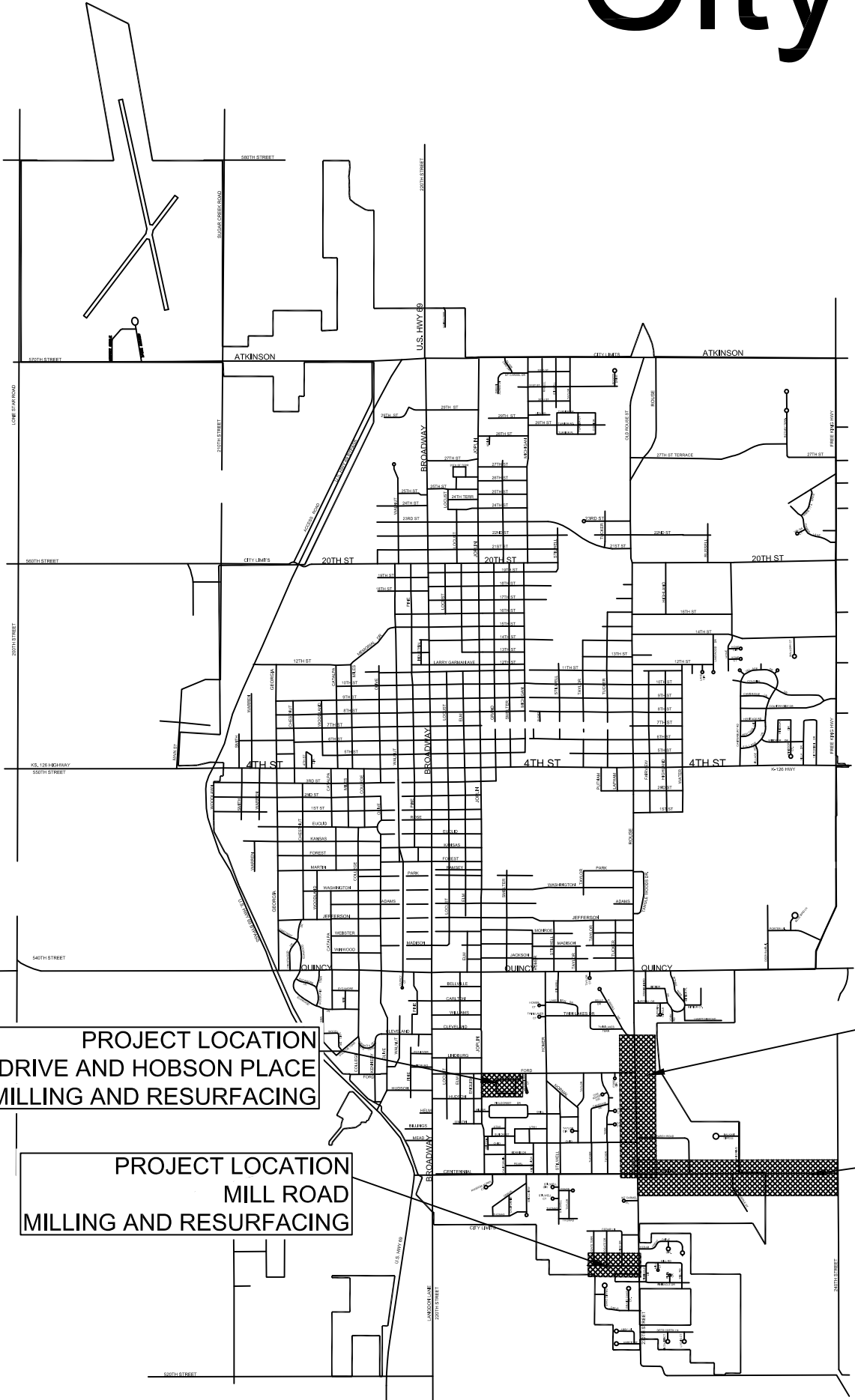


# City of Pittsburg

## 2017 Street Improvements



### INDEX OF SHEETS

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3.	Typical Sections
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9.-14.	Pavement Marking Quantities
15.-21.	Traffic Control

PROJECT LOCATION  
HOBSON DRIVE AND HOBSON PLACE  
ASPHALT MILLING AND RESURFACING

PROJECT LOCATION  
MILL ROAD  
MILLING AND RESURFACING

PROJECT LOCATION  
ROUSE STREET ASPHALT  
MILLING AND RESURFACING

PROJECT LOCATION  
CENTENNIAL DRIVE ASPHALT  
MILLING AND RESURFACING

### PUBLIC OFFICIALS

MAYOR	John Ketterman
PRESIDENT OF THE BOARD	Michael Gray
CITY COUNSEL MEMBERS	Chuck Munsell
	Patrick O'Bryan
	Jeremy Johnson
CITY MANAGER	Daron Hall
CITY CLERK	Tammy Nagel
CITY ATTORNEY	Henry Menghini
DIRECTOR OF PUBLIC WORKS	Cameron Alden



GENERAL NOTES

1.

All adjacent buildings, structures, parking lots, drives, street pavements, utility lines, utility structures and appurtenances other than shown for replacement, shall be protected from damage during construction of the project. Items damaged beyond the limits shown on the drawings shall be removed and replaced by the contractor at no additional expense to the owner.
2.

The contractor shall promptly, and before such conditions are disturbed, notify the engineer if conditions on the site differ from those shown on the plans.
3.

The contractor will be required to provide a minimum of seventy-two (72) hours advanced notice to each of the following utility owners prior to the beginning of construction and request that any existing lines be located and flagged. Any utility damaged by the contractor or their subcontractors shall be repaired or replaced at no cost to the owner. The contractor shall coordinate work with contractors or utility companies and other agencies to minimize inconvenience to the public. Kansas One-Call: (800) 344-7233 OR **811**
- EMERGENCY (POLICE, FIRE, AMBULANCE): 911

The contractor must notify the following in case of an emergency: Owners Representative: (620) 231-4170
4.

Full depth saw cuts of existing pavement shall be provided at locations where proposed construction abuts an existing pavement for which partial removal of that pavement is required. Sawed joints to facilitate removal within three (3) feet of existing joints will not be permitted and for such instances the limits of removal shall extend to the existing joint. Such saw cuts will not be paid for directly, but will be considered subsidiary.
5.

All dowel bars shall be epoxy coated for use within type III concrete.
6.

All disposal sites shall be approved of by The City of Pittsburg and Kansas Dept. of Health and Environment. Material either stockpiled or disposed of within a flood plain will require a Kansas State Board of Agriculture permit. Any material dumped in waters of the United States or wetlands is subject to U.S. Corps of Engineers permitting regulations.
7.

The contractor shall comply with all applicable safety regulations. Insuring the safety of the public shall be the contractor's responsibility. Any workers present within street right of ways of the City of Pittsburg will be required to wear a safety vest meeting ANSI Class II requirements.
8.

Traffic control on city streets shall be per MUTCD requirements and the details of the plans.
9.

The contractor will be required to remove all debris piles, millings, soil, or trash within the same day they are deposited including any tracking of these materials on areas outside of the project.

CONTRACTOR SHALL CALL FOR UTILITY LOCATES PRIOR TO ANY EXCAVATION

Pittsburg, Kansas Area Underground Utility Owners

Water, Sewer, Communications:

City of Pittsburg Public Utilities Department

303 Memorial Drive Pittsburg, KS 66762

Phone: (620) 240-5126

Gas:

Kansas Gas Service

3008 N. Joplin Street Pittsburg, KS 66762

Phone: (620) 230-8113

Electric Power:

Westar Energy

1909 S. Olive Street Pittsburg, KS 66762

Phone: (620) 235-2516

Telephone:

AT&T

23 W. 1<sup>st</sup> Street Fort Scott, KS 66701

Phone: (620) 223-9942

Cable Television:

Cox Communications

2802 N. Joplin Street Pittsburg, KS 66762

Phone: (620) 231-3360

Other Communications:

Craw-Kan Telephone Cooperative

200 N. Ozark Street Girard, KS 66743

Phone: (620) 724-8235

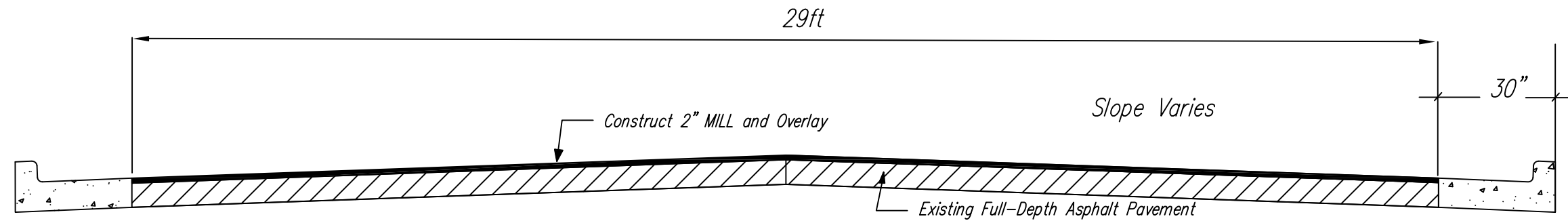
Optic Communications

224 S. Kansas Avenue

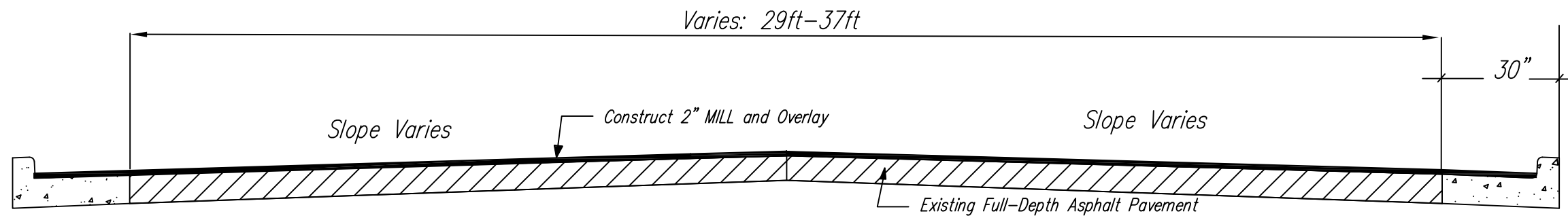
Columbus, KS 66725Phone: (620) 429-3132



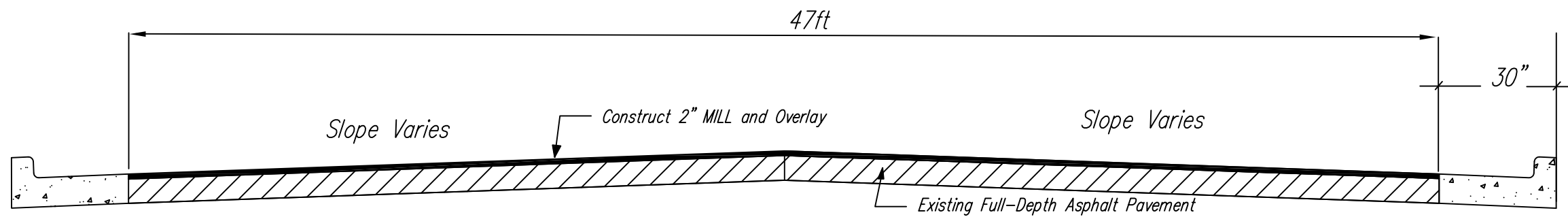
No.	Revision	By	Date
GENERAL NOTES AND MATERIAL QUANTITIES			
2017 STREET IMPROVEMENTS PROGRAM CITY OF PITTSBURG, KANSAS			
Designed by JJR		Sht. 2 of 21	
		Date	July 2017



Typical Section – Mill Road



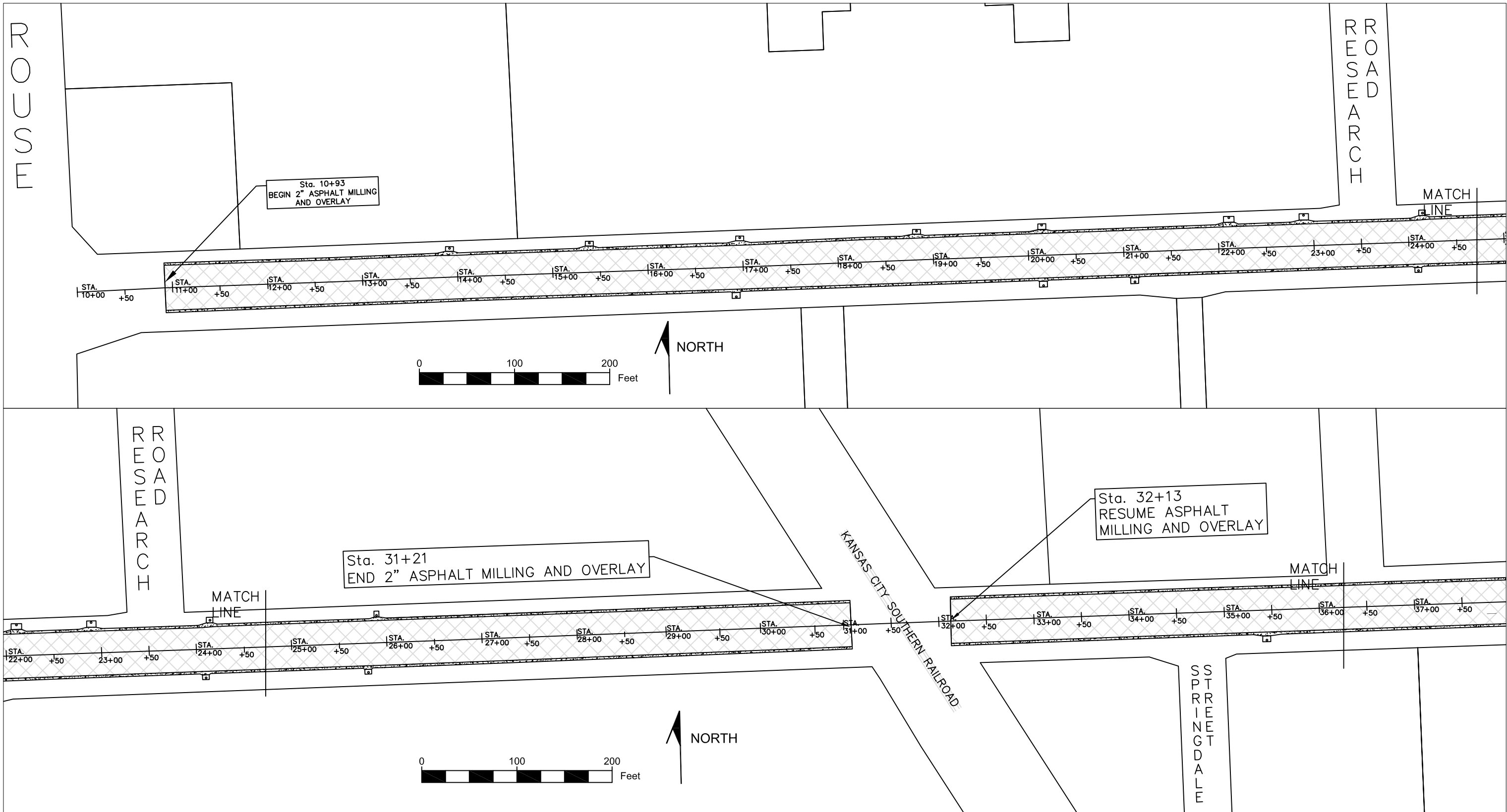
Typical Section – Hobson, Hobson Drive, Hobson Place



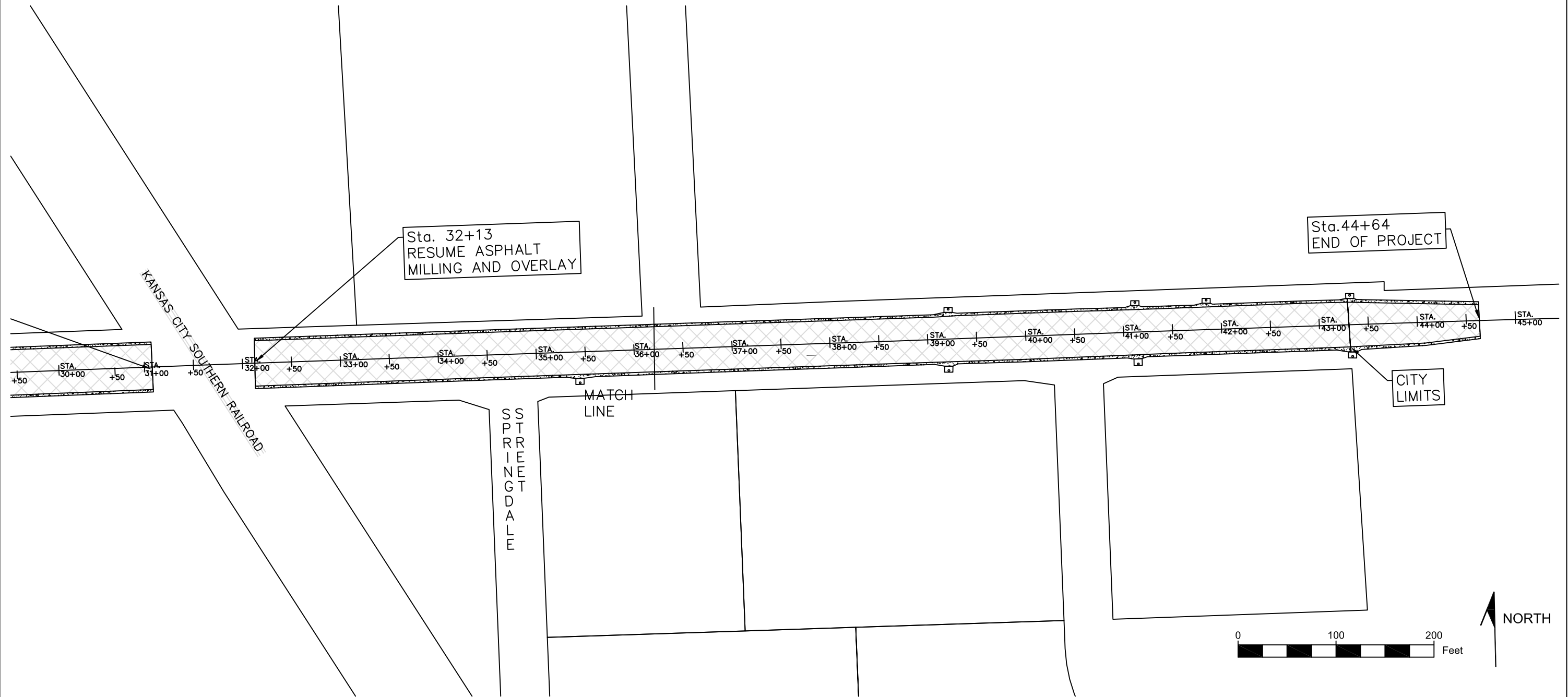
Typical Section – Centennial Drive and Rouse Street



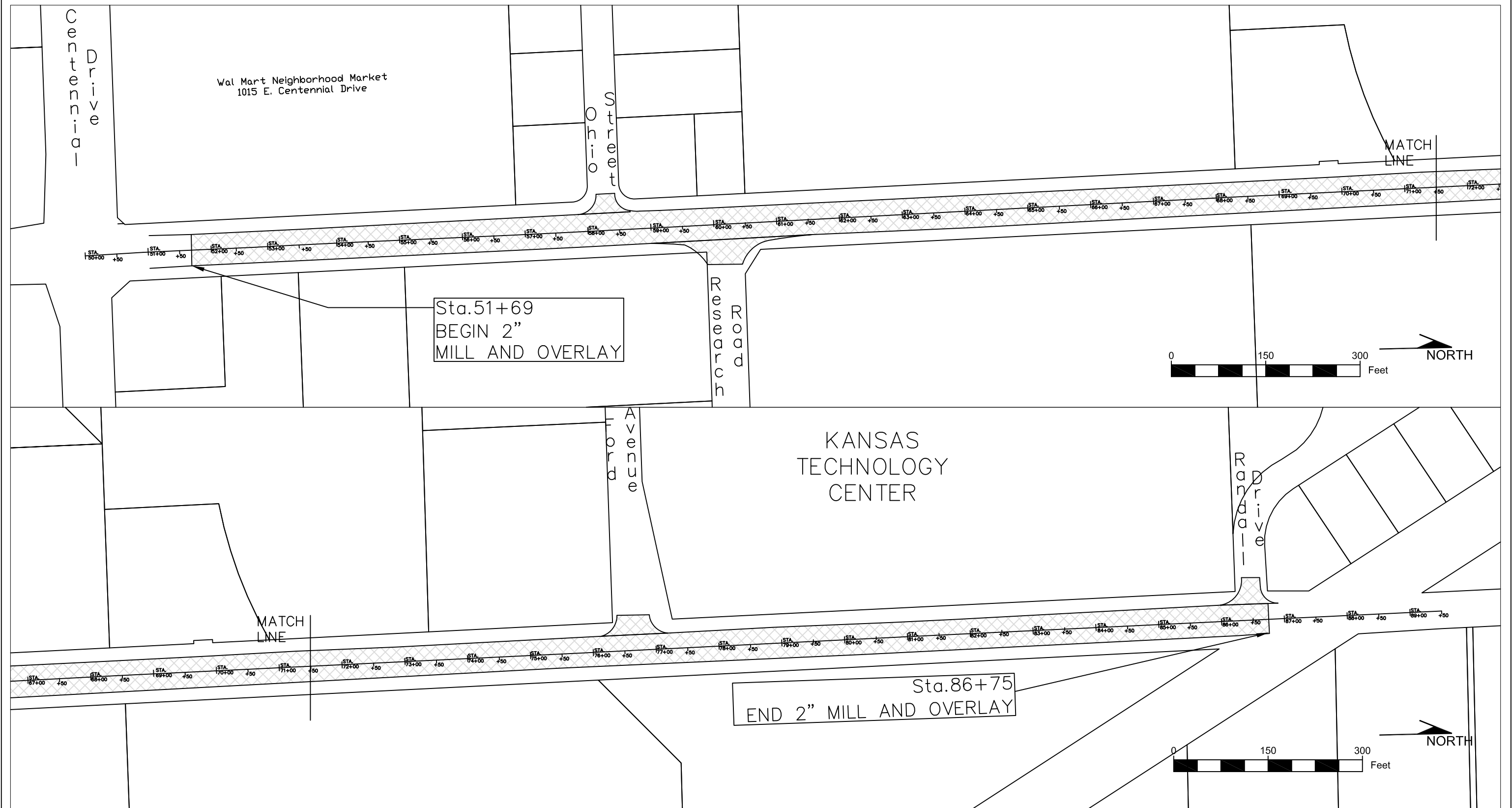
No.	Revision	By	Date
TYPICAL SECTIONS			
2017 STREET IMPROVEMENT PROGRAM CITY OF PITTSBURG, KANSAS			
<i>not to scale</i>		Sht. 3 of 21	
Designed by: JJR		Date: JULY 2017	



No.	Revision	By	Date
ROUSE TO KCS RAILROAD			
CENTENNIAL DRIVE			
ASPHALT MILLING AND RESURFACING			
2017 STREET SALES TAX IMPROVEMENT PROGRAM			
CITY OF PITTSBURG, KANSAS			
Designed by: JJR		Sht. 4 of 21	
		Date: JULY 2017	

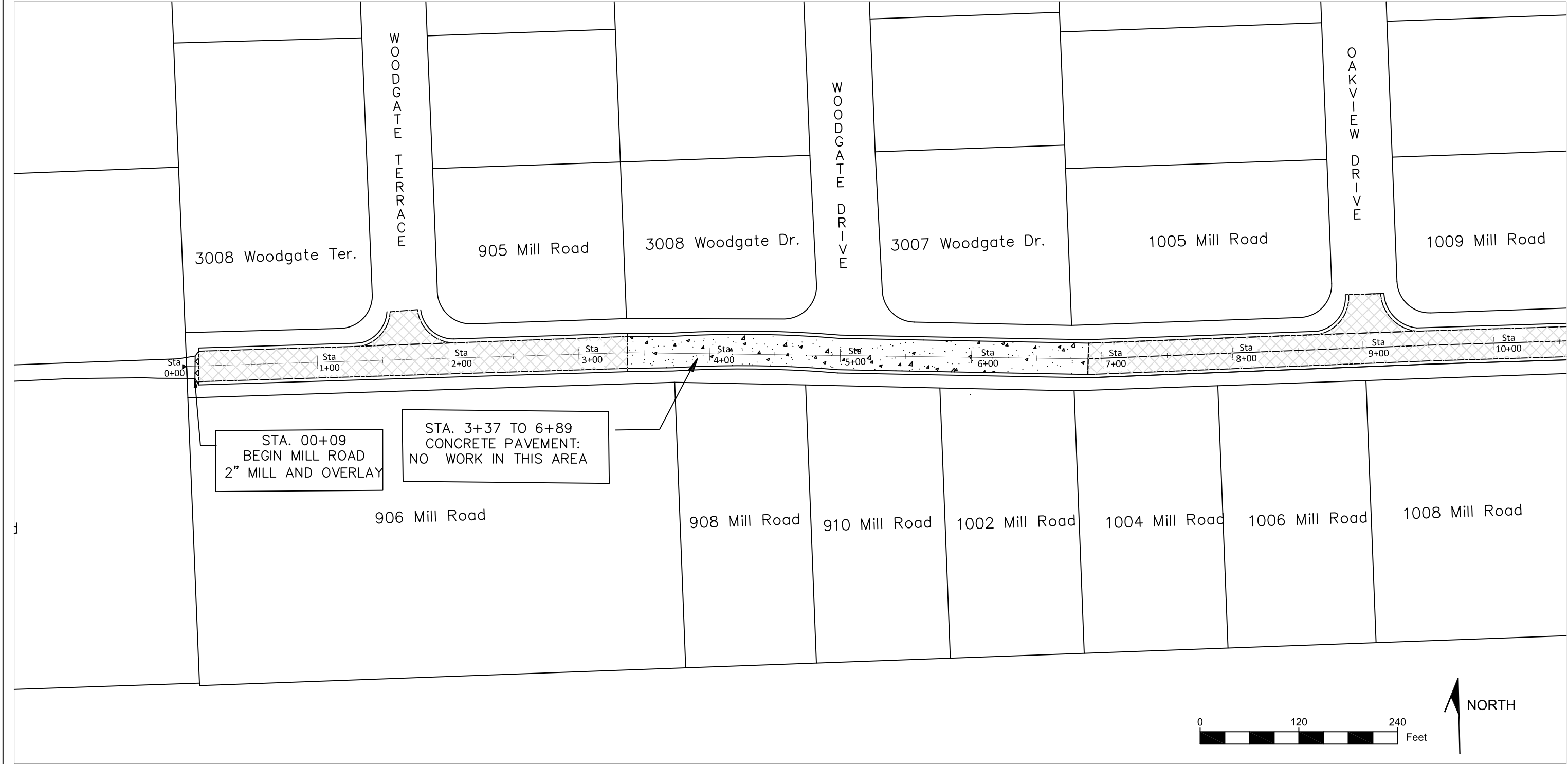


No.	Revision	By	Date
ROUSE TO KCS RAILROAD <b>CENTENNIAL DRIVE</b> ASPHALT MILLING AND RESURFACING			
2017 STREET SALES TAX IMPROVEMENT PROGRAM CITY OF PITTSBURG, KANSAS			
Designed by: JJR		Date: JUNE 2017	
		Sht. 5 of 21	

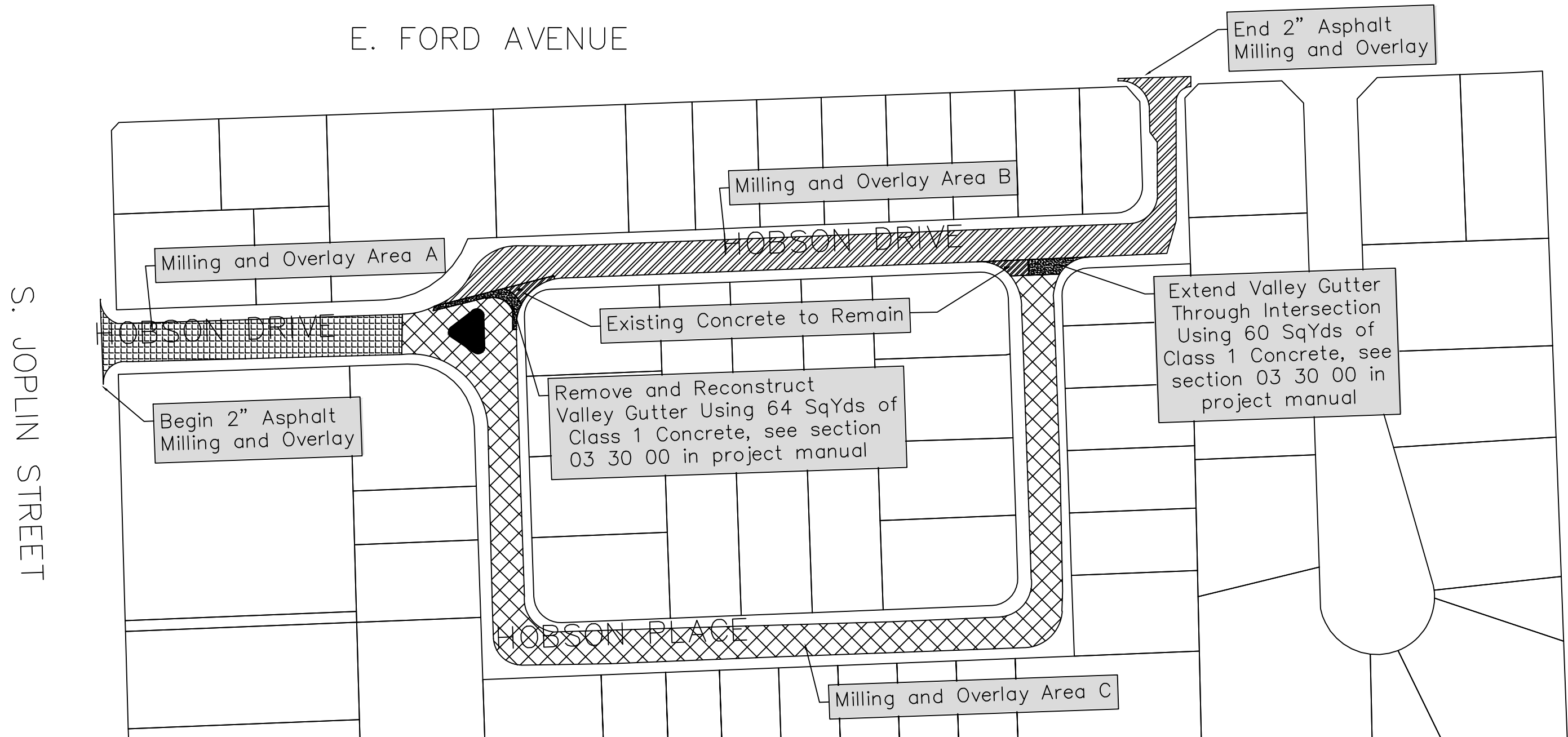


No.	Revision	By	Date
Centennial Drive to Randall Street			
South Rouse Street			
ASPHALT MILLING AND RESURFACING			
2017 STREET SALES TAX IMPROVEMENT PROGRAM			
CITY OF PITTSBURG, KANSAS			
Designed by: JJR		Sht. 6 of 21	
Date: JUNE 2017			





No.	Revision	By	Date
MILL ROAD			
ASPHALT MILLING AND RESURFACING			
2017 STREET SALES TAX IMPROVEMENT PROGRAM CITY OF PITTSBURG, KANSAS			
Designed by: JJR		Date: JULY 2017	Sht. 7 of 21

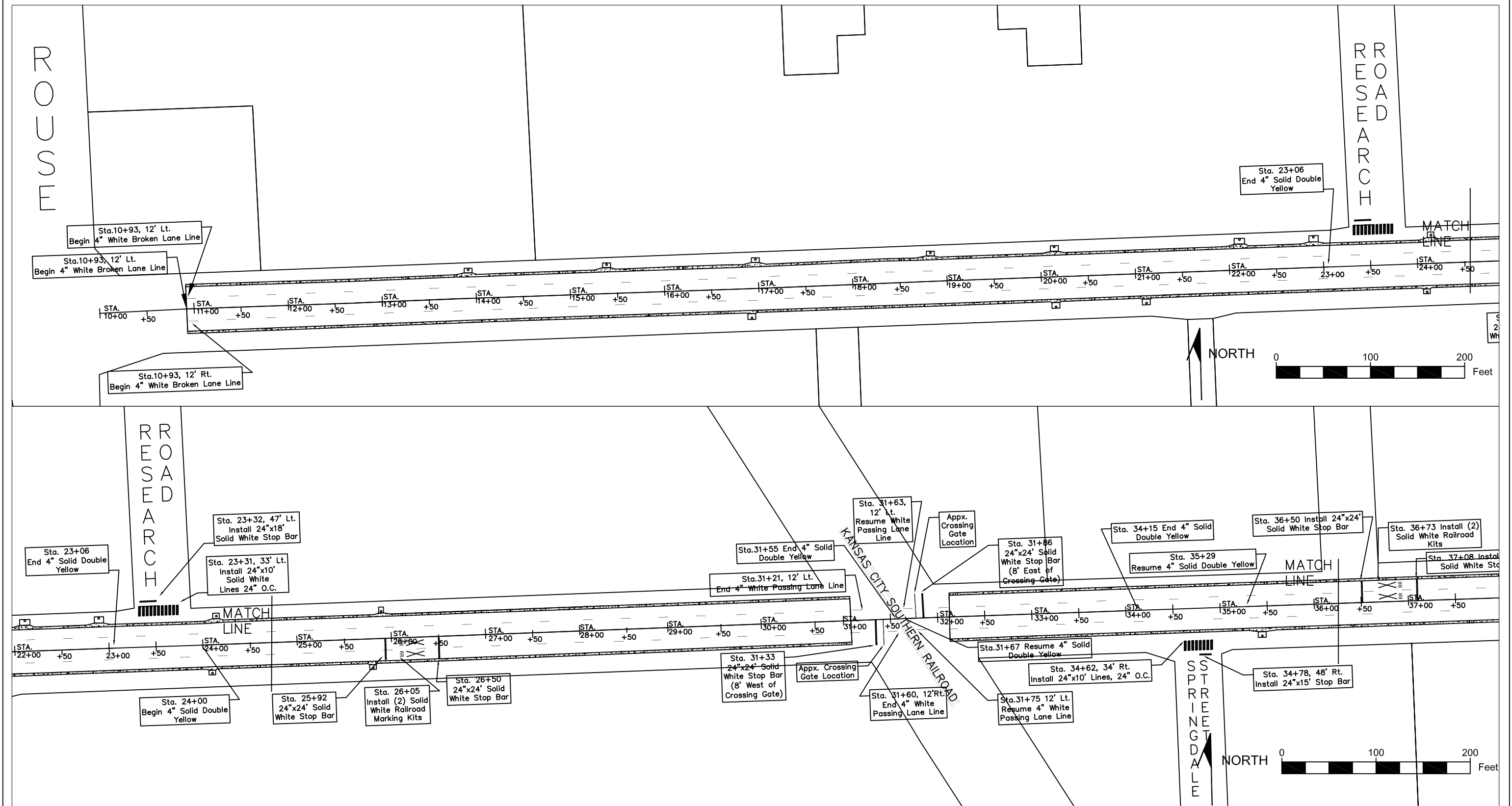


SUMMARY OF CONCRETE QUANTITIES		
Location	Grade	Quantity (SqYds)
Hobson Dr. and Hobson Pl.	Class 1- 4000psi (AE)	60
Hobson Dr. and Hobson Pl.	Class 1- 4000psi (AE)	64
	Total	124

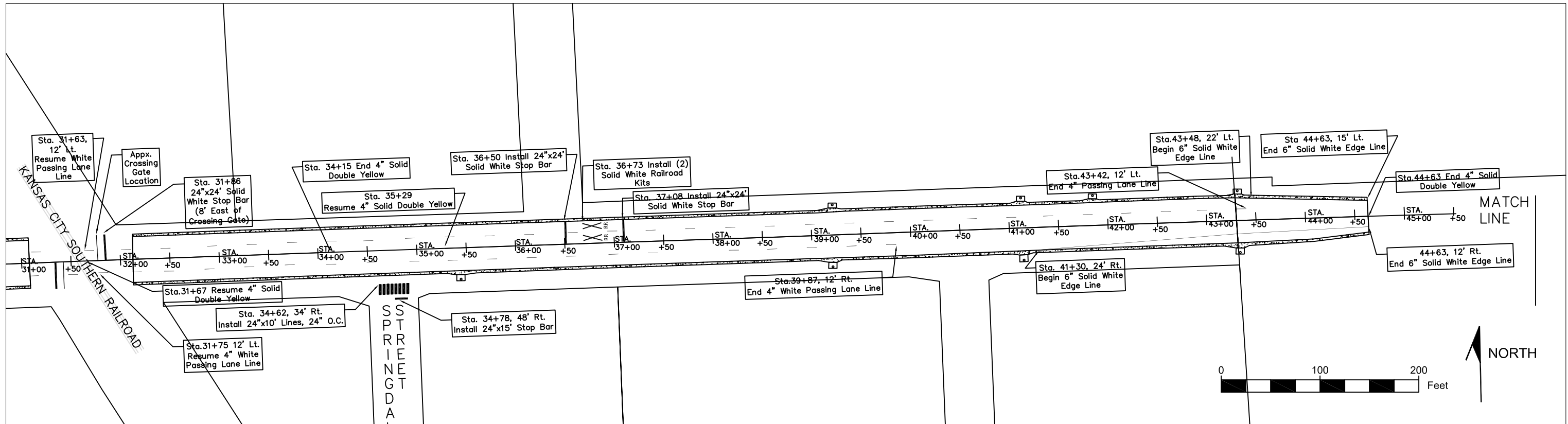


No.	Revision	By	Date
	Hobson Place	Hobson Drive	
<b>HILLSIDE ADDITION</b>			
Asphalt Milling and Overlay Plan			
2017 STREET SALES TAX IMPROVEMENT PROGRAM			
CITY OF PITTSBURG, KANSAS			
Designed by: JJR		Date: JULY 2017	
		Sht. 8 of 21	

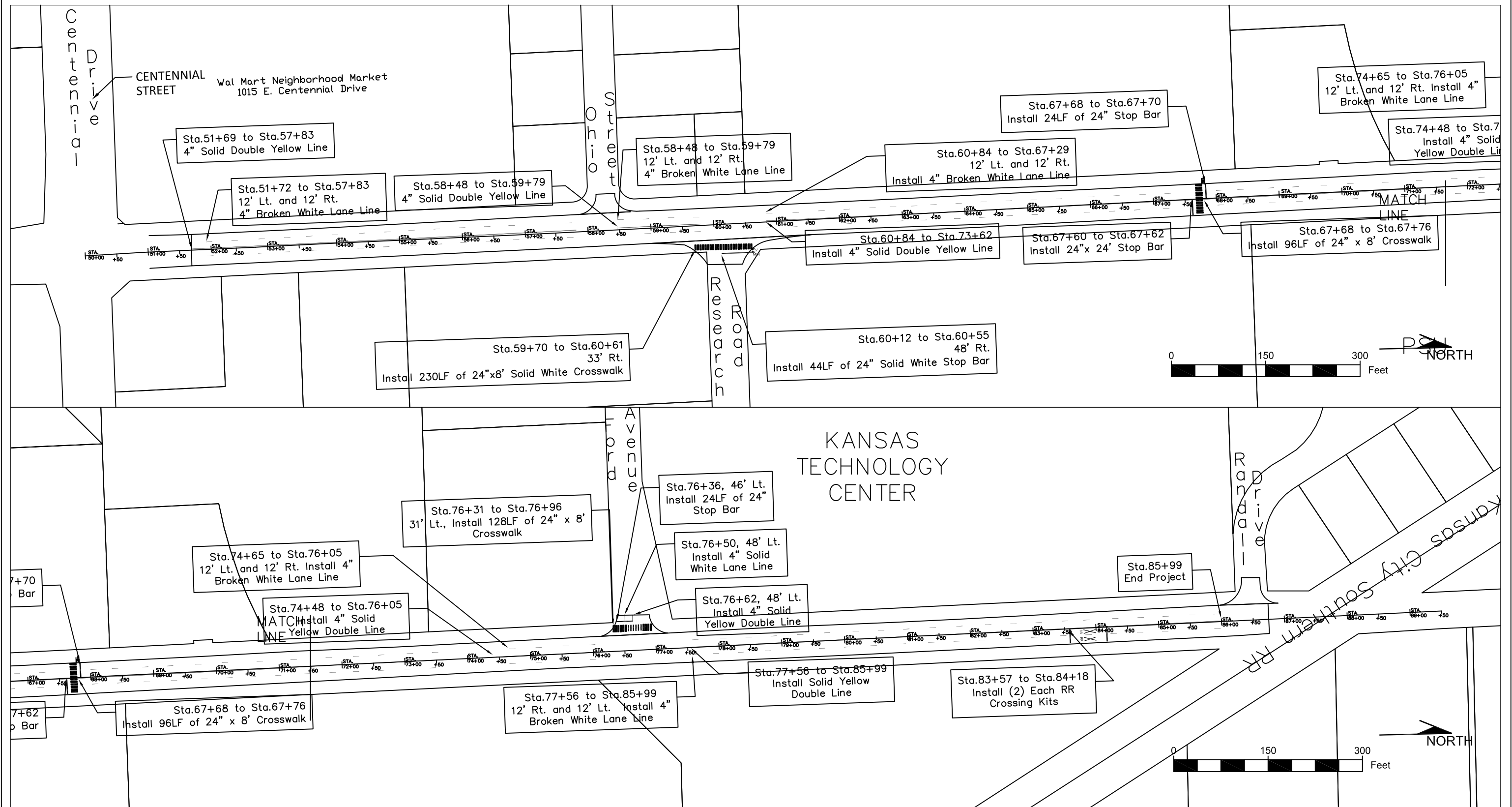




No.	Revision	By	Date
Rouse to City Limits			
CENTENNIAL DRIVE			
PAVEMENT MARKINGS			
2017 STREET SALES TAX IMPROVEMENT PROGRAM			
CITY OF PITTSBURG, KANSAS			
Designed by: JJR		Date: JULY 2017	
		Sht. 9 of 21	



No.	Revision	By	Date
Rouse to City Limits			
CENTENNIAL DRIVE			
PAVEMENT MARKINGS			
2017 STREET SALES TAX IMPROVEMENT PROGRAM			
CITY OF PITTSBURG, KANSAS			
Designed by: JJR		Date: JUNE 2017	
			Sht. 10 of 21



No.	Revision	By	Date
Centennial Drive to Randall Street			
South Rouse Street			
PAVEMENT MARKINGS			
2017 STREET SALES TAX IMPROVEMENT PROGRAM			
CITY OF PITTSBURG, KANSAS			
Designed by: JJR		Sht. 11 of 21	
		Date: JULY 2017	

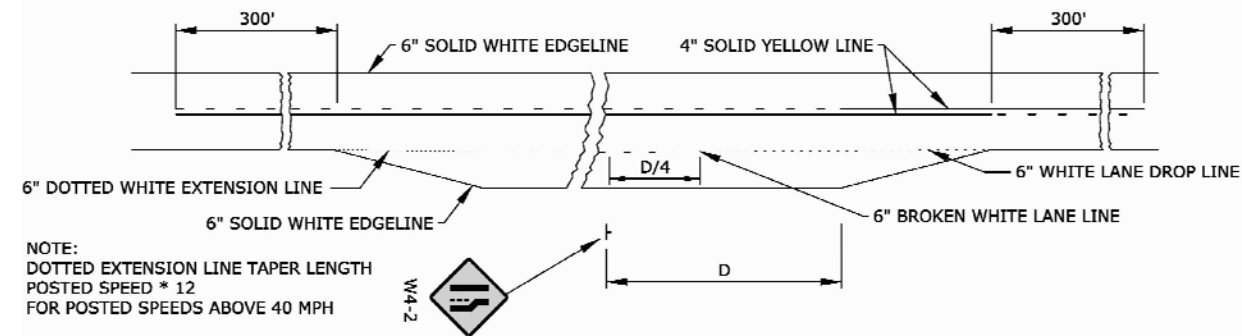
ROUSE STREET IMPROVEMENTS							
PAVEMENT MARKINGS							
Station from	Offset (Ft)	Station to	4" Broken WHITE Lane Line (Ft)	4" Solid WHITE Lane Line (Ft)	24" Solid WHITE Stop Bar/ crosswalk (Ft)	4" Solid YELLOW Double Line (Ft)	Solid WHITE Railroad Crossing Kit (Each)
51+69	0	57+83				1228	
51+72	12 Rt	57+83	150				
51+72	12 Lt	57+83	150				
58+48	0	59+79				262	
58+48	12 Rt	59+79	40				
58+48	12 Lt	59+79	40				
59+70	33 Rt	60+61			230		
60+12	48 Rt	60+55			43		
60+84	0	73+62				2556	
60+84	12 Rt	67+29	310				
60+84	12 Lt	67+29	310				
67+60	0	67+62			24		
67+68	0	67+76			96		
67+70	0	67+72			24		
67+99	12 Lt	73+54	130				
67+99	12 Rt	73+54	130				
74+48	0	76+05				314	
74+65	12 Rt	76+05	40				
74+65	12 Lt	76+05	40				
76+31	31 Lt	76+96			128		
76+36	46 Lt	76+60			24		
76+50	48 Lt	76+50		9			
76+62	48 Lt	76+63				18	
77+56	0	85+99				1686	
77+56	12 Rt	85+99	210				
77+56	12 Lt	85+99	210				
83+57	0	84+18					2
Total Quantity			1760	9	569	6064	2

CENTENNIAL DRIVE IMPROVEMENTS							
PAVEMENT MARKINGS							
Station from	Offset (Ft)	Station to	4" Broken WHITE Lane Line (Ft)	4" Solid WHITE Lane Line (Ft)	24" Solid WHITE Stop Bar/ crosswalk (Ft)	4" Solid YELLOW Double Line (Ft)	Solid WHITE Railroad Crossing Kit (Each)
10+93	0	23+06				2402	
10+93	12 Lt	31+21	750				
10+93	12 Rt	31+60	820				
23+31	33 Lt	23+70			110		
23+32	47 Lt	23+50			18		
24+00	0	31+55				1472	
25+92	Rt	25+94			24		
26+05	Rt	26+35					2
26+50	Rt	26+52			24		
31+33	Rt	31+35			24		
31+63	12 Lt	43+42	300				
31+67	0	34+15				496	
31+75	12 Rt	39+87	210				
31+86	0	31+88			24		
34+62	34 Rt	34+96			80		
34+78	48 Rt	34+93			15		
35+29	0	44+63				1868	
36+50	Lt	36+52			24		
36+73	Lt	37+23					2
37+08	Lt	37+10			24		
41+30	23 Rt	44+63		334			
43+48	12 Lt	44+64		117			
Total Quantity			2080	451	367	6238	4

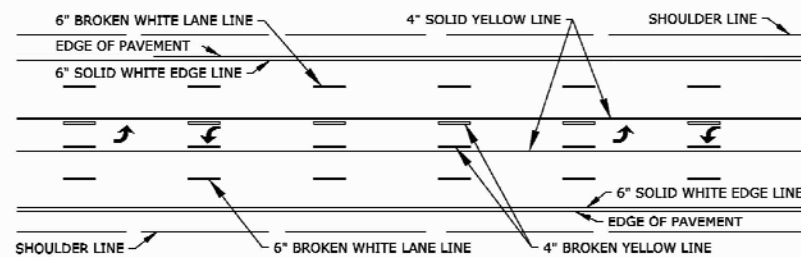
2017 STREET IMPROVEMENTS SUMMARY OF PAVEMENT MARKINGS					
	4" Broken WHITE White Lane Line	4" Solid WHITE Lane Line (Ft)	24" Solid WHITE Stop Bar/ Crosswalk (Ft)	4" Solid YELLOW Double Line (Ft)	Solid WHITE Railroad Crossing Kit (Each)
Centennial Drive	2080	451	367	6238	4
Rouse Street	1760	9	569	6064	2
Grand Total	3840	460	936	12302	6



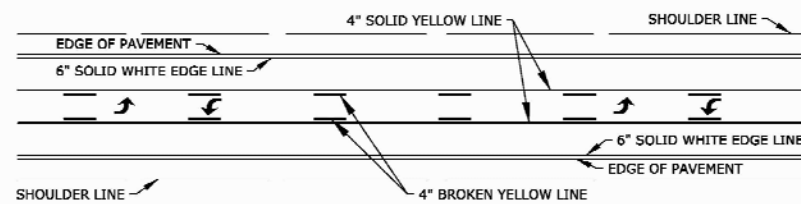
No.	Revision	By	Date
Pavement Marking Quantities			
2017 STREET SALES TAX IMPROVEMENT PROGRAM CITY OF PITTSBURG, KANSAS			
Designed by: JJR		Date: JULY 2017	Sht. 12 of 21



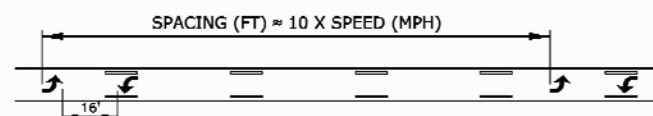
TYPICAL MARKING FOR AUXILIARY PASSING LANE



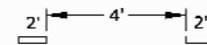
TWO-WAY LEFT TURN DETAIL FOR FIVE LANE ROADWAY



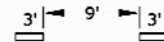
TWO-WAY LEFT TURN DETAIL FOR THREE LANE ROADWAY



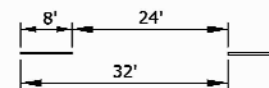
TWO-WAY LEFT TURN ARROW SPACING DETAIL



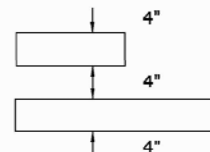
TYPICAL SPACING  
FOR DOTTED EXTENSION  
LINES, UNLESS OTHERWISE  
NOTED ON PLANS.



TYPICAL SPACING  
FOR LANE DROP.  
UNLESS OTHERWISE  
NOTED ON PLANS.



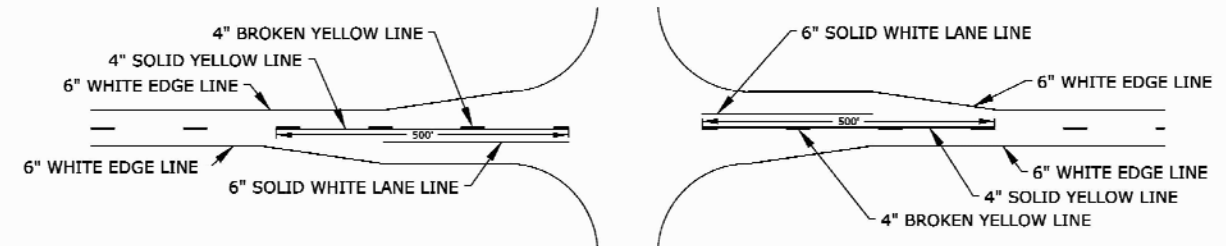
TYPICAL SPACING  
FOR BROKEN LINES  
UNLESS OTHERWISE  
NOTED ON PLANS



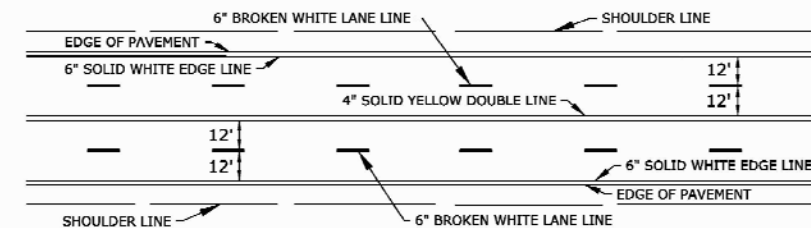
TYPICAL SPACING FOR  
NO PASSING LINES  
UNLESS OTHERWISE  
NOTED ON PLANS

NOTE:  
ALL PAVEMENT MARKINGS SHALL BE BROKEN AT  
CROSS ROADS.

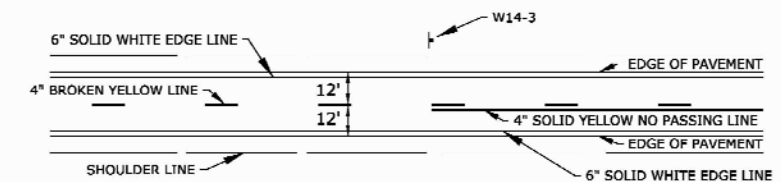
FOR HIGHWAY JUNCTIONS THE NO PASSING  
ZONE WILL EXTEND 1000' FROM INTERSECTION.



TYPICAL ROAD JUNCTION MARKINGS WITH BYPASS LANES



TYPICAL MARKINGS FOR FOUR LANE ROADWAY



TYPICAL TWO LANE MARKINGS

NOTE:  
LONGITUDINAL PAVEMENT MARKING LINES SHALL BE OFFSET  
A MINIMUM OF 2" FROM LONGITUDINAL PAVEMENT JOINTS.

NOTE:  
ON NON I, US, AND K ROUTES, 4" EDGE LINES MAY BE INSTALLED.  
6" EDGE LINES ARE NOT REQUIRED ON NON I, US, AND K ROUTES.



No.	Revision	By	Date
TYPICAL PAVEMENT MARKING DETAIL SHEET			
2017 STREET IMPROVEMENTS PROGRAM CITY OF PITTSBURG, KANSAS			
Designed by	JJR	Date	JULY 2017
Sht. 13 of 21			



4" BROKEN YELLOW LINE

The diagram shows a solid black line on the left that curves into a dashed line. A label "4" BROKEN YELLOW LINE" with an arrow points to the dashed section, which represents a 4-foot wide broken yellow line.

[illegible]

AD

# RAILROAD CROSSING MARKING

Diagram illustrating the marking for a railroad crossing on a three-lane roadway. The diagram shows the approach, crossing, and departure sections.

**Approach Section:**

- 6" BROKEN WHITE LANE LINE
- 4" BROKEN YELLOW LINE
- 4" SOLID YELLOW LINE
- 4" SOLID YELLOW DOUBLE LINE
- 6" SOLID WHITE LINE
- 6" WHITE EDGE LINE

**Crossing Section:**

- SYMBOL (X)
- 24" (width of symbol)
- 6.6' (width of symbol)
- 3.3' (width of symbol)
- 6.6' (width of symbol)
- 1.6' (width of symbol)
- 20' (width of symbol)
- 16' (width of symbol)
- 60' (width of symbol)
- 5' (width of symbol)
- 24' (width of symbol)
- 10' (width of symbol)

**Departure Section:**

- 15' \* APPROX. (width of symbol)

**Other Markings:**

- VARIES (width of symbol)
- 6" WHITE EDGE LINE

**Signage:**

- T-ONE (sign)

**Dimensions:**

- 300' (distance from symbol to edge line)
- 24" (width of symbol)
- DISTANCE D FROM CHART A

**Notes:**

- A THREE-LANE ROADWAY SHOULD BE MARKED WITH A CENTERLINE FOR TWO-LANE APPROACH OPERATION ON THE APPROACH TO A

**NOTE:**  
ON NON I, US, AND K ROUTES, 4" EDGE LINES MAY BE INSTALLED.  
6" EDGE LINES ARE NOT REQUIRED ON NON I, US, AND K ROUTES.

SPEED MPH	DISTANCE D (feet)
75	850
70	750
65	650
60	550
55	450
50	375
45	300
40	225
35	150
30	(X)
25	(X)
20	(X)

TYPE I: CROSSWALK LINES SHALL BE 12" SOLID WHITE LINES. THEY SHALL BE SPACED A MINIMUM OF 6' APART FROM INSIDE EDGE TO INSIDE EDGE.

TYPE II: THESE LINES SHOULD BE SOLID WHITE 24" WIDE PLACED PARALLEL TO THE DIRECTION OF TRAFFIC FLOW. THE LINE PLACEMENT IS DETERMINED BY LANE LINE, CENTER LINE, AND WHEEL PATH IN SUCH A MANNER AS TO MINIMIZE TRAFFIC WEAR. THE CROSSWALK WIDTH SHOULD BE NOT LESS THAN 8'. THE TRANSVERSE CROSSWALK LINES MAY BE ADDED.

WHEN REQUIRED, STOP LINES SHALL BE INSTALLED A MINIMUM OF 5' FROM CROSSWALKS.

4" DOUBLE YELLOW LINE

12" YELLOW DIAGONAL LINE

30°

6" SOLID WHITE LANE LINE

24" WHITE STOP LINE

25" MINIMUM

X (FROM CHART B)

A

B

L

THE APPROACH TAPER LENGTH FROM POINT A TO POINT B IS

CHART "B"

APPROACH

CHART "C"

APPROACH

APPROACH SPEED	X
20 MPH	20
25 MPH	25
30 MPH	30
35 MPH	35
40 MPH	40
45 MPH	45
50 MPH	50
55 MPH	55
60 MPH	60
65 MPH	65
70 MPH	70

APPROACH SPEED	L
20 MPH	80'
25 MPH	125'
30 MPH	180'
35 MPH	245'
40 MPH	320'
45 MPH	540'
50 MPH	600'
55 MPH	660'
60 MPH	720'
65 MPH	780'
70 MPH	840'

The diagram illustrates the required clearances for Type I and Type II barriers at a curb. Type II shows a 5' MIN. clearance from the curb face to the barrier. Type I shows a 6' MIN. clearance from the curb face to the barrier. Both show a 5' MIN. clearance from the barrier to the adjacent structure.



1) Design Speed: Those items delegated to temporary traffic control should be designed and installed using the posted/legal speed of the roadway prior to work starting.

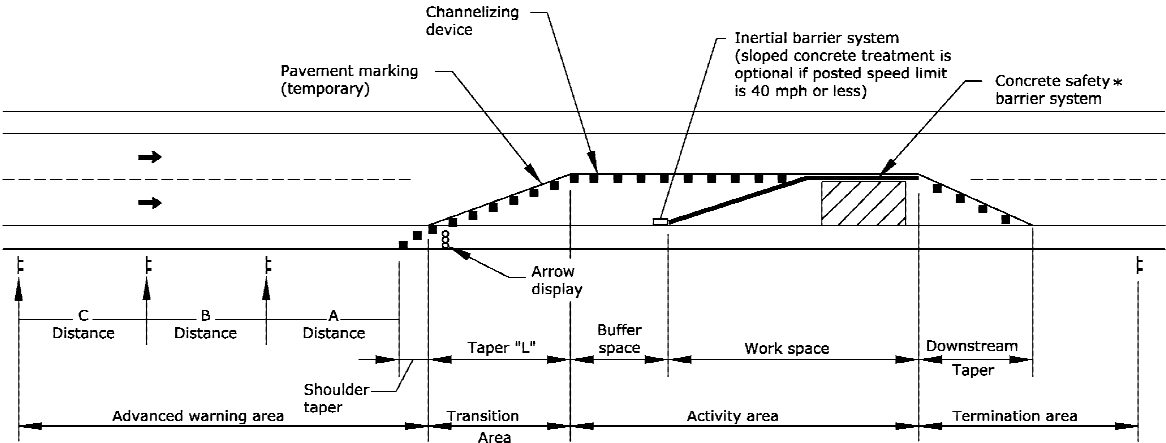
2) Minimum lane width: Lane widths shall be a minimum of 11' (measured between centerlines of pavement markings) or as shown on the plans, or as directed by the engineer. A lane width less than 11' may require restricted roadway width signing.

3) Consideration should be made to seperate pedestrian and, if needed, bicycle movements from both work site activity and vehicular traffic. Unless a reasonable safe route that does not involve crossing the roadway can be provided, pedestrians should be appropriately directed with advance signing that encourages them to cross to the opposite side of the roadway. In urban and suburban areas with high vehicular traffic volumes, these signs should be placed at intersections (rather than midblock locations) so that pedestrians are not confronted with midblock work sites that will induce them to attempt skirting the work site or making a midblock crossing.

4) When existing pedestrian facilities are disrupted, closed, or relocated, the temporary facilities shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility.

5) When the driving surface open to traffic is milled, is a temporary surface made of loose material, or when directed by the engineer use the W8-15 (Grooved Pavement) or W8-7(Loose Gravel) a "C" distance after the W20-1 (Road Work Ahead) on mainline approaches. Signs may be used with the W8-15p motorcycle plaque as directed by the engineer. Display signs in advance of the condition as long as the condition is present.

6) Alternative temporary rumble strip options may be available. Please contact the Temporary Traffic Control Unit for more information at 785-296-0355 or 785-296-1183.



TYPICAL WORK ZONE COMPONENTS

\* When concrete barrier system is used, portable channelizing devices are not needed along the tangent barrier section.

Minimum advance warning sign spacing (in feet):

SPEED (MPH) *	A	B	C
URBAN (40 MPH OR LOWER)	100	100	100
URBAN (45 MPH OR HIGHER)	350	350	350
RURAL (55 MPH OR LOWER)	500	500	500
RURAL (60 MPH OR HIGHER)	750	750	750
EXPRESSWAY/FREEWAY	1000	1500	2640

\* Posted speed prior to work starting

The minimum spacing between signs shall be no less than 100', unless directed by the engineer.

The spacing between any signs may be increased beyond the minimum values in the table above as approved by the engineer in order to maximize visibility.

Taper Formulas:

L = WS for speeds of 45 MPH or more

L = WS<sup>2</sup>/60 for speeds of 40 MPH or less

Where: L =Minimum length of taper in feet  
S =Numerical value of posted speed prior to work starting in MPH  
W =Width in offset feet

Shifting taper=1/2 L  
Shoulder taper=1/3 L

Channelizer placement:

- (1) The spacing between devices in transition area (taper) should not exceed a distance in feet equal to 1/2 the posted speed limit in mph prior to work starting.
- (2) The spacing between devices in the advanced warning area and the activity area should not exceed a distance in feet equal to two times the posted speed limit in mph prior to work starting.
- (3) Channelizing devices shall be placed for optimum visibility, normally at right angles to the traffic flow.
- (4) Place directional indicator barricades in series to direct traffic onto the new path. The arrow sign should not be visible to opposing traffic.
- (5) Alternating diagonal orange and white striping must slope downward in the direction traffic is expected to pass.

Buffer Space

SPEED (MPH) *	20	25	30	35	40	45	50	55	60	65	70	75
LENGTH (ft)	115	155	200	250	305	360	425	495	570	645	730	820

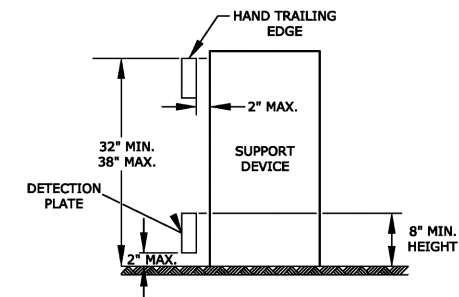
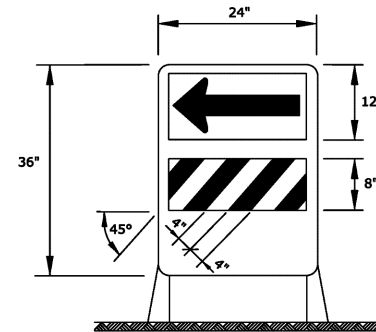
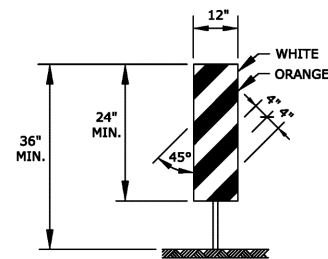
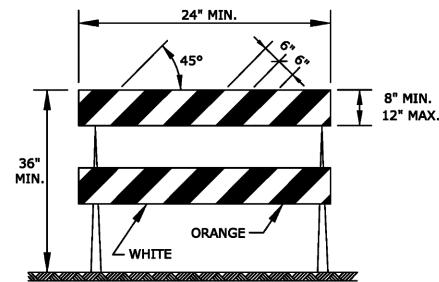
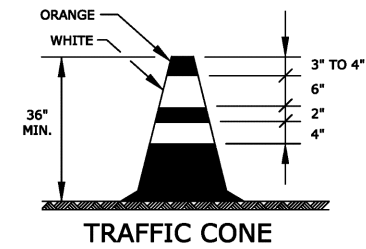
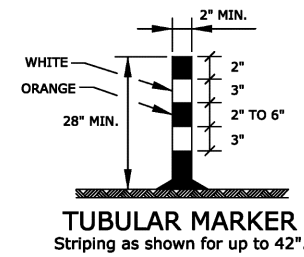
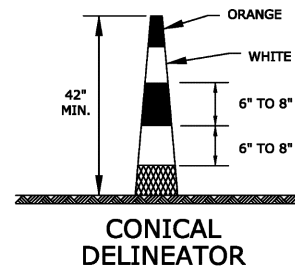
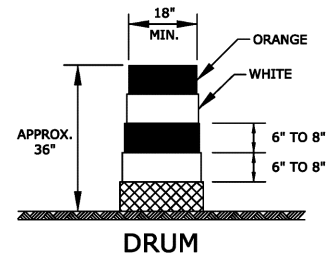
\* Posted speed prior to work starting

Neither work activity nor storage of equipment, vehicles, or material should occur in the buffer space. When a protection vehicle is placed in advance of the work space, only the space upstream of the vehicle constitutes the buffer space.

If temporary concrete safety barrier system is used to seperate approaching traffic from the work space, the barrier system shall be considered part of the activity area. A full lane width should be available throughout the length of the buffer space. See typical work zone components above.



No.	Revision	By	Date
TRAFFIC CONTROL GENERAL NOTES			
2017 STREET IMPROVEMENTS PROGRAM CITY OF PITTSBURG, KANSAS			
Designed by JJR		Sht 15 of 21	
Date JULY 2017			



**TYPE 2 BARRICADE**  
For rails less than 36" long, 4" wide stripes may be used. All stripes shall slope downward to the traffic side for channelization.

**VERTICAL PANEL**  
The stripes shall slope downward to the traffic side for channelization.

**DIRECTION INDICATOR BARRICADE**  
The stripes shall slope downward in the direction traffic is to pass. The direction indicator barricade shall be used in series to direct the motorist into the intended lane of travel.

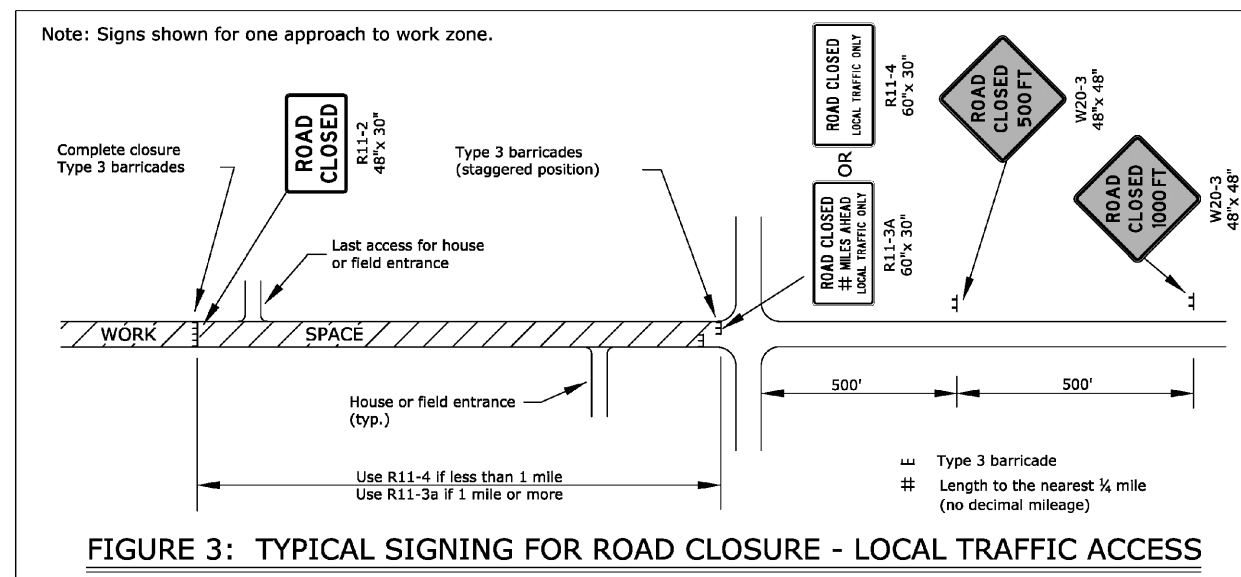
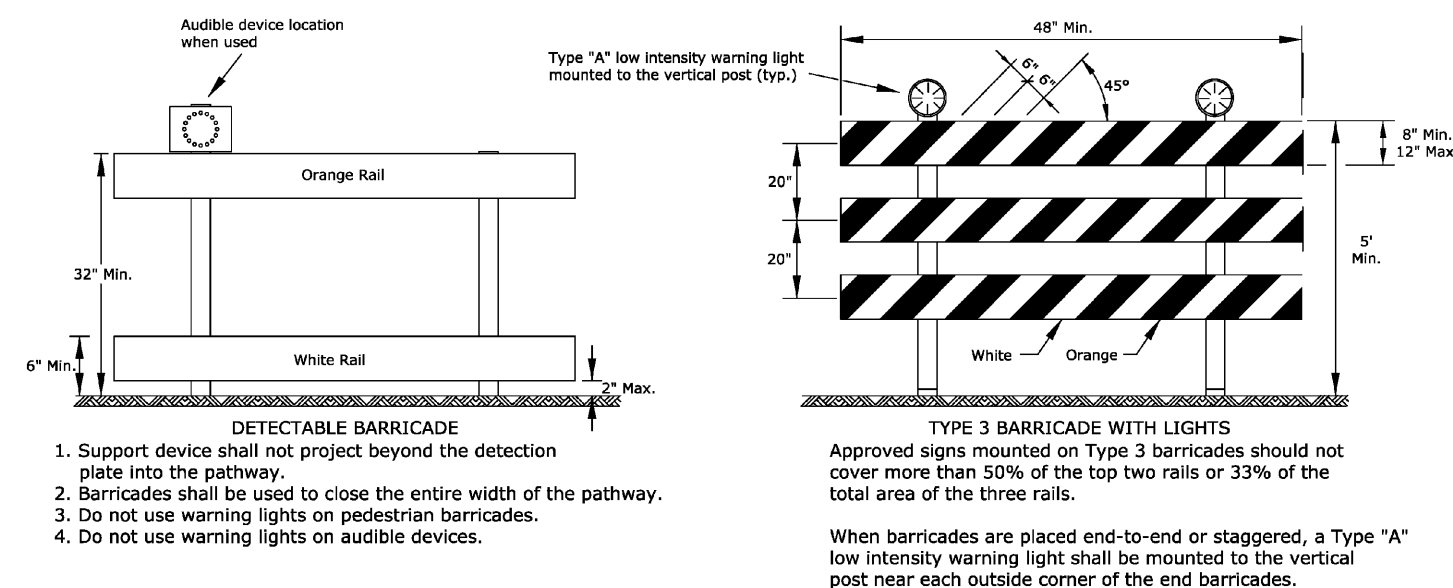
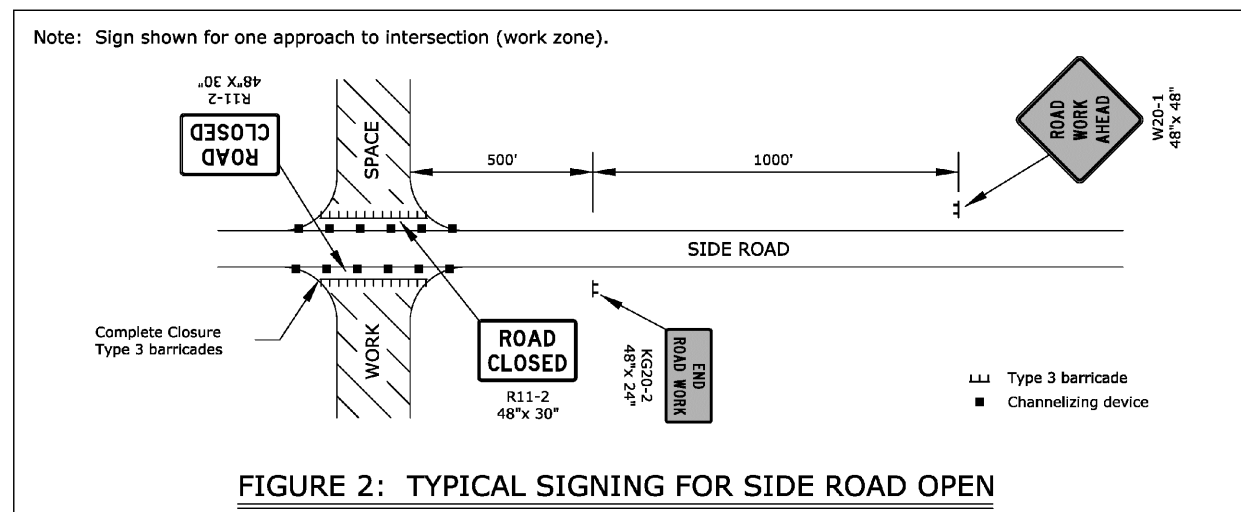
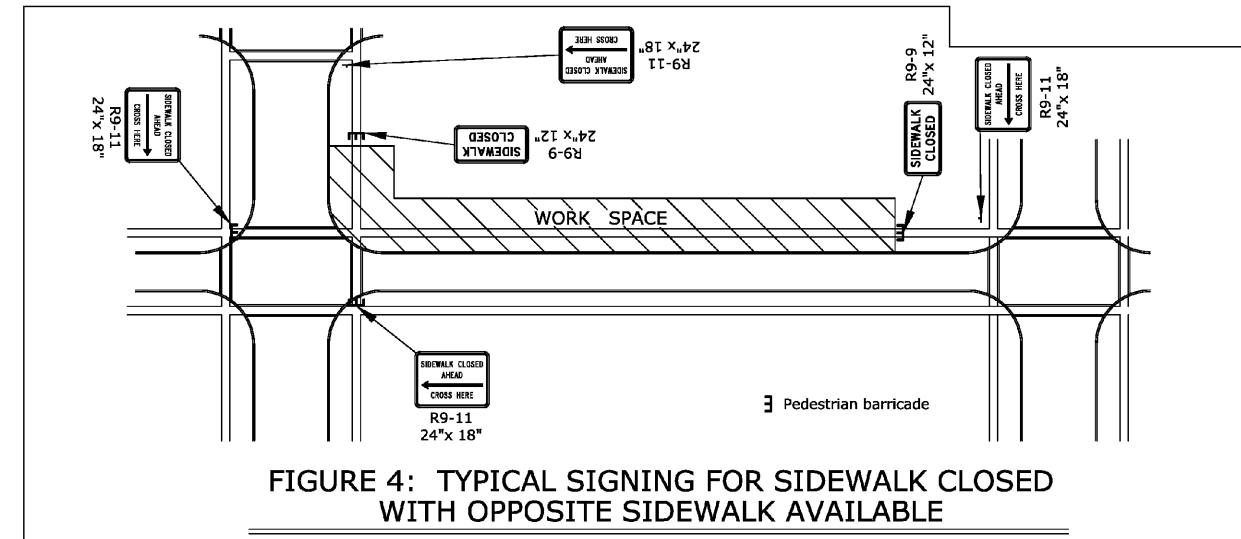
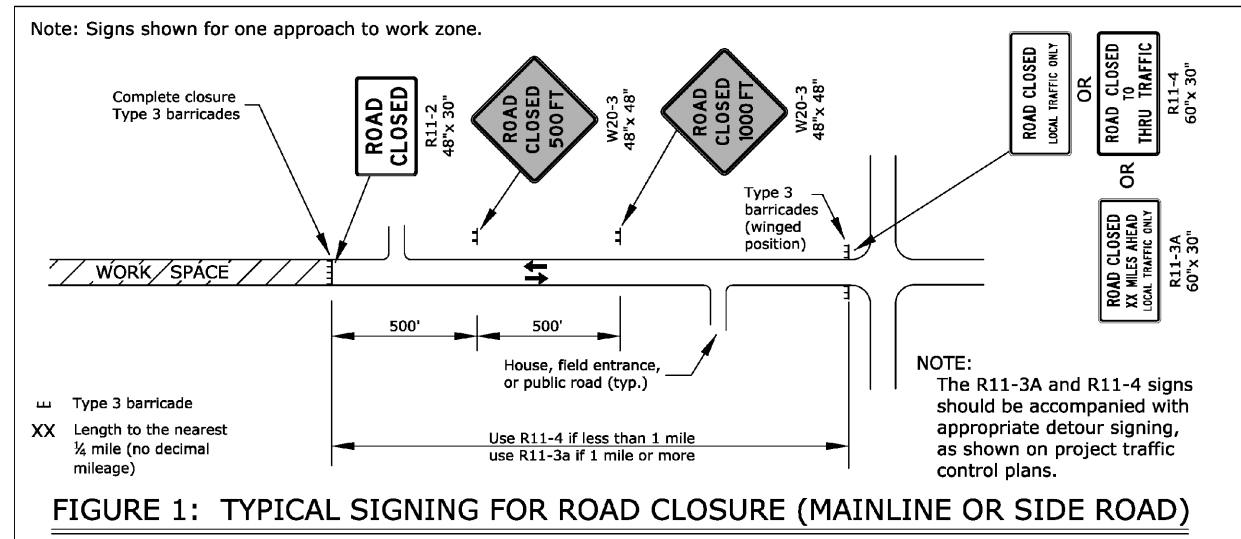
**PEDESTRIAN CHANNELIZER**  
1. Support device shall not project beyond the detection plate into the pathway.  
2. Hand trailing edges and detection plates are optional for continuous walls.  
3. Interconnect pedestrian channelizers to prevent displacement and to provide continuous guidance through or around work.  
4. Alternate pathways shall be firm, stable, and slip resistant.  
5. Treat height differentials > 1/2" in the surfaces of alternate paths with a firm, stable, and slip resistant temporary ramp having a slope of 12:1 or flatter and having a width equal to the alternate path.  
6. Use alternating orange/white on interconnected devices.

ITEM		LOCATION									
		Cross-overs	Shoofly Diversions	Tangents	Tapers	Ramps	Head to Head	Object Identifier	Lead-in Devices	Gores	
PORTABