00	3.14	0.50	2.00	1	15.46
C87	CIRCULAR	1.50	1.77	0.38	1.50	1	32.31
C88	CIRCULAR	1.50	1.77	0.38	1.50	1	30.99
C89	CIRCULAR	1.50	1.77	0.38	1.50	1	26.31
C9	Overland	4.00	180.00	2.10	85.00	1	1388.84
C90	CIRCULAR	1.50	1.77	0.38	1.50	1	28.53
C91	CIRCULAR	1.50	1.77	0.38	1.50	1	18.40
C92	CIRCULAR	2.00	3.14	0.50	2.00	1	33.72
C93	Street	25.50	3411.52	5.56	236.00	1	82649.72
C94	Street	25.50	3411.52	5.56	236.00	1	83757.54
C95	Street	25.50	3411.52	5.56	236.00	1	86280.81

100 YR 2 HR SWMM RESULTS
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C96	Overland	4.00	180.00	2.10	85.00	1	1262.11
C97	Street	25.50	3411.52	5.56	236.00	1	75900.66
C98	Overland	4.00	180.00	2.10	85.00	1	1015.18
C99	CIRCULAR	1.50	1.77	0.38	1.50	1	25.39

100 YR 2 HR SWMM RESULTS
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\*\*\*\*\*

#### Transect Summary

\*\*\*\*\*

#### Transect Overland

Area:

0.0026	0.0059	0.0099	0.0146	0.0200
0.0261	0.0330	0.0405	0.0488	0.0578
0.0675	0.0779	0.0890	0.1008	0.1133
0.1266	0.1405	0.1552	0.1706	0.1867
0.2035	0.2210	0.2392	0.2581	0.2778
0.2981	0.3192	0.3410	0.3635	0.3867
0.4106	0.4352	0.4605	0.4866	0.5133

0.5408	0.5690	0.5979	0.6275	0.6578
0.6888	0.7205	0.7530	0.7861	0.8200
0.8546	0.8899	0.9259	0.9626	1.0000

100 YR 2 HR SWMM RESULTS
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Hrad:

0.0333	0.0610	0.0858	0.1089	0.1310
0.1524	0.1732	0.1938	0.2140	0.2341
0.2540	0.2737	0.2933	0.3129	0.3324
0.3518	0.3712	0.3905	0.4097	0.4290
0.4482	0.4674	0.4866	0.5057	0.5248
0.5439	0.5630	0.5821	0.6012	0.6202
0.6393	0.6583	0.6773	0.6964	0.7154
0.7344	0.7534	0.7724	0.7914	0.8104
0.8293	0.8483	0.8673	0.8863	0.9052
0.9242	0.9431	0.9621	0.9810	1.0000

Width:

0.0776	0.0965	0.1153	0.1341	0.1529
0.1718	0.1906	0.2094	0.2282	0.2471
0.2659	0.2847	0.3035	0.3224	0.3412
0.3600	0.3788	0.3976	0.4165	0.4353

0.4541	0.4729	0.4918	0.5106	0.5294
0.5482	0.5671	0.5859	0.6047	0.6235
0.6424	0.6612	0.6800	0.6988	0.7176
0.7365	0.7553	0.7741	0.7929	0.8118
0.8306	0.8494	0.8682	0.8871	0.9059
0.9247	0.9435	0.9624	0.9812	1.0000

100 YR 2 HR SWMM RESULTS
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## Street Summary

\*\*\*\*\*

## Street Street

Area:

0.0035	0.0092	0.0155	0.0224	0.0299
0.0381	0.0468	0.0562	0.0662	0.0767
0.0879	0.0997	0.1121	0.1251	0.1388
0.1530	0.1679	0.1833	0.1994	0.2161
0.2333	0.2512	0.2697	0.2889	0.3086

0.3289	0.3499	0.3714	0.3936	0.4164
0.4398	0.4638	0.4884	0.5136	0.5394
0.5658	0.5929	0.6205	0.6488	0.6777
0.7072	0.7373	0.7680	0.7993	0.8312
0.8638	0.8969	0.9307	0.9650	1.0000

100 YR 2 HR SWMM RESULTS
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Hrad:

0.0575	0.1405	0.2141	0.2803	0.3401
0.3947	0.4449	0.4912	0.5343	0.5745
0.6123	0.6479	0.6816	0.7136	0.7442
0.7734	0.8015	0.8285	0.8546	0.8798
0.9042	0.9279	0.9510	0.9735	0.9955
1.0169	1.0380	1.0586	1.0788	1.0987
1.1182	1.1375	1.1564	1.1751	1.1936
1.2118	1.2299	1.2477	1.2653	1.2828
1.3001	1.3172	1.3342	1.3511	1.3679
1.3845	1.4010	1.4174	1.4337	1.0000

Width:

0.1529	0.1702	0.1875	0.2047	0.2220
0.2393	0.2566	0.2739	0.2912	0.3085

0.3258	0.3431	0.3603	0.3776	0.3949
0.4122	0.4295	0.4468	0.4641	0.4814
0.4986	0.5159	0.5332	0.5505	0.5678
0.5851	0.6024	0.6197	0.6369	0.6542
0.6715	0.6888	0.7061	0.7234	0.7407
0.7580	0.7753	0.7925	0.8098	0.8271
0.8444	0.8617	0.8790	0.8963	0.9136
0.9308	0.9481	0.9654	0.9827	1.0000

100 YR 2 HR SWMM RESULTS
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\*\*\*\*\*

## Analysis Options

\*\*\*\*\*

Flow Units ..... CFS

Process Models:

Rainfall/Runoff ..... YES

RDII ..... NO

Snowmelt ..... NO

Groundwater ..... NO

Flow Routing ..... YES

Ponding Allowed ..... NO

Water Quality ..... NO

Infiltration Method ..... GREEN\_AMPT

Flow Routing Method ..... DYNWAVE

Surcharge Method ..... EXTRAN

Starting Date ..... 01/06/2024 00:00:00

Ending Date ..... 01/07/2024 00:00:00

Antecedent Dry Days ..... 0.0

Report Time Step ..... 00:01:00

Wet Time Step ..... 00:05:00

Dry Time Step ..... 00:05:00

Routing Time Step ..... 5.00 sec

Variable Time Step ..... YES

Maximum Trials ..... 8

Number of Threads ..... 8

Head Tolerance ..... 0.005000 ft

100 YR 2 HR SWMM RESULTS
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100 YR 2 HR SWMM RESULTS
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*****	Volume	Depth
Runoff Quantity Continuity	acre-feet	inches
*****	-----	-----
Total Precipitation .....	100.658	3.680
Evaporation Loss .....	0.000	0.000
Infiltration Loss .....	56.533	2.067
Surface Runoff .....	43.904	1.605
Final Storage .....	0.642	0.023
Continuity Error (%) .....	-0.419	

*****	Volume	Volume
Flow Routing Continuity	acre-feet	10^6 gal
*****	-----	-----
Dry Weather Inflow .....	0.000	0.000
Wet Weather Inflow .....	43.904	14.307
Groundwater Inflow .....	0.000	0.000
RDII Inflow .....	0.000	0.000
External Inflow .....	0.000	0.000

External Outflow .....	40.744	13.277
Flooding Loss .....	2.734	0.891
Evaporation Loss .....	0.000	0.000
Exfiltration Loss .....	0.000	0.000
Initial Stored Volume ....	0.001	0.000
Final Stored Volume .....	0.687	0.224
Continuity Error (%) .....	-0.591	

100 YR 2 HR SWMM RESULTS
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#### Highest Continuity Errors

\*\*\*\*\*

Node J179 (56.16%)

Node J71 (22.12%)

Node J62 (6.22%)

Node J32 (-5.18%)

Node J73 (-5.05%)

100 YR 2 HR  
SWMM RESULTS

\*\*\*\*\*

Time-Step Critical Elements

\*\*\*\*\*

Link C100 (74.01%)

Link C26 (9.63%)

Link C1 (7.02%)

Link C58 (1.61%)

Link C56 (1.48%)

\*\*\*\*\*

Highest Flow Instability Indexes

\*\*\*\*\*

Link C103 (28)

Link C149 (5)

Link C118 (4)

Link C116 (2)

Link C115 (2)

\*\*\*\*\*

Most Frequent Nonconverging Nodes

\*\*\*\*\*

Node J10 (0.68%)

Node J115 (0.68%)

Node J122 (0.68%)

Node J123 (0.68%)

Node J186 (0.68%)

\*\*\*\*\*

Routing Time Step Summary

\*\*\*\*\*

Minimum Time Step : 0.50 sec

Average Time Step : 2.38 sec

Maximum Time Step : 5.00 sec

% of Time in Steady State : 0.00

Average Iterations per Step : 2.10

% of Steps Not Converging : 0.68

100 YR 2 HR SWMM RESULTS
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Time Step Frequencies :

5.000 - 3.155 sec : 1.87 %

3.155 - 1.991 sec : 75.78 %

1.991 - 1.256 sec : 5.28 %

1.256 - 0.792 sec : 14.18 %

0.792 - 0.500 sec : 2.89 %

\*\*\*\*\*

Analysis begun on: Sun Jan 21 19:03:43 2024

Analysis ended on: Sun Jan 21 19:03:49 2024

Total elapsed time: 00:00:06

# APPENDIX VI

## PUBLIC INVOLVEMENT MATERIALS



You are invited to attend a  
Public Open House for the

## **Southwest Drive Corridor Plan**

Wednesday, June 21<sup>st</sup> from 5:00 pm to 6:30 pm at  
the Cheyenne Animal Shelter Public Meeting Room  
(800 Southwest Drive)

Meet with the design team and the Cheyenne  
Metropolitan Planning Organization (MPO) staff to learn  
about the Corridor Plan for Southwest Drive between  
West Lincolnway and College Drive.

Opportunities will be available for you to offer your  
insight and comments regarding this plan.



**BenchMark**  
ENGINEERS, PC





# Israel’s step-by-step Gaza offensive risks extending war

**HENRY MEYER**  
Bloomberg News

Israel’s goal of defeating Hamas is more ambitious than ever before, yet a new long-term military approach aimed at limiting its own casualties may draw further international concern over the humanitarian crisis in Gaza.

The ground campaign to destroy those that run the Gaza Strip — following the deadly incursion by the Palestinian militant group into Israel in early October — involves armed forces moving gradually into the crowded enclave while backed up by tanks and artillery.

The Israeli military said Tuesday that two soldiers were killed in combat in northern Gaza, the army’s first reported fatalities since the start of the ground offensive on Friday. Meanwhile, Gaza’s Hamas-run Health Ministry said a series of Israeli airstrikes on a crowded refugee camp had killed and wounded hundreds, one of the deadliest single assaults since the aerial bombardment began more than three weeks ago.

Airstrikes, which have pummeled Gaza since the Oct. 7 attacks, continue and have already claimed more than 8,500 Palestinian lives, according to Hamas-led health authorities.

On the ground, armored vehicles are reported by residents to be on the outskirts of Gaza City, several kilometers across the border, while Israeli forces attacked a Hamas outpost, killing dozens of militants, the army spokesman’s unit said in a text message Tuesday.

The upshot of this gradual strategy is the Israeli military and government are primed

— and are priming the public — for a campaign that will take months, not weeks.

“Israel is proceeding very gradually, very carefully, cautiously as it wants to make sure there are minimum casualties,” Yossi Kuperwasser, a former top military intelligence official, said by phone. “Israel believes it is not under any time pressure.”

That contrasts with 2014, when Israel’s army surged into the Gaza Strip following 10 days of aerial bombardment, triggering a fierce battle in a densely populated urban neighborhood where Hamas was dug in. More than a dozen soldiers died. Before a cease-fire took hold a few weeks later, the army death toll rose to 66, drawing criticism within Israel.

### GO SLOW

The gradual progress of the present campaign is intended to avoid pitched fighting in built-up areas, while troops are wary of approaching the vast network of secret subterranean tunnels in which Hamas hides. The go-slow tactics may succeed in limiting Israeli military losses and potentially civilian deaths, yet risk prolonging a war.

There’s also a shift of focus away from negotiating over hostages, of which about 240 were taken by Hamas, which is designated a terrorist group by the U.S. and European Union. On Tuesday, Israel said there’s no deal within sight to free more of the captives via Qatari mediation.

The unprecedented civilian death toll from Israeli bombing since the Hamas attacks has sparked growing international criticism, while leading to a dire humanitarian crisis that has left more than 60% of Gaza’s 2.2 million population displaced. A blockade of fuel and power supplies by Israel alongside limited water and food have added to their plight.

That’s complicating Israel’s goal of destroying Hamas and its leadership after the Iranian-supported group staged the deadliest single-day attack in the country’s history. Several thousand fighters broke through a heavily guarded security fence and rampaged through communities and military bases in southern Israel, killing 1,400 people and abducting 240 others.

### AID FLOWS

Israel is about to increase the amount of aid allowed into Gaza from Egypt to 100 trucks a day — still a fifth of

the prewar level — said Strategic Affairs Minister Ron Dermer. The military campaign should start to exact fewer civilian casualties due to focused fire on the north of Gaza, where Hamas military forces are based, he added. Israel had urged Gazans to flee to the south, although air strikes are continuing there, as well.

Israel seems on track to establish a buffer zone between the country and Gaza a couple of kilometers deep to ensure future attacks on its territory can’t happen, according to officials.

But successfully dislodging Hamas from Gaza could take more than a year, according to Amir Avivi, a former brigadier general who was involved in preparations for the 2014 Gaza war. “We need to spend months and months dismantling all this infrastructure,” he said by phone after meetings with Israeli Prime Minister Benjamin Netanyahu and top military officials as head of an association of former and reserve members of the security forces.

The challenge that Israel faces in Gaza is magnified by the tunnel network, which Hamas says extends for several hundred kilometers and is equipped with ventilation shafts and electricity. Some reach a depth of 35 meters, or about 115 feet, and can even have railroad tracks and communication rooms, according to experts. The entrance to them often lies in residential buildings or other public facilities.

Using robots to explore the tunnel complex can reduce risks. But, due to confined spaces, booby traps and greater knowledge by Hamas of the underground environment, Israeli troops who try to enter are at a severe disadvantage. Another complication is Hamas has said it’s keeping hostages underground, making it more hazardous to bomb the complexes.

### ‘BLOOD PRICE’

“Hamas is counting on us entering every bunker and every tunnel in order to exact a heavy blood price from us,” former Israeli Prime Minister Naftali Bennett said on X, the social media platform formerly known as Twitter. He called for a long siege to “suffocate the Hamas terrorists in the tunnels until they are forced to leave.”

Since the war started, Hamas has continued to use the underground system to attempt attacks, both on land and by sea.



ASSOCIATED PRESS

Israeli forces’ flares light up the night sky in northern Gaza Strip, Tuesday, Oct. 31, 2023.

# Israeli airstrikes crush complex in Gaza camp

**NAJIB JOBAIN, JACK JEFFREY AND LEE KEATH**  
Associated Press

KHAN YOUNIS, Gaza Strip — A barrage of Israeli airstrikes leveled apartment buildings in a refugee camp near Gaza City on Tuesday, and footage showed rescuers pulling men, women and children out of the rubble. Israel said the strike destroyed a Hamas command center set up in civilian houses and a network of tunnels underneath.

The toll from the strikes in the Jabaliya camp was not immediately known. The Israeli military said a large number of militants were killed, including the commander overseeing Hamas operations in northern Gaza.

The director of the nearby hospital where casualties were taken, Dr. Atef Al-Kahlot, said hundreds were wounded or killed, but he did not provide exact figures. Neither side’s account could be independently confirmed.

The strike underlined the anticipated surge in casualties on both sides as Israeli troops battling Hamas militants advance deeper into the northern Gaza Strip toward dense, residential neighborhoods. Israel has vowed to crush Hamas’ ability to govern Gaza or threaten Israel following its bloody Oct. 7 rampage, which ignited the war. Hamas, an Islamic militant group, openly calls for the destruction of Israel.

Israel said two of its soldiers were killed in fighting in northern Gaza, the first military deaths it reported since the ground offensive into the tiny Mediterranean territory accelerated late last week.

Several hundred thousand Palestinians remain in northern Gaza in the path of the ground assault. They have crowded into homes or are packed by the thousands into hospitals that are already overwhelmed with patients and running low on supplies.

In the Jabaliya refugee camp — a densely built-up area of small streets on Gaza City’s outskirts — footage of the

scene from Al-Jazeera TV showed at least four large craters where buildings once stood amid rubble surrounded by partially collapsed structures.

Dozens of rescue workers and bystanders dug through the wreckage, searching for survivors beneath the pancaked buildings. Young men carried the limp forms of two children from the upper floors of a damaged apartment block’s crumbling frame while helping down another child and woman. It was unclear whether the children were alive or dead.

The Israeli military said it carried out a wide-scale strike in Jabaliya on Hamas infrastructure “that had taken over civilian buildings.”

Brig. Gen. Daniel Hagari said an underground Hamas installation beneath a targeted building collapsed, toppling other nearby buildings. He said the commander killed in the strike, Ibrahim Biari, played a role in the Oct. 7 attack on Israel.

Also on Tuesday, the Israeli military said ground troops took control of a Hamas military stronghold in west Jabaliya, killing 50 militants.

Hamas spokesman Hazem Qassem denied the military’s claim, saying it was trying to justify “its heinous crime” against civilians.

Hagari repeated calls for civilians to evacuate northern Gaza to the south. The military says it targets Hamas fighters and infrastructure and that the militants endanger civilians by operating among them. The military has also repeatedly emphasized it will strike Hamas wherever it finds it.

Some 800,000 Palestinians have reportedly fled to the south, but many have not, in part because they say nowhere is safe as Israeli airstrikes in the south have continued to cause civilian deaths. The window to flee may be closing, as Israeli forces reached Gaza’s main north-south highway this week.

More than 8,500 Palestinians have been killed in the war, mostly women and

minors, the Gaza Health Ministry said Tuesday, without providing a breakdown between civilians and fighters. The figure is without precedent in decades of Israeli-Palestinian violence.

Over 1,400 people have died on the Israeli side, mainly civilians killed during Hamas’ initial attack, also an unprecedented figure. Palestinian militants also abducted around 240 people during their incursion and have continued firing rockets into Israel.

A day after Israel’s first successful rescue of a captive held by Hamas, the spokesman of the militant group’s armed wing said they plan to release some non-Israeli hostages in the coming days. Hamas has previously released four hostages, and has said it would let the others go in return for thousands of Palestinian prisoners held by Israel, which has dismissed the offer.

More than half of Gaza’s 2.3 million Palestinians have fled their homes, with hundreds of thousands sheltering in packed U.N.-run schools-turned-shelters or in hospitals alongside thousands of wounded patients.

The war has also threatened to ignite fighting on other fronts. Israel and Lebanon’s Hezbollah militant group have traded fire daily along the border, and Israel and the U.S. have struck targets in Syria linked to Iran, which supports Hamas, Hezbollah and other armed groups in the region.

The military said it shot down what appeared to be a drone near the southernmost city of Eilat and intercepted a missile over the Red Sea on Tuesday, neither of which entered Israeli airspace.

Iranian-backed Houthi rebels in Yemen later claimed they fired ballistic missiles and drones at Israel, saying it was their third such operation and threatening more. Earlier this month, a U.S. Navy destroyer in the Red Sea intercepted missiles and drones launched toward Israel by the Houthis, who control much of northern Yemen.

CHRISTMAS

IN THE COUNTRY AT THE

SCHOOL HOUSE

NOV 2ND - NOV 12TH • 2023 • 10AM - 5PM

THURSDAYS • NOV 2ND & 9TH • OPEN TILL 8PM

DIRECTIONS:

7 mi. N. of Cheyenne on Yellowstone Rd. to Rt. 85, Right on Rt. 85 10mi. to Rd. 222. Go E. on Rd. 222, 9 1/2 mi. to Rd. 140. Turn Left (N.) on Rd. 140 for 1 mile to the School House.

OR: 8mi. N of Hillsdale, WY. on Rd 143, to Rd. 223, 3mi. W. on Rd 223 to the School House on the Corner.

Bazaar at the School House

See our Facebook page for Updates

Find us on Facebook

We Accept

Cash • Check • MasterCard

VISA • DISCOVER

You are invited to attend a Public Open House for the

Southwest Drive Corridor Plan

Wednesday, November 15th from 5:00 pm to 6:30 pm at the Cheyenne Animal Shelter Public Meeting Room (800 Southwest Drive)

Meet with the design team and the Cheyenne Metropolitan Planning Organization (MPO) staff to learn about the Corridor Plan for Southwest Drive between West Lincolnway and College Drive.

Opportunities will be available for you to offer your insight and comments regarding this plan.

Cheyenne MPO

BME

BenchMark ENGINEERS, PC

FELSBURG HOLT & ULLEVIG

GLM Design Group



# Community invited to share ideas on future of Southwest Drive

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CHEYENNE – The Cheyenne Metropolitan Planning Organization along with BenchMark Engineers, P.C., GLM Design and Felsburg Holt & Ullevig, is hosting a public meeting to gather community input on the future of the Southwest Drive corridor.

With continued growth and development in southwest Cheyenne, traffic levels are projected to increase significantly in the coming years. A study looking at improving Southwest Drive between West Lincolnway and West College Drive is the topic of the meeting, and its primary goal is to provide a conceptual plan for Southwest Drive that meets the future mobility needs of the residents and businesses along the corridor and throughout Southwest Cheyenne.

The meeting will take place from 5:00 to 6:30 p.m. Wednesday, June 21<sup>st</sup>, at Cheyenne Animal Shelter's meeting room, located at 800 Southwest Drive. During the meeting, a presentation and dialogue will take place. The city, county, MPO staff, the design team and community members will present and discuss improvement strategies that will guide the design concept.

Community input is extremely valuable; the success of the project is largely dependent on community involvement. The Cheyenne community is invited to review, comment, ask questions and stay connected.

Visit the MPO's website, [www.plancheyenne.org](http://www.plancheyenne.org) or the project website, [www.benchmarkengineers.com/southwest-drive/](http://www.benchmarkengineers.com/southwest-drive/) to take the survey.

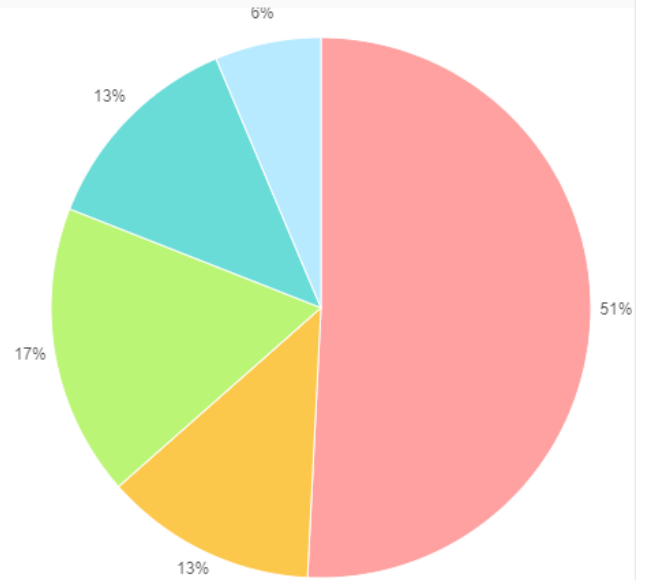
# SOUTHWEST DRIVE PUBLIC MEETING #1

## 06/21/2023

- Attendees: 56
- Surveys Completed 8
- Online Surveys Completed: 48

☒ ☒ Which of the following best describes you? (Check all that apply)

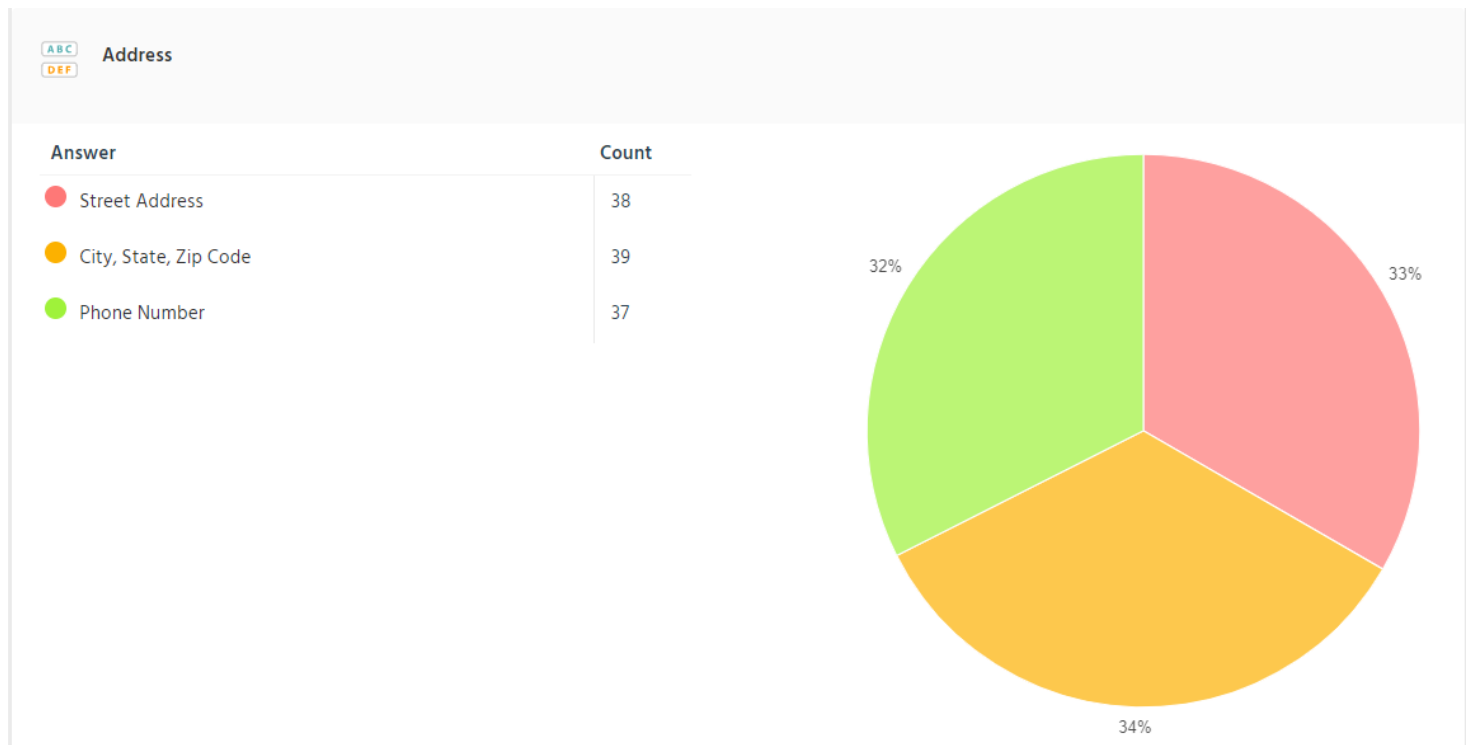
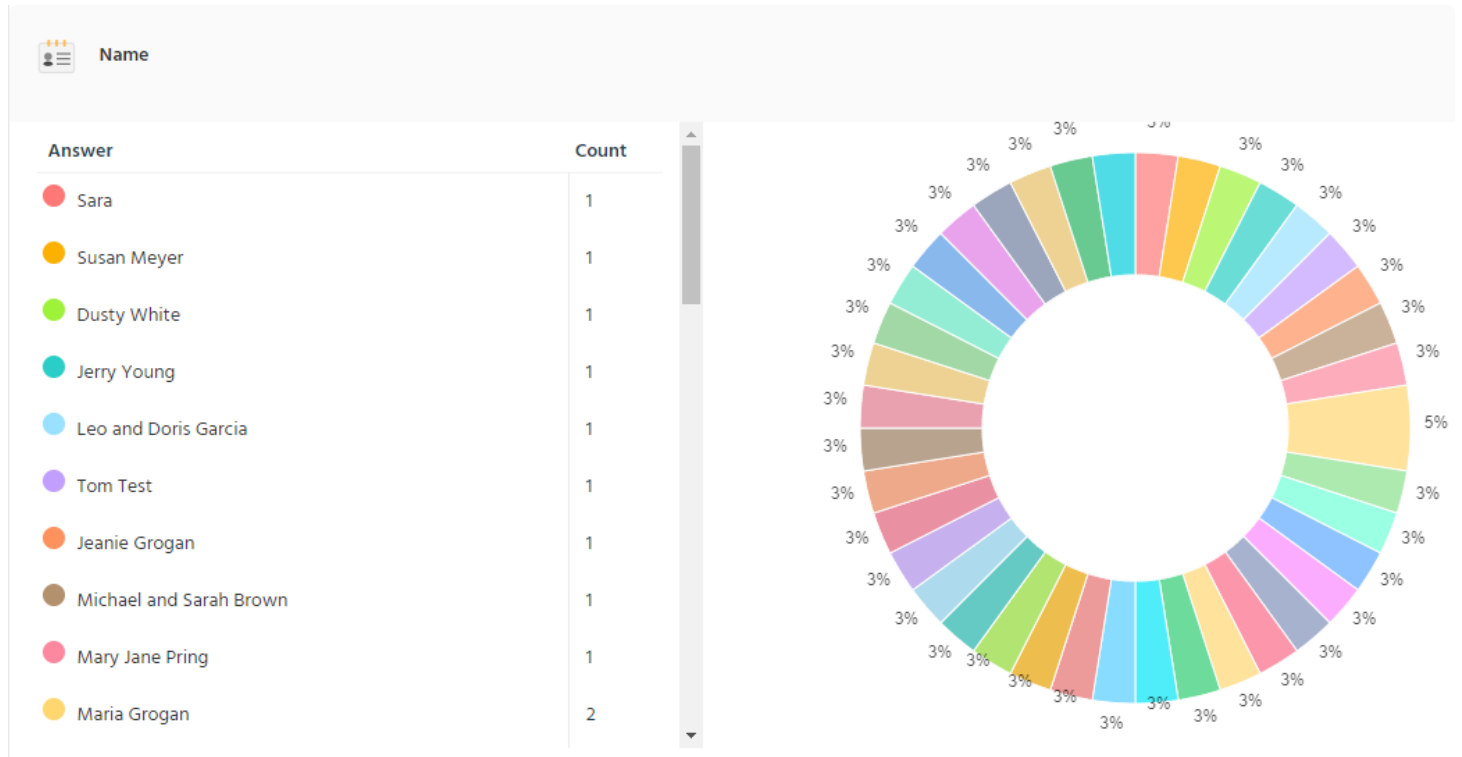
Answer	Count
<span style="color: red;">●</span> Resident (either owner or renter)	32
<span style="color: orange;">●</span> Property owner (non-occupant or vacant land)	8
<span style="color: green;">●</span> Business Owner or Employee	11
<span style="color: teal;">●</span> Corridor user	8
<span style="color: lightblue;">●</span> Other	4



Answers
I go to the dog park.
I work in the Kangaroo Storage Business park.
Broken Arrow resident
Bar X Road
Bar X Road
Stirrup

# SOUTHWEST DRIVE PUBLIC MEETING #1

06/21/2023



# SOUTHWEST DRIVE PUBLIC MEETING #1

## 06/21/2023

dustydwhite@gmail.com
Fordman527@yahoo.com
dorigarcia7@gmail.com
mason6525@gmail.com
jgrogan66@outlook.com
mike.brown@kbtinc.biz
maryjaneppring.307@gmail.com
mbgsoccer@gmail.com
Mjm82001@aol.com
elkhunter010@hotmail.com
kevin_murphy@reedserv.com
dale_reed@reedserv.com
lori_reed@reedserv.com
nate-davidson@outlook.com
Castlebuilderswyo@gmail.com
mbgsoccer@gmail.com
ernste@mhbwy.com
gaobssuth@gmail.com
wytlc@aol.com
renee@cfdrodeo.com
lenz.cathy@gmail.com
troy@kaiserwyo.com
danascot@charter.net
pwl82001@aol.com
benhornok@tcsolutions365.com
drkms1@gmail.com
lukesarne@gmail.com
markpring.307@gmail.com

# SOUTHWEST DRIVE PUBLIC MEETING #1

## 06/21/2023

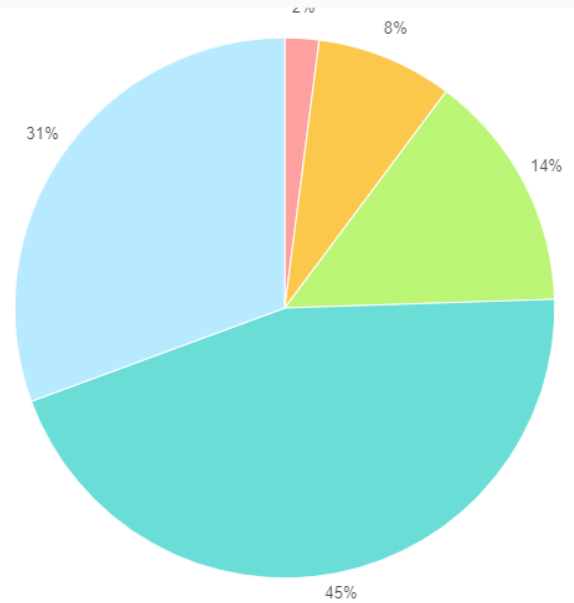
How long have you lived along the corridor?

### Answer

- Less than a year
- 1-5 Years
- 6-15 Years
- More than 15 years
- Not Applicable

### Count

1  
4  
7  
22  
15



### Answers

I've worked in the building for 4 years and drive southwest two to 4 times a day.

We have lived her 50 years as some of the other residents have too. Many owners are elderly.

I have family that live here

we are located in the business area between Lincoln Way and north of I-80

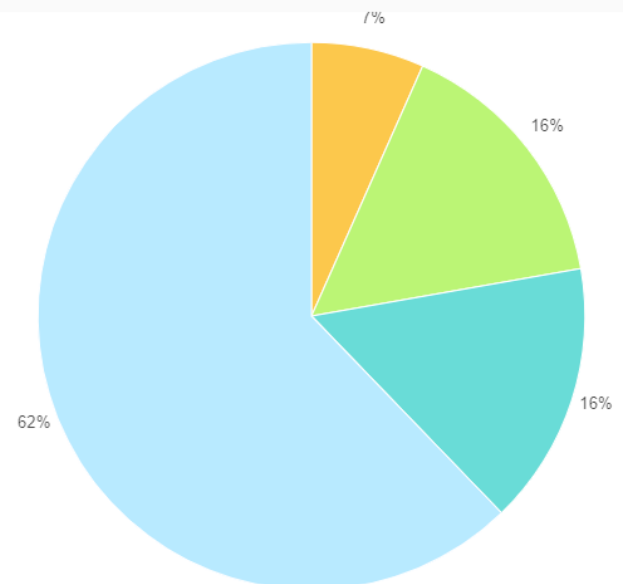
How long have you worked along the corridor?

### Answer

- Less than a year
- 1-5 Years
- 6-15 years
- More than 15 years
- Not applicable

### Count

0  
3  
7  
7  
28



### Answers

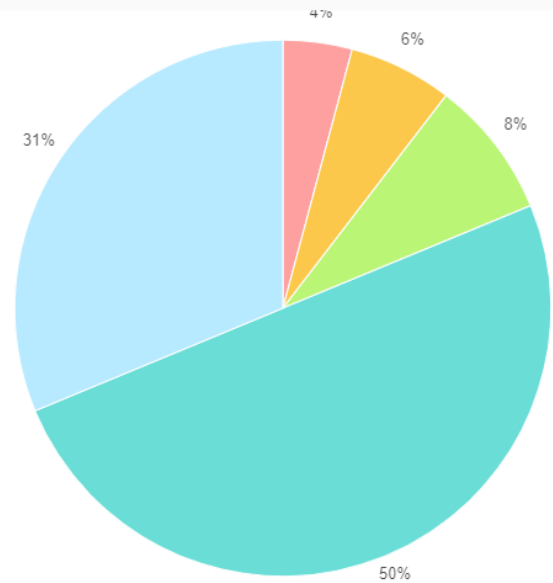
We purchased the building on W 5th street in 2009 and began occupying it in 2010.

# SOUTHWEST DRIVE PUBLIC MEETING #1

## 06/21/2023

☒ ☐ The corridor is wide enough for current traffic.

Answer	Count
<span style="color: red;">●</span> Strongly Agree	2
<span style="color: orange;">●</span> Agree	3
<span style="color: green;">●</span> Neutral	4
<span style="color: teal;">●</span> Disagree	24
<span style="color: lightblue;">●</span> Strongly Disagree	15



### Answers

Not enough.

It's needs to be widened and maintained

Needs maintenance

It is adequate presently but probably not in near future.

very narrow and of poor condition. on many occasions we need to slow or stop as residence are accessing their mail boxes. also foot traffic is often waling along the road causing need to slow or stop for oncoming traffic.

While driving I often have to move over to allow for pedestrian traffic in the area particularly in our light industrial area. When driving on Southwest past the residential area there have been a number of times when I was concerned for residents trying to get their mail. I've had to stop because of oncoming traffic so that I could keep the residents safety primary. Large trucks coming from the opposing direction and the close proximity of mailboxes are a very big concern. The road is not wide enough for the existing traffic

The road is on the edge of being wide enough; it could be argued that commercial vehicles such as semi trucks could use a little more width in some parts of the roadway since commercial vehicles are often wider than passenger vehicles.

We constantly have people walking through our yard to avoid being hit by traffic

If you are driving a pick up truck or a pick up truck with trailer it is difficult at times on this road. Much less any commercial type vehicle.

# SOUTHWEST DRIVE PUBLIC MEETING #1

## 06/21/2023

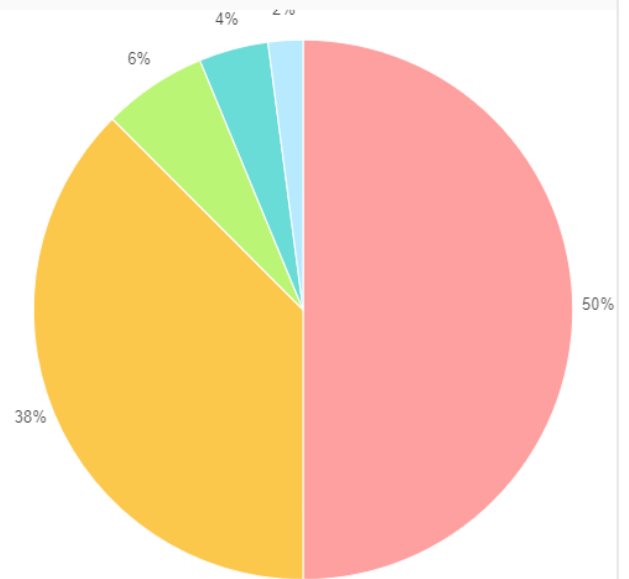
☒ ☐ I am concerned about increasing traffic along Southwest Drive.

### Answer

### Count

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

24  
18  
3  
2  
1



### Answers

We are very concerned about the semi traffic and high rate of speed.

Commercial traffic is only going to increase due to the current vacant land being marketed & sold as Commercial Property. It seems as though more of the residences/properties are becoming business or being rezoned as such.

in past there was a sign at College Drive stating no transport truck access on Southwest road. this was removed and truck traffic increased at that time.

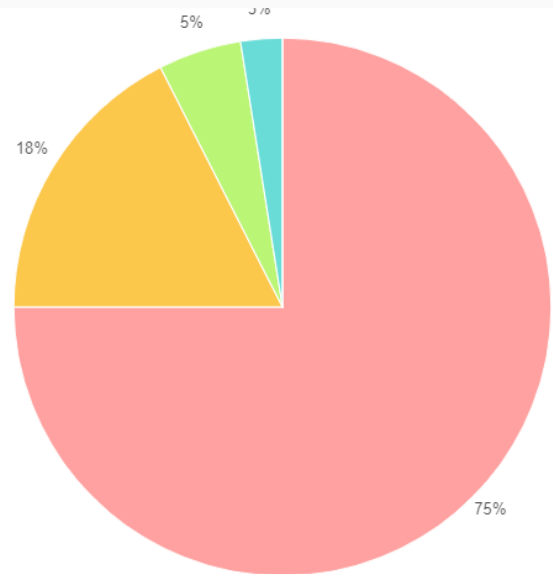
The light industrial park is presently at 100% occupancy. These businesses generate traffic in order to earn a living so it is only going to increase the traffic not diminish it. With the improvements to the Clear Creek Park it is be utilized more and with the addition of businesses along Southwest drive south of I-80 there will be more traffic. Also the intersection at College and Southwest is very dangerous especially when I-80 was closed so often this winter forcing the trucks to look for any place to park.

# SOUTHWEST DRIVE PUBLIC MEETING #1

## 06/21/2023

☒ ☒ Commercial truck traffic is a concern along the corridor.

Answer	Count
<span style="color: red;">●</span> Strongly Agree	30
<span style="color: orange;">●</span> Agree	7
<span style="color: green;">●</span> Neutral	2
<span style="color: teal;">●</span> Disagree	1
<span style="color: lightblue;">●</span> Strongly Disagree	0



### Answers

Trucks are ruining our road. They ignore the signs. Especially when there's a train stopped up north. They come all the way down to College, tearing up the road.

There are signs on either end stating trucks are not allowed, yet we see not only regular semis at high rates of speed, but also HazMat trucks loaded with blasting agents drive by our home everyday that even shake the house.

We understand why they drive this direction, because of the long wait times at the train crossing, but this is in no way condoning or accepting it. The railroad crossing needs remedied and the "unlawful" traffic needs regulated.

The road has so much freeze/thaw wave that when it is slick, it is very hard to control a vehicle on, especially at the current 40 mph speed.

the road appears to be of insufficient load design to handle Large Commercial Truck traffic based on the quick degradation of the road since the increased commercial truck traffic.

The trucks don't have a choice about using Southwest drive from College because of the many times the access from Lincolnway is blocked by the trains.

I've seen occasional commercial traffic using the roadway. There is some concern with the rather low I-25 bridge that has a warning sign labeled 14 foot, 5 inches. IMO, although it could be lower and therefore a higher risk to truck traffic, it's a wonder if up to this point, no truck has hit the bridge like they frequently do at the "can opener bridge" found on the YouTube channel, @11foot8plus8 also known as yovo68.

Trucks are a major problem.



# SOUTHWEST DRIVE PUBLIC MEETING #1

## 06/21/2023

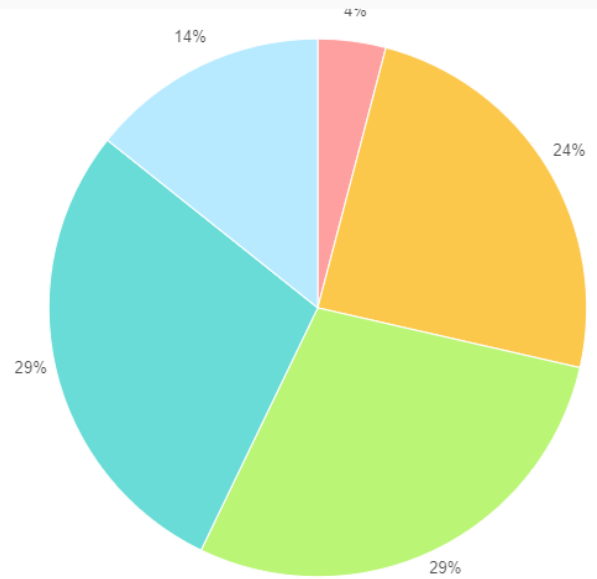
☐ ☐ The current speed limits are appropriate.

### Answer

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly Disagree

### Count

2  
12  
14  
14  
7



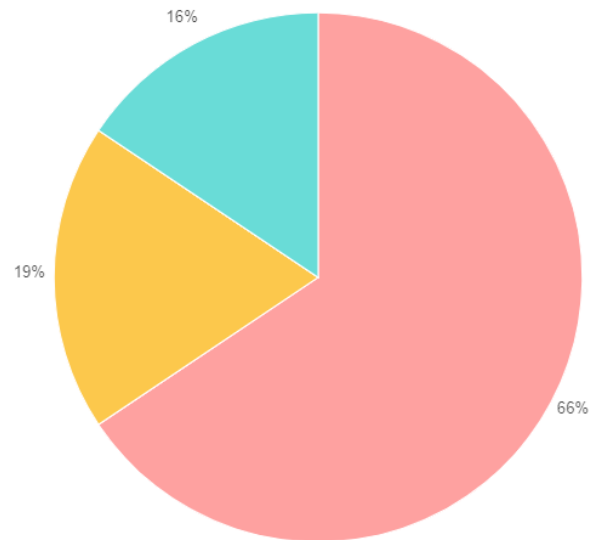
☐ Are Traffic Speeds Too Fast or Too Slow? Choose From Dropdown Below

### Answer

- ☐ Too Fast
- ☐ Just Right
- ☐ Too Slow
- ☐ No Opinion

### Count

21  
6  
0  
5



### Answers

People drive too fast.

The speed limit is fine as long as cars don't speed.

The posted limit is 40MPH and with the road damage, this needs to be slowed way down. The loaded semis on this road don't help as well.

Current speed should be 30 mph

It is not enforced.

speed limit is just right but it needs better enforcement

In the current state of the Southwest Dr roadway from a motorized vehicle user perspective disregarding pedestrian/bicycle usage and all other factors, 40 MPH feels about appropriate; however, considering pedestrians and bicycles are more frequently using the roadway, 40 MPH is simply way too fast. If a traffic incident happens where a pedestrian or bicycle is hit, there is a significant likeliness of injury or fatality, and the risk of an incident occurring is even more likely since bicycles and pedestrians tend to use the edge of the roadway.

People need to slow down.

# SOUTHWEST DRIVE PUBLIC MEETING #1

## 06/21/2023

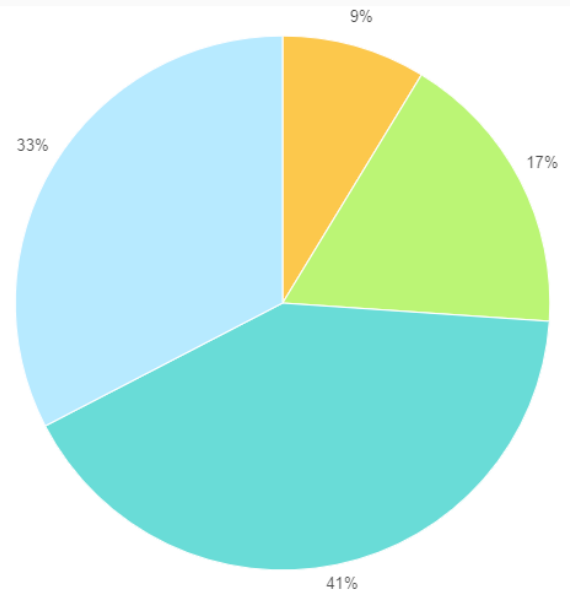
☒ ☐ Intersections along Southwest Drive are adequate.

### Answer

### Count

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

0  
4  
8  
19  
15



### Answers

Too many big trucks.

I have lived at here for thirty nine years. The train stop on the tracks for 30 plus minutes Multiple times A-day.

Too much traffic turning west off of SW and the Loves is always conflicting.

Neither are adequate with the railroad tracks at one end and the truck traffic at the other.

If maintenance would happen yes

Southwest Dr & W. College is to narrow to accomodate the semis turning either on or off Southwest Dr.

College intersection is a problem point and Lincolnway intersection is a problem point.

College intersection has large Commercial truck traffic from the commercial subdivision (Warren Glen Addition) and the Sinclair and Loves service stations. In many situations we witness frustration from the commercial trucks pulling into traffic with insufficient traffic spacing causing near miss incidences.

The Lincoln Way (HWY 30) has the UP main line (4 tracks) that are very often blocked by trains. this creates a need to exit the Warren Glen Addition through the residential area south of I-80. my biggest concern is the emergency access to this area in the event of a train blocking the crossing. this requires that emergency (police, fire and ambulance) services need to add 5 minutes to there response time to support this area. we have had I-80 Bridge maintenance interfere with the alternate exit. in one case of memory the road was closed under the bridge for maintenance and the Cheyenne Fire service insisted the closure be cancelled due to the frequent blockage of the Lincoln Way crossing.

The congestion at this intersection is horrible. I have had a number of close calls with the trucks trying to maneuver out of the truck stops.

Yes and no. As it stands right now, the College Dr traffic light likely is necessary to more safely turn off of Southwest Dr. The College Dr/ Southwest Dr intersection does feel rather quite close, however, to other nearby intersections including the entryways to the gas stations. Little/no hassle with other intersections along the roadway besides the sometimes long wait times at the RR crossing next to W Lincolnway. For pedestrians however, pedestrian lights/buttons are nonexistent at the intersection of W Lincolnway/Southwest Dr and same for the intersection of W College Dr/Southwest Dr.

On the north side a train is always blocking the way, on the south side you wait for so long to turn left

It is a very busy area and challenging to get out of at times.

You need some lights at College Drive.

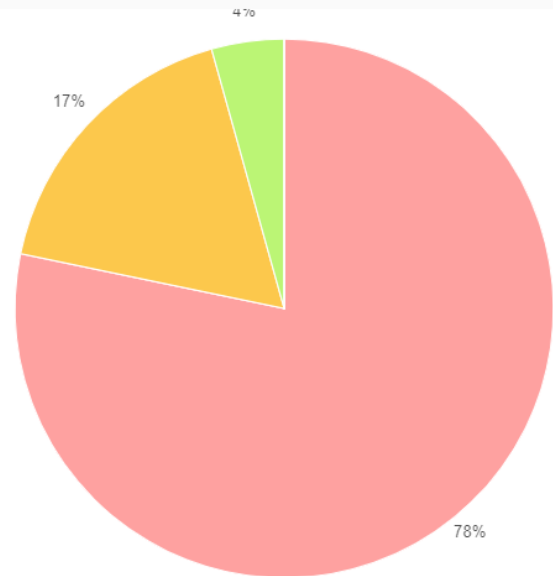
Lights needed at College as well as turn lanes throughout.

# SOUTHWEST DRIVE PUBLIC MEETING #1

## 06/21/2023

Wait time at the railroad crossing is a concern.

Answer	Count
Strongly Agree	36
Agree	8
Neutral	2
Disagree	0
Strongly Disagree	0



### Answers

It's hideous!

The train stops, blocking the intersection, multiple times a day every day. I've sat there for over half an hour before, and at least once daily I have to go down to I-25 and around the long way to get to the other side.

Multiple times A-day the trains just sit on the tracks.

Trains are too long and block the roadway past their 20 minute limit.

It sucks.

Flat out ridiculous.

Go around

There RR does not follow the required guidelines. There have been times when emergency vehicles have had to go around due to the tracks being blocked. Delaying response time. We have lost business due to our customer not knowing how to access us otherwise.

If train was not allowed to stop on tracks it would solve most problems.

the wait time is inconvenient but we can also exit the area to the south at the College exit. My biggest issue is for every minute the crossing is blocked by UP trains our emergency response time to the industrial area is increased by 5 minutes minimum. Emergency response to our work is the most important issue to me as a business owner.

I drive in to work off of I-25. I make a point of trying to look through the buildings to determine if I am going to be held up by the trains. If a train is coming into town I head to College to access Southwest because I know that I will have an extremely long wait for the crossing to clear as 9 times out of 10 the train will stop and block the crossing for more than 20 minutes. When the crossing was built in the 1970's the trains were not 1 mile long. Also I believe that control of the trains is not being done in Cheyenne but instead in Omaha, NE so they don't take into consideration the crossing here.

Waiting for a train to go by isn't a big deal; this becomes a hassle however when the train(s) stop in the intersection and sit there for long amounts of time for no apparent reason. Trains taking a long amount of time during which they just sit without moving can and does result in vehicular traffic wanting to turn around and go a different way. Pedestrians have been seen passing through the intersection when the gates are down and lights are flashing.

It is detrimental to business.

# SOUTHWEST DRIVE PUBLIC MEETING #1

## 06/21/2023

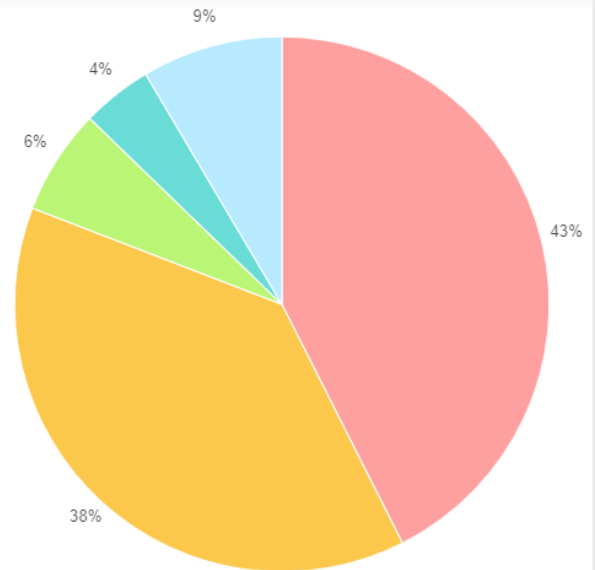
Facilities for pedestrians are needed.

### Answer

### Count

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

20  
18  
3  
2  
4



Answers
No sidewalks or shoulder.
No sidewalks
The ONLY pedestrians I see walking on the road are hitchhikers, train hoppers, and the drug addicts that hang out at the park. Cleaning them up would be a better use of taxpayer money than increasing the road size.
Lighting, safe walkways and bathroom facilities along the route to the homeless shelter. Cut out the large commercial vehicles and there is plenty that can be done for actual pedestrians without cutting into property owner's real estate.
This isn't an area for people to do stuff it's rural housing and access to interstate
It is very unsafe at night especially when the transients are walking along road. Hard to see them.
side walk for pedestrians between College Dr and Lincoln Way
It is such a concern that often people walk in the ditch. We see disabled people who work at Ambitious Diversities walking and I often concern myself with their welfare.
At the minimum, some kind of path needs built along the entire roadway. It'd be really nice to have a bike path/mixed use path that's totally separated from Southwest Drive that (at least) connects W Lincolnway to Clear Creek Park (or even better, to W College Dr to also support the homes and other businesses in the area). Although if expanding the greenway isn't a possibility at this time, at least having a standard ADA compliant sidewalk would still be better than nothing at all.
Having an adequate shoulder on this road would be a big improvement.

# SOUTHWEST DRIVE PUBLIC MEETING #1

## 06/21/2023

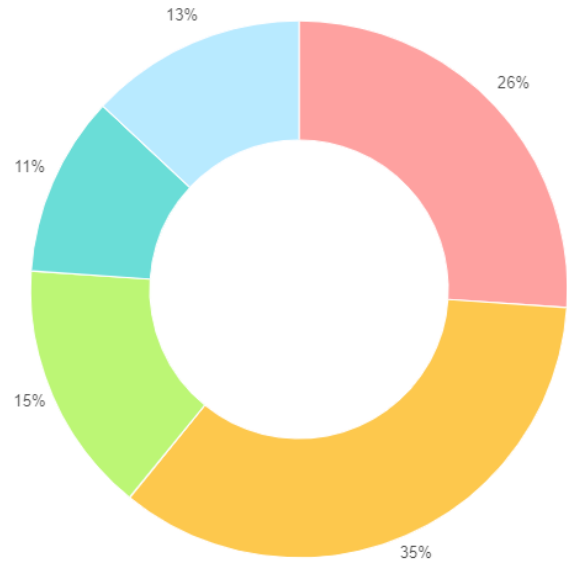
☒ ☐ Facilities for bicycles are needed.

### Answer

### Count

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

12  
16  
7  
5  
6



### Answers

Same as before.

You can't ride here without getting in the traffic lane.

We have seen very few bicycles on this route, likely due to the heavy and fast traffic as well as the over whelming transient traffic that wouldn't typically have a bicycle. They could share the sidewalk with very little concessions either way.

If the road is wide enough, bicycle traffic can remain on the road.

We don't see a lot of cyclists and I am not sure if that is because the road is so bad they look for alternative routes. Clear creek park put in a facility for bike activities but I don't know of anyone using it because of the road condition getting there and the crossing being blocked a lot of the time.

If no bike path can be provided, it would be better than nothing to at least have basic bike lanes. If speeds are to be kept at a higher rate (ie at the existing 40 MPH limit), then it'd be ideal to have the lanes separated from traffic instead of just having a single white line-width between bikes and cars.

I could ride my bike to work.

# SOUTHWEST DRIVE PUBLIC MEETING #1

## 06/21/2023



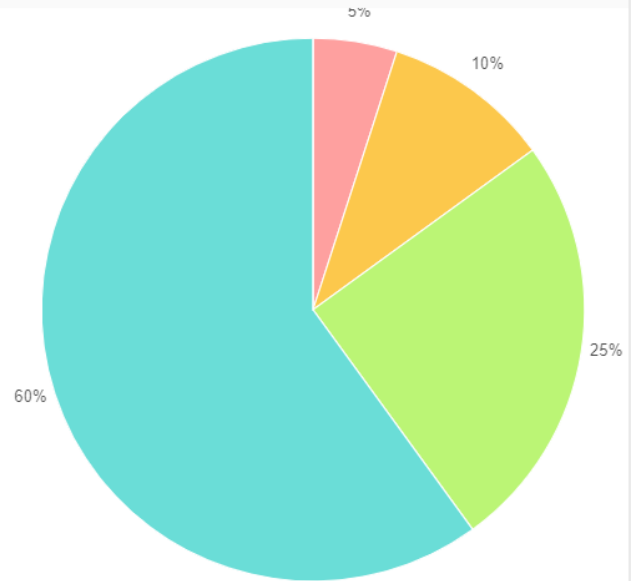
I have stormwater or snowmelt issues due to inadequate drainage in the Southwest Drive right-of-way.

Answer

Count

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

2  
4  
10  
24  
0



### Answers

With all the rain and snow this last year we didn't see any issues.

If you expand we will have issues

I have not experienced flooded roads.

never personally experienced

Our property is up high enough that we don't have flooding. But the access into W 5th is prone to flooding even after the improvements that were done before CH Yarber built their property.

I haven't had issues with flooding, even in spite of the obvious low point under I-25. That doesn't mean others haven't had issues, maybe there are other people who have had issues that could better answer this question.

My driveway is getting washed out due to the Arby's sidewalk and curb.

# SOUTHWEST DRIVE PUBLIC MEETING #1

## 06/21/2023

☒ ☒ I am interested in connecting to public water if an outside user agreement is available.

Answer

Count

☒ Strongly Agree

5

☒ Agree

16

☒ Neutral

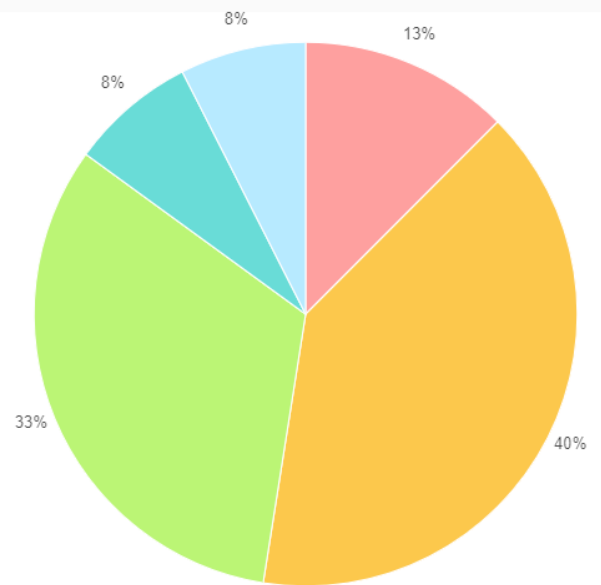
13

☒ Disagree

3

☒ Strongly Disagree

3



### Answers

We like our well.

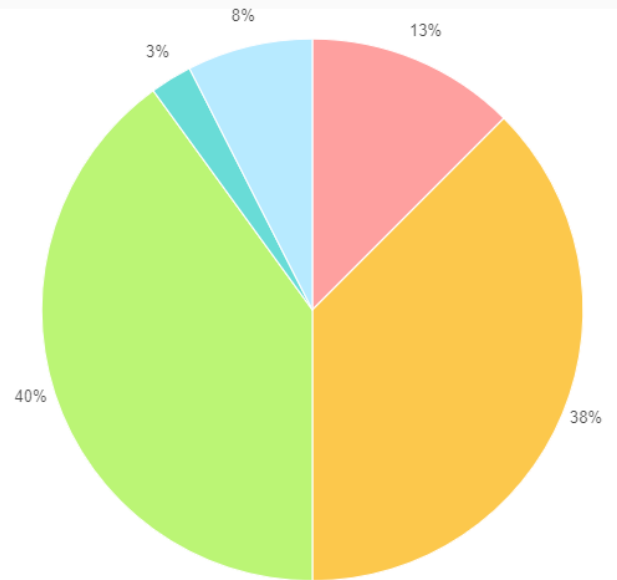
we are currently on well and prefer to stay with that water source

# SOUTHWEST DRIVE PUBLIC MEETING #1

## 06/21/2023

☒ ☒ I am interested in connecting to public sewer if an outside user agreement is available.

Answer	Count
<span style="color: red;">●</span> Strongly Agree	5
<span style="color: orange;">●</span> Agree	15
<span style="color: green;">●</span> Neutral	16
<span style="color: teal;">●</span> Disagree	1
<span style="color: lightblue;">●</span> Strongly Disagree	3



### Answers

As long as I don't have to annex.

My place of employment is already connected to public sewer.

already attached to Public Sewer

We are already on BOPU sewer.

I already connected to the public sewer.

Already attached



# SOUTHWEST DRIVE PUBLIC MEETING #1

## 06/21/2023

☒ ☒ I plan to subdivide my property in the future.

Answer

Count

☒ Yes

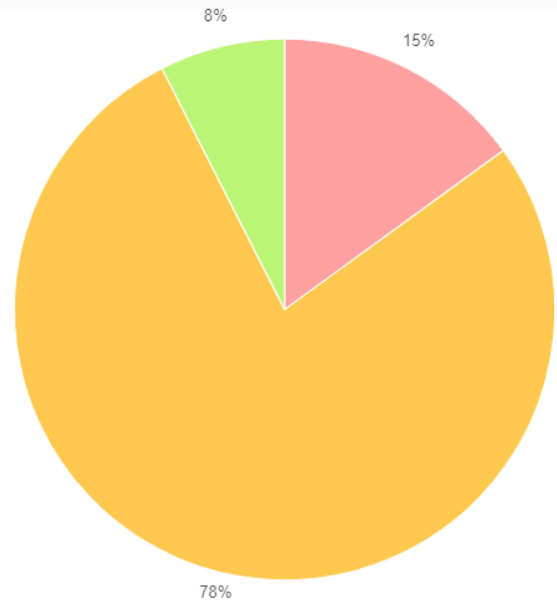
6

☒ No

31

☒ Undecided

3



Answers

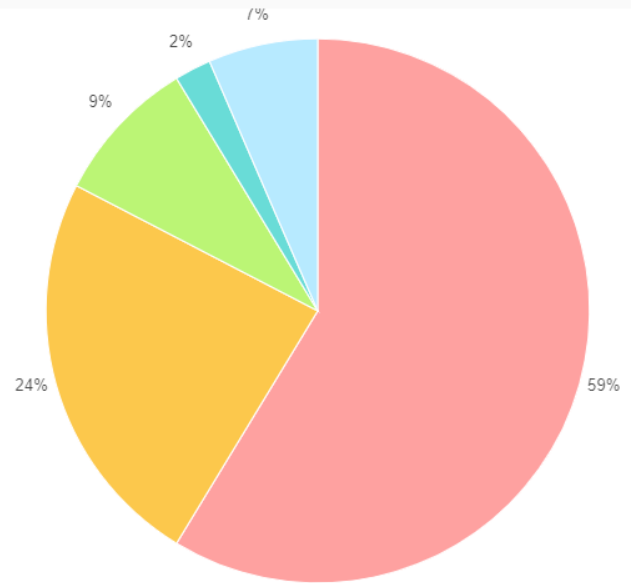
May consolidate some of my lots into larger parcels.

# SOUTHWEST DRIVE PUBLIC MEETING #1

## 06/21/2023

Southwest Drive traffic will continue to increase; we should improve it.

Answer	Count
Strongly Agree	27
Agree	11
Neutral	4
Disagree	1
Strongly Disagree	3



### Answers

It would be nice to be able to walk here on a sidewalk. Also the pavement needs help.

Lighting should be improved as well, there are very few lights present and huge dark areas create unsafe conditions, especially for transients who walk down the road at all hours of the day or night.

If the road was maintained now it wouldn't be an issue

I would like to see Southwest Drive improved mainly to improve the road condition. IE high manhole covers and potholes.

the area between College Drive and south of 5th Ave is narrower than the area north of that. This narrow area causes delays with residents crossing the road and checking mail boxes and vehicles turning across traffic to access driveways and road access. A widening of the lanes and maybe a center median would allow for safely moving over to allow for turning traffic and pedestrians checking mail.

Improvements do need made. At the end of the day, it's a vital connection between W Lincolnway and W College Dr, especially including those not using the typical motorized vehicles. The only alternative for pedestrians/bicycles is via W College Dr with vehicles traveling 45+ MPH which can make some otherwise relatively short routes suddenly quite unnecessarily long. Motorized vehicles at least do still have the alternative of using I-25 and I-80.

The road is a rollercoaster with too many 18-wheel trucks.

# SOUTHWEST DRIVE PUBLIC MEETING #1

## 06/21/2023

☒ ☒ An alternate traffic route, along Broken Arrow Road, should be explored as an alternative to Southwest Drive, due to Southwest Drive's close proximity to business access at I-25.

Answer

Count

● Strongly Agree

12

● Agree

10

● Neutral

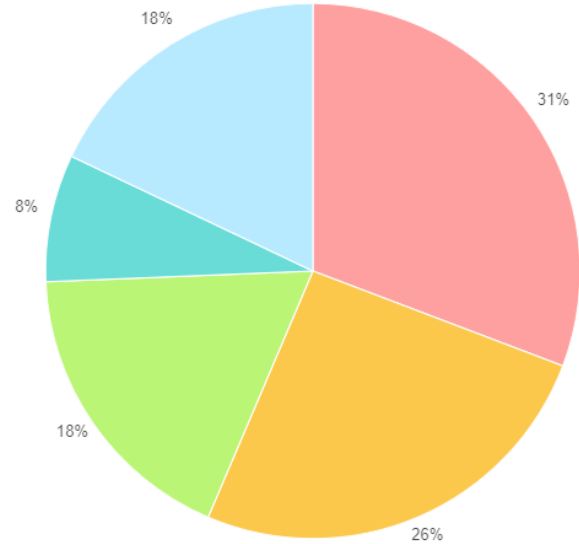
7

● Disagree

3

● Strongly Disagree

7



### Answers

This alternate route will help, but not enough.

Whether it is on Southwest & Broken Arrow it is still going through a residences. Why spend the \$\$ to build a completely new road on Broken Arrow, when Southwest could be repaired & save \$\$.

This will be an added expense that would not solve the primary problem of wait time at railroad crossing. Strongly disagree.

This may help with the College Drive intersection but would require redesign and upgrading of Broken Arrow Road.

This is a great option which should be utilized sooner than later. During the winter when the trucks were piling up on the side of Southwest drive because I80 was closed there was a jack knifed Semi and we tried to go around because once again the crossing was blocked by the train. Broken arrow is an option but it is not maintained so we couldn't get through we had to sit and wait.

This option may provide easier access onto W College Drive without having so much truck traffic from gas stations.

We don't want the traffic on our road. Keep it on SW Drive.

I don't want all that traffic on my street. I also do not want to give up any of my property for a wider road.

# Southwest Drive Corridor Plan Public Open House

## Sign-in Sheet

### June 21, 2023

Name	Address	Phone	Email	Add me to email list to receive updates
GLENN & TAMMY CONNOR	1304 BROKEN ARROW RD.		WYTLCD@AOL.COM	✓
Renee Widdleton	PO Box 34177 82003		reneew@fidelis.com	✓
Norman and Maryjane Fleming	1209 Southeast Dr	307 221-2176		
Hank Sohl	1122 Beverly Blvd Cheyenne WY 82007	307 421 3216	hanksohl57@gmail	✓
Patti Dyer	1013 Southwest Dr	4703024815		
Dennis Smith	1819 Southwest Dr.	307-833-2993	None	



# Southwest Drive Corridor Plan Public Open House

## Sign-in Sheet

### June 21, 2023

Name	Address	Phone	Email	Add me to email list to receive updates
Fran Shive	17036 BARREL	307 634-6033		
Lori Reed	3909 W 5TH ST	307 286-7865		
Kevin Murphy	3371 Hales Rock Rd Cheyenne 82007	307 421 9119		
Patricia Lenz	3923 W Lombard Ave Cheyenne 82001	307 595-3514	lenz.patky@gmail.com	✓
DEAN & DONNA MARRS	1515 S.W. DR.	307 635-5588		✓
Michael Flann	1212 SW. DR	307 286-7979	mike.flann@barr.net	x



# Southwest Drive Corridor Plan Public Open House

## Sign-in Sheet

### June 21, 2023

Name	Address	Phone	Email	Add me to email list to receive updates
Maria Grogan	613 South West Dr	307 431 2212	mbgsoccera@gmail	
Blake Grogan	613 Southwest Dr	307 421 3417		
Jeanie Grogan	613 Southwest Dr	307 250 7592	grogan@leadout100%	X
Ed Ernste	707 SW Dr	630 5895	ernste@mhby.com	
Eileen + GEORGE OBSSUTH	1807 SW Drive	761-0988	gaobssuth@gmail.com	yes
Judi Monden	wysof			



# Southwest Drive Corridor Plan Public Open House

## Sign-in Sheet

### June 21, 2023

Name	Address	Phone	Email	Add me to email list to receive updates
Taylor McCort	2518 Bent Ave	307.745.2117	Taylor.McCort@wyo.gov	
Troy Griffith	210 N. American 12th. Cheyenne, WY	307- 640-0808	Troy@KaiserWyo.com	
Shella Mack	1515 Southwest 82009	307 635-5000		
Susan Graham	2003 Bar X Road	287-9113		





# Southwest Drive Corridor Plan Public Open House

## Sign-in Sheet

### June 21, 2023

Name	Address	Phone	Email	Add me to email list to receive updates
Keithy Karla Wright K's Trailer Parts	4194 W. 5th St	630-9078	elkhunter010@hotmail.com	x
Scott Lethin	1804 STARR	469 831 4653	DANA CAT CHARTER.NET	✓
PAT LACROIX	3133 LINCOLN CT	632 405	ANL-3200@AOL.COM	✓
Ben Hornok	1016 Southwest	307 274 5529	benhornok@tcsolutions365.com	✓
Dale Reed	3909 W 5th St	307 286 3523	dale_reed@redson.com	✓
Leon Davis Garcia	1113 Southwood Dr.	307-632-2992	Designarcio7@gmail.com	✓





# Southwest Drive Corridor Plan Public Open House

## Sign-in Sheet

### June 21, 2023

Name	Address	Phone	Email	Add me to email list to receive updates
STEVE & RONNY PAALL	2314 STIKRUP RD	632-7654		
Buchanan Stoip	1405 Southwest Dr.	630-3736		
Kay Shearer	2211 Berlin - Arrow Rd	303-884-3328 cell 307-634-8786 home	drkms1@gmail.com	✓
Luke Sarne	3941 W 5th St	307 630 0462	luke.sarne@gmail.com	✓
MICHAEL HARRIS	3133 LINDBLUM	307 214 2444	WGM82001@vtr	✓
Mark & Jodie Pring	6403 Sunset Dr.	307-631 5057	markpring.207@gmail.com	✓



# Southwest Drive Corridor Plan Public Open House

## Sign-in Sheet

### November 15, 2023

Name	Address	Phone	Email	Add me to email list to receive updates
JEFF & GINNI	MPO			
Patthi	Southwest Dr			
GLENN CONNOR 1 AMMY CROW	1304 Blaiken Arroyo Rd		WYTLCC@aol.com	X
Shore	1703 Banta Rd		Bnp@gmail.com	X
Molly				
Dennis Smith	1810 Southwest Drive	307-823-2993	None	



# Southwest Drive Corridor Plan Public Open House

## Sign-in Sheet

### November 15, 2023

Name	Address	Phone	Email	Add me to email list to receive updates
Nate Davidson	803 Southwest Dr.	307 772 1551	ndavidson@reimancorp.com	✓
Blake W. Isop	112 Southwest Dr.	307-421-9996	blake@chyanher.com	✓
Norman & Mary Jane Freng	1209 SW Drive	307-221-2176		
KAY SHEEHAN				



# Southwest Drive Corridor Plan Public Open House

## Sign-in Sheet

### November 15, 2023

Name	Address	Phone	Email	Add me to email list to receive updates
Steve & Penny Hall	2314 Stimp Rd.	652-7657		<input checked="" type="checkbox"/>





# Israel's step-by-step Gaza offensive risks extending war

HENRY MEYER  
Bloomberg News

Israel's goal of defeating Hamas is more ambitious than ever before, yet a new long-term military approach aimed at limiting its own casualties may draw further international concern over the humanitarian crisis in Gaza.

The ground campaign to destroy those that run the Gaza Strip — following the deadly incursion by the Palestinian militant group into Israel in early October — involves armed forces moving gradually into the crowded enclave while backed up by tanks and artillery.

The Israeli military said Tuesday that two soldiers were killed in combat in northern Gaza, the army's first reported fatalities since the start of the ground offensive on Friday. Meanwhile, Gaza's Hamas-run Health Ministry said a series of Israeli airstrikes on a crowded refugee camp had killed and wounded hundreds, one of the deadliest single assaults since the aerial bombardment began more than three weeks ago.

Airstrikes, which have pummeled Gaza since the Oct. 7 attacks, continue and have already claimed more than 8,500 Palestinian lives, according to Hamas-led health authorities.

On the ground, armored vehicles are reported by residents to be on the outskirts of Gaza City, several kilometers across the border, while Israeli forces attacked a Hamas outpost, killing dozens of militants, the army spokesman's unit said in a text message Tuesday.

The upshot of this gradual strategy is the Israeli military and government are primed

— and are priming the public — for a campaign that will take months, not weeks.

"Israel is proceeding very gradually, very carefully, cautiously as it wants to make sure there are minimum casualties," Yossi Kuperwasser, a former top military intelligence official, said by phone. "Israel believes it is not under any time pressure."

That contrasts with 2014, when Israel's army surged into the Gaza Strip following 10 days of aerial bombardment, triggering a fierce battle in a densely populated urban neighborhood where Hamas was dug in. More than a dozen soldiers died. Before a cease-fire took hold a few weeks later, the army death toll rose to 66, drawing criticism within Israel.

## GO SLOW

The gradual progress of the present campaign is intended to avoid pitched fighting in built-up areas, while troops are wary of approaching the vast network of secret subterranean tunnels in which Hamas hides. The go-slow tactics may succeed in limiting Israeli military losses and potentially civilian deaths, yet risk prolonging a war.

There's also a shift of focus away from negotiating over hostages, of which about 240 were taken by Hamas, which is designated a terrorist group by the U.S. and European Union. On Tuesday, Israel said there's no deal within sight to free more of the captives via Qatari mediation.

The unprecedented civilian death toll from Israel's bombing since the Hamas attacks has sparked growing international criticism, while leading to a dire humanitarian crisis that has left more than 60% of Gaza's 2.2 million population displaced. A blockade of fuel and power supplies by Israel alongside limited water and food have added to their plight.

That's complicating Israel's goal of destroying Hamas and its leadership after the Iranian-supported group staged the deadliest single-day attack in the country's history. Several thousand fighters broke through a heavily guarded security fence and rampaged through communities and military bases in southern Israel, killing 1,400 people and abducting 240 others.

## AID FLOWS

Israel has continued to increase the amount of aid allowed into Gaza from Egypt to 100 trucks a day — still a fifth of

the prewar level — said Strategic Affairs Minister Ron Dermer. The military campaign should start to exact fewer civilian casualties due to focused fire on the north of Gaza, where Hamas military forces are based, he added. Israel had urged Gazans to flee to the south, although air strikes are continuing there, as well.

Israel seems on track to establish a buffer zone between the country and Gaza a couple of kilometers deep to ensure future attacks on its territory can't happen, according to officials.

But successfully dislodging Hamas from Gaza could take more than a year, according to Amir Avivi, a former brigadier general who was involved in preparations for the 2014 Gaza war. "We need to spend months and months dismantling all this infrastructure," he said by phone after meetings with Israeli Prime Minister Benjamin Netanyahu and top military officials as head of an association of former and reserve members of the security forces.

The challenge that Israel faces in Gaza is magnified by the tunnel network, which Hamas says extends for several hundred kilometers and is equipped with ventilation shafts and electricity. Some reach a depth of 35 meters, or about 115 feet, and can even have railroad tracks and communication rooms, according to experts. The entrance to them often lies in residential buildings or other public facilities.

Using robots to explore the tunnel complex can reduce risks. But, due to confined spaces, booby traps and greater knowledge by Hamas of the underground environment, Israeli troops who try to enter are at a severe disadvantage. Another complication is Hamas has said it's keeping hostages underground, making it more hazardous to bomb the complexes.

## 'BLOOD PRICE'

"Hamas is counting on us entering every bunker and every tunnel in order to exact a heavy blood price from us," former Israeli Prime Minister Naftali Bennett said on X, the social media platform formerly known as Twitter. He called for a long siege to "suffocate the Hamas terrorists in the tunnels until they are forced to leave."

Since the war started, Hamas has continued to use the underground system to attempt attacks, both on land and by sea.



ASSOCIATED PRESS

Israeli forces' flares light up the night sky in northern Gaza Strip, Tuesday, Oct. 31, 2023.

# Israeli airstrikes crush complex in Gaza camp

NAJIB JOBAIN, JACK JEFFREY  
AND LEE KEATH  
Associated Press

**KHAN YOUNIS, Gaza Strip** — A barrage of Israeli airstrikes leveled apartment buildings in a refugee camp near Gaza City on Tuesday, and footage showed rescuers pulling men, women and children out of the rubble. Israel said the strike destroyed a Hamas command center set up in civilian houses and a network of tunnels underneath.

The toll from the strikes in the Jabaliya camp was not immediately known. The Israeli military said a large number of militants were killed, including the commander overseeing Hamas operations in northern Gaza.

The director of the nearby hospital where casualties were taken, Dr. Atef Al-Kahlout, said hundreds were wounded or killed, but he did not provide exact figures. Neither side's account could be independently confirmed.

The strike underlined the anticipated surge in casualties on both sides as Israeli troops battling Hamas militants advance deeper into the northern Gaza Strip toward dense, residential neighborhoods. Israel has vowed to crush Hamas' ability to govern Gaza or threaten Israel following its bloody Oct. 7 rampage, which ignited the war. Hamas, an Islamic militant group, openly calls for the destruction of Israel.

Israel said two of its soldiers were killed in fighting in northern Gaza, the first military deaths it reported since the ground offensive into the tiny Mediterranean territory accelerated late last week.

Several hundred thousand Palestinians remain in northern Gaza in the path of the ground assault. They have crowded into homes or are packed by the thousands into hospitals that are already overwhelmed with patients and running low on supplies.

In the Jabaliya refugee camp — a densely built-up area of small streets on Gaza City's outskirts — footage of the

scene from Al-Jazeera TV showed at least four large craters where buildings once stood amid rubble surrounded by partially collapsed structures.

Dozens of rescue workers and bystanders dug through the wreckage, searching for survivors beneath the pancaked buildings. Young men carried the limp forms of two children from the upper floors of a damaged apartment block's crumbling frame while helping down another child and woman. It was unclear whether the children were alive or dead.

The Israeli military said it carried out a wide-scale strike in Jabaliya on Hamas infrastructure "that had taken over civilian buildings."

Brig. Gen. Daniel Hagari said an underground Hamas installation beneath a targeted building collapsed, toppling other nearby buildings. He said the commander killed in the strike, Ibrahim Biari, played a role in the Oct. 7 attack on Israel.

Also on Tuesday, the Israeli military said ground troops took control of a Hamas military stronghold in west Jabaliya, killing 50 militants.

Hamas spokesman Hazem Qassem denied the military's claim, saying it was trying to justify "its heinous crime" against civilians.

Hagari repeated calls for civilians to evacuate northern Gaza to the south. The military says it targets Hamas fighters and infrastructure and that the militants endanger civilians by operating among them. The military has also repeatedly emphasized it will strike Hamas wherever it finds it.

Some 800,000 Palestinians have reportedly fled to the south, but many have not, in part because they say nowhere is safe as Israeli airstrikes in the south have continued to cause civilian deaths. The window to flee may be closing, as Israeli forces reached Gaza's main north-south highway this week.

More than 8,500 Palestinians have been killed in the war, mostly women and

minors, the Gaza Health Ministry said Tuesday, without providing a breakdown between civilians and fighters. The figure is without precedent in decades of Israeli-Palestinian violence.

Over 1,400 people have died on the Israeli side, mainly civilians killed during Hamas' initial attack, also an unprecedented figure. Palestinian militants also abducted around 240 people during their incursion and have continued firing rockets into Israel.

A day after Israel's first successful rescue of a captive held by Hamas, the spokesman of the militant group's armed wing said they plan to release some non-Israeli hostages in the coming days. Hamas has previously released four hostages, and has said it would let the others go in return for thousands of Palestinian prisoners held by Israel, which has dismissed the offer.

More than half of Gaza's 2.3 million Palestinians have fled their homes, with hundreds of thousands sheltering in packed U.N.-run schools-turned-shelters or in hospitals alongside thousands of wounded patients.

The war has also threatened to ignite fighting on other fronts. Israel and Lebanon's Hezbollah militant group have traded fire daily along the border, and Israel and the U.S. have struck targets in Syria linked to Iran, which supports Hamas, Hezbollah and other armed groups in the region.

The military said it shot down what appeared to be a drone near the southernmost city of Eilat and intercepted a missile over the Red Sea on Tuesday, neither of which entered Israeli airspace.

Iranian-backed Houthi rebels in Yemen later claimed they fired ballistic missiles and drones at Israel, saying it was their third such operation and threatening more. Earlier this month, a U.S. Navy destroyer in the Red Sea intercepted missiles and drones launched toward Israel by the Houthis, who control much of northern Yemen.

**WHEELS**  
MEALS & WHEELS  
SERVING  
VOLUNTEERS NEEDED

Regular Drivers Monday-Friday  
We are seeking a compassionate driver to help deliver meals to homebound seniors in the Cheyenne area. Drivers must be at least 18 years old, have a valid driver's license, and a reliable vehicle. Training and support provided. Contact us today to get started. (307) 635-5542 or apply online. www.mealsandwheelswy.com

# CHRISTMAS IN THE COUNTRY AT THE SCHOOL HOUSE

NOV 2ND - NOV 12TH • 2023 • 10AM - 5PM  
THURSDAYS • NOV 2ND & 9TH • OPEN TILL 8PM

## Directions:

7 mi. N. of Cheyenne on Yellowstone Rd. to Rt. 86, Right on Rt. 86 10mi. to Rd. 222, Go E. on Rd. 222, 0 1/2 mi. to Rd. 140, Turn Left (N.) on Rd. 140 for 1 mile to the School House.  
OR: 6mi. N of Millsdale, WY. on Rd 143, to Rd. 223, Sml. W. on Rd 223 to the School House on the Corner.

Bazaar at the School House  
See our Facebook page for Updates

We Accept  
Cash • Check • MasterCard  
VISA • DISCOVER

You are invited to attend a  
Public Open House for the

## Southwest Drive Corridor Plan

Wednesday, November 15th from 5:00 pm to 6:30 pm at the Cheyenne Animal Shelter Public Meeting Room (800 Southwest Drive)

Meet with the design team and the Cheyenne Metropolitan Planning Organization (MPO) staff to learn about the Corridor Plan for Southwest Drive between West Lincolnway and College Drive.

Opportunities will be available for you to offer your insight and comments regarding this plan.

**CHEYENNE MPO**  
**BME**  
BenchMark  
ENGINEERS, PC

**FELLSBURG HOLT & ULLIVIG**  
**GLM**  
Design Group



## Southwest Drive Corridor Plan Open House Comment Card June 21, 2023



Which of the following best describes you (check all the apply):

- ☐ Resident (either owner or renter)
- ☒ Property owner (non-occupant or vacant land)
- ☒ Business Owner or Employee
- ☐ Corridor user
- ☐ Other \_\_\_\_\_



Please provide contact information so we may reach out to you:

Name: Lori Reed Phone: 307 286 7865

Address: 3909 W 5th St Email: lori-reed@reedserv.com

Reminder: The project area corridor extends from West Lincolnway to West College Drive.

How long have you lived or worked along the corridor?

- ☐ less than 1 year    ☐ 1 to 5 years    ☒ 6 to 15 years    ☐ more than 15 years    ☐ not applicable

1. What do you like about Southwest Drive and the overall project area? \_\_\_\_\_

it is great for our business close to both 180 + 125

2. What concerns do you have about traffic safety along Southwest Drive, and what safety improvements would you like to see? train always blocks intersection sending

us to College and down Southwest Dr.

3. Should an alternate route be explored to avoid the railroad crossing at West Lincolnway? \_\_\_\_\_

Yes!!

4. If you have additional comments, please share them here: \_\_\_\_\_



**BenchMark Engineers, PC**  
1920 Thomes Avenue, Suite 320  
Cheyenne, WY 82001



This survey can also be completed online by scanning the QR code with your phone's camera:

The link for the online survey is:

<https://www.surveylegend.com/s/4rl4>



### 1. Travel Lanes for Vehicles

I believe the corridor is wide enough for current traffic.

☐ strongly agree   ☐ agree   ☐ neutral   ☐ disagree   ☒ strongly disagree   ☐ not applicable

Are there any specific locations without enough lanes for vehicles?

---

### 2. Traffic Volumes

I am concerned about increasing traffic along Southwest Drive.

☒ strongly agree   ☐ agree   ☐ neutral   ☐ disagree   ☐ strongly disagree   ☐ not applicable

Do you have additional comments you would like to share?

---

### 3. Commercial Trucks

Commercial truck traffic is a concern along the corridor.

☐ strongly agree   ☒ agree   ☐ neutral   ☐ disagree   ☐ strongly disagree   ☐ not applicable

If not, are the speed limits ☐ too high (traffic needs to slow down) or ☐ low (traffic is moving too slowly)?

Are there any specific areas where speeding is a concern for you?

---

### 4. Speed Limits

The current speed limits are appropriate.

☐ strongly agree   ☐ agree   ☒ neutral   ☐ disagree   ☐ strongly disagree   ☐ not applicable

If not, are the speed limits ☐ too high (traffic needs to slow down) or ☐ low (traffic is moving too slowly)?

Are there any specific areas where speeding is a concern for you?

---

**5. Intersections**

Intersections along Southwest Drive are adequate.

☐ strongly agree   ☐ agree   ☐ neutral   ☐ disagree   ☒ strongly disagree   ☐ not applicable

Are you aware of any specific issues with current intersections? (delays, improper use, sight distance, etc.)

---

**6. Railroad Crossing**

Wait time at the railroad crossing is a concern.

☒ strongly agree   ☐ agree   ☐ neutral   ☐ disagree   ☐ strongly disagree   ☐ not applicable

Are you aware of any specific issues with current rail crossings? (delays, improper use, sight distance, etc.)

---

**7. Pedestrians**

Facilities for pedestrians are needed.

☒ strongly agree   ☐ agree   ☐ neutral   ☐ disagree   ☐ strongly disagree   ☐ not applicable

Do you have additional comments you would like to share?

---

**8. Bicyclists**

Facilities for bicycles are needed.

☒ strongly agree   ☐ agree   ☐ neutral   ☐ disagree   ☐ strongly disagree   ☐ not applicable

Do you have additional comments you would like to share?

---

**9. Drainage Issues**

I have stormwater or snowmelt issues due to inadequate drainage in the Southwest Drive right-of-way.

☐ strongly agree   ☐ agree   ☒ neutral   ☐ disagree   ☐ strongly disagree   ☐ not applicable

Do you have additional comments you would like to share?

---



**10. Public Water Supply**

I am interested in connecting to public water if an outside user agreement is available.

☐ strongly agree   ☐ agree   ☒ neutral   ☐ disagree   ☐ strongly disagree   ☐ not applicable

Do you have additional comments you would like to share?

---

**11. Public Sewer Connection**

I am interested in connecting to public sewer if an outside user agreement is available.

☐ strongly agree   ☐ agree   ☒ neutral   ☐ disagree   ☐ strongly disagree   ☐ not applicable

Do you have additional comments you would like to share?

we are attached to sewer

---

**12. Subdivision**

I plan to subdivide my property in the future.

☐ strongly agree   ☐ agree   ☐ neutral   ☐ disagree   ☐ strongly disagree   ☒ not applicable

Do you have additional comments you would like to share?

---

**13. The Future**

Southwest Drive traffic will continue to increase; we should improve it.

☒ strongly agree   ☐ agree   ☐ neutral   ☐ disagree   ☐ strongly disagree   ☐ not applicable

Do you have additional comments you would like to share?

---

**14. Alternate Route Ideas**

An alternate traffic route, along Broken Arrow Road, should be explored as an alternative to Southwest Drive, due to Southwest Drive's close proximity to business access at I-25.

☐ strongly agree   ☐ agree   ☒ neutral   ☐ disagree   ☐ strongly disagree   ☐ not applicable

Do you have additional comments you would like to share?

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## 15. Additional Concerns

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



# Southwest Drive Corridor Plan Open House Comment Card June 21, 2023



Which of the following best describes you (check all the apply):

- ☐ Resident (either owner or renter)
- ☐ Property owner (non-occupant or vacant land)
- ☒ Business Owner or Employee
- ☒ Corridor user
- ☐ Other \_\_\_\_\_



Please provide contact information so we may reach out to you:

Name: Hank Sohl Phone: 307 421 3216

Address: 1122 Beverly Blvd Email: Hank.Sohl57@gmail.com

Reminder: The project area corridor extends from West Lincolnway to West College Drive.

How long have you lived or worked along the corridor?

- ☐ less than 1 year    ☐ 1 to 5 years    ☐ 6 to 15 years    ☒ more than 15 years    ☐ not applicable

1. What do you like about Southwest Drive and the overall project area? Bypass for South  
Greely

2. What concerns do you have about traffic safety along Southwest Drive, and what safety improvements would you like to see? Signal at College

3. Should an alternate route be explored to avoid the railroad crossing at West Lincolnway?

4. If you have additional comments, please share them here:



**BenchMark Engineers, PC**  
1920 Thomas Avenue, Suite 320  
Cheyenne, WY 82001

This survey can also be completed online by scanning the QR code with your phone's camera:

The link for the online survey is:

<https://www.surveylegend.com/s/4r14>



### 1. Travel Lanes for Vehicles

I believe the corridor is wide enough for current traffic.

☐ strongly agree   ☐ agree   ☐ neutral   ☐ disagree   ☒ strongly disagree   ☐ not applicable

Are there any specific locations without enough lanes for vehicles?

---

### 2. Traffic Volumes

I am concerned about increasing traffic along Southwest Drive.

☒ strongly agree   ☐ agree   ☐ neutral   ☐ disagree   ☐ strongly disagree   ☐ not applicable

Do you have additional comments you would like to share?

---

### 3. Commercial Trucks

Commercial truck traffic is a concern along the corridor.

☒ strongly agree   ☐ agree   ☐ neutral   ☐ disagree   ☐ strongly disagree   ☐ not applicable

If not, are the speed limits ☒ too high (traffic needs to slow down) or ☐ low (traffic is moving too slowly)?

Are there any specific areas where speeding is a concern for you?

---

### 4. Speed Limits

The current speed limits are appropriate.

☐ strongly agree   ☒ agree   ☐ neutral   ☐ disagree   ☐ strongly disagree   ☐ not applicable

If not, are the speed limits ☐ too high (traffic needs to slow down) or ☐ low (traffic is moving too slowly)?

Are there any specific areas where speeding is a concern for you?

---

**5. Intersections**

Intersections along Southwest Drive are adequate.

☐ strongly agree   ☐ agree   ☐ neutral   ☐ disagree   ☒ strongly disagree   ☐ not applicable

Are you aware of any specific issues with current intersections? (delays, improper use, sight distance, etc.)

---

**6. Railroad Crossing**

Wait time at the railroad crossing is a concern.

☐ strongly agree   ☒ agree   ☐ neutral   ☐ disagree   ☐ strongly disagree   ☐ not applicable

Are you aware of any specific issues with current rail crossings? (delays, improper use, sight distance, etc.)

---

**7. Pedestrians**

Facilities for pedestrians are needed.

☒ strongly agree   ☐ agree   ☐ neutral   ☐ disagree   ☐ strongly disagree   ☐ not applicable

Do you have additional comments you would like to share?

---

**8. Bicyclists**

Facilities for bicycles are needed.

☒ strongly agree   ☐ agree   ☐ neutral   ☐ disagree   ☐ strongly disagree   ☐ not applicable

Do you have additional comments you would like to share?

---

**9. Drainage Issues**

I have stormwater or snowmelt issues due to inadequate drainage in the Southwest Drive right-of-way.

☐ strongly agree   ☒ agree   ☐ neutral   ☐ disagree   ☐ strongly disagree   ☐ not applicable

Do you have additional comments you would like to share?

---

**10. Public Water Supply**

I am interested in connecting to public water if an outside user agreement is available.

☐ strongly agree ☒ agree ☐ neutral ☐ disagree ☐ strongly disagree ☐ not applicable

Do you have additional comments you would like to share?

---

**11. Public Sewer Connection**

I am interested in connecting to public sewer if an outside user agreement is available.

☐ strongly agree ☐ agree ☒ neutral ☐ disagree ☐ strongly disagree ☐ not applicable

Do you have additional comments you would like to share?

---

**12. Subdivision**

I plan to subdivide my property in the future.

☐ strongly agree ☒ agree ☐ neutral ☐ disagree ☐ strongly disagree ☐ not applicable

Do you have additional comments you would like to share?

---

**13. The Future**

Southwest Drive traffic will continue to increase; we should improve it.

☒ strongly agree ☐ agree ☐ neutral ☐ disagree ☐ strongly disagree ☐ not applicable

Do you have additional comments you would like to share?

---

**14. Alternate Route Ideas**

An alternate traffic route, along Broken Arrow Road, should be explored as an alternative to Southwest Drive, due to Southwest Drive's close proximity to business access at I-25.

☐ strongly agree ☒ agree ☐ neutral ☐ disagree ☐ strongly disagree ☐ not applicable

Do you have additional comments you would like to share?

---



Entered into  
online survey

## Southwest Drive Corridor Plan Open House Comment Card June 21, 2023



Which of the following best describes you (check all the apply):

- ☒ Resident (either owner or renter)  
☐ Property owner (non-occupant or vacant land)  
☐ Business Owner or Employee  
☐ Corridor user  
☐ Other \_\_\_\_\_



Please provide contact information so we may reach out to you:

Name: Dale Reed Phone: 307 286 3523  
Address: 3909 W 5th St Email: dale.reed@reedson.com

Reminder: The project area corridor extends from West Lincolnway to West College Drive.

How long have you lived or worked along the corridor?

- ☐ less than 1 year ☐ 1 to 5 years ☒ 6 to 15 years ☐ more than 15 years ☐ not applicable

1. What do you like about Southwest Drive and the overall project area? \_\_\_\_\_

access to work

2. What concerns do you have about traffic safety along Southwest Drive, and what safety improvements would you like to see? \_\_\_\_\_

train crossing impedes safety  
service access

3. Should an alternate route be explored to avoid the railroad crossing at West Lincolnway? \_\_\_\_\_

unimpeded safety lane  
under crossing

4. If you have additional comments, please share them here: \_\_\_\_\_

current Rd. quality is very poor



**BenchMark Engineers, PC**  
1920 Thomas Avenue, Suite 320  
Cheyenne, WY 82001



This survey can also be completed online by scanning the QR code with your phone's camera:

The link for the online survey is:

<https://www.surveylegend.com/s/4r14>



### 1. Travel Lanes for Vehicles

I believe the corridor is wide enough for current traffic.

☐ strongly agree ☐ agree ☐ neutral ☐ disagree ☒ strongly disagree ☐ not applicable

Are there any specific locations without enough lanes for vehicles?

Too narrow

### 2. Traffic Volumes

I am concerned about increasing traffic along Southwest Drive.

☐ strongly agree ☒ agree ☐ neutral ☐ disagree ☐ strongly disagree ☐ not applicable

Do you have additional comments you would like to share?

### 3. Commercial Trucks

Commercial truck traffic is a concern along the corridor.

☐ strongly agree ☒ agree ☐ neutral ☐ disagree ☐ strongly disagree ☐ not applicable

If not, are the speed limits ☐ too high (traffic needs to slow down) or ☐ low (traffic is moving too slowly)?

Are there any specific areas where speeding is a concern for you?

### 4. Speed Limits

The current speed limits are appropriate.

☐ strongly agree ☒ agree ☐ neutral ☐ disagree ☐ strongly disagree ☐ not applicable

If not, are the speed limits ☐ too high (traffic needs to slow down) or ☐ low (traffic is moving too slowly)?

Are there any specific areas where speeding is a concern for you?

**5. Intersections**

Intersections along Southwest Drive are adequate.

☐ strongly agree ☐ agree ☐ neutral ☒ disagree ☐ strongly disagree ☐ not applicable

Are you aware of any specific issues with current intersections? (delays, improper use, sight distance, etc.)

---

**6. Railroad Crossing**

Wait time at the railroad crossing is a concern.

☒ strongly agree ☐ agree ☐ neutral ☐ disagree ☐ strongly disagree ☐ not applicable

Are you aware of any specific issues with current rail crossings? (delays, improper use, sight distance, etc.)

---

**7. Pedestrians**

Facilities for pedestrians are needed.

☒ strongly agree ☐ agree ☐ neutral ☐ disagree ☐ strongly disagree ☐ not applicable

Do you have additional comments you would like to share?

---

**8. Bicyclists**

Facilities for bicycles are needed.

☐ strongly agree ☐ agree ☐ neutral ☒ disagree ☒ strongly disagree ☐ not applicable

Do you have additional comments you would like to share?

---

**9. Drainage Issues**

I have stormwater or snowmelt issues due to inadequate drainage in the Southwest Drive right-of-way.

☐ strongly agree ☒ agree ☐ neutral ☐ disagree ☐ strongly disagree ☐ not applicable

Do you have additional comments you would like to share?

---

**10. Public Water Supply**

I am interested in connecting to public water if an outside user agreement is available.

☐ strongly agree   ☐ agree   ☐ neutral   ☐ disagree   ☐ strongly disagree   ☒ not applicable

Do you have additional comments you would like to share?

---

**11. Public Sewer Connection**

I am interested in connecting to public sewer if an outside user agreement is available.

☐ strongly agree   ☐ agree   ☐ neutral   ☐ disagree   ☐ strongly disagree   ☒ not applicable

Do you have additional comments you would like to share?

---

**12. Subdivision**

I plan to subdivide my property in the future.

☐ strongly agree   ☐ agree   ☐ neutral   ☐ disagree   ☐ strongly disagree   ☒ not applicable

Do you have additional comments you would like to share?

---

**13. The Future**

Southwest Drive traffic will continue to increase; we should improve it.

☒ strongly agree   ☐ agree   ☐ neutral   ☐ disagree   ☐ strongly disagree   ☐ not applicable

Do you have additional comments you would like to share?

---

**14. Alternate Route Ideas**

An alternate traffic route, along Broken Arrow Road, should be explored as an alternative to Southwest Drive, due to Southwest Drive's close proximity to business access at I-25.

☒ strongly agree   ☐ agree   ☐ neutral   ☐ disagree   ☐ strongly disagree   ☐ not applicable

Do you have additional comments you would like to share?

---



✓

## Southwest Drive Corridor Plan Open House Comment Card June 21, 2023



Which of the following best describes you (check all the apply):

- ☒ Resident (either owner or renter)
- ☐ Property owner (non-occupant or vacant land)
- ☐ Business Owner or Employee
- ☐ Corridor user
- ☐ Other \_\_\_\_\_



Please provide contact information so we may reach out to you:

Name: Dennis Smith Phone: 307-828-2993  
Address: 1817 Southwest Dr Email: None

Reminder: The project area corridor extends from West Lincolnway to West College Drive.

How long have you lived or worked along the corridor?

- ☐ less than 1 year    ☐ 1 to 5 years    ☐ 6 to 15 years    ☒ more than 15 years    ☐ not applicable

1. What do you like about Southwest Drive and the overall project area? \_\_\_\_\_

\_\_\_\_\_

2. What concerns do you have about traffic safety along Southwest Drive, and what safety improvements would you like to see? Road is like a roller coaster. Too many 18 wheel trucks.

\_\_\_\_\_

3. Should an alternate route be explored to avoid the railroad crossing at West Lincolnway?

yes. Train blocking traffic is terrible.

\_\_\_\_\_

4. If you have additional comments, please share them here: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



**BenchMark Engineers, PC**  
1920 Thomas Avenue, Suite 320  
Cheyenne, WY 82001

This survey can also be completed online by scanning the QR code with your phone's camera:

The link for the online survey is:

<https://www.surveylegend.com/s/4r14>



### 1. Travel Lanes for Vehicles

I believe the corridor is wide enough for current traffic.

☐ strongly agree   ☐ agree   ☒ neutral   ☐ disagree   ☐ strongly disagree   ☐ not applicable

Are there any specific locations without enough lanes for vehicles?

---

### 2. Traffic Volumes

I am concerned about increasing traffic along Southwest Drive.

☐ strongly agree   ☒ agree   ☐ neutral   ☐ disagree   ☐ strongly disagree   ☐ not applicable

Do you have additional comments you would like to share?

---

### 3. Commercial Trucks

Commercial truck traffic is a concern along the corridor.

☒ strongly agree   ☐ agree   ☐ neutral   ☐ disagree   ☐ strongly disagree   ☐ not applicable

If not, are the speed limits ☐ too high (traffic needs to slow down) or ☐ low (traffic is moving too slowly)?

Are there any specific areas where speeding is a concern for you?

---

### 4. Speed Limits

The current speed limits are appropriate.

☐ strongly agree   ☒ agree   ☐ neutral   ☐ disagree   ☐ strongly disagree   ☐ not applicable

If not, are the speed limits ☐ too high (traffic needs to slow down) or ☐ low (traffic is moving too slowly)?

Are there any specific areas where speeding is a concern for you?

---

**5. Intersections**

Intersections along Southwest Drive are adequate.

☐ strongly agree ☐ agree ☒ neutral ☐ disagree ☐ strongly disagree ☐ not applicable

Are you aware of any specific issues with current intersections? (delays, improper use, sight distance, etc.)

---

**6. Railroad Crossing**

Wait time at the railroad crossing is a concern.

☒ strongly agree ☐ agree ☐ neutral ☐ disagree ☐ strongly disagree ☐ not applicable

Are you aware of any specific issues with current rail crossings? (delays, improper use, sight distance, etc.)

---

**7. Pedestrians**

Facilities for pedestrians are needed.

☐ strongly agree ☐ agree ☒ neutral ☐ disagree ☐ strongly disagree ☐ not applicable

Do you have additional comments you would like to share?

---

**8. Bicyclists**

Facilities for bicycles are needed.

☐ strongly agree ☐ agree ☒ neutral ☐ disagree ☐ strongly disagree ☐ not applicable

Do you have additional comments you would like to share?

---

**9. Drainage Issues**

I have stormwater or snowmelt issues due to inadequate drainage in the Southwest Drive right-of-way.

☐ strongly agree ☒ agree ☐ neutral ☐ disagree ☐ strongly disagree ☐ not applicable

Do you have additional comments you would like to share? My drive way is getting washed out due to the ARBY's sidewalk & curb. 1517 Southwest Dr.

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**10. Public Water Supply**

I am interested in connecting to public water if an outside user agreement is available.

☐ strongly agree ☐ agree ☒ neutral ☐ disagree ☐ strongly disagree ☐ not applicable

Do you have additional comments you would like to share?

---

**11. Public Sewer Connection**

I am interested in connecting to public sewer if an outside user agreement is available.

☐ strongly agree ☐ agree ☐ neutral ☐ disagree ☐ strongly disagree ☐ not applicable

Do you have additional comments you would like to share?

I did connect to the public sewer system.

**12. Subdivision**

I plan to subdivide my property in the future.

☐ strongly agree ☐ agree ☒ neutral ☐ disagree ☐ strongly disagree ☐ not applicable

Do you have additional comments you would like to share?

---

**13. The Future**

Southwest Drive traffic will continue to increase; we should improve it.

☒ strongly agree ☐ agree ☐ neutral ☐ disagree ☐ strongly disagree ☐ not applicable

Do you have additional comments you would like to share?

The road is like a roller coaster. Too many 18 wheel trucks.

**14. Alternate Route Ideas**

An alternate traffic route, along Broken Arrow Road, should be explored as an alternative to Southwest Drive, due to Southwest Drive's close proximity to business access at I-25.

☐ strongly agree ☐ agree ☒ neutral ☐ disagree ☐ strongly disagree ☐ not applicable

Do you have additional comments you would like to share?

---





## SOUTHWEST DRIVE CORRIDOR SURVEY

**BenchMark**  
Engineers, P.C.

### 15. Additional Concerns

If you have additional comments, please share them here.

No side walks if I have to pay for them!  
Trucks should enter the truck stops on college Drive  
AND not from Southwest Dr.

**CITY OF CHEYENNE**  
**PLANNING COMMISSION MINUTES**  
**March 18, 2024**  
**6:00 P.M.**

**MEMBERS PRESENT:** Bob Mathia, Chair; Boyd Wiggam, Vice-Chair; Meghan Connor, Secretary; Tony Laird, Bryan Thomas, Amy Hernandez

**MEMBERS ABSENT:** Darrell Hibbens

**CITY STAFF PRESENT:** Stephanie Boster, City Attorney; Valerie Pickard, Planning & Development Office Manager; Sophia Maes, Planner I; Connor White, Planner II; Jeffrey Noffsinger, MPO Director

**OTHERS PRESENT:** Glen Connor, Doris Garcia

**ITEM 1: CALL MEETING TO ORDER / ROLL CALL**

Bob Mathia, Chair, called the meeting to order at 6:00 PM

Roll Call was done by Connor White, Planner II. There was a quorum with 6 members present.

**ITEM 2: APPROVAL OF AGENDA AND MINUTES**

Mr. Laird made a motion to approve the February 20<sup>th</sup> meeting minutes. Mr. Thomas seconded the motion. The minutes were approved unanimously.

**ITEM 3: DISCLOSURES**

**ITEM 4: PLANNING PROJECTS**

**ITEM A: Southwest Drive Corridor Plan**

- [1. Final Plan](#)
- [2. Appendices](#)
- [3. Resolution](#)

Case Planner: Jeffrey Noffsinger, MPO Director

Connor White, Planner II, read the item into the record.

Jeffery Noffsinger, MPO Director, presented the final Southwest Drive Corridor Study.

Mr. Laird asked for corrections to be made throughout the plans where items were not clear or had grammar errors.

Ms. Connor asked about the right of way on Broken Arrow vs. Southwest Drive.

Noffsinger, the cueing issues at Southwest Drive and College Drive causes congestion and safety concerns.

Ms. Connor, I have a concern with the hill leading up to Broken Arrow.

Noffsinger, there is ample sight distance, and the ice and snow is a factor for maintenance.

Ms. Connor, I have a concern that the County residence do not have representation in the City processes.

*\* Minutes are meant to provide a brief summary of the meeting's action items, discussions, and decisions made. For more detailed information, please request a recording from the Planning & Development Staff.*

Noffsinger: There is a concurrent process through the County as well. Southwest Drive has been in the long-range plan for over 20 years.

Ms. Connor stated concerns over the rural character of the road. She asked why the rural feel was such a concern for Southwest Drive and not for Broken Arrow.

Mr. Noffsinger, this plan is long-range to find the optimal solution should the owner decide to develop the 80-acre parcel to the north in the next 10 or 20 years.

Mr. Wiggam, I have concerns with the analysis of the plan. There is existing right of way and paved road.

Mr. Laird, this seems like a big change for the area, I would like to see a much more rigorous report to hash out these details.

Mr. Mathia asked for public comment. Hearing none, he closed the public comment.

Mr. Glen Connor presented his concerns regarding this plan. A few items are missing from the is plan like the Sinclair pipeline. Concerns for safety of crossings on Southwest Dr. I have concerns for right of way acquisitions for property owners and drainage.

Mr. Laird stated that the plan shows curb and gutter on Broken Arrow, this will help control drainage.

Ms. Doris Garcia, I agree with everything that Mr. Connor stated. We were notified about the first meeting, but not notified about second open house. I have concerns with the grade of the road in the area.

Noffsinger, we did look at an East-West connector which is Swan Ranch Road with an over/underpass at the BNSF, and looked further north, but felt like that alignment was best to accommodate improvements on those large parcels. We did consider an over/underpass at Lincolnway, but there is no cost-effective solution for this. We looked at Bridle Bit, but WYDOT has secured funding for an overpass at the BNSF line on College and complicates using this alignment. There is no flood plain in the area, there are drainage issues, but could be taken care of with this plan.

Mr. White stated that developers of the large parcels will need to build their portion of the road out to City standards.

Noffsinger recommends postponement of recommendation to City Council.

Mr. Wiggam made a motion to postpone the Southwest Drive Corridor plan to the next mid-month meeting, Ms. Connor seconded the motion.

Roll Call: Motion to postpone the item was passed unanimously by a vote of 6-0.

**ITEM 5: OTHER BUSINESS/STAFF ANNOUNCEMENTS**

- There will be text amendments at our next mid-month meeting.

**ITEM 6: MEETING ADJOURNED 7:45 PM**



Staff Signature



Board Officer

## SOUTHWEST DRIVE CORRIDOR PLAN

### Reasons NOT to develop Broken Arrow Road

To: Scott Larsen (Benchmark), Jeff Noffsinger (Director, MPO), Laramie County Commissioners, Laramie County Planning Commission, Cheyenne City Council, WYDOT

The meeting on November 15, 2023, at the Cheyenne Animal Shelter regarding Southwest Drive and Broken Arrow Road had a very poor turn out and was extremely small because it seems no one in the 100 acre subdivision of Southcrest Heights that borders Broken Arrow Road on the south and north side of College Drive and whose property and well-being would be negatively affected by any development of Broken Arrow Road, received a notice, except me, regarding the meeting. None of the people surveyed on Southwest Drive, whose backyards abut Broken Arrow Road received a notice. Only one other person besides me who lives on Broken Arrow Road received a notice.

This appears to be discrimination and seems purposeful elimination by a committee, comprised of no one who lives in this area (some not even living in Wyoming) nor whose property, property values, homes and well-being would be negatively affected, making decisions about this area based on a 70 plus year old map that is out of date and has no relation to how the area has developed and the increased congestion and extreme safety hazard developing Broken Arrow Road would cause.

Also, the sparsely attended meeting was arranged so there was a presentation of the proposed idea, but with no input from those few of us at the meeting who live in the affected area. It seems this was purposeful to try to ram through a poorly thought-out plan.

1) If the idea of developing Broken Arrow Road is to relieve congestion of traffic in this area, it would not. It would increase congestion and be a huge safety hazard. It is too close to I-25, Southwest Drive, three truck stops, two fast food restaurants, a fireworks store and right next to already established homes. Traffic on Southwest Drive is not a problem. The issue for the residents is primarily that the road needs to be resurfaced. Closing Southwest Drive, as Benchmark has proposed, would increase congestion and cause a major safety problem. Any issue with continuing to use Southwest Drive would be moved to Broken Arrow plus adding to congestion and making it a greater safety hazard than any other road in this area.

2) Broken Arrow Road is at the base of three hills and the cars and semis coming down College Drive from the east or west already have a difficult time slowing, especially in the rain, snow and icy conditions. Turning from Broken Arrow onto College Drive is already hazardous because of this. Putting a stop light at the intersection of Broken Arrow and College Drive would not be feasible because of the hills and the traffic, especially semis. If semis had to stop or turn at Broken Arrow, it would be very difficult because they are coming down hills from the east and west and then going up a hill again. Once slowed or stopped would be very difficult to get up to speed, especially in inclement weather, causing more congestion, traffic back-up and a safety hazard. Developing Broken Arrow Road would not solve a problem, but would create more problems causing more congestion and safety hazards.

3) A connector/collector road going north and south should be farther to the east or west of this area, on the west side of MacDonald's or the east side of the railroad tracks. A connector road south of College Drive, for example, High Plains Road, or a road between High Plains and College Drive going east and west is much more feasible and would relieve the traffic at I-25 and College Drive

4) Putting a connector road on Briddle Bit might be a possible option, or, better yet, on the east side of the railroad tracks, where is it open land and would not impinge on anyone's well-being and homes. This is on flat land so semis and cars would not be slipping and sliding down a hill in inclement weather, there are no houses, the possible road would run next to Reiman's property on the east side of the railroad tracks..

5) I have owned my home and land adjacent to Broken Arrow Road as well as the land next to Briddle Bit for more than 34 years when I purchased it from my aunt's estate. My aunt and uncle owned Southcrest Heights Nursery and landscaped what is now my property. They subdivided this 100 acres in 1954 and slowly developed it during their retirement. They loved this land and landscaping and so do I. My aunt and uncle and my and my partner have put in a lot of effort, both physically and emotionally, to keep a rural feel to this area and to protect the land since 1954. I have a very deep love connection with this land and do not want to see it ruined by having Broken Arrow developed and hence creating a congested and dangerous mess with semis and more pollution. As this area has developed, bit by bit, it has become a terrible location for a connector road north and south.

My home is surrounded by numerous trees and bushes that act as a barrier to the noise and lights from the truck stops and fast food places to the east. If Broken Arrow Road were developed, my property and home would be ruined, including my enjoyment and happiness from my trees, bushes, plants and animals that come onto my "oasis." I want to keep my land rural (as do the others who live in this area) and have no desire to develop it. I also own almost all of the lots within the Southcrest Heights area on the north side of College Drive that have not been developed and have no intention of developing any of the lots in order to keep a rural feel and to have open spaces. However, if Broken Arrow Road is developed and there is development of the 80 acres north of my property (Wooden Shoe), my desire to not develop my already platted lots may change, leading to more congestion in this area.

I have been coming to my home and land since the early 1950s when my aunt and uncle bought their home and developed the land with trees, bushes and flowers that bloom Spring, Summer and Fall. I purchased this home from my aunt's estate over 34 years ago and have fought to keep it as an oasis that I could one day retire to.

6) Not developing Broken Arrow Road keeps my property, the other homes along Broken Arrow Road and the properties along Southwest Drive together since all of us want to keep the area rural.

7) Putting the burden of loss of landscaping, loss of enjoyment of one's home and land, loss of land and loss of already platted land (70 years) on one person is discriminatory and unfair. There are many better options for a collector/connector road that do not place such a burden and loss on one property owner.

8) Any connector/collector road should be on undeveloped land with no. or small burdens distributed evenly. People do not want a connector/collector road in this area. Any developers who seem to want the road developed need to bear the loss of land and cost since they are the only ones benefiting. The developers do not lose the enjoyment of their homes and property, are not having their land taken from them, nor their property and life investment taken from them. They are benefiting. And, most of them do not live in the Cheyenne area or even in Wyoming!

9) Leaving Broken Arrow as a gravel road, keeps it as a barrier to the truck stops, fast food restaurants and fireworks building keeping the 100 acre Southcrest Heights and north with the rural feel we have fought to keep since 1990. It also reduces crime. Developing Broken Arrow Road, would increase crime and be an

invitation to loiterers from the truck stops. Keeping it as a gravel road acts as a barrier to the vagrants and crime brought in by the truck stops.

10) Keeping Broken Arrow Road as a gravel road also helps keep the air quality in this area cleaner since we are in a pocket near the truck stops (Southwest Drive is not) that have developed over the years. If it is developed, the air pollution from trucks and cars will be trapped in this pocket and increase harm to our health.

11) My current landscaping of mature trees and bushes also helps clean the air pollution that has developed over the years. Any removal of the trees and bushes harms the air quality we all breathe and has a negative impact on our health. This would also affect the air quality of any development north of Southcrest Heights since it is part of the pocket.

We who live in this area, the 100 acre Southcrest Heights, Southwest Drive and others living next to Broken Arrow Road need to be heard, our voices taken into account and involved in any development in and near this area. Development of a connector road to reduce congestion and reduce safety hazards and lessen the impact on health, well-being, property values, homes and life plans should be on the west side of I-25, a continuation of High Plains Road going north and/or to the east, or on the east side of the railroad tracks. Both of these areas are vacant property, have no already developed homes, and would relieve the congestion. Both of these areas are flat with no hills, reducing congestion and minimizing safety hazards for vehicles.

Dr. Kay Sheehan  
2011 Broken Arrow Road  
Cheyenne, Wyoming 82007

Home: 307-634-8478  
Cell: 303-884-3328

November 15, 2023

Re: Southwest Drive Corridor Plan-Reasons Broken Arrow Rd should not be considered as an alternate traffic route to Southwest Drive

- 1) Broken Arrow Rd is too close to Interstate 25, 3 truck stops, 2 fast food restaurants and a fireworks store to be any help alleviating traffic congestion or making the area a safer traffic corridor.
- 2) Broken Arrow Rd is at the bottom of 2 hills on College Dr making it more difficult for traffic to stop, especially semis. Inclement weather would exacerbate this problem.
- 3) If semis have to stop at a sign or light they would have to accelerate from a standstill up an incline. This acceleration is slow on level ground and much slower on the significant inclines on College Dr. This would back traffic up causing more congestion, not less. Another consideration is the impatient driver who might be tempted to pass the slow truck causing a safety issue. As I mentioned in point 2, inclement weather would make these problems worse.
- 4) Developing Broken Arrow Rd would necessitate destroying the mature trees and bushes along the road at the edge of Ms. Sheehan's property. As you know, it has taken many years for these plants to reach their current level of maturity. If these plants were removed it would negatively impact the appearance of Ms. Sheehan's property. These mature plants also provide a wind break. New plantings would take many years to provide the benefits that these mature plants provide now, plus there wouldn't be the land to plant them on.
- 5) It would make more sense to move the proposed road further east where the terrain is flat. One possibility might be Bridle Bit Rd. Ms. Sheehan owns the property on the west side of Bridle Bit and might be more willing to accept this alternative, of course I can't speak for her. Another and perhaps better alternative, would be to develop a road east of the railroad tracks. It is undeveloped land and putting a road there would not harm already established homes.
- 6) Finally, developing Broken Arrow Rd would destroy the rural nature of Ms. Sheehan's property, a characteristic which adds greatly to her enjoyment of said property. This property has a house built by her aunt and uncle, Cath and Herm Bascom, in the early 1950s. Ms. Sheehan has owned the property for 30 plus years having purchased it from her aunt's estate. Her enjoyment of and the value of her property all along Broken Arrow Rd in it's current condition, as well as the afore mentioned issues, should be taken into consideration when making this decision. Developing Broken Arrow Rd would be devastating to her personally and to the value of her property. I too would not want Broken Arrow Rd developed. As a friend and colleague I have been coming to this property to work on the land and enjoy some peace and quiet for 50 years.

Sincerely,  
Rod Mers  
2011 Broken Arrow Rd  
Cheyenne, Wyoming 82007

November 15, 2023

# SOUTHWEST DRIVE CORRIDOR PLAN UPDATE

**Prepared by the  
Cheyenne MPO**  
April 3, 2024





# SOUTHWEST DRIVE

## CORRIDOR PLAN UPDATE

### PLAN UPDATE

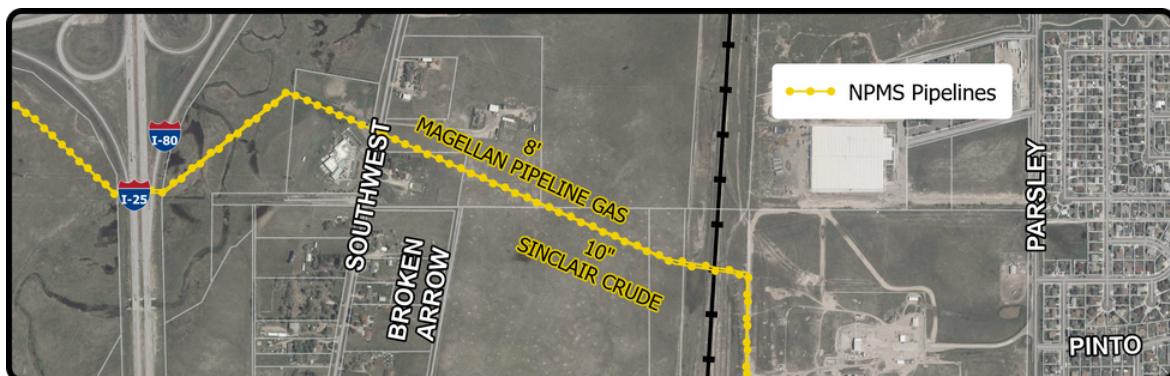
MPO staff has updated the corridor plan presented by BenchMark. The format has changed slightly for more clarity on the planning process. At the request of the commission graphics/photos have been updated with clearer images, the alternative analysis section was expanded with more details from the Transportation Operations Report in the Appendix, the gas lines from the Magellan property were identified, and cost estimates were updated to include Stirrup Road and Southwest Drive. Also, some clarification was made based on public comments at the Planning Commission Meeting. The following is a summary of each of those items.

#### Alternative Analysis

The Transportation Operations Report in Appendix IV of the Corridor Plan was conducted by Fehlsburg, Holt, Ullevig, This table was inserted into the main body of the plan with the addition of analysis of Bridle Bit Road and Stirrup Road. The table can be found on page 36.

#### Gas Line Location

BenchMark located two major gas lines running parallel to each other through the project area. One is an 8" product line owned by Magellan Midstream Partners. The other is a 10" crude line owned by Sinclair Oil Corp. They surveyed the markers for the lines and added them to the 35% design plans. The two lines already cross Southwest Drive north of the Animal Shelter. Future crossing include Broken Arrow Road and Swan Ranch. New development in the area will determine if these lines will need to be relocated within the proposed rights-of-way or if development will incorporate the easements into the design.



# SOUTHWEST DRIVE

## CORRIDOR PLAN UPDATE

### Public Comment

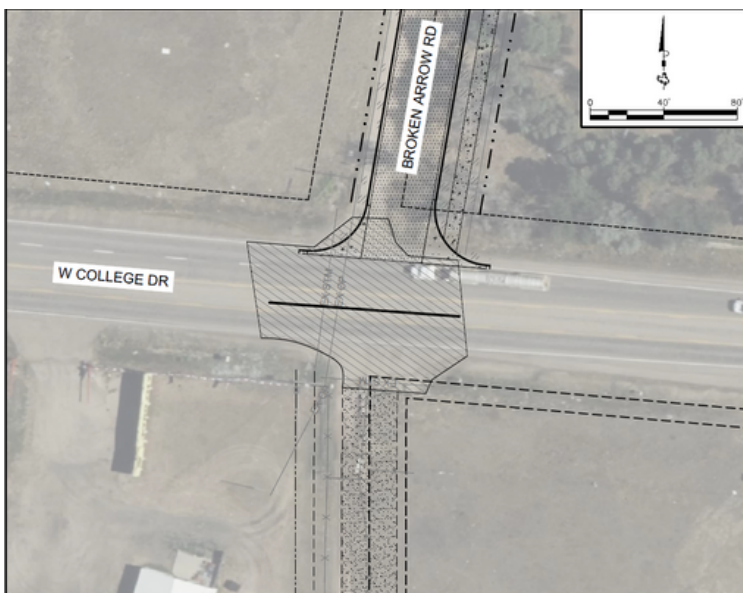
Existing drainage concerns were presented at the last meeting. Drainage from the road construction is analyzed in detail in Appendix V of the Corridor Plan. Page 47 of the plan summarizes the proposed improvements to include a one mile stormwater system with in the Broken Arrow right-of-way to Clear Creek.

For each open house, the consultants mailed out 71 postcards to any property that would access to Southwest Drive along the corridor. The Planning Commission was advertised as a public meeting with the Southwest Drive Corridor Plan as the only item on the agenda.

The slope of College Drive to the west of Broken Arrow is at a 3.5% grade and a 3.8% grade to the east of Broken Arrow. It becomes a concern for roadways when the grades get close to 10%, so these grades are far from being a concern. The City of Cheyenne allows for street grades to be upwards of 6% to 8% and the County allows for grades up to between 6% to 10%. In addition, currently there is 200' of "flat" area on College Drive centered at the intersection with Broken Arrow, so the slopes don't start for almost 100' on each side of Broken Arrow. When WYDOT builds the overpass for the RR, I am not sure if or how that would impact the existing slopes and where, but as of right now, they are fine. For comparison purposes, Warren Avenue connecting with Lincolnway is at a 7% grade and Warren Avenue has double the amount of traffic on it than College Drive. Yellowstone Road between Storey and Vandehei has a fairly constant grade of over 4% with four roadways intersecting it without any problems.

### Additional Information

MPO Staff recently reviewed a proposal for development South of College Drive that would intersect with the Broken Road Corridor alignment. This critical alignment supports future signalization at this intersection. Additional right-way will be needed when the southeast parcel is developed to accommodate a future right-hand turn lane.



# SOUTHWEST DRIVE

## CORRIDOR PLAN UPDATE

### CONSTRUCTION/R.O.W COST

At the request of Commissioner Wiggam, below is a matrix with estimated cost for three alternative routes.

Corridor	Construction Cost	Right-of-Way Cost	Total Cost
Broken Arrow Road	\$10,208,370	\$445,660	10,654.030
Stirrup Road	\$10,208,370	\$1,000,000	\$11,208,370
Southwest Drive	\$7,641,732	\$0	\$7,641,732

While upgrading the existing corridor is least expensive alternative, it does not solve the issue of the intersection of Southwest Drive and College Drive. As such, this alternative was not considered an option by the MPO, the MPO Steering Committee, or the design team because it did not solve the problem with the intersection of Southwest Drive and College. One of the most important goals of this study was to solve the spacing problem with that intersection.

The engineer's estimate for the Stirrup Road alternative estimate road construction to be the same as the Broken Arrow Road corridor; however, it should be noted that the right-of-way cost would be considerably more since the existing right-of way is only 40 feet and several homes would be impacted.

It should also be noted that some of the construction costs for the Broken Arrow Road alignment may be shared with a future developer. Therefore, the public cost would be reduced significantly.

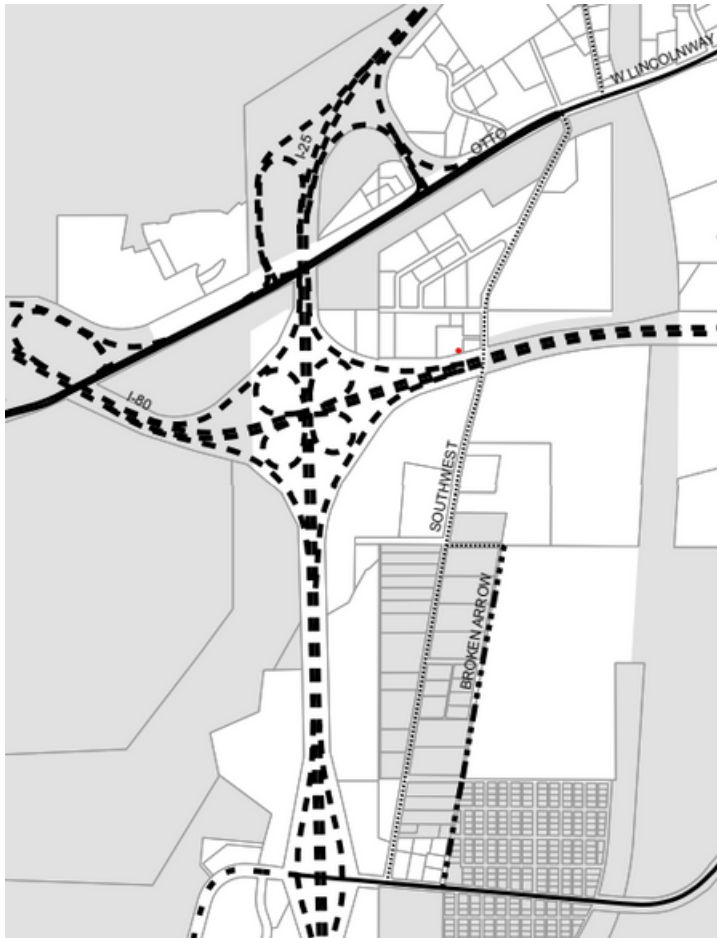
# SOUTHWEST DRIVE

## CORRIDOR PLAN UPDATE

### Summary

The City of Cheyenne Master Street Plan Official Maps shows Broken Arrow Road as a minor collector (see below). Research indicates that this corridor has been identified for improvements since at least 2015. The Connect 2045 Transportation Update also list this corridor as developer funded project as shown on Figure 22, Page 124.

Through further detailed analysis by the steering committee and design team of technical experts, the Southwest Drive Corridor Plan concludes that the Broken Arrow Road corridor is the desired corridor from a safety perspective, operationally to accommodate additional development in the area, and fiscally as the developer will be responsible to assist with construction costs. Furthermore, WYDOT's independent study of College Drive also recommended Broken Arrow Road as the major collector.



### *Legend*

#### Master Street Plan

- - - Interstate
- Principal Arterial
- - - Minor Arterial
- ..... Major Collector
- . . . Minor Collector
- FE Warren Air Force Base
- Laramie County

**CITY OF CHEYENNE**  
**PLANNING COMMISSION MINUTES**  
**April 15, 2024**  
**6:00 P.M.**

**MEMBERS PRESENT:** Bob Mathia, Chair; Boyd Wiggam, Vice-Chair; Meghan Connor, Secretary; Tony Laird, Darrell Hibbens, Bryan Thomas

**MEMBERS ABSENT:** Amy Hernandez

**CITY STAFF PRESENT:** Valerie Pickard, Planning & Development Office Manager; Sophia Maes, Planner I; Connor White, Planner II; AJ Swain, Planner I, Jeffrey Noffsinger, MPO Director; Seth Lloyd, Senior Planner

**OTHERS PRESENT:** Jerry & Naomi Young, Susan Graham, Fred Schlachter, Rod Mers, Kay Sheehan, Gary Russell, Glen Connor, Mark Briggs, Milt Briggs, Linda Coatney, Bob Bailey, Scott Larson, Eileen Obsuth, George Obsuth, Mark and Vicki Sopr, Rick Lara, David Barker, Doris Garcia, Meri Garcia

**ITEM 1: CALL MEETING TO ORDER / ROLL CALL**

Bob Mathia, Chair, called the meeting to order at 6:00 PM

Roll Call was done by Connor White, Planner II. There was a quorum with 6 members present.

**ITEM 2: APPROVAL OF AGENDA AND MINUTES**

Mr. Wiggam made a motion to approve the March 18<sup>th</sup> meeting minutes. Mr. Hibbens seconded the motion.

Ms. Connor wished to amend the minutes, referring to the section of when Mr. Noffsinger stated the long-range plan for 20 years had shown this as a major corridor. She stated she'd like this to be clarified in terms of which road (Southwest Drive or Broken Arrow). She also would like her comment regarding the rural feel of Broken Arrow to be included in the minutes.

Mr. Wiggam made a motion to amend the minutes to reflect the correction proposed by Ms. Connor. Ms. Connor seconded.

The minutes were approved as amended unanimously.

**ITEM 3: DISCLOSURES**

**ITEM 4: PLANNING PROJECTS**

**ITEM A: Southwest Drive Corridor Plan**

1. Memo
2. Final Plan
3. Resolution

Case Planner: Jeffrey Noffsinger, MPO Director

Connor White, Planner II, read the item into the record.

Jeffery Noffsinger, MPO Director, presented the final Southwest Drive Corridor Study. He stated several updates were made to the document and graphics per comments at the previous mid-month Planning Commission.

Ms. Connor asked if the WYDOT study was available. Mr. Noffsinger stated he would provide it if needed, to which Ms. Connor agreed it was vital to be able to review. He stated there was a proposal

*\* Minutes are meant to provide a brief summary of the meeting's action items, discussions, and decisions made. For more detailed information, please request a recording from the Planning & Development Staff.*



south of College Dr that would use the Broken Arrow right of way for an RV storage area and the driveway would need to eventually align with north side of Broken Arrow for the traffic signal. He stated there would be significant right of way costs on at least four homes for right of way requirements. He clarified the cost difference between the plan and fixing Southwest Drive. He also found a record of variations of this plan since 2015.

Ms. Connor asked if the 71 letters sent included Broken Arrow. Mr. Noffsinger confirmed they were. Ms. Connor asked for the WYDOT study to be provided. Mr. Noffsinger stated he did not have the study but would provide it.

Mr. Laird asked why the CFD Park and Ride wasn't included in the plan. Mr. Noffsinger stated it wasn't considered in the study, as it seems it will go away in the long term.

Ms. Connor asked Mr. Noffsinger to clarify how the costs on the cost matrix were determined. Mr. Noffsinger stated the costs were broken down in the Appendix. Ms. Connor asked if this Appendix was included in the agenda documents. Mr. Laird stated since the documents were not included for this meeting, he assumed they had not been updated since the March 20<sup>th</sup> meeting.

Seth Lloyd stated Mr. Noffsinger has confirmed the Appendices from last month were indeed unchanged.

Mr. Mathia asked if there was a staff report. Mr. White stated there was no staff report, and public comment could continue with a three-minute time limit per person.

Susan Graham attended the June meeting after receiving a postcard. She stated she did not receive a post card for the November meeting, nor was there a sign posted. She is concerned the Southwest Drive Corridor Plan does not mitigate the congestion of the railroad crossing.

Fred Schlachter stated he felt this plan was created to benefit a specific developer at the expense of the landowners on Broken Arrow, and a government official was potentially also benefiting from a backdoor partnership. He did not agree that Southwest Drive should be closed and would prefer \$7.1 million to be spent upgrading Southwest Drive vs \$13 million on Broken Arrow.

George Obsuth stated he agreed blocking off Southwest Dr would not be good, rather a partial block to allow "local traffic only." He was concerned that developing Broken Arrow would attract more traffic and wouldn't even mitigate the railroad crossing issue. He would prefer to see a corridor developed on the east side of I-25 with a railroad overpass.

Dr. Kay Sheehan stated her property would see the most detriment from this plan. She stated the June 2021 meeting was presented as asking for ideas and therefore she and others did not fill out the questionnaire. She did not believe the stakeholders at the June 2021 meeting were good representatives of people to be affected. She stated the three people who lived on Broken Arrow were vocal about the road *not* being developed.

Rick Lara was concerned about his property value and who would be liable for paying the road development fees.

Glenn Connor believes Southwest Drive would be perfect for a feeder street to the City, but had other concerns, such as the UP Railroad Congestion. His concern was the railroad would stay and would put more households at risk if Broken Arrow were to be developed with housing (because UP carries a lot of hazardous waste). He stated there were no surveys or specific road specifications in terms of right of way for the homeowners and wanted the City to communicate those ROW specifications to the homeowners. He stated he wanted something in writing that a county homeowner would not be liable to pay back developer reimbursement if involuntarily annexed into the City at some point.

Jerry Young stated concern about the railroad. He also stated he did not receive any notification about plans for Broken Arrow (only for Southwest Dr) even though he lives on Broken Arrow.

*\* Minutes are meant to provide a brief summary of the meeting's action items, discussions, and decisions made. For more detailed information, please request a recording from the Planning & Development Staff.*

Chris Papas Onares stated he was informed but didn't realize it was relevant because the notice described the plan as Southwest Drive Corridor (not Broken Arrow). He was frustrated because no municipality had made updates to the infrastructure around his house, but also recommended the repair of Southwest Drive instead of the development of Broken Arrow, as well as mitigating the railroad congestion.

Linda Coatney was nervous about the traffic impact. She does not believe the plan had enough research and study and does not believe this is the best option. She is concerned the plan favors developers that may get tax credits (especially for low-income housing) versus the landowners in the area. She also voiced concern that all low-income housing seems to go on the southside.

Mr. Mathia stated Commissioners could ask the public questions during public comment.

Mr. Laird addressed the comments that there was no reason to move traffic from SW Drive to Broken Arrow, stating that the report states the main reason is traffic operation problems at the College Dr and SW Dr intersections, both now and for future volumes expected. This intersection is too close to business access to the west, and the analysis states moving operations to the east would improve these issues and likely would warrant a traffic signal at some point. He asked the public to consider this as the main reason for the plan, not the railroad congestion.

Vicki Sopr stated she did not receive any notice, even though her property touches both Southwest Drive and Broken Arrow. She stated that if either of these roads are blocked off, they will not be able to access their property. She would like to have someone assess her property value and any costs associated with this plan.

Gary Russell asked if the Planning Commission was appointed or elected. Mr. Mathia stated they are volunteer appointees via the Mayor. Mr. Russell asked who completed the study and when it was completed. He asked what happened with the traffic light that was proposed years ago. Mr. Laird believes the traffic signal was going to be temporary for Cheyenne Frontier Days via WYDOT.

Mary Garcia stated her concern with the railroad traffic congestion and emergency services. She is also concerned about the speed limits, particularly in poor weather.

Eileen Kennedy stated that she is against taking private property to expand Broken Arrow. She also stated she never received a postcard. She does not want to see the Southwest Corridor area annexed into the City.

Dr. Sheehan requested the Commission read her summary of reasons why Broken Arrow should not be developed and alternative suggestions (see attached letter).

Doris Garcia had concerns about the gas pipeline that runs under Southwest Drive. She was also concerned about the semi-trucks on Broken Arrow during the wintertime with inclement weather. She would prefer to see a bridge over the railroad instead.

David Barker does not want the traffic and congestion to come to his side of town. He yielded his remaining time to Dr. Sheehan.

Dr. Sheehan continued explaining her summary of reasons why Broken Arrow should not be developed and alternative suggestions.

Mr. Wiggam stated that the most cost-effective option would be to fix Southwest Drive, but there is a stakeholder group not at the meeting that is trying to gain local access from the interstate and into the local road network that are currently using Southwest Drive. He asked if there was a way to get traffic east of Southwest Drive that could be established as the primary intersection north of College Drive and south of UP Railroad, without imposing on private property.

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Dr. Sheehan stated that developing Broken Arrow would not be best because of how it lines up with College Drive, stating it would be too slippery for heavier vehicles during poor weather conditions. She stated neighbors would protest high density development in the area. She stated there has been no input from the neighborhood about this plan.

Ms. Connor asked what type of traffic was being accounted for in the plan.

Mr. Noffsinger stated the MPO would hold another community workshop to get more feedback. He asserted the plan was to find the best solution for the next 25 years. He stated the Key Stakeholders that were involved in the plan were on page two (2). He also proposed the item be postponed until after the community workshop was held.

Mr. White clarified that Mr. Noffsinger was requesting postponement. Mr. Wiggam asked if it could be postponed by more than one month. Mr. White stated postponement happens one month at a time.

Mr. Mathia asked when the workshop would be. Mr. Noffsinger stated the item should be ready by early May.

Dr. Sheehan asked again about the stakeholders involved.

Mr. Obsuth stated again that he believes the Commission should vote no on the plan.

Mr. Young stated that the 80-acre parcel in the area does currently have plans to develop within the next year.

Ms. Coatney stated the semi-trucks typically don't need to be accounted for with traffic since they stay at the truck stops then return to the interstate.

Mr. Mathia closed public comment.

Scott Larsen with Benchmark Engineers stated FHU in Denver did the traffic study. He stated the original goal was address concerns with growing traffic at the intersection at College Drive and I-25 from WYDOT, the City, and the County. He stated it was not feasible to build an overpass over the railroad and tie back into Lincolnway. He stated the key concerns for people along Southwest Drive has been speeding, traffic, the railroad, transient people, and more. Broken Arrow was seen as an alternative because its location meets WYDOT standards. He stated the current plan takes the least amount of private property for right of way. He stated there would be no cost to the adjacent property owners to build the road, and there would be an increase in property values based on comparable situations. He stated the developer is looking at an urban development.

Ms. Connor asked if the scenario of building Broken Arrow yet leaving Southwest Corridor as the major road was considered. Mr. Larsen stated the traffic study did not state the ultimate destination of the traffic being measured, only the volume on a certain roadway. He stated the scope of work did not include a cost estimate for Southwest Drive because it would not solve the intersection issue, and the Steering Committee wanted the traffic moved to a more urban area.

Ms. Connor would like to see a plan that doesn't bring financial harm to anyone.

Mr. Mathia opened a public question period per Mr. Lloyd's recommendation.

Mr. Laird asked Mr. Noffsinger to address the questions pertaining to who was doing the study and why. Mr. Noffsinger stated the MPO is an autonomous organization that represents the City, the County, and WYDOT. He stated that this project was listed as a priority for FY 23 (or FY 22) and the MPO was allowed to use federal funding to do the study.

Dr. Sheehan asked if the letter addressed to the Planning Commission would be inserted into the minutes and if the attendees could be part of the MPO Steering Committee.

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Mr. Onares asked if the Planning Commission knew what would be developed on the nearby 80-acre parcel. Mr. Lloyd stated the 80-acres directly east of Broken Arrow was annexed to the City in 2010, is zoned MUB Mixed-use Business. He stated there have been no formal applications regarding this area. He reaffirmed that the plan was purposefully done before any development to get ahead of potential issues that may occur with development.

Mr. Onares stated property values would be impacted. He asked if the people of Southwest Drive truly said there was too much traffic on Southwest Drive, and they wanted to shift it to Broken arrow.

Mr. Mathia stated that there needs to be a new discussion with as many people involved regarding this plan, as the workshops may not have been clear on the proposed development of Broken Arrow. He suggested using certified mailing.

Mr. Wiggam stated the MPO has a need for volunteers, and there are opportunities for people to be advocates for the southern portion of Cheyenne.

Mr. Wiggam made a motion to postpone this item to the May 20<sup>th</sup> Planning Commission meeting. Mr. Hibbens seconded the motion.

Roll Call: Motion to postpone the item was passed unanimously by a vote of 5-0.

Mr. Mathia called a five-minute recess at 7:59 PM.

Mr. Mathia called the meeting back to order at 8:05 PM.

**ITEM B:**        PLTA-24-1 / Residential Height, Text Amendment  
Case Planner: Sophia Maes, Planner I

Connor White, Planner II, read the item into the record.

Sophia Maes, Planner I, presented the staff report. The UDC text amendment proposes allowing low-density residential lots to have up to three stories for both principal and accessory buildings.

Ms. Connor asked if the accessory building would still have to be the same height or lower than the principal building. Ms. Maes confirmed this.

No public comment.

Mr. Wiggam asked about the unintended consequences of increased heights, particularly obstruction of the mountains. He also asked if the Fire Department was equipped with the ability to handle three-story residential buildings. Mr. White confirmed the Fire Department was consulted and had no objections.

Ms. Connor made a motion to recommend the Governing Body approve text amendments to the Unified Development Code Section 5.1.5 as outlined in this staff report and recommended by staff, noting the requests meet the review criteria of UDC 2.4.1.d. Mr. Thomas seconded the motion.

The motion was passed unanimously by a vote of 5-0.

**ITEM C:**        PLTA-24-2 / Building, Detached Definition, Text Amendment

Case Planner: Connor White, Planner II

Connor White, Planner II, read the item into the record and presented the staff report. The text amendment is two-pronged, first revising the definition of "detached building," second proposing additional requirements for accessory buildings (specifically regarding structural attachments). He stated

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the current code was not clear on detached accessory buildings and there have been issues with enforcement.

Ms. Connor asked if the revision would change any definitions for property owner insurance or tax base. Mr. White stated he did not know, but it would likely be dependent on how the assessor assesses it. Mr. Lloyd stated that the definition for detached shed is different for assessors vs. the zoning or building code.

Mr. Wiggam asked if one foot was enough space to increase public health and safety. Mr. White clarified that the one-foot distance would be between buildings on the same property, not a setback from neighboring buildings. The one-foot distance would also be between eaves, not walls, which would create more of a three-foot distance at the ground level.

Mr. Wiggam was concerned about fire safety and distance buffering between buildings. Mr. Lloyd stated it depended on the fire rating of the buildings. Mr. Wiggam asked if there would be any concern about wind tunneling effects of such a small distance. Mr. Lloyd stated that was not reviewed.

No public comment.

Mr. Wiggam asked for the best way to amend the motion to have a five-foot minimum distance between principal and accessory buildings. Mr. Lloyd advised making the motion as is and adding the amendment as a clause.

Mr. Laird asked if the building inspectors would determine if a structure met the fire code (for structures that require a permit). Mr. Lloyd stated the building code does not regulate fire code between buildings on the same parcel. Mr. White stated that building inspectors typically only enforce fire rating for buildings on adjacent property lines. He stated the building department reviewed the text amendment and had no comments.

Mr. Wiggam made a motion to recommend the Governing Body approve text amendments to the Unified Development Code Sections 1.4.3 and 5.8.8 as outlined in this staff report and recommended by staff, with the modification to increase the required setback to five (5) feet between the detached structure and the main structure on a property, noting the requests meets the review criteria of UDC 2.4.1.d. Mr. Hibbens seconded the motion.

Mr. Wiggam stated that five feet seemed to be the minimum requirement to gain safety benefits other than aesthetics.

Mr. Laird asked if this would be suitable for a landowner to seek a variance. Mr. White confirmed it would be.

The motion was passed unanimously by a vote of 5-0.

**ITEM D:**      [PLTA-24-3 / Sign Code Incentives, Text Amendment](#)

Case Planner: Seth Lloyd, Senior Planner

Connor White, Planner II, read the item into the record.

Seth Lloyd, Senior Planner, presented the staff report. The text amendment addresses incentives and bonuses in relation to the sign codes of near-interstate signs, master signs, and creative sign approval. It also addresses clarification to the UDC in relation to billboards in different zone districts (including residential) and on-premises signs.

Mr. Wiggam asked for the height of the Bish's RV along I-25 South. Mr. Lloyd stated it was twenty (20) feet high or less. Mr. Wiggam stated he understood the need for better signage visibility along

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interstates, stating the Bish's sign should have been allowed to be higher as well. He does not want to diminish the function of a sign for aesthetics.

Ms. Connor asked if these changes would reduce the amount of variance requests for signs. Mr. Lloyd confirmed.

Mr. Laird asked for clarification on the term EMC. Mr. Lloyd stated it means electronic message center, or a sign that can be updated electronically.

Mr. Laird was concerned about the signs along the interstate being defined as within 100' of the rights-of-way and would prefer the distance to be defined from the edge of the road itself. Mr. Lloyd agreed this may be a better way to define the distance, however the current amendment was written to be consistent with current UDC standards. He suggested it may be a part of a future comprehensive sign amendment.

Mr. Laird asked for clarification on the right-of-way boundaries. Mr. Lloyd stated the right-of-way is measured from the front of the property line to the interstate. Mr. Laird asked for clarification on 6.5.8.j "within 1,000 feet of the interstate." Mr. Lloyd clarified that Staff interprets that text as within the interstate right-of-way.

Mr. Wiggam asked if it would be appropriate to specify "interstate right-of-way" in the recommendation. Mr. Lloyd stated the proposed amendment could be amended to include right-of-way.

Mr. Wiggam asked about the maximum square feet (SF) area regarding the area of the Chick-fil-A sign vs Menard's sign in the report. Mr. Lloyd stated the overall sign is 400 SF, the Menard's sign is 100 SF, the Chick-fil-A sign is 100 SF. Mr. Wiggam believes 200 SF is adequate for a business.

No public comment.

Mr. Laird made a motion to recommend the Governing Body approve text amendments to the Unified Development Code subsections 6.5.4.b.3 and 6.5.8.j as outlined in this staff report and recommended by staff, noting the requests meet the review criteria of UDC 2.4.1.d. Ms. Connor seconded the motion.

The motion was passed unanimously by a vote of 5-0.

#### **ITEM 5: OTHER BUSINESS/STAFF ANNOUNCEMENTS**

- Mr. White stated there will be a May 6<sup>th</sup> Planning Commission, and the mid-month Planning Commission on May 20<sup>th</sup>.
- Mr. White stated that at this time, there would not be a June 3<sup>rd</sup> meeting. If there is a meeting on this day, it will likely be held in Municipal Building Room 104 as the Council will be holding their budgetary session in Council Chambers.
- Mr. White will inform the Planning Commission when the Southwest Drive Corridor workshop will be held.

#### **ITEM 6: MEETING ADJOURNED 9:04 PM**



Staff Signature



Board Officer

To: Charles Bloom, Director of Cheyenne Planning Commission, Cheyenne Planning Commission members, Jeff Noffsinger, Director of MPO, and MPO members

Cheyenne Planning Commission Meeting, Monday, April 15, 2024, 6:00 P.M.

Background of the two meetings with Jeff Noffsinger, Director of MPO and Scott Larsen, Owner of Benchmark Engineering, June 21, 2023 and November 15, 2023.

**Questions regarding the Southwest Drive Corridor 35% Design Plan that is based on the Benchmark's design:**

- 1) Coordination and Public Involvement, page 26 of the Southwest Drive Corridor 35% Design Plan, it states, "On June 8, 2023, the MPO and design team, along with designated stakeholders, participated in a Steering Committee meeting to gather information, insight, and to offer feedback. The Steering Committee includes representatives from the City of Cheyenne the Cheyenne Board of Public Utilities, WYDOT, and Laramie County Planning and Public Works.

We want to know who these "designated shareholders" are because we who live on Southwest Drive, Broken Arrow Road, and the 100 acre Southcrest Heights Subdivision knew nothing of this meeting and were not involved. Who are these "designated shareholders" referenced?

- 2) The minutes are missing of the MPO's meetings of August, 2023, and October, 2023, - between the first public meeting on June 21, 2023, and the second public meeting, November 15, 2023, (when only one person was notified, the one with the most to lose) that created this proposal of the Southwest Corridor Plan 35% Design Plan proposing closing the existing Southwest Drive Corridor/thoroughfare and shifting it to developing a dirt road creating far more problems and far greater cost.

These minutes are missing from the Southwest Corridor 35% Plan and are not in the Appendices. We would like to see the minutes of these meetings.

- 3) The minutes of the poorly attended public meeting November 15, 2023, because only one person (the one with the most to lose) received a notice, are missing and are not contained in the appendices.

We would like to see these minutes, also.

**Correction/explanation for this 35% plan:**

- 1) It is stated in the 35% Corridor Plan (page 32 of 48), that three residents (all the people at the meeting who were contacted by the one person notified of the meeting) who live and own property on Broken Arrow Road) were "very vocal about Broken Arrow being developed." but it skews the truth because we were all adamant that it NOT be developed!

2) It is stated in this 35% Design Plan that one of the reasons to shift the existing Southwest Drive Corridor to Broken Arrow Road, a dirt road, was to retain the "rural feel" for the people of Southwest Drive Corridor. However, we who live on Broken Arrow Road, a dirt road and who live and own property in the 100 acre Southcrest Heights Subdivision bordering Broken Arrow Road are the people who have been fighting for over 34 years to keep the "rural feel."

How many Cheyenne Planning Committee members have read the entirety of the 500-page Southwest Corridor 35% Plan that has been presented for your input and vote? Some of us who live on and near Broken Arrow Road have completed the excruciating task of reading it.

**Major problems with the Southwest Corridor 35% Plan and why the Collector/thoroughfare should REMAIN Southwest Drive and why developing Broken Arrow Road, a dirt road, is not feasible:**

**Reasons to keep Southwest Drive the major thoroughfare:**

- 1) Already has an 80 feet easement
- 2) Already has all utility easements in place and are being used.
- 3) Entrance to Southwest Drive and Southwest Drive itself is flat, not at the base of two hills.
- 4) It is a straight line from College Drive on Southwest Drive to Lincoln Way – no turns necessary.
- 5) All houses on Southwest Drive are set back from the easement and road. The houses were built knowing the road already was developed.
- 6) Traffic lights are already installed at the intersection of College Drive and Southwest Drive –they just need to be turned on.
- 7) Environmentally, it is better because Southwest Drive is not in a pocket, as is Broken Arrow and the pollution is blown away by the wind.
- 8) Confiscation of property is not involved
- 9) There is no heartache with one's property and landscaping being seized.
- 10) There is no heartache with one's life plans being stolen.
- 11) There is no monetary loss of property values because it is already built and used
- 12) Utility easements are already in place so no monetary outlay by property owners is needed.
- 13) Value of Southwest Drive homeowner's and property owner's value will increase with re-surfacing the road and adding some improvements

**Reasons NOT to develop Broken Arrow Road as a major Collector/thoroughfare and to leave Southwest Drive as the major Collector/thoroughfare:**

- 1) The entrance to Broken Arrow from College Drive is at the base of two hills – making it very difficult for semis, other heavy vehicles and cars to negotiate in ice, snow and blowing dust/snow now, let alone turn into Broken Arrow Road – Southwest Drive is flat.



- 2) Slowing or stopping for semis and other heavy vehicles and cars for a potential stop sign or traffic light at the intersection of College Drive and Broken Arrow Road, makes it very difficult for the heavy vehicles to accelerate again, to go up a hill, especially in inclement weather.
- 3) Broken Arrow Road has only a 30' to 50' easement (page 32 of 48, Southwest Drive Corridor Plan, 35% Design Plan)
- 4) Has only one utility easement
- 5) Cost of adding needed easements would be borne by the residents
- 6) Cost of maintaining the utilities would be at the property owner's expense
- 7) Would require taking already landscaped property of current homeowners
- 8) If the current easements are increased, it would require the taking of our land, destruction of mature landscaping, trees and bushes as well as having current home's front doors ending up right next to the collector/thoroughfare
- 9) It would require taking already platted (since 1954) lots in Southcrest Heights Subdivision
- 10) It would place the burden of loss of property, already established landscaping of mature trees and bushes and loss of platted lots on one person, which is unethical and discriminatory.
- 11) It would require heartache and loss of enjoyment of our already established homes and property
- 12) Loss of property, especially to one resident, and loss of livelihood and retirement plans.
- 13) Studies show that having a collector/thoroughfare next to and near residential areas decreased property values (Email from Scott Larsen, owner of Benchmark Engineering to Kay Sheehan, April 12, 2024)

**Developing Broken Arrow Road is many millions of dollars more than it is to leave Southwest Drive as the Corridor with improvements**

The suggestions of what to do.

Our property values would decrease, as Mr. Scott Larsen said. Southwest property values remain the same or increased with a re-paved road and some additions.

The best placements for a collector/thoroughfare and to relieve traffic at the intersection of I-25 and College Drive is to:

1) Leaving the thoroughfare at Southwest Drive, where the road is already developed with ditches on either side and the homes are already set back from the road, not requiring confiscating people's land, and simply improving the road surface. This is by far the less expensive plan and best for the reasons listed above and would not take property from those of us on Broken Arrow Road as well as the platted lots in Southcrest Heights Subdivision,

and/or

2) Moving the thoroughfare to the west side of I-25 either in back of Mac Donalds or in front of Mac Donalds where there is already a road going to the Wyoming Department of Transportation Drivers Services and extending it to Lincoln. This is open land and would not disturb any homes - since there are none. Plus, this would keep the semis, trucks, campers and cars on the west side where the Flying J, Quality Inn, semi-truck wash, Mac Donalds, Industrial Park and High Plains Drive is, so they do not have to cross the overpass to access Lincoln. This would reduce congestion now, and in the future as the west side of I-25 is developed

It is stated in the Southwest Corridor 35% Design Plan that the railroad crossing at Southwest Drive and Lincoln Way does not have enough room to construct either an over or underpass. Moving the Collector Road/thoroughfare to the west side of I-25 allows room for either an overpass or underpass at the railroad crossing at Lincoln Way, alleviating wait times of over 30 minutes, as much as eight hours every day.

and/or

3) Another alternative is to have a separate entrance from I-25 going north to Love's truck stop and to have a separate entrance to I-25 from behind Sinclair truck stop for semi's and heavy load vehicles.

These proposals alleviate by far the majority of semi, heavy vehicles and cars in the I-25 and West College and the Southwest Drive thoroughfare and are proposals from those of us who live in this area not just those who see lines on a map.

These proposals not only reduce all traffic in this area but also, do not require seizure of any already established home property, landscaping of mature trees and bushes and already platted residential lots.

"Tom Mason of the MPO stressed that there is no funding for this project at this time." (Page 28 of the Southwest Drive Corridor Plan, 35% Design Plan)

We are pleading with the Cheyenne Planning Commission to VOTE NO on this Southwest Corridor 35% Plan and to go back to the drawing board with our proposals and include those of us who live and own property in this area on the MPO and other planning bodies.

Dr. Kay Sheehan

Dr. Kay Sheehan  
2011 Broken Arrow Road  
Cheyenne Wyoming 82007

Eileen + George Obssuth  
1807 SOUTHWEST DR

Vicki Sopr  
1703 Southwest Dr.  
Mark Sopr  
1703 Southwest Dr.

Rick Lapa  
1606 Broken Arrow Rd

Dr. Susan Graham  
2008 Bar X Road

Fred Schlechter  
2008 BAR X Rd.

Pat Messer  
2011 Broken Arrow Rd.

MARK BRIGGS  
2214 STIRRUP RD.  
MILTON BRIGGS  
2214 STIRRUP RD

Sam Con  
1304 Broken Arrow Rd

Naomi Young  
1404 Broken Arrow Rd

Gay Russell  
1753 SOUTHWEST

Jerry Young  
1404 Broken Arrow Rd

Jinda CONTNEY  
2211 Stirrup Rd.

Chris Pappas Kanoris  
1815 STIRRUP RD

Bob Bailey  
2211-STIRRUP Rd

**CITY OF CHEYENNE**  
**PLANNING COMMISSION MINUTES**  
**May 20, 2024**  
**6:00 P.M.**

**MEMBERS PRESENT:** Bob Mathia, Chair; Boyd Wiggam, Vice-Chair; Meghan Connor, Secretary; Tony Laird, Darrell Hibbens, Bryan Thomas, Amy Hernandez

**MEMBERS ABSENT:**

**CITY STAFF PRESENT:** Valerie Pickard, Planning & Development Office Manager; Connor White, Planner II, Athen Mores, Planner I, Jeffrey Noffsinger, MPO Director; Seth Lloyd, Senior Planner, Stefanie Boster, City Attorney.

**OTHERS PRESENT:** Scott Larson, Tracy Page, Jeanie and Stan Grogan, Mark Christensen, Susan Graham, Fred Schlachter, Glenn Connor, George and Ellen Obssuth, Kay Sheehan, Linda Coatney, Mark Briggs, Gary Russell, Ilene Kennedy, Keith and Karla Wright, Jordan Jemiola.

**ITEM 1: CALL MEETING TO ORDER / ROLL CALL**

Bob Mathia, Chair, called the meeting to order at 6:00 PM, and gave the instructions and rules he expects from the public and staff to not repeat previous meeting points to avoid repetition.

Roll Call was done by Connor White, Planner II. There was a quorum with 7 members present.

**ITEM 2: APPROVAL OF AGENDA AND MINUTES**

Mr. Wiggam made a motion to approve the April 15th meeting minutes.

Mr. Laird seconded the motion.

The motion passed with all members voting unanimously.

**ITEM 3: DISCLOSURES**

**ITEM 4: PLANNING PROJECTS**

**ITEM A: Southwest Drive Corridor Plan**

- 1. Update on May 2<sup>nd</sup> Workshop**
- 2. April Memo**
- 3. Final Plan**
- 4. Appendices**
- 5. Resolution**

Case Planner: Jeffrey Noffsinger, MPO Director

Connor White, Planner II, read the item into the record.

Mr. Matia made a motion to approve a time limit for the public comment.

There was no second for the motion and the motion failed.

Mr. Noffsinger stated That in an attempt to get more project details out to the public. A meeting at the animal shelter was held containing about 40 public members.

*\* Minutes are meant to provide a brief summary of the meeting's action items, discussions, and decisions made. For more detailed information, please request a recording from the Planning & Development Staff.*



Mr. Hibbens asked if Mr. Noffsinger could summarize how the community meeting went.

Mr. Noffsinger explained the meeting was a question and answer format with Scott Larson. They summarized the findings from the first public meetings, and received feedback from the residents. They described alternatives, options, and possible solutions, but explained the best fit to be at Brocken Arrow Rd.

Mr. Thomas reiterated to be concise and not repeat what we have already discussed in previous meetings.

Ms. Connor asked where the projections came from regarding benchmark engineering.

Mr. Noffsinger answered that FHE was the consultant hired to do an analysis of the area and to do traffic counts. Tazmat also was used by staff revealing how undeveloped land will be developed. Analysis creates a forecast about what projections will look 25 years into the future.

Ms. Connor asked Mr. Noffsinger to explain how the traffic increase goes from 0 to 4000?

Mr. Noffsinger stated that it was about a 2500 increase due to the existing homes and already existing traffic, which is estimated to be about 2500.

Ms. Connor stated she has the consultant's memo and asked what development will be taking place adjacent to the project?

Mr. Noffsinger answered it is uncertain as it is a future assumption based on the reports.

Mr. Carroll asked Mr. Noffsinger again how the traffic increase goes from 0 to 4000?

Mr. Noffsinger stated that the increase is not going from 0 to 4000, and that there is general traffic with 1% growth. In the traffic study this growth increases to about 2500.

Ms. Connor asked what can we assume will be developed in the area?

Mr. Noffsinger answered that the assumptions come from the future land use map, and that it's an assumption. No development is currently taking place at the moment. These assumptions depict housing, businesses, etc.

Ms. Connor stated the land is up for sale and listed as high density housing which is desired and although MUB can report multiple uses. This land was for sale after the report was listed.

Mr. Noffsinger answered he cannot answer and is unaware he is only making assumptions of what the land could be.

Mr. Mathia asked for any other questions to staff?

Mr. Wiggam asked if the assumptions generating traffic future volume were tied to our current future land use map?

Mr. Noffsinger answered yes, it is all based on the 2045 masterplan. He also stated zoning is another component they are looking at for the assumptions to put into the model.

Ms. Connor asked why the costs are different in the report than the model, and the plan is not aligning to the correct 2045 land use plan?

Mr. Noffsinger answered the cost plan was done 5 years ago, and the other report was done at today's costs. He also stated that on the official street map, broken arrow is a collector road and has been designated so since last decade. Both broken Arrow and Southwest drive

Ms. Connor stated there are 2 types of collector roads, minor and major.

Mr. Noffsinger stated she was correct.

Mr. Mathia asked for any other questions for staff?

Mr. Wiggam asked what the consequences of the do-nothing approach would be if adopted.

Mr. Bloom answered it would end its journey today and we would move on with the major street plan. Southwest drive would remain as is, and Broken Arrow would remain as is.

Mr. Wiggam asked what happens with the status quo of future traffic projections at Southwest drive, College drive, and the interstate interchange?

Mr. Bloom answered it would stay as is WYDOT would monitor the area overtime. DOT will not install any traffic mechanism unless warrants are met. Evaluate traffic levels, and if they get to an unsafe level they will come up with possibilities and safety mechanisms in the area.

Mr. Mathia asked for any more questions and opened up for public comment.

Mr. Obsuth approached the podium and stated that this has already been done, which is why a traffic light was installed. He read off his report and stated it could carry a lot of traffic from frontier days. There is an existing road and traffic light, its very simple, improve Southwest drive, activate the traffic light, and we'll save millions. He is frustrated due to the congestion at the train tracks. He says it makes sense to turn on the traffic light and improve the road. States that a new road will be a burden to the area and is not an improvement. Said traffic incidents were exaggerated and that his answer would save grief, aggravation, and millions of dollars. We don't need Broken Arrow right now he ended with.

Mr. Laird asked if he had any Insite of the traffic light from WYDOT?

Mr. Obsuth answered why would they put it there? And that it's a great traffic light.

Mr. Laird said his conclusion were wrong, and that he used to work for WYDOT.

Mr. Obsuth asked why it would be placed there then?

Mr. Laird answered it was for park and ride and other projects, but it's the best they could do to leave with the existing stop sign and then put a traffic signal up that week. It is a temporary light.

Mr. Obsuth stated it's not a one-week traffic light and to look at the pictures he has provided of it.

Mr. Laird Answered that it's a temporary traffic light that is not a permanent use.

Mr. Obsuth stated that it is not a temporary light, and that we should use it.

Mr. Mathia asked if there were any questions relating to Mr. Obsuth statements.

Mr. Bloom answered that he himself was here when park and ride was approved, and they modified the use for the light for CFD and other uses. They requested to put in a permanent use but were denied, and only applied for 10 days per year. Only used for CFD traffic.

At this point Mr. Obssuth had yet to identify himself.

Mr. Hibbens asked who the speaker was and to please introduce himself.

Mr. Obssuth introduced himself as George Obssuth into the record.

Ms. Graham approached the podium and read off facts she learned from Mr. Bloom regarding major collector roads. Projections for road are up to 4000 vehicles per day. She thinks it's overkill for the project. She has learned not to take Southwest drive, North because it limits traffic anyway. She also learned about WYDOT 2023 plan and has a huge overpass going in front of her house. Could not find any train crossing study for 2023 and she knows what it does, she watches it every day, and believes this does not need the 28-million-dollar overpass. Commented on Mr. Wiggams comment from the previous public meeting of the focus on Swan Ranch. States that Swan Ranch takes care of the UP crossing at Lincolnway and connects to Parsley Ave. She wants to leave Broken Arrow alone and to focus on Swan Ranch Road because it corrects the UP crossing on Lincolnway and that Parsley Ave is already developed and improves Southwest drive. She states people do not use this road, and she thinks the predictions are wrong.

Mr. Mathia asked for any questions for Ms. Graham, and there was none.

Dr. Sheehan went to the podium and read off a letter she had sent to the commission voicing her neighbors, business owners, and her frustration regarding the project. Pleading with the commission to please vote no

Mr. Mathia asked for any questions there were none.

Mr. Russell approached the podium and voiced his frustrations and is hoping to find a solution to Southwest drive at the UP tracks and thinks this plan makes the problem worse. He then asked Mr. Noffsinger where he is getting his information from?

Mr. Noffsinger answered he did look at the study and solutions and the solution would not work.

Ms. Kennedy came to the podium and read a summary of her frustrations that the MPO process is backwards and doesn't care about the public of the area. She believes the road solves no actual problems, and that closing the road makes no sense.

Mr. Wright approached the podium and asked why he couldn't buy the land and tear down the dairy building due to historic preservation, but the MPO can build a road through it? He then asked about the traffic and trucks along Southwest Drive. He believes it will hurt business in the area. Asked the commission to please vote no on the project.

Mr. Laird asked Mr. Russel if the dairy is on the national registry of historic places?

Mr. Russell was told he saw a sign saying it was.

Mr. Mathia asked for any other questions, there was none.

Mr. Connor approached the podium stating he is against the project, and has questions for Mr. Noffsinger. How much time is the crossing going to be blocked? Stated North Platte develops 1 mile away from railroad because its safer. He thinks this project will crowd

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the area making it unsafe. He understands development will grow but believes this is a major safety issue.

Mr. Mathia asked for any questions, there were none.

Ms. Coatney approached the podium and voiced that Broken Arrow is not a solution for the problems that have been discussed. She asked if adopted what the next stage was or if voted yes if this was final?

Mr. Bloom answered it would go to city council but needs to go to county planning commission and county planners first due to incorporating property in the city and county.

Ms. Coatney asked if a traffic study was done and believes there is not that many cars on Southwest drive and College Drive as the study shows. She also commented on the KGWN story a reporter did on Mr. Noffsinger, and a flashing beacon will be placed for Railroad closures. Asked why that hasn't been done on Southwest Drive? She is also wondering why the Railroad can't negotiate with the city to have trains stop before reaching the main road. Also stated the CFD parking is not a good idea out there and does not see it working out. She also printed a corridor plan update but does not see Swan Road and wants to know how it's incorporated with the plan, and to please vote no on the plan.

Mr. Mathia asked for any questions, there were none.

Mr. Briggs came to the podium and listed his observations. He thanked Ms. Connor for questioning the traffic study, and thinks we are assuming too much. He stated he did traffic studies for the DOT, and they did formulas, graphs and studies and that the staff isn't providing any of that and only basing on assumptions.

Mr. Jemiola approached the podium and stated he used to serve on the county and municipal level on the committee before. He thinks this is theft for someone who doesn't own the property yet. He thinks the theoretical traffic counts are ridiculous. He wants to ask Mr. Bloom if he could have a map on the overhead screen.

Mr. Lloyd brought up the map on the overhead screen.

Mr. Jemiola thinks there is a viable alternative and taking the property is not right. He asked for Southwest drive to be an alternative.

Mr. Larid asked due to his familiarity with these types of projects that if he thinks the project would be very difficult to build on broken arrow?

Mr. Jemiola answered yes, and that Southwest Drive and Swan Ranch would be a better compromise.

Mr. Mathia asked for any more questions and there were none.

Public comment was then closed.

Mr. Noffsinger approached the podium and stated that a traffic study was provided per city standards. He explained further study would be needed for the east side of the Railroad connecting to Parsley. He answered comments on UDC 4-20 and stated that the city only has 300 ft of interchange connecting to Southwest drive. City funds come through WYDOT at the federal level and 10% local match. Phase 1 would like county and city to do a study for Southwest Drive, there is no funding so far. There is an estimated \$800,000 required for the study. The department must make assumptions, they are based off of calculations, based on traffic reports, future land use areas. Where does the city want the 4000 cars a day going? Staff is trying to look at future concerns and studies, and that Broken Arrow aligns with the long-range master plan. He explained this is not an immediate need, but is a long-term long-range need, trying to be reactive.

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Mr. Mathia asked if the plans are all public?

Mr. Noffsinger answered yes with plancheyenne.com.

Mr. Mathia stated 300ft is too close as well as I25 and college, and believes its confusing and would complicate things by adding another road.

Mr. Noffsinger answered that a traffic signal at the intersection will reduce accidents.

Mr. Mathia also asked if it's a 25-year plan, and if anything will happen to Broken Arrow in the next 5 years?

Mr. Noffsinger stated, it is mainly driven by development.

Mr. Bloom added connect 2045 is the overarching master plan for the community and that it does talk about all the corridors and primary funding is developer driven. The purpose of the plan is 30% design drawing with transportation and 2 collector streets. Any future construction of roads would be the expectation of the developer. Any developer roadway to the south would require the consent of those property owners. Does not recall a time eminent domain has been used as of recent.

Mr. Wiggam stated eminent domain was on the table at the intersection of Pershing ,19<sup>th</sup> and Converse. Then asked Noffsinger if something not designated as an intersection could be a collector? east of College Drive or even Broken Arrow but nor perhaps an alignment that would abut the existing houses of future development. He assumes its complete urban buildout at college and I-25, is that an option to avoid the existing area while accommodating a greater need for the interstate and the College.

Mr. Noffsinger answered yes it was looked at, at Bar X and Bridle Bricks, when found out there was overpass it eliminated College drive as an option. Othe than that there are no other options.

Mr. Wiggam asked what would happen if there was a departure slightly west at the Broken Arrow intersection that would take a Northeast route and connect with broken arrow or align to the east, a weird angle that could serve a collector that could not disrupt anybody, and future developers could plan that.

Mr. Noffsinger answered the MPO typically avoids weird, skewed angles and that this is why they are looking at the current project as it creates proper alignment.

Mr. Wiggam asked if staff is missing an opportunity to avoid the worst complications what if the change at College was west of Broken Arrow and had a route around Broken Arrow swinging east and dodging between the buildings at AbarA Drive or lazy Y Drive then head off along the prairie being the high-volume road? Would that solve the concerns of the residents?

Mr. Noffsinger answered that the rights of way at South crest are in place for major roads. This would offset the roads and would put traffic into the existing neighborhood. Same with south of College, it is deficient with major rights away. The city would acquire structures as opposed to land in this instance.

Mr. Wiggam is concerned that the City replats a lot and it wipes out these rights of way.

Ms. Connor asked about Railroad growth in the study?

Mr. Noffsinger answered no, there is little control with Railroad right of ways and projecting how much traffic will be in any rail corridor.

Ms. Connor asked if 1% growth was projected on the project is this maxed out?

Mr. Noffsinger could not answer and said in the general traffic model it's a general assumption they have to make.

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Mr. Larson went to the podium and answered Ms. Conner. He explained you must project when the property is built out. Once it's built out the 1% increase goes away. The hardest part of the project is predicting when the project will be built out. With limited open space it does cap off.

Ms. Connor stated the south point is a dead end and is constrained by railroads. Those coming from the south, why would they enter a dead end? She stated that she does indeed see a maximum cap?

Mr. Larson said there is reasons for people to take any route, but it's hard to predict where and why people are going the route they choose. Railway system they just estimate how much is going down now and how much will be in the future.

Ms. Connor asked how much of this is based on traffic from the south.

Mr. Larson could not answer the question. He stated it is in the model the city uses.

Ms. Connor is concerned that these projects are the basis of the model, so they are not accurate assumptions.

Mr. Larson stated they are accurate and that this is only a planning document not a set development plan.

Ms. Connor stated her concern is when the plan says something we need the plan to be accurate when it says something.

Mr. Larson stated plans change as time progresses and this is the best alternative right now, but you always go back to reexamine if it still meets the need or not. Used the high plains road original plan as an example. This is only a planning study not a cast in stone rule.

Ms. Connor understands and is talking about eminent domain and government theft here. She can't base this off of plans changing in the future, she wants cold hard facts about what will happen.

Mr. Larson stated again it's a plan and that they are not taking anything. Only one property owner is needed for a successful plan, the rest of the property would be obtained by the developer. Most of the cost of creating the roadway would be borne by the developer if Southwest drive is used as a collector it will be borne by the taxpayers. This project saves the taxpayers the most amount of money.

Ms. Connor said she can't vote yes for theft of property.

Mr. Larson said nothing is taken it is acquired.

Mr. Bloom interrupted and asked if we could get on topic.

Mr. Thomas asked if the yes or no vote for the plan could be delayed until a developer comes and the plan gets revisited.

Mr. Bloom answered the plan was put together as the workplan for the policy committee of the MPO to postpone until development occurs. It probably won't be relevant at the time due to different types of developments that come in. There is a budget for the project which would make this ineligible. If voted no, the recommendation would be to deny the project. Right of ways in future would be acquired by the developers in the future not the city.

Mr. Laird asked if alignment on a map or map studies will change after corridor study?

Mr. Bloom answered the official map is an instrument used by the governing body identifying street plans and where future roads can go. If adopted this would change the official map of southwest drive to a local street status to point of determination to College Drive.

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Mr. Mathia asked for any further questions, there were none.

Mr. Wiggam made a motion to adopt item A.

Mr. Larid second the motion.

Mr. Wiggam commented that the body needs a point of discussion and has some concerns that as a planning organization we cannot just dish out rural land and stick to the plan of residential neighborhood business. Also concerned about debating development and business and not addressing the constraints from the Railroad. But if this is adopted, they are doing something significant that the primary access from College Drive needs to move from the Southwest Drive intersection. And designate for future developers that this is where the point of access is going to be. A major street network will align and connect is our job this project does address the offset from I25. Wants to know more about the historic dairy and looked up the North Platte study and it's a shrinking community. As a planning graduate he will admit that planners do not have a great history of realigning major road networks. He sees the need for this but does not believe it is the solution. He is not afraid to let it die. Doesn't believe status quo is the solution either.

Mr. Mathia asked for any other comments from the planning commission.

Mr. Laird supports the resolution, and believes the proposal addresses the traffic operations problem.

Ms. Connor disagrees with the project and thinks there is constraint, and the numbers aren't accurate. There is always the option to revisit it in the future, but this isn't needed right now. Wants to know what development will be there first?

Mr. Mathia stated there will be progress and that Broken Arrow Road will be paved regardless. It's better to have some kind of plan than have nothing to get started with.

Roll call was taken with the adoption failing vote 4 no and 2 yes.

A 5-minute recess was taken.

Meeting called back to order by Mr. Mathia at 8:08

**ITEM B: URA Plan and Project: Jolly Rogers Site**

Case Planner: Charles Bloom, AICP, Planning and Development Director

Connor White, Planner II, read the item into the record.

Mr. Christensen approached the podium as a rep for stencil and explained the plan in project which is an urban renewal project. A blite study was conducted and a bight designation is appropriate for the area. Locate 194 apartment units.

Mr. Wiggam asked for more details of ownership of the plan.

Mr. Christensen answered the site is owned by jolly Rodger LLC; applicant has proposed property under contract. Lot would be subdivided into 2 lots. They are purchasing the west lot and leaving the east lot for future development.

Mr. Wiggam asked the applicant why the added language to aid in the acquisition costs?

Mr. Christensen answered that he is looking for tax increments to allow urban renewal fund to aid in acquisition costs and are currently working with the city, city wanted the throw this in

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the maximum extent to meet state statutes. Anymore would need approve by a development agreement.

Mr. Hibbens asked what the area next to the site was.

Mr. Christensen answered the area to the east is a longer RV park, the area to the north is a county subdivision,

Mr. Mathia asked any other questions, there were none.

Mr. Bloom read the staff report to the commission.

Mr. Wiggam asked what acquisition costs were used for the purpose of the funds? Is it for offsetting interest rates or what?

Mr. Bloom answered that they want to further research what could be an acquisition cost. Possibly a detention pond or storm water facility but are up to further discussion with the applicant.

Mr. Christensen stated he agrees with director bloom, it was included in the language so that it would be eligible if some of these items come up.

Mr. Mathia asked for any public comment, there was none.

Mr. Thomas made a motion to recommend approval.

Mr. Wiggam second the motion.

Roll call was taken, and the motion passed with a unanimous vote.

#### **ITEM C: PLTA-24-4 / Temporary Use, Text Amendment**

Case Planner: Connor White, Planner II

Connor White, Planner II, read the item into the record.

Mr. White presented the text amendment to the commission. Mr. White explained what temporary uses were in our code and that they are popular over CFD. Lots of people submit their applications before CFD and there are a lot of issues. The text amendment add anything less than 14 days doesn't need a temporary use permit.

Mr. Mathia asked for any questions.

Ms. Connor asked if there were any potential abuses with the project.

Mr. White answered that currently it gets abused all the time. The problems he sees are people overstaying their welcome. There is potential for it to be abused but will help with the CFD section and believe it would help.

Mr. Wiggams asked what would be the worst-case scenario that would be a risk?

Mr. White answered that pedal cabs around town are the biggest pains as they do not submit for permits until usually a week before CFD and it requires staff time. Longer issues could be food tents at a gas station, and they decide they don't want to be temporary they want to be permanent.

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Mr. Wiggams asked if there were any nuisance uses, we are concerned about.

Mr. Lloyd answered that they received complaints such as auto repair or storage sheds in the front yard. They give a 14-day notice period for them to clear up the area.

Mr. laird asked what the enforcement is for people who don't get the city clerk license.

Mr. White answered that it involves the police department.

Ms. Bostler answered an officer would review any violations, currently working on enforcing the code, would go through municipal court.

Mr. White answered city clerk license would be quicker than a zoning violation.

Mr. Mathia opened the discussion for comments, there were none.

Ms. Hernandez made a motion to approve.

Ms. Connor second the motion

Roll call was taken, and the motion passed unanimously.

**ITEM D: PLTA-24-5 / Child Care, Text Amendment**

Case Planner: Connor White, Planner II

Connor White, Planner II, read the item into the record.

Mr. White gave the staff report to the commission amending the text for childcare requirements in the UDC. City is making it easier to meet DFS requirements. City definitions do not match DFS definitions at all. Project to better match the DFS definitions. Location was brought up to have the names match, and proposed conditional uses for these centers in LR, MR, HR, NR-1, NR-2, and NR-3 zones. Went over requirements in UDC a,b,c,d meeting DFS requirements then you are meeting the requirements. Updating the parking table so that childcare is part of parking table will follow all requirements. Different credits, reductions, more flexibility with it in this section. Family childcare centers would need 1 space per employee and one visitor space.

Mr. Mathia asked for questions or public comment, there were none.

Mr. Lloyd stated some churches have childcare services and that this would allow them to do that.

comment closed.

Mr. Wiggam made a comment that at Newport news some residents were mad about having it be there.

Mr. Wiggam moved to approve the item.

Mr. Thomas second the motion.

Roll call was taken. The motion passed unanimously.

**ITEM 5: OTHER BUSINESS/STAFF ANNOUNCEMENTS**


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Mr. Lloyd wanted to propose amendments to landscaping on industrial parks for a tour on July 14 proposed by Cheyenne leads.

Mr. Lloyd brought up June 3<sup>rd</sup> planning commission is same time as city of the whole. Will meet in a different room possibly.

Might not have a mid-month June meeting possibly July 1 meeting.

**ITEM 6: MEETING ADJOURNED 9:03**

  
\_\_\_\_\_  
Staff Signature

  
\_\_\_\_\_  
Board Officer

**George A Obssuth**

**1807 Southwest Drive**

**May 20, 2024**

**6:00PM Planning Board Meeting**

**Page One**

**Pictures of unused but, installed traffic lights at the intersection of Southwest Drive and College Drive.**

**We were told that his was “temporary for Frontier Day(s) traffic.”**

**Notice the streetlights, traffic sensors, control center and concrete bases.**

**Also, note that Southwest Drive appears to be quite wide at the intersection of College Drive.**

Continued

George A Obssuth

1807 Southwest Drive

May 20, 2024

6PM Planning Board Meeting

Page Two

Other inaccuracies :

- a. "There are more than ten (10) reported accidents at the intersection of Southwest Drive and College Drive." **Actually, there are less than two (2).**  
*The ten-plus accidents are at the ridiculous "reverse diamond" hundreds of feet to the west.*
- b. "Broken Arrow is 1000 feet east of Southwest Drive." **Try 635 feet.**  
*A Fifth Grader told me if you "round off" 635 that's 600 not 1000.*
- c. "The problem with Southwest Drive is the intersection at College". **In reality, the problem is the railroad crossing at West Lincoln Way.**  
*See statements from numerous businesses and homeowners that LIVE AND WORK on Southwest Drive.*

Although I could go on at length and in greater detail, there is enough information to give this a grade.

#### Part A : The Basic Concept

Your concept "It would be a great idea to construct a new road (Broken Arrow) a few hundred feet east and parallel to an existing paved road at the cost of tens of millions of dollars but then dumps traffic into the end of Southwest Drive (after the barricade but before the dreaded railroad crossing to force compliance to the plan of barricading both ends of Southwest Drive.

**GRADE - - - F minus**

#### Part B : Honest and Accuracy

Honesty and accuracy of details.

GRADE --- F

**Summary :**

**Use what you already have on the homestead! \***

- 1. An existing paved road (needs to be upgraded)**
- 2. An existing and well-designed traffic light (Put in place by Wyoming Department of Transportation (WYODot))**
- 3. DUH!**

**\* From Marty Raney "Homestead Rescue" show.**

**George A Obssuth**

**1807 Southwest Drive**

**May 20, 2024**

**6:00PM Planning Board Meeting**

**Page One**

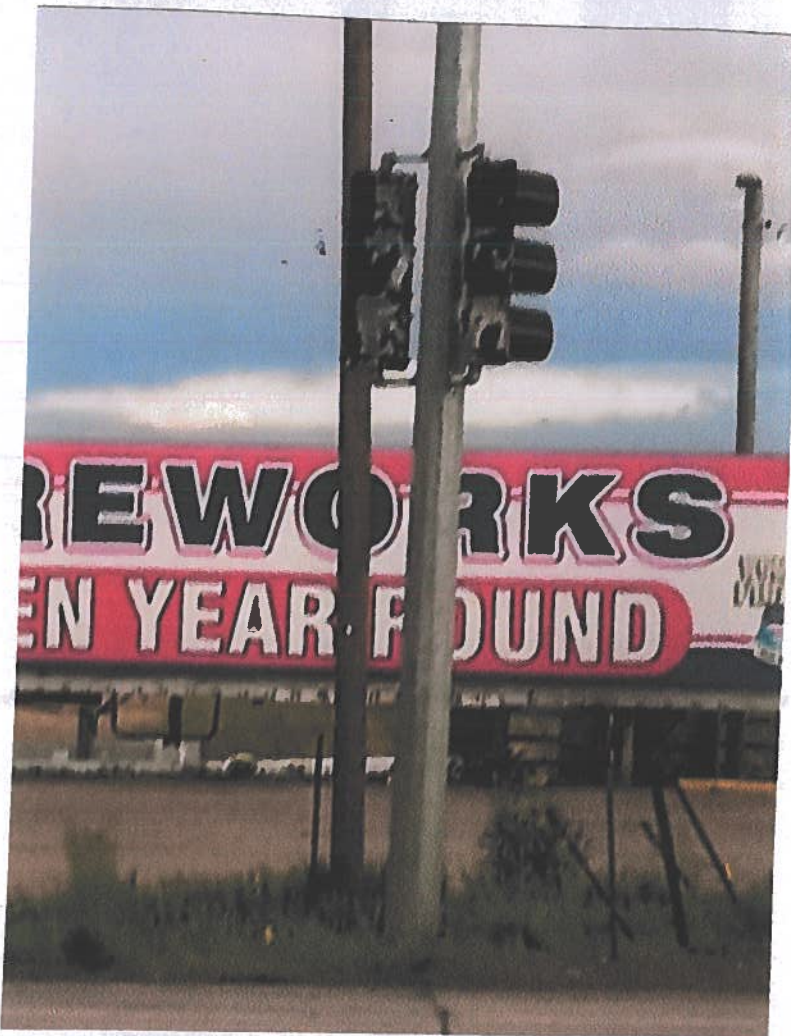
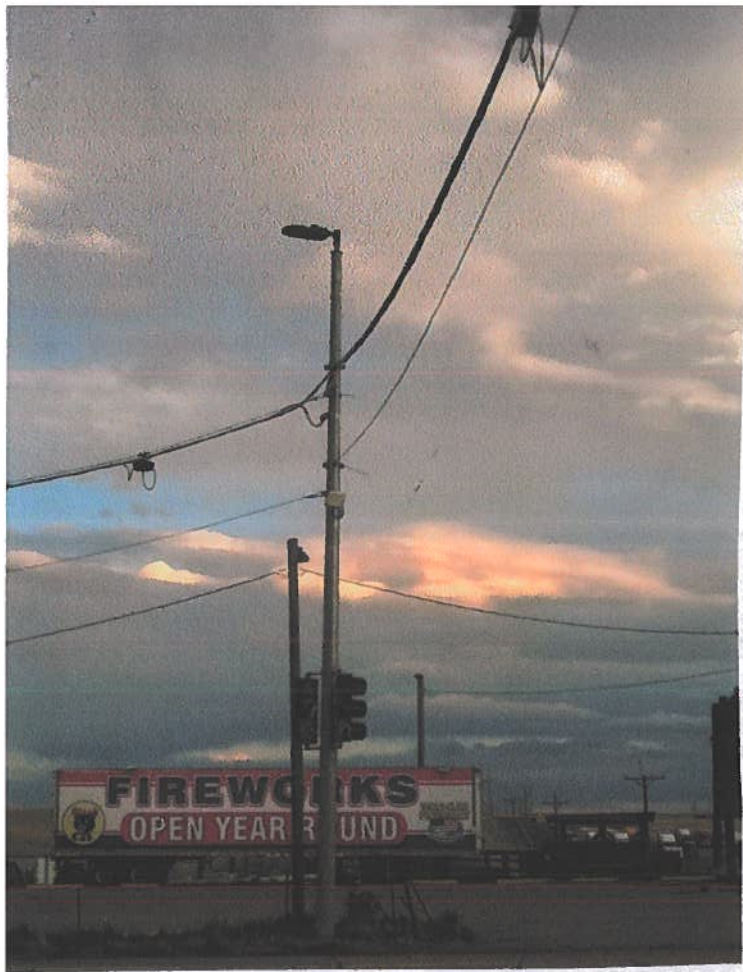
**Pictures of unused but, installed traffic lights at the intersection of Southwest Drive and College Drive.**

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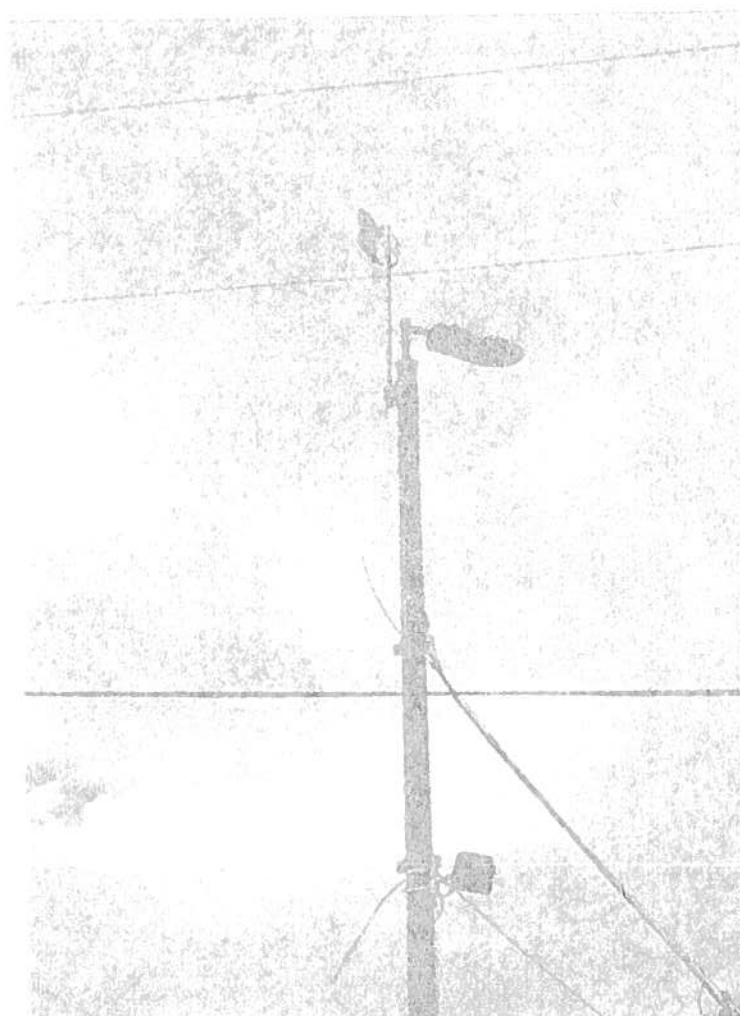
**Notice the streetlights, traffic sensors, control center and concrete bases.**

**Also, note that Southwest Drive appears to be quite wide at the intersection of College Drive.**

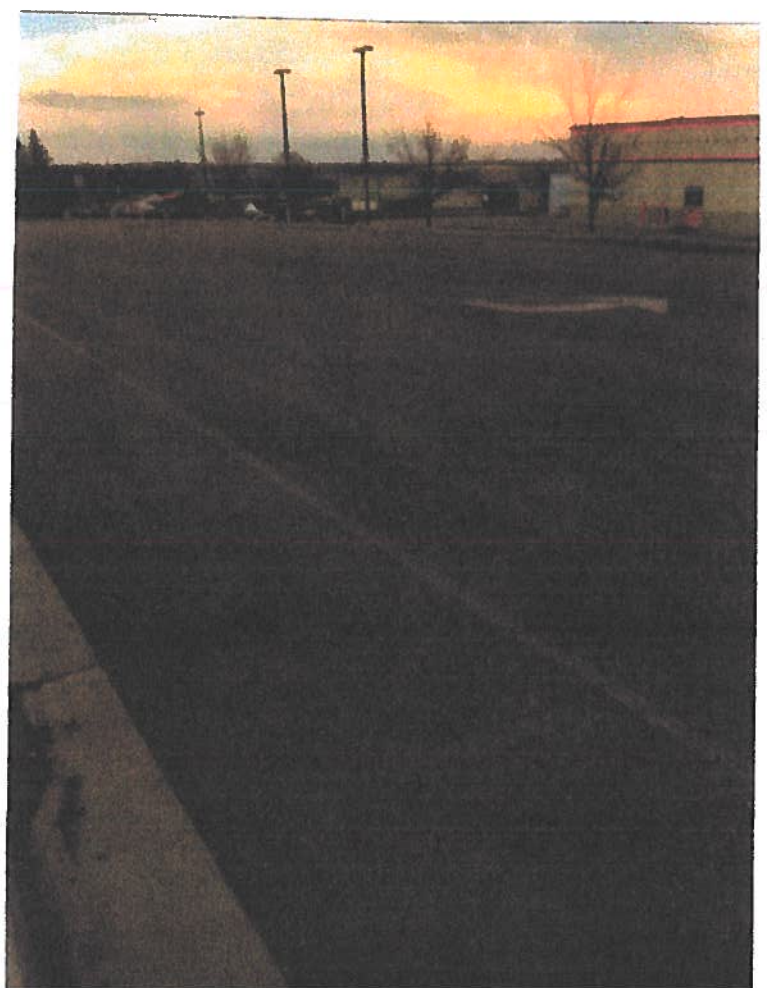
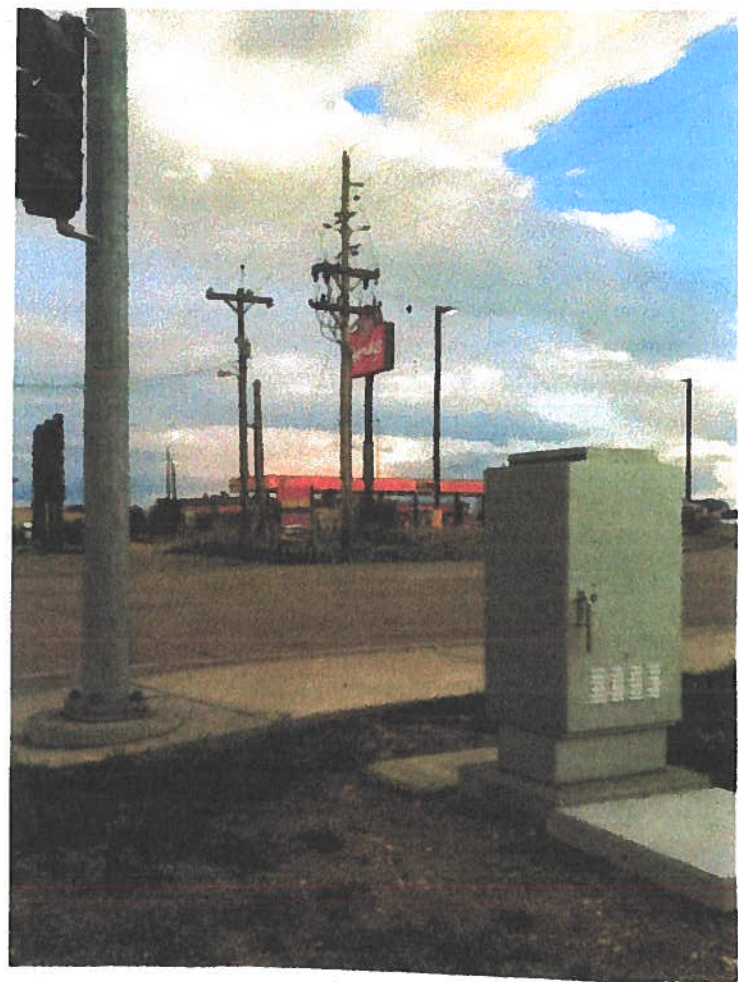












**To: Cheyenne Planning Commission: Reasons the Southwest Drive Corridor Alternative Broken Arrow, Final Plan should be Stopped and Vote No on it:**

The Southwest Drive Corridor Plan, Broken Arrow Alternative, Final Plan is a manufactured proposal created by those who look at lines on a map who do not know the area and who apparently do not read their own studies. Their own studies refute their claims that there is a problem to solve. And, those advocating for this proposal, the MPO, are cherry picking any comments to try to support their proposal.

- 1) The MPO wants to close off Southwest Drive because, they say it is too close to I-25. However, the truth is the WYDOT statutes of 2014 are for new “driveways” (roads) only, NOT existing roads. Southwest Drive (as well as thousands of other roads and main thoroughfares in Cheyenne and the state) is grandfathered in. Southwest Drive can and should remain the collector/thoroughfare that it is and has been for decades.
- 2) The MPO talks about safety at the intersection of Southwest Drive and College Drive, but the traffic study in their own document states that there have been only 9 crashes, of some type, in the course of 5 years, 2016 to 2020.
- 3) Broken Arrow Road is at the base of three hills. Semis already use jake brakes/compression brakes to drive down the hills on College Drive to pass Broken Arrow, the bottom of three hills. When the new Wydot overpass at College Drive and the BNSF railroad track is built. It will create an even steeper grade on College Drive coming down to Broken Arrow. Since all semis currently use jake brakes to pass Broken Arrow at the bottom of the hill, imagine trying to stop at Broken Arrow to then continue up the hill or to turn onto it, especially in ice and snow, as this misguided Final Plan designs! Broken Arrow needs to remain the local residential street only that it has been platted and used as since 1954. Southwest drive is flat and should remain the thoroughfare. This proposal creates dangerous and hazardous problems.
- 4) This proposed “Final Plan” does not solve the problem of the UP railroad crossing at Southwest Drive and Lincoln Way that blocks its crossing for over 8 hours per day and carries hazardous material. This proposed plan has Broken Arrow curving into Southwest Drive before the railroad crossing. This proposed plan solves nothing!
- 5) The MPO seems to care about the “rural feel” but it has confused which road has kept a rural feel. Southwest Drive has Sinclair truck stop, a large storage area facility, a sign company, home businesses, the Cheyenne Animal Shelter and other businesses on it. The houses are built away from the road. Broken Arrow is a dirt road with homes next to the road and no businesses. In fact, the owner of the vacant lots bordering Broken Arrow and within Southcrest Heights has purposely not sold any platted lots for over 40 years to keep the open spaces and to keep the rural feel. Again, the MPO group seems to be confused.
- 6) Costs: This proposed plan costs well over 13 to 20 million dollars. It is far less expensive to improve Southwest Drive and keep it as the collector/thoroughfare it is and leave Broken Arrow as the local residential street that it is.

It appears the MPO wants projects to work on to justify their jobs and contracts, but they need to look at useful and helpful projects, such as improving the already existing 80' ROW Southwest Drive collector/thoroughfare and improving the already 80' ROW Parsley Boulevard collector/thoughfare that people want done, not projects that solve nothing, but create hazardous and dangerous conditions.

Sent by Dr. Kay Sheehan on behalf of: Southwest Drive homeowners and business owners, Broken Arrow homeowners and property owners and Southcrest Heights homeowners and property owners.



To: Cheyenne Planning Commissioners: Please read this prior to the May 20, 2024, meeting. Benchmark Engineers responded to our letter that was given to you at the April 15, 2024, meeting. This is our rebuttal to Benchmark's comments and we are citing pages and sources disputing his comments. It contains new information.

Thank you. If you have questions, please contact Dr. Kay Sheehan (Cell: 303-884-3328)

Benchmark Engineers, P.C. response is in blue text.

Dr. Sheehan's and other Homeowners and Business owners of Southwest Drive, Homeowners and property owners of Broken Arrow Road and Homeowners and property owners of the 100 acer Southcrest Heights Subdivision responses to Benchmark Engineer's comments are in red text..

To: Charles Bloom, Director of Cheyenne Planning Commission, Cheyenne Planning Commission members, Jeff Noffsinger, Director of MPO, and MPO members

Cheyenne Planning Commission Meeting, Monday, April 15, 2024, 6:00 P.M.

Background of the two meetings with Jeff Noffsinger, Director of MPO and Scott Larsen, Owner of Benchmark Engineering, June 21, 2023 and November 15, 2023.

Questions regarding the Southwest Drive Corridor 35% Design Plan that is based on the Benchmark's design:

1) Coordination and Public Involvement, page 26 of the Southwest Drive Corridor 35% Design Plan, it states, "On June 8, 2023,.the MPO and design team, along with designated stakeholders, participated in a Steering Committee meeting to gather information, insight, and to offer feedback. The Steering Committee includes representatives from the City of Cheyenne the Cheyenne Board of Public Utilities, WYDOT, and Laramie County Planning and Public Works.

We want to know who these "designated shareholders" are because we who live on Southwest Drive, Broken Arrow Road, and the 100 acre Southcrest Heights Subdivision knew nothing of this meeting and were not involved. Who are these "designated shareholders" referenced?

□ **The Steering Committee is made up of the following:**

- **Tom Mason – MPO** [L]  
[SEP]
- **Jeffrey Noffsinger - MPO** [L]  
[SEP]
- **Ginni Stevens - MPO** [L]  
[SEP]
- **Chris Yaney - MPO** [L]  
[SEP]
- **Charles Bloom - City of Cheyenne** [L]  
[SEP]
- **Adele Bartel - City of Cheyenne** [L]  
[SEP]
- **Bryce Dorr, P.E. - BOPU** [L]  
[SEP]
- **David Cole, P.E. - BOPU** [L]  
[SEP]
- **Julianne Monahan - WYDOT** [L]  
[SEP]
- **Wayne Shenefelt, P.E. - WYDOT** [L]  
[SEP]
- **Molly Bennett - Laramie County** [L]  
[SEP]
- **Justin Arnold - Laramie County** [L]  
[SEP]
- **Scott Larson - BenchMark Engineers** [L]  
[SEP]
- **Julie Goode - BenchMark Engineers** [L]  
[SEP]
- **Lyle DeVries, P.E. - Felsburg Holt & Ullevig - remote** [L]  
[SEP]
- **Faith Kelley, E.I. - Felsburg Holt & Ullevig – remote** [L]  
[SEP]
- **Gene MacDonald, P.E. – GLM Design** [L]  
[SEP]

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2) The minutes are missing of the MPO's meetings of August, 2023, and October, 2023, - between the first public meeting on June 21, 2023, and the second public meeting, November 15, 2023, (when only one person was notified, the one with the most to lose) that created this proposal of the Southwest Corridor Plan 35% Design Plan proposing closing the existing Southwest Drive Corridor/thoroughfare and shifting it to developing a dirt road creating far more problems and far greater cost.

These minutes are missing from the Southwest Corridor 35% Plan and are not in the Appendices. We would like to see the minutes of these meetings.

**All Steering Committee minutes are included in Appendix VII on page 436 of the Southwest Drive Corridor Plan Appendices.**

3) The minutes of the poorly attended public meeting November 15, 2023, because only one person (the one with the most to lose) received a notice, are missing and are not contained in the appendices.

We would like to see these minutes, also.

**□ There are no minutes for the Public Meeting on November 15, 2023 because this was an open forum format with singular discussions between the public and the MPO and Design Team. There was a short reiteration of a PowerPoint presentation showing the printed boards that were to be discussed in a one-on-one format. The PowerPoint is available to anyone who wishes to review it.**

Correction/explanation for this 35% plan:

1) It is stated in the 35% Corridor Plan (page 32 of 48), that three residents (all the people at the meeting who were contacted by the one person notified of the meeting) who live and own property on Broken Arrow Road) were “very vocal about Broken Arrow being developed.” but it skews the truth because we were all adamant that it NOT be developed!

**□ In no way does the written dialogue “skew the truth”. The statement is made that the three residents who live along Broken arrow were “very vocal” about improvements to Broken Arrow, which is an unbiased observation. That sentence is followed by a sentence reiterating the concerns of these residents concerning acquisition of right-of-way along Broken Arrow.**

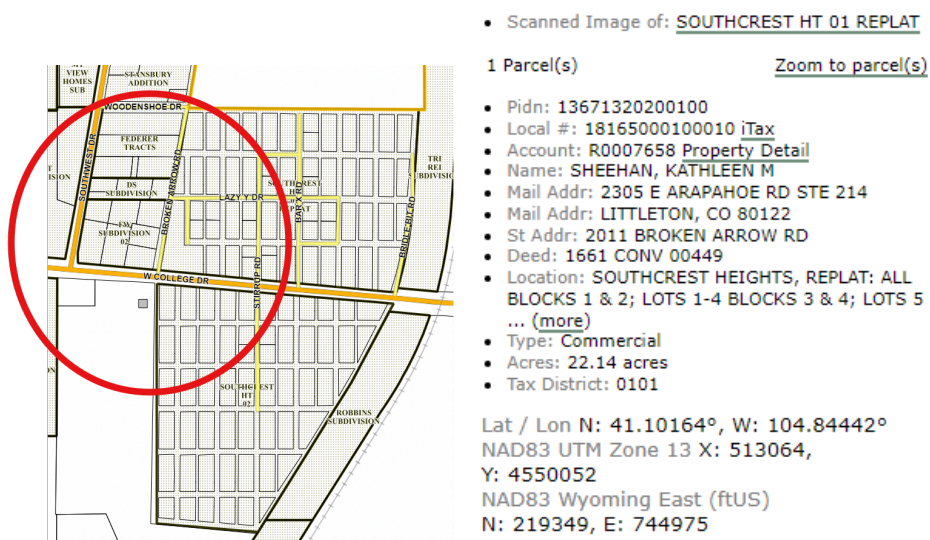
**It does skew the truth because the homeowners had numerous additional objections to this proposed plan and are adamantly against it. It does not make it clear that we were/are adamantly against it for many reasons.**

2) It is stated in this 35% Design Plan that one of the reasons to shift the existing Southwest Drive Corridor to Broken Arrow Road, a dirt road, was to retain the “rural feel” for the people of Southwest Drive Corridor. However, we who live on Broken Arrow Road, a dirt road and who

live and own property in the 100 acre Southcrest Heights Subdivision bordering Broken Arrow Road are the people who have been fighting for over 34 years to keep the “rural feel.”

How many Cheyenne Planning Committee members have read the entirety of the 500-page Southwest Corridor 35% Plan that has been presented for your input and vote? Some of us who live on and near Broken Arrow Road have completed the excruciating task of reading it.

**The Southcrest Subdivision, along Broken Arrow, is solely owned by Kathleen M. Sheehan, the writer with other homeowners of this letter . See map below:**



**There are other homeowners along Broken Arrow Road north of my property and we are all affected negatively by this proposed plan - as well as those of us on Southwest Drive, Broken Arrow Road, and the 100 acre Southcrest Heights Subdivision.**

Major problems with the Southwest Corridor 35% Plan and why the Collector/thoroughfare should REMAIN Southwest Drive and why developing Broken Arrow Road, a dirt road, is not feasible:

Reasons to keep Southwest Drive the major thoroughfare:

1) Already has an 80 feet easement

**Broken Arrow Road is a recorded dedicated public right-of-way in Laramie County, which was recorded with the original plat in 1954 and then in the replat of the Southcrest Heights Subdivision in 1957. The fact that the road has not been improved to date does not change the fact that the road is a dedicated public right-of-way .**

Broken Arrow Road is a recorded public right of way of ONLY 30 FEET for a LOCAL STREET SINCE 1954 and 1957 and NEVER a MAJOR COLLECTOR road. The fact that the road has not been improved does not change the fact that the current ROW is only 30' to 50' and has NEVER been planned as a major collector road, only a local residential road.

2) Already has all utility easements in place and are being used.

Southwest Drive only has sanitary sewer within the roadway, no water. Utilities can be placed within the Broken Arrow Road dedicated right-of-way so no easements would be necessary. See 35% drawings for utility locations.

Page 34 of the Southwest Drive Corridor Plan, Broken Arrow Alternative, states. “Numerous utility easements are in place along Southwest Drive adjacent to the right-of-way per the various plats. Broken Arrow has a utility easement along the eastern side of the right-of-way. Although construction of improvements such as roadway, sidewalks, greenway, etc. may be possible, there is a risk of financial obligation on the public entity rather than the utility owner for repairing and/or replacing these improvements when work is completed on the respective utility. Existing utilities are both over head and buried within the corridor.”

3) Entrance to Southwest Drive and Southwest Drive itself is flat, not at the base of two hills.

It is good, common engineering practice to have intersections and roadways at the top and bottom of hills for drainage purposes. This is preferred in most Cities and Counties across the country. Also, the express purpose of this study is to address the location of the entrance to Southwest Drive from West College Drive. The placement of the Southwest Drive entrance in close proximity to the I-25 interchange and the commercial properties to the west, east and south, pose a public risk as well as a public nuisance due to commercial traffic on and around the Southwest Drive entrance.

Service roads are right next to interstates all over the United States and are used by heavy vehicles as well as cars. Southwest Drive is much further away from I-25 than are service roads. There are no studies indicating that the current intersection of Southwest Drive and College Drive “pose a public risk as well as a public nuisance”. In fact, the traffic study stated that there were only nine crashes at this intersection within a five-year period (2016-2020) (page 35 of the Southwest Drive Plan Broken Arrow Alternative.) No signal is needed at Southwest Drive or Broken Arrow Road

The City, County and WYDOT all have specific requirements for how far a roadway and accesses need to be from each other for safety issues and the current location of Southwest

Drive does not meet any of the requirements. According to WYDOT, requirements for NEW DEVELOPMENT ONLY came into effect in 2014, NOT FOR EXISTING ROADS all over Wyoming, such as Southwest Drive. This major collector road is functioning without problems as the studies in this proposed plan confirm. In addition, there are specific requirements for how far one signalized intersection needs to be from another and if signal lights were placed at Southwest Drive, they would be too close to the signals at the interchange and would not meet the requirements. Traffic lights were used during Cheyenne Frontier Days at the same intersection of Southwest Drive and College Drive so if traffic lights can be used then, a permanent traffic light would also be fine, if needed. But, as it turned out, no traffic light was even needed during Cheyenne Frontier Days.

4) It is a straight line from College Drive on Southwest Drive to Lincoln Way — no turns necessary.

While it is not a “straight line” from West College Drive to West Lincolnway, consideration is given to the current use of Southwest Drive as a shortcut for commercial vehicles to access West Lincolnway, which poses a public safety risk. There are no studies indicating a public safety risk. In fact, see the above 5-year traffic study of only 1.8 crashes per year at the intersection of Southwest Drive and College Drive. Southwest Drive is not designed or maintained to be used as a major collector, which creates hazardous conditions for local residents. There are no studies indicating this. The Southwest Drive Major Corridor consisting of businesses and homes is already an 80 foot right-of-way. The use of Broken Arrow Road, designed to address future development and current zoning as Mixed-Use Business and Medium Density Residential, would move traffic off a Low Density, rural road to a specifically developed Major Collector thoroughfare, designed and maintained to support associated traffic use. Broken Arrow Road has been a 30’ right-of-way planned since 1954 as a rural local road only. There are no businesses on Broken Arrow Road. However, on the existing Southwest Drive Corridor/thoroughfare, there are home businesses, a large storage facility, Cheyenne Frontier Days parking lot, Cheyenne Animal Shelter and other businesses. Southwest Drive is NOT a rural road. Broken Arrow Road IS a rural road and planned as such since 1954. The homeowners along Broken Arrow Road and the 100 acre Southcrest Heights Subdivision have fought for over 40 years to keep it rural. Additionally, the owner of the vacant lots in the 50 acre Southcrest Heights Subdivision north of College Drive has purposely not sold any of the vacant lots in over 40 years to keep the open spaces and rural feel. In addition, it is common engineering practice to avoid making roadways straight for long stretches because it encourages speeding. Having roadways curve, etc. helps to reduce speeds, which provides for a much safer roadway. The proposed plan to shift the existing



major collector/thoroughfare of Southwest Drive to Broken Arrow has Broken Arrow from well south of College Drive to parallel to the Animal Shelter as a straight road! It is similar to traffic calming techniques. One of the biggest concerns for the people who live along Southwest Drive is the speeding that takes place on the existing roadway making the roadway unsafe. Keeping it the main corridor, improving the street and keeping it relatively straight will only make the speeding worse. No, it will not. Reducing the speed limit, patrolling the road and giving tickets, speed bumps and a flashing light sign indicating vehicular mph will reduce speeding. However, the Traffic Safety Analysis (page 35 Southwest Drive Corridor Plan) study indicated that for those vehicles speeding going north, "speeding" was less than 5 miles per hour over the posted speed limit. Going south, if a vehicle was speeding, it was more than 5 mph but less than 10 mph over the speed limit. Moving the major collector road to Broken Arrow only shifts the problem, plus creates a mass of other problems and costs over Thirteen Million Dollars! Keeping Southwest Drive as the major collector road is many, many millions of dollars LESS.

5) All houses on Southwest Drive are set back from the easement and road. The houses were built knowing the road already was developed.

At the time most of the houses along Southwest Drive were constructed, most of the commercial activity on both sides of the interstate at the interchange were not there and Southwest Drive did not see a lot of traffic. There was no way for the homeowners at that time to know how busy Southwest Drive would become over the years because of all of the businesses at the interchange. Broken Arrow Road is a dedicated public right-of-way and has been since 1954 of only a 30 feet right-of-way and was never intended as anything other than a local rural road. The fact that the road has not been improved to date does not change the fact that the road is a dedicated right- of-way of 30 feet and intended as a local rural road and the roadway could be constructed at any time.

6) Traffic lights are already installed at the intersection of College Drive and Southwest Drive — they just need to be turned on.

The wiring to allow temporary traffic lights to be installed were put in place by WYDOT for Cheyenne Frontier Days (CFD) in order to help control traffic from CFD's parking area to the northwest, during this specific event, one time a year. These are not permanent traffic signals and there are no plans to make them permanent because they don't meet the spacing requirements for the intersection. There was so little traffic that the traffic lights were not needed,

7) Environmentally, it is better because Southwest Drive is not in a pocket, as is Broken Arrow

and the pollution is blown away by the wind.

No environmental studies were performed in this study and are outside the scope of this report.

8) Confiscation of property is not involved

No confiscation of property is proposed as confiscation is illegal and not a method used in Wyoming. The legal process of gaining additional rights-of-way to improve public infrastructure can be clarified by the County or City Attorney. It *feels* like confiscation of property for those of us who would be losing our property.

9) There is no heartache with one's property and landscaping being seized.

Nothing is being "seized". It *feels* like seizure for those of us losing property and well-being. This proposed plan does not address the emotional and psychological damage to those of us who own already established homes on and around Broken Arrow Road. It also does not address the damages to the businesses on Southwest Drive if it were closed, as proposed by this plan. There are very specific guidelines, which must be followed to improve public infrastructure. While progress can be slow and disappointing at times, the County and City is bound to advance public infrastructure in the best interest of the greater population. In addition, there are some trees, bushes, etc. along Southwest Drive that are in the right-of-way that would need to be removed with the improvement of Southwest Drive to the preferred section. No land or major landscaping would be lost for those along Southwest Drive. It would cost Over Three Million Dollars of right-of-way on Broken Arrow

10) There is no heartache with one's life plans being stolen.

The proposed plan does not steal anything. Yes, it does. There is no compensation for loss of one's life plans, retirement plans, heartache, loss of enjoyment of one's home, and unwanted loss of property and mature landscaping.

11) There is no monetary loss of property values because it is already built and used

There is no proven "monetary loss" in developing a dirt track into a well-designed, paved road that has been previously designated as a roadway, on County plats, for the past 70

years. It has been a 30' right-of-way since 1954 and in 2019 a short section of 50' right-of-way as a local road only, NEVER as a major collector/thoroughfare! Yes, there is a monetary loss when all the property owners and homeowners built their homes knowing that Broken Arrow had a right-of-way of only 30 feet and the purpose was a local road only, not a major collector/thoroughfare. This is common sense.

12) Utility easements are already in place so no monetary outlay by property owners is needed.

No utility easements are needed from existing property owners along Broken Arrow Road. See page 34 of this proposed Southwest Drive Corridor Plan. The quote is listed under 2) (above)

13) Value of Southwest Drive homeowner's and property owner's value will increase with resurfacing the the road and adding some improvements

There is no market data to suggest any increase in value to a property based only on resurfacing a roadway, which is already paved. It is common sense that resurfacing an already developed roadway and adding improvements will increase the desirability and value of the homes and businesses on it. If this is true however, then paving and adding some improvements to Broken Arrow will increase the property values along Broken Arrow as well. It is common sense that if Broken Arrow were developed into a major thoroughfare, the properties near it would decrease in value since these homes are close to the 30' to 50' right-of-way that was designated only as a local road since 1954. These homeowners and property owners want the rural feel. That would be completely gone if it were to become a major collector/thoroughfare.

Reasons NOT to develop Broken Arrow Road as a major Collector/thoroughfare and to leave Southwest Drive as the major Collector/thoroughfare:

page 10 of 20

1) The entrance to Broken Arrow from College Drive is at the base of three hills — making it very difficult for semis, other heavy vehicles and cars to negotiate in ice, snow and blowing dust/snow now, let alone turn into Broken Arrow Road — Southwest Drive is flat. ALL the semis going west from the BNSF railroad tracks use jake brakes/compression brakes coming down the hill to pass Broken Arrow Road. When the BNSF overpass is built on College Drive the steepness will be significantly increased and pose a serious and hazardous condition for vehicles, especially semis, to stop or turn at Broken Arrow Road, as this proposed plan states.

Given the existing shallow slopes of College Drive, An almost 4% grade on

either side is not shallow, especially for a semi going from a stopped position up a short distance to make a turn, particularly in inclement weather. They are using Jake brakes to pass by Broken Arrow now, indicating that it is steep there is no documented proof that there would be an issue. Ask any semi, heavy load or even auto driver. There are numerous roadways throughout Cheyenne that are much steeper than College Drive that do not support this theory. The express purpose of this study is to address the location and issues of the entrance to Southwest Drive from West College Drive. The placement of the Southwest Drive entrance in close proximity to the I-25 interchange and the commercial properties to the west, east and south, pose a public risk as well as a public nuisance due to commercial traffic on and around the Southwest Drive entrance. [L] [SEP]

The entrance to Broken Arrow Road will be designed to address slope and expected traffic flow. Please see Plan and Profile Sheet 6 on page 9 of 448 in the Appendices.

- 2) Slowing or stopping for semis and other heavy vehicles and cars for a potential stop sign or traffic light at the intersection of College Drive and Broken Arrow Road, makes it very difficult for the heavy vehicles to accelerate again, to go up a hill, especially in inclement weather.

Grades less than 4%, which is what College Drive is in both directions from Broken Arrow Road, do not make things “very difficult” for trucks. These types of grades are extremely common at intersections throughout the United States and large trucks navigate them on a daily basis without issues. [L] [SEP] Ask any heavy load vehicle driver. Going from a stopped position, especially in ice and snow conditions, up a 4% grade a short distance to make a 90-degree turn is very difficult. It is even for the driver of an auto vehicle.

- 3) Broken Arrow Road has only a 30’ to 50’ easement (page 32 of 48, Southwest Drive Corridor Plan, 35% Design Plan) [L] [SEP]

There is only approximately 1,200’ (Only?!) of Broken Arrow Road where there would need to be additional right-of-way needed for the 80’. The remaining approximately 4,100’ of Broken Arrow Road would be obtained by the developer of the property. Broken Arrow Road is a public right-of-way, designed in the 1950’s. The need to bring Broken Arrow Road up to current standards has existed for quite some time. At some point, improvements will come to any developing area. It is a 30 feet right-of-way for local use only since platted in 1954, NOT

**an 80 or more feet right-of-way major corridor/thoroughfare.**

4) Has only one utility easement

**Utilities located in the right-of-way do not require easements. No additional easements are needed for utilities.**

5) Cost of adding needed easements would be borne by the residents

**No utility easements are needed from the adjacent property owners of Broken Arrow Road.**

6) Cost of maintaining the utilities would be at the property owner's expense

**Maintenance of utilities, and associated costs, are done by the utility owners and not at the property owner's expense. Page 34 of the Southwest Drive Corridor Plan, Broken Arrow Alternative, states. "Numerous utility easements are in place along Southwest Drive adjacent to the right-of-way per the various plats. Broken Arrow has a utility easement along the eastern side of the right-of-way. Although construction of improvements such as roadway, sidewalks, greenway, etc. may be possible, there is a risk of financial obligation on the public entity rather than the utility owner for repairing and/or replacing these improvements when work is completed on the respective utility. Existing utilities are both over head and buried within the corridor."**

7) Would require taking already landscaped property of current homeowners

**Widening of the existing right-of-way would require acquisition (taking) additional right-of-way once the development of Broken Arrow is initiated, which could be 20-30 years in the future. The new proposed Southwest Drive Corridor Plan, Final Plan has no time frames except for development of Swan Ranch Road which it proposes for 2045. Development of Swan Ranch Road and the proposed over or underpass of the BNSF railroad track to Parsley Blvd, would relieve the impass that occurs on Southwest Drive crossing the railroad tracks to Lincoln. Development of Broken Arrow Road south of College Drive has already begun. So, what are the most recent proposed time frames? Currently, there is only one property on Broken Arrow Road where the needed additional right-of-way would impact existing landscaping.**

8) If the current easements are increased, it would require the taking of our land, destruction of mature landscaping, trees and bushes as well as having current home's front doors ending up right next to the collector/thoroughfare

Ms. Sheehan's house is approximately 90' from the existing right-of-way line. Since No surveying has been done, we do not know where the existing right-of-way line even is, let alone if it is being 90'. The additional right-of-way needed would put the right-of-way (not the roadway) approximately 50' away from the house, but the house would be approximately 70' away from the proposed roadway. Currently Ms. Sheehan's house is approximately 16' away from Horseshoe Road right-of-way and 47' from the road. This is an excellent example of just seeing a line on a piece of paper and knowing nothing of the area nor how the "road" is used. This is practically a private road that separates Dr. Sheehan's home from the small building she owns that was built by her aunt and uncle as the store for the Southcrest Nursery in 1954. No one uses this "road" but Dr. Sheehan who walks the short distance and very occasionally the owner of the home north of the small building. Ms. Sheehan's property is the only residential property with mature landscaping along Broken Arrow Road that would be affected by the proposed widening of the right-of-way.

9) It would require taking already platted (since 1954) lots in Southcrest Heights Subdivision

The Southcrest Subdivision, along Broken Arrow, is solely owned by Kathleen M. Sheehan, the writer of this letter. Widening of the right-of-way would not "take" any lot within the subdivision. It would require unwanted loss of the owner's property and devaluing of the then reduced area of the lots that were platted to be next to a 30' right-of-way local road only since 1954, NOT a major collector/thoroughfare of 80 feet or more.

10) It would place the burden of loss of property, already established landscaping of mature trees and bushes and loss of platted lots on one person, which is unethical and discriminatory.

No confiscation of property is proposed as confiscation is illegal and not a method used in Wyoming. The process of legally obtaining additional rights-of-way to improve public infrastructure can be clarified by the County or City Attorney. It is not unethical or discriminatory when it is in the best interests of the greater good. There are no studies indicating this would be in the "best interest of the greater good." Leaving the already existing major corridor/thoroughfare of Southwest Drive is best for the businesses already established along it, causes no additional problems along Broken Arrow Road, and saves the tax payers many millions of dollars that could be put to better use.

11) It would require heartache and loss of enjoyment of our already established homes and property

Broken Arrow Road is a recorded public thoroughfare in Laramie County, which was recorded

with the original plat in 1954 and then in the replat of the Southcrest Heights Subdivision in 1957. The fact that the road has not been improved to date does not change the fact that the road is a dedicated right-of-way. Again, this has been platted since 1954 as a local road only with a 30' right-of-way, not a major collector/thoroughfare.

12) Loss of property, especially to one resident, and loss of livelihood and retirement plans.

As the city and county grow, development happens all over and affects many people. One cannot expect to live in an area that still has potential for development and not be impacted by improvements, changes to roadways, changes to the surrounding properties, etc. Again, this has been platted since 1954 as a local road only, not a major collector/thoroughfare.

13) Studies show that having a collector/thoroughfare next to and near residential areas decreased property values (Email from Scott Larsen, owner of Benchmark Engineering to Kay Sheehan, April 12, 2024)

Scott Larson's email actually said that studies he has been aware of in the past indicated property values increase with roadways and improved roadways, however, they do decrease if the property is immediately adjacent to an interstate or highway. Broken Arrow is not an interstate or highway.

Developing Broken Arrow Road is many millions of dollars more than it is to leave the existing major corridor/thoroughfare of Southwest Drive with improvements. It is common sense that if homes and vacant lots in a residential area designed since 1954 to be adjacent to a 30' ROW local road only, that if it changed to an 80' ROW with unwanted loss of property and landscaping, increased traffic, including semis, and noise and pollution that the property loses value.

Leaving Southwest Drive as the major corridor does not solve the issue and problems with the intersection with College. While progress can be slow and disappointing at times, the County and City is bound to advance public infrastructure in the best interest of the greater population. There are no studies cited in this plan of ANY issues and problems with the intersection of Southwest Drive and College Drive. In fact, there have been less than two accidents (only 1.8) per year at the intersection according to the 5-year timeframe of 2016 to 2020. (See the Traffic Safety Analysis, page 36 of the Southwest Drive Corridor Plan).

**The Suggestions of what to do.**

The best placements for a collector/thoroughfare and to relieve traffic at the intersection of I-

25 and College Drive is to:

1) Leaving the thoroughfare at Southwest Drive, where the road is already developed with ditches on either side and the homes are already set back from the road, not requiring confiscating peoples land, and simply improving the road surface. This is by far the less expensive plan and best for the reasons listed above and would not take property from those of Us on Broken Arrow Road as well as the platted lots in Southcrest Heights Subdivision,

□ **Please see prior narratives.**

and/or

2) Moving the thoroughfare to the west side of 1-25 either in back of Mac Donals or in front of Mac Donalds where there is already a road going to the Wyoming Department of Transportation Drivers Services and extending it to Lincoln. This is open land and would not disturb any homes - since there are none. Plus, this would keep the semis, trucks, campers and cars on the west side where the Flying J, Quality Inn, semi-truck wash, Mac Donalds, Industrial Park and High Plains Drive is, so they do not have to cross the overpass to access Lincoln. This would reduce congestion now, and in the future as the west side of 1-25 is developed.

It is stated in the Southwest Corridor 35% Design Plan that the railroad crossing at Southwest Drive and Lincoln Way does not have enough room to construct either an over or underpass. Moving the Collector Road/thoroughfare to the west side of 1-25 allows room for either an overpass or underpass at the railroad crossing at Lincoln Way, alleviating wait times of over 30 minutes, as much as eight hours every day.

□ **There are significant grade/terrain issues, floodplain issues, and issues with the I25 and I80 interchange that makes this option financially unfeasible and potentially not physically practical. No study has been done. In addition, this alignment would not allow an overpass or underpass at the railroad and the UP would not grant another crossing at this location. Also, with this alignment, people who want to get to Lincolnway would have to go further out of their way by going west, then north, then back east once they get to Lincoln Way. Therefore, this would not reduce the traffic on Southwest Drive because it would be a more direct/shorter route. This also does not address the issues with the intersection of Southwest Drive to College. Again, according to the Traffic Safety Analysis there were less than two (1.8) crashes, per year in a 5-year study and in the study of “speeding” going north, those vehicles that were “speeding” were only “going less than 5 miles per hour over the 40-mph speed limit.”**



and/or<sup>[LSEP]</sup>

3) Another alternative is to have a separate entrance (should read exit) from 1-25 going north to Love's truck stop and to have a separate entrance to 1-25 from behind Sinclair truck stop for semi's and heavy load vehicles.

**This proposed option is neither financially feasible nor physically practical and does not address the issue at hand. No studies have been done regarding the feasibility of this alternative.**

These proposals alleviate by far the majority of semi, heavy vehicles and cars in the 1-25 and West College and the Southwest Drive thoroughfare and are proposals from those of us who live in this area not just those who see lines on a map.

These proposals not only reduce all traffic in this area but also, do not require seizure of any already established home property, landscaping of mature trees and bushes and already platted residential lots.

**Please see prior narratives.**

"Tom Mason of the MPO stressed that there is no funding for this project at this time." (Page 28 of the Southwest Drive Corridor Plan, 35% Design Plan)

**As stated in the Southwest Drive Corridor Plan document, there is no funding at this time for this project, like many other proposed improvements across Cheyenne. This is a 35% design plan to be used as a reference for many years in the future and can be modified if conditions change.**

**Additional Comments:**<sup>[LSEP]</sup> It is nearly impossible for plans like these to solve the problems and issues while making everyone happy with the proposed solutions. Unfortunately, people are impacted by progress in Cities and Counties. The proposed improvements in the current plan solve the issues with the intersection of Southwest Drive and College, address most, if not all, of the major concerns of the 27 residents along Southwest Drive and minimize the amount of additional right-of-way needed to only one property owner. Cities and Counties sometimes must make the hard decision to impact the few in the best interest of the greater population. **There are NO studies indicating that this proposed plan is "in the best interests of the greater population."**

**This proposed plan not only does not solve anything, but creates more problems and hazards and costs over 13 million dollars, if done last year.**

As stated, numerous times, if the main corridor remains on Southwest Drive, it will not solve the issues and problems with the intersection at College Drive which was the main issue to resolve with this study. According to your own Traffic Safety Analysis, (page 35 in the proposed Southwest Drive Corridor Plan, Final Plan), given the low incidence of accidents and the minimal amount of speeding, there really are no significant issues at the intersection of Southwest Drive and College Drive and if there were any, all this proposed plan does is shift them 600 feet to Broken Arrow creating more issues, solving nothing and costing over 13 million dollars! In addition, long range plans have Broken Arrow extending to the east and tying into West Wallick Road to provide another roadway for the Cosmos development to be able to use as well as other currently undeveloped properties. Broken Arrow Road to the south of College has been established in planning documents as a collector as well. This is a 20' ROW since 1954. There are better options, such as Bridle Bit that has an already existing right-of-way of 80 feet and already has a road, as well as many other options. Wydot knows of no plans to construct an overpass at the intersection of College Drive and the BNSF railroad tracts that would interfere with using Bridle Bit (as Mr, Larsen stated would not be feasible because of a proposed overpass). An overpass has been planned for Swan Lake Road and is not needed on College Drive. This would cost over 24 million dollars if an overpass were put on College Drive to solve a problem that does not exist, because there are not many trains and delays are very minimal to none.

When this road gets developed, there will need to be a signal light at College. If Southwest Drive is used as the collector instead of Broken Arrow, there would need to be a signal at the intersection with College as well and there cannot be two signalized intersections that close together for safety and operational reasons. There are no studies indicating that a stop light is needed at the existing major collector/thoroughfare of Southwest Drive and no studies indicating a need for a stop light at College Drive and south Broken Arrow if it were to be developed. It only makes sense and it is the only way to meet all of the requirements that the one signalized intersection be at Broken Arrow for both the north section of Broken Arrow and the south section. The studies within this proposed Southwest Corridor, Final Plan supports the fact that there are no major problems at the intersection of Southwest Drive and College Drive. Furthermore, it shows that this plan solves nothing and creates more problems at a cost of over 13 million dollars! Broken Arrow Road to the south of College is expected to be constructed in 2024. So how does this relate to your stated 20-30 year timeframe?

This proposed Southwest Drive Corridor Plan, Final Plan has tunnel vision and only looks at two lines on a map seemingly without knowledge of the area. A plan needs to be developed

**with in-put from those of us living in this area which looks at several alternatives. Our involvement needs to be a direct and meaningful involvement, not just an open meeting at the Animal Shelter where MPO lays a plan on us and just takes our questions.**

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We are pleading with the Cheyenne Planning Commission to VOTE NO on this Southwest Corridor 35% Plan and to go back to the drawing board with our proposals and include those of us who live and own property in this area on the MPO and other planning bodies.

### SUMMARY

We are a United Group of Southwest Drive Homeowners and Business owners, Broken Arrow Homeowners and Property owners and Homeowners and Property owners of the 100 acre Southcrest Heights Subdivision. We are COMPLETELY OPPOSED to this proposed Southwest Drive Corridor Alternative Plan, Final Plan. We are pleading with the Cheyenne Planning Commission to VOTE NO on this misguided, hazardous proposal.

The best, and much less expensive plan, is for the 80' ROW Southwest Drive to be improved and left as the major collector/thoroughfare that it is. To the east, the 80' ROW Parsely Blvd., should be improved and left as the collector/thoroughfare that it is. Broken Arrow Road, platted as a 30' ROW local residential street only since 1954 should be left alone.

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Dr. Kay Sheehan

Dr. Kay Sheehan  
2011 Broken Arrow Road  
Cheyenne Wyoming 82007

Dr. Susan Graham  
2008 Bar X Road

Fred Schlechter  
2008 BAR X Rd.

Sam Cow  
1304 Broken Arrow Rd

Gay Russell  
1753 SOUTHWEST

Jinda CONTNEY  
2211 Stirrup Rd.

Vicki Sopr  
1703 Southwest Dr.

Mark Sopr  
1703 Southwest Dr.

Pat Miller  
2011 Broken Arrow Rd.

Chris Pappas Kanoris  
1815 Stirrup Rd

Eileen + George Obsuth  
1807 SOUTHWEST DR

Rick Langa  
1806 Broken Arrow

MARK BRIGGS  
2214 STIRRUP RD.

MILTON BRIGGS  
2214 STIRRUP RD

Naomi Young  
1404 Broken Arrow Rd

Jerry Young  
1404 Broken Arrow Rd

Bob Bailey  
2211-STIRRUP Rd

## Southwest/

from A1

While there have been no applications for development on that property, Noffsinger said his office has prepared these plans as a potential option if development were to increase vehicle traffic in the area.

"Based on all the research and all the analysis that we've done on this project, this is the optimal solution for the future," Noffsinger said. "Again, the future could be 10 to 25 years, unless development precedes that."

The plan would address traffic at the intersection of Southwest Drive and College Drive, which the MPO says is burdened by traffic due to its proximity to the interstate, and develop an alternate route to connect to Lincolnway, rather than through Southwest Drive, which is blocked by train traffic one-third of the time, according to a study from the MPO.

The connection to Lincolnway would develop Swan Ranch Road, which sits on the southern border of the Cheyenne Animal Shelter, from Southwest Drive to Parsley Boulevard via Broken Arrow

Road. Parsley Boulevard would allow connection to the Ames Avenue underpass, avoiding rail traffic.

George Obbsuth, a resident of Southwest Drive, said he doesn't believe this is an optimal solution. To him, it would be cheaper and more efficient to create an underpass or overpass at the intersection of Southwest Drive and Lincolnway to bypass rail traffic.

Noffsinger said that the intersection is too narrow to develop an efficient underpass, and an overpass would require expensive construction and land acquisition and cost between \$30 million and \$50 million. Additionally, it does not address his concerns with potential traffic increases at the intersection of Southwest and College drives.

"We're just planning in advance so if that [development] does happen, the Broken Arrow corridor would probably require signalization at College Drive, which would basically make College Drive function more efficiently, rather than having multiple lights at Southwest Drive and Broken Arrow Road," Noffsinger said. "It's just going to function much better."

Obbsuth and Schlachter also

expressed concern over cost. The initial MPO planning study estimated the updates would cost around \$13 million. With inflation, Obbsuth estimated that may be closer to \$20 million by the time of development.

Noffsinger said that if the plan were to be realized, funds would largely come from the private developers seeking better access to their property.

"They already have legal access, but they would need to improve the access," he said. "So, a lot of the contribution will be coming from the developer."

Noffsinger cited a few other documents that support the development of Broken Arrow Road, including Connect 2045 (a long-range transportation plan) and a 2023 WYDOT study.

A potential shift from Southwest Drive to Broken Arrow Road as a major collector road would also create the possibility to connect to and support traffic from the COSMO project to the southeast. This would require Broken Arrow Road to extend farther south, pass over the railroad and connect with Wallick Road, a county road on the COSMO project's northern

border. COSMO is a large-scale data center project; the company developing it has so far not been identified publicly.

Obbsuth and Schlachter questioned the true intentions of the potential development, saying that, if realized, they would see it as the city putting potential developers and data centers over the concerns of existing residents. Noffsinger said there is no pressing need to pursue this development in the near-term.

Next week, the plan will come before the Cheyenne Planning Commission for approval and will then seek certification from the City Council, if approved. The MPO will do the same for Laramie County, bringing it before the county planning commission and county commissioners.

If approved on both levels, it will be up to governmental entities to decide if they want to move forward with design and then construction of the project.

**Noah Zahn** is the Wyoming Tribune Eagle's local government/business reporter. He can be reached at 307-633-3128 or [nzahn@wyomingnews.com](mailto:nzahn@wyomingnews.com). Follow him on X @NoahZahnn.

## Southwest/

from A1

While there have been no applications for development on that property, Noffsinger said his office has prepared these plans as a potential option if development were to increase vehicle traffic in the area.

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The plan would address traffic at the intersection of Southwest Drive and College Drive, which the MPO says is burdened by traffic due to its proximity to the interstate, and develop an alternate route to connect to Lincolnway, rather than through Southwest Drive, which is blocked by train traffic one-third of the time, according to a study from the MPO.

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## LETTERS TO THE EDITOR

**Why is gambling legal in Wyoming, but marijuana isn't?**

So, let me get this straight. Marijuana is not legal because it could be addictive, but we have statewide gambling because it's way more addictive.

Give me a break.

Steven E. Wuerth  
Cheyenne

**We have reasons to be angry, but we can't give up on civil dialogue**

Regarding "McDaniel: I'm angry because the Wyoming in which I grew up no longer exists," published May 4:

Most of us, all along the political spectrum, have plenty of reasons to be angry with the current state of affairs. Anger can be motivating. It can also lead to disengagement or destructive confrontation.

Let's not, in any case, give up on "civil dialogue" with people like this, wherever they might be. In a pluralistic society as diverse and complex as ours, we have to keep trying to understand each other, find common ground and work together.

There are examples to draw inspiration from — maybe the encounter between George Wallace and Shirley Chisholm? Braver Angels workshops teach skills that can help.

Tom Brantley  
Cheyenne

**Mr. Melia and others wrong to say LCSD1 libraries contain 'lurid stories'**

In his 5/2/24 letter, Mr. Melia says "sexually lurid stories are not cautionary tales." I agree with Mr. Melia, but he is making the same mistake that many of the commenters at Laramie County School District 1 school board meetings make: that LCSD1 libraries contain "lurid stories."

None of the books acquired by the certified school librarians are lurid in content, obscene in content, nor pornographic in content, as has often been implied by Mr. Melia and others.

Google the "Miller Test," and then go to justice.gov online, and you will see that none of the books currently on the list of LCSD1 "sexually explicit" books meets the standards of obscenity, luridness or pornography, as some people in the community continue to insist.

The site states, "The standard of what is harmful to minors may differ from the standard applied to adults. Harmful materials for minors include any communication consisting of nudity, sex or excretion that (i) appeals to the prurient interest of minors, (ii) is patently offensive to prevailing standards in the adult community with respect to what is suitable material for minors, (iii) and lacks serious

**To submit a letter**

The Wyoming Tribune Eagle welcomes opinions from readers on topics of public interest. Because of space considerations, letters should be no more than 350 words in length. Letters that promote a commercial product, those containing libelous material or personal attacks on individuals, those critical of local businesses and those containing comments in bad taste will not be published. Letters must be signed and should contain the writer's address. A telephone number, which will not be published, should be included for verification purposes.

**Wyoming Tribune Eagle**

**Mail:** 702 W. Lincolnway, Cheyenne, WY 82001

**Email:** opinion@wyomingnews.com

literary, artistic, political, or scientific value for minors."

Mr. Melia states, "one might just as well obtain subscriptions to Playboy (K-6), Penthouse (7-9) and Hustler (10-12), as these publications have 'excellent articles' and 'appropriate sexual instructions' that could be seen by the social/political Left as having social/educational/sexually redeeming qualities..."

Mr. Melia, I take umbrage — first, that you are making this a left/right political issue. There are many on the right who also believe in the First Amendment rights of students. Second, you know that LCSD1-certified librarians would never have Playboy, Penthouse or Hustler magazines in their libraries, as they do meet the Miller Test and would not be appropriate.

Carol Mathia  
Cheyenne

**WICC works to increase civic engagement by encouraging youth to vote**

In April and May, at high school sites, Wyoming Independent Citizens Coalition (WICC) partnered with Laramie County School District 1 administrators, social studies teachers, social studies coordinator, high school staffs, parents and senior high students. A total of 110 seniors made a commitment to vote and to cast their votes in the 2024 elections.

Our hope is that going to young voters' sites will increase the number of potential voters who are typically underrepresented as a group. It is refreshing and inspiring to hear the reasons why these seniors are voting: "I have the power and responsibility to do so," "It is important to give my opinion for our county and state," "I want a voice in major elections, and my voice needs to be heard," "I feel it is necessary to decide how our state and country is run," "I represent myself within our country as a service member," "I want to fulfill my

duty as an American citizen," "Having your voice heard in government is important," "I am of legal age, and I care for my country," "I want to have a say in the United States," and "I am an American and I am a Wyoming/Cheyenne citizen."

WICC events focus on underserved populations and assisting them through civic engagement, education and advocacy.

This joint effort of working together is one example of involving youth in civic engagement in our community.

Carla Gregorio, WICC President  
Cheyenne

**Road project is a waste of millions of Cheyenne taxpayers' dollars**

The city of Cheyenne recently made public a plan that local citizens are quite vocal in opposition to, stating, along other things, that the plan is unwanted, unnecessary and damaging.

Original cost estimates were approximately \$10 million; however, since then, construction costs have skyrocketed.

The plan is to divert traffic from an existing paved road, blockade this existing road, and turn a dirt trail into a major thoroughfare, complete with sidewalks and bike lanes, thus forcing traffic onto the unneeded and unwanted road.

The issue is, there currently exists a paved road connecting College Drive to West Lincolnway, which is Southwest Drive. The city is proposing the creation of a new road a few hundred feet east that would run parallel to the existing Southwest Drive.

At this time, the proposed Broken Arrow Road is a dirt trail that only goes part way to West Lincolnway and would cost tens of millions of taxpayer dollars to complete.

There have been no complaints about the intersection of College Drive and Southwest Drive. The only grievances spoken about are the poor condition of the road and the delays throughout the day and night at the railroad crossing at West Lincolnway.

The proposed new road connects to Southwest Drive just before the railroad crossing, and does not solve that problem at all. The city proposes placing "concrete barriers or possibly berms..." at the south and north ends of Southwest Drive, forcing all traffic to use the planned Broken Arrow Road.

Locals state this is costly, poorly planned, not needed or necessary or wanted. What is the motivation for this outstandingly bad plan?

An estimated \$20 million for what? The motivation behind this is still unclear at this writing, but has those affected wondering.

George Obsuth  
Cheyenne

## LETTERS TO THE EDITOR

**Plan to spend \$13 million on Broken Arrow Road is a wasteful mistake**

Who benefits from Cheyenne's \$116,000 engineering proposal that doesn't fix a longstanding troublesome intersection?

Introducing "The Southwest Drive Corridor Plan," a still unapproved, unfunded, "Build Back Better" proposal focused on the main intersections of Southwest Drive at both its north and south ends, as well as the road itself. After recent public pushback, the plan's name was changed to include Broken Arrow Road. Why's that?

Anyone who's been held up by trains on the four-track intersection of West Lincolnway and Southwest Drive could've easily confirmed what the study showed: In any 24-hour period, it's blocked for up to a total of eight hours. The plan's almost 500 pages focuses south and east of this daily boondoggle by shifting both our attention and the traffic on Southwest Drive 635 feet to the east to Broken Arrow Road — a one-lane dirt road that parallels Southwest Drive and only intersects West College Drive.

Pertinent questions about this \$13 million-plus plan include:

Since even in the plan this one-lane dirt road will not intersect West Lincolnway, how is its pending approval by city and county elected officials a possible solution to the daily occurrence of the train-blocked intersection? It's not. After already spending \$116,000 on the

**To submit a letter**

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proposal, a further question to ask is, who will benefit from \$13 million-plus additional public money needed to develop it?

Project Cosmo, Meta's almost 800,000-square-foot data center, is under construction south of West College Drive. This booming business will benefit from the development of South Broken Arrow Road. But who benefits by developing North Broken Arrow Road, especially when much-needed and long-overdue improvements to Southwest Drive were studied and are estimated at about half of the \$13 million-plus total cost?

Apparently the total \$13 million-plus

eastward shift will lessen the fewer than two accidents per year (!) at the West College Drive intersection, while drivers on the north end who are stuck at the four-track intersection on West Lincolnway and Southwest Drive will continue to wait.

Fix Southwest Drive, and don't block it. Leave North Broken Arrow Road alone.

**Susan Graham**  
Cheyenne

**Unlike cartoon's comparison, republic and democracy are very different**

I saw the recent editorial cartoon comparison between bison/buffalo and republic/democracy. I had learned in school as a kid that they are different.

A republic is based upon a constitution that is the basis of laws in the country. Example, in a republic, murder is illegal, period. Because a democracy is based on the will of the majority, murder will become legal if 51% of the people say so.

So they are not like the bison/buffalo comparison; it's like night/day. Strong nations function under the republic because basic rights are written, for lack of a better phrase, in stone. Solid and firm.

A democracy is written in sand. It flows and changes with the tide/mood of the people.

**Paul Ragland**  
Cheyenne



# APPENDIX VII

## STEERING COMMITTEE MEETING MINUTES



# MEETING MINUTES - SOUTHWEST DRIVE CORRIDOR STUDY

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## MINUTES ♦ STEERING COMMITTEE MEETING #1

June 8, 2023  
Start Time: 10:00 am  
End Time: 11:30 am  
City Center Building  
1920 Thomas Avenue  
Cheyenne, WY 82001  
*1<sup>st</sup> Floor Conference Room*

### Order of Business

#### Call to Order

Julie Goode, of BenchMark Engineers, P.C. called to order the first meeting of the Steering Committee for the Southwest Drive Corridor Plan at 10 am on June 8, 2023, in the 1<sup>st</sup> floor conference room of 1920 Thomas Avenue, Cheyenne, WY 82001

#### Roll Call

Roll call was conducted via a sign-in sheet for this first meeting of the Steering Committee.

- Tom Mason – MPO
- Ginni Stevens - MPO
- Chris Yaney - MPO
- Charles Bloom - City of Cheyenne
- Adele Bartel - City of Cheyenne
- Bryce Dorr, P.E. - BOPU
- David Cole, P.E. - BOPU
- Julianne Monahan - WYDOT
- Wayne Shenefelt, P.E. - WYDOT
- Molly Bennett - Laramie County
- Justin Arnold - Laramie County
- Scott Larson - BenchMark Engineers
- Julie Goode - BenchMark Engineers
- Lyle DeVries, P.E. - Felsburg Holt & Ullevig - remote
- Faith Kelley, E.I. - Felsburg Holt & Ullevig - remote
- Gene MacDonald, P.E. – GLM Design

#### Approval of Minutes

This was the first meeting of this committee; therefore, there were no prior minutes to approve.

#### Open Issues

None to date.

# MEETING MINUTES - SOUTHWEST DRIVE CORRIDOR STUDY

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## Meeting Recap

1. Julie Goode of BenchMark Engineers, P.C. welcomed all participants and presented a PowerPoint summary of the Southwest Drive Corridor Plan Study. Items addressed are as follows:
  - a. Scope of the study
    - i. Identify corridor needs
    - ii. Address traffic related needs
      1. Speed
      2. Intersections
      3. Commercial vehicle use
      4. Bridge heights
      5. Railroad congestion
2. Progress to date
  - a. Reviews of bridges, utilities, train counts and traffic are complete
3. Floodplain discussed by Gene MacDonald of GLM Design.
  - a. County or City designation will determine how drainage is addressed
    - i. Borrow issues are easier to address than storm drains
    - ii. Inverts and design point catchments
      1. North of I-80 - water that's backed up by the Burlington Northern culvert
      2. South of I-80 – Clear Creek; care to be taken not to impact negatively
  - b. A complete study is not in the scope of this project
4. Multi-modal traffic study discussion by Lyle DeVries and Faith Kelley of FHU
  - a. Future greenway extension to the corridor will necessitate installation of sidewalks, crosswalks and bike paths
  - b. Current uses do not indicate a need for multimodal infrastructure
  - c. Speeds appear to conform with posted speed limit signs
  - d. Vehicle accidents occurred at West Lincolnway, West College Drive and North American road, with West College boasting the most accidents, nine in five years and West Lincolnway registering six accidents in five years.
  - e. Business location and associated congestion possibly contribute to vehicle accidents at West College Drive.
  - f. Intersections reviewed for traffic volume indicate Level C or better; no operational deficiencies.
  - g. Level of Service F at the southbound, left turn movement, at the intersection of Southwest Drive with College Drive
5. Bridges discussion
  - a. Trucks hit the bridges – height wise
  - b. Bridges to be replaced in the I25/I80 Interchange Project
  - c. Project completion time unknown

## MEETING MINUTES - SOUTHWEST DRIVE CORRIDOR STUDY

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### 6. Broken Arrow Road Discussion

- a. Suggestion to use Broken Arrow as the major collector in order to move the intersection with West College Drive further east and away from the I-25 interchange
- b. Discussion about making Broken Arrow a major collector south of I-80
- c. Suggestion to not present the option at the Public Open House
- d. Suggestion to present as an option at the Public Open House
- e. Tom Mason requested a display board for the Public Open House showing the Broken Arrow alternate route as a viable option.
  - i. Using Broken Arrow as a Major Collector would put Southwest Drive into the minor collector category
  - ii. Discussion on access for residents and businesses should Broken Arrow be the major collector
  - iii. Consensus on asking for public input at the Open House
- f. Discussion of future residential development along Broken Arrow Road

### 7. Rural vs. Urban

- a. A decision needs to be made as to how the corridor is designated; either rural or urban.
- b. Consensus that if Broken Arrow is the major collector, the designation would be urban with multimodal infrastructure and Southwest Drive would remain rural without multimodal infrastructure
- c. Suggestion to duplicate Allison Road development with a mixture of Urban and Rural
- d. Create a board for the Public Open House describing Level of Service information from the College Drive Study, which is still a draft
  - i. Ginni Stevens with the MPO indicated she would send Julie Goode with BME a link to review the study

### 8. Annexation & Utilities

- a. Discussion of resident's concerns about being forced to annex
- b. If septic fails currently, residents are required to connect to public sewer, which runs down the middle of Southwest Drive currently
- c. Water connection is available north of I-80
- d. Discussion of future water lines being looped to the corridor
- e. East/West water connection from Parsley Drive discussed
- f. Request to expand the online survey to included questions about public utilities and drainage issues

### 9. Railroad Crossing at West Lincolnway

- a. Number of trains per day
- b. Wait time at the crossing
- c. Accidents at the crossing
- d. Contact UP about total time road is blocked due to rail traffic
- e. Suggestion of a ramp at West Lincolnway to avoid the wait at the RR crossing
- f. Suggestion for a train ahead warning sign

# MEETING MINUTES - SOUTHWEST DRIVE CORRIDOR STUDY

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## 10. East West Connection to Parsley Road

- a. Discussion about feasibility
- b. Discussion about Burlington Northern allowing a tunnel or bridge
- c. Questions about the viability of the Southwest Drive Corridor Plan if an East/West connection is not feasible
- d. Request for recommendation in order to move forward

## 11. Discussion of current survey results

- a. Sidewalks – Yes
- b. Bicycles – No
- c. Trains are a problem
- d. Speeds are a problem
- e. Improve Southwest Drive – 3 No – 3 Yes

## 12. Date and location of Public meeting reiterated

- a. June 21, 2023  
5 pm – 6:30 pm  
Cheyenne Animal Shelter  
800 Southwest Drive  
Cheyenne, Wyoming 82007

## **Next Meeting Schedule**

Tentatively Scheduled For Mid-July

Invites will be sent, via email, two weeks before the next scheduled Steering Committee Meeting

## **Adjournment**

# MEETING MINUTES - SOUTHWEST DRIVE CORRIDOR STUDY

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## MINUTES ♦ STEERING COMMITTEE MEETING #2

August 16, 2023  
Start Time: 10:00 am  
End Time: 11:18 am  
City Center Building  
1920 Thomas Avenue  
Cheyenne, WY 82001  
*1<sup>st</sup> Floor Conference Room*

### Order of Business

#### Call to Order

Julie Goode, of BenchMark Engineers, P.C. called to order the second meeting of the Steering Committee for the Southwest Drive Corridor Plan at 10 am on August 16, 2023, in the 1<sup>st</sup> floor conference room of 1920 Thomas Avenue, Cheyenne, WY 82001.

#### Roll Call

Roll call was conducted via a sign-in sheet for this first meeting of the Steering Committee.

- Jeff Noffsinger – MPO
- Ginni Stevens - MPO
- Chris Yaney - MPO
- Adele Bartel - City of Cheyenne (Remote)
- David Cole, P.E. - BOPU
- Molly Bennett - Laramie County
- Scott Larson - BenchMark Engineers
- Julie Goode - BenchMark Engineers
- Lyle DeVries, P.E. - Felsburg Holt & Ullevig – (Remote)
- Faith Kelley, E.I. - Felsburg Holt & Ullevig – (Remote)

#### Meeting Recap

- I. Julie Goode of BenchMark Engineers, P.C. welcomed all participants and presented a PowerPoint summary of the Southwest Drive Corridor Plan Study. Items addressed are as follows:
  - a. Public Meeting Survey Results
    - i. Concerns Per Surveys (54 Surveys; includes online and hard copy)
      1. Railroad Crossing Delays
      2. Commercial Truck Traffic
      3. Pedestrian Facilities
      4. Traffic In General
      5. Intersection Improvements

## MEETING MINUTES - SOUTHWEST DRIVE CORRIDOR STUDY

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2. Chris Yaney, with the MPO, performed a train count for seven days at Southwest Drive and West Lincolnway; the results showed the following:
  - a. Fridays, 60 Trains, 47 Closures, **8 Total Hours Closed**
  - b. Thursdays, 51 Trains, 41 Closures, **7 Total Hours Closed**
  - c. Saturday, 47 Trains, 36 Closures, **10 Total Hours Closed**
  - d. Wednesday, 48 Trains, 44 Closures, **7+ Total Hours Closed**
  - e. Sunday, 47 Trains, 39 Closures, **7.5 Total Hours Closed**
  - f. Tuesday, 44 Trains, 39 Closures, **7.50 Total Hours Closed**
  - g. Monday, 41 Trains, 36 Closures, **5.50 Total Hours Closed**
3. Julie Goode spoke with Nathan Anderson, Sr. Director, Public Affairs, Union Pacific for WY, CO, MT, ID, UT, per Julie Monahan's suggestion. Mr. Anderson stated that train counts have increased in the past year and will continue to increase substantially in the future. When asked if a representative from UP would attend a public meeting, Mr. Anderson declined.
4. Areas of Concern discussion by Lyle DeVries and Faith Kelley of FHU
  - a. College Dr/Southwest Dr Intersection close access spacing.
    - i. Right in, right out should improve spacing issues.
  - b. Road Network Connections and Improvements: Local Connectivity
  - c. Lincolnway/Southwest Dr Intersection: Railroad Crossing
  - d. Southwest Drive Typical Section:
    - i. Pavement Condition
    - ii. Pedestrian And Bicyclist Accommodations
    - iii. Rerouted Truck Traffic Due To Weather Related Closure On I-25
5. Alternate Route discussion
  - a. N/S: Broken Arrow
    - i. Broken Arrow is the best choice for an alternate N/S route. This would need to be built out by developers in the future.
      - I. A cross section of the Broken Arrow route will be included in the 35% design drawings.
  - b. N/S: Bridle Bit
  - c. E/W: Woodenshoe
  - d. E/W Swan Ranch
    - i. This would be developer built and City funded. To be built in phases.
6. Traffic Lights discussion per the traffic study by Kimley-Horn
  - a. Light at Southwest Drive and West College Drive
  - b. Light at Broken Arrow and West College Drive
7. Rural vs. Urban
  - a. A decision was made by the committee members who were present that the corridor be treated as a mix between rural and urban with 8' multi-use sidewalks on the east side and none on the west side. The committee members requested additional input from the members who were not present.

# MEETING MINUTES - SOUTHWEST DRIVE CORRIDOR STUDY

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- b. Concerns about width under I-80 for sidewalk.
  - c. Southwest Drive would remain 2-lanes with appropriate center turn lanes where needed.
  - d. Discussion about closing off Southwest Drive just north of Arby's and Sinclair and using Broken Arrow to Woodenshoe as the residential access to the corridor.
8. Railroad Crossing at West Lincolnway
- a. A cut across to Parsley Road was discussed as an alternative to waiting at the RR crossing.
  - b. A northern cut across to Jefferson Road was discussed as an alternative.
    - i. Discussion of a bridge over the RR at the southern option or tunneling under at the northern option.
  - c. The cut across may be cost prohibitive and may be part of a future development.
    - i. Cost benefit analysis of over versus under.
    - ii. Once traffic counts increase enough to make it financially feasible.
  - d. The current remedy would be warning signs that the gates are down.
9. RFP only asked for one connector, which is Swan Ranch.
10. Include water & sewer in 35% design plans.
11. Next Steps
- a. Screen Solutions and Select Preferred Options
    - i. College Dr/Southwest Dr intersection
    - ii. Lincolnway/Southwest Dr intersection
    - iii. Southwest Drive Typical Section
    - iv. Network connections
  - b. Hold 2nd Public Meeting
    - i. Schedule and hold the 2<sup>nd</sup> public meeting to present a draft plan.
      - I. Suggestion to find a larger meeting place.
        - a. Kiwanis Building
        - b. Hotel Meeting Room
  - c. Complete 35% Designs
    - i. Produce 35% design plans that follow the recommendations of the Steering Committee.
  - d. Additional Committee Meetings
    - i. Present final 35% plan design to the additional committees: Policy, Technical, Citizen

## Next Meeting Schedule

No meeting scheduled at this time.

## Adjournment



# MEETING MINUTES - SOUTHWEST DRIVE CORRIDOR STUDY

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## MINUTES ♦ STEERING COMMITTEE MEETING #3

October 25, 2023  
Start Time: 2:00 pm  
End Time: 3:20 pm  
City of Cheyenne Building  
2101 O'Neil Avenue  
Cheyenne, WY 82001  
Conference Room #208

### Order of Business

#### Call to Order

Julie Goode, of BenchMark Engineers, P.C. called to order the second meeting of the Steering Committee for the Southwest Drive Corridor Plan at 2:00 pm on October 25, 2023, in conference room 208 of 2101 O'Neil Avenue, Cheyenne, WY 82001.

#### Roll Call

Roll call was conducted via a sign-in sheet for this third meeting of the Steering Committee.

- Jeff Noffsinger – MPO
- Ginni Stevens – MPO (Virtual)
- Chris Yaney - MPO
- Juli Monahan – WYDOT (Virtual)
- Wayne Shenefelt - WYDOT
- Bryce Dorr - BOPU
- Justin Arnold - Laramie County Planning
- Scott Larson - BenchMark Engineers
- Julie Goode - BenchMark Engineers
- Tyler Menger - BenchMark Engineers
- Faith Burkey, E.I. - Felsburg Holt & Ullevig – (Virtual)

#### Meeting Recap

- I. Julie Goode of BenchMark Engineers, P.C. welcomed all participants and presented a PowerPoint summary of the Southwest Drive Corridor Plan Study. Items addressed are as follows:
2. FHU – Faith Burkey
  - a. The four key areas:
    - i. Future roadway network
    - ii. Intersection of College Drive with Southwest Drive
    - iii. Southwest Drive typical section
    - iv. Railroad crossing

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- b. Decision on for the future roadway network, improving Broken Arrow Road to collector standards and replacing Southwest Drive, which provides better spacing away from I-25 and is better for the future connectivity South of College Drive as well.
  - c. Broken Arrow would extend South of College Drive as a local access in the short term. This is also how it's shown in the 2045 model, but in the long term that would connect down to Wallick Road.
  - d. For the Southwest Drive, College Drive intersection, we were planning on limiting the movements at the commercial access.
  - e. Planned future Swan Ranch Road connection, which goes to Parsley Blvd.
  - f. Right-in and Right-out per the WYDOT Study was discussed. But because the southern truck stop, Love's Travel Stop, doesn't have any other accesses for the purpose of our study, we were only showing the north access is being right-in, right-out and then those left turners are able to use the access that's on Southwest Drive.
  - g. Regarding the Southwest Drive typical section, because we would be improving Broken Arrow, we would be blocking off Southwest Drive just South of the Arby's access and also to the north, south of where Broken Arrow would tie back in.
  - h. We're suggesting adding the railroad crossing occupancy advanced warning sign as the intersection cannot be improved.
  - i. Short-term alternatives would include improvements to Southwest Drive and Broken Arrow Road; Swan Ranch Road is not included in the short-term plan.
  - j. Two way stop control with the exception of Lincoln Way and Southwest Drive which is already signalized.
  - k. Broken Arrow was assumed to be a two-lane roadway with a center left turn lane for this analysis as well.
  - l. The long-term scenario, which is 2045, has all the same improvements as the preceding 20–30-year analysis with Swan Ranch Road added.
  - m. None of these intersections are anticipated to warrant signalization from the traffic volumes that we foresee.
  - n. The WYDOT study did originally suggest signalizing the intersection of College Drive and Broken Arrow, if that is improved, but our analysis shows that signalization is not going to be needed and everything should operate acceptably.
3. Scott Larson talked about the following, based on public comments:
- a. Southwest drive will be closed off just south of the Broken Arrow/Southwest Drive intersection and immediately north of the Arby's restaurant/Sinclair Truck Stop to reduce or eliminate commercial traffic on Southwest Drive, keeping Southwest Drive a rural road.
  - b. Three roadways would connect Southwest Drive to Broken Arrow, Woodenshoe Drive, Lindblom Court and eventually, Swan Ranch Road.
  - c. Sidewalk installation on the east side of Southwest Drive to tie into Broken Arrow via the three east/west streets.
  - d. The main roadway, which will become the collector, is Broken Arrow and the northern part of Southwest Drive.
  - e. UDC Guidelines were followed with minor exceptions.

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- f. On-street parking and on-street bicycle lanes were discussed as a good option.
  - g. Bike lanes on the bridge overpasses at the railroad and I-25; Swan Ranch Road.
  - h. Widening the shoulder under the I-80 overpass was discussed.
  - i. The existing Box-culvert was discussed as an impairment to the widened shoulder.
  - j. Handrails would be necessary at the Box-culvert due to location of sidewalk.
  - k. Turn lanes to the industrial park are recommended.
  - l. Future development would determine the need for turn lanes.
  - m. A bridge over the Burlington Northern train tracks, for Swan Ranch was discussed.
  - n. Greenway connection to the area east of Parsley Boulevard was discussed as a future need for the City of Cheyenne.
  - o. The Swan Ranch connection across Southwest Drive does not line up; therefore, there would be a curve in the road at Swan Ranch and Southwest Drive.
  - p. The Southwest Drive ROW is 80'; Broken Arrow varies at 30', 50' and 60'.
  - q. Keep the existing western ROW on Broken Arrow and obtain additional ROW from landowners to the east.
  - r. Emergency vehicle access to Southwest Drive was discussed; cul-de-sacs would address any concerns from the fire department.
  - s. The two Southwest Drive terminus would be earth berms, which would block the line of sight to headlights coming north or south.
  - t. Change Southwest Drive to a local road classification and Broken Arrow to a major collector classification.
  - u. WYDOT railroad bridge on College Drive at Burlington Northern RR, in the next ten years discussed.
  - v. Discussion of an over or under railroad crossing on Swan Ranch Road.
  - w. Discussion of acquisition of additional ROW from Kay Sheenhan and her objections to additional ROW being taken from her land.
  - x. Short-term plan is to overlay Southwest Drive due to extensive wear.
  - y. Mid-term is to improve Broken Arrow.
  - z. Long-term is to improve Swan Ranch Road.
4. Julie Goode discussed the pricing for renting a room at a local hotel for the next public meeting. Jeffery Noffsinger said the meeting should be at the Cheyenne Animal Shelter since there is no charge.
5. Next Steps
- a. Schedule second Public Meeting for November 15, 2023.
    - i. Suggested one additional Steering Committee meeting.
  - b. Complete 35% Designs
    - i. Produce 35% design plans that follow the recommendations of the Steering Committee.
  - c. Additional Committee Meetings
    - i. Present final 35% plan design to the additional committees: Policy, Technical, Citizen

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### **Next Meeting Schedule**

No meeting scheduled at this time.

### **Adjournment**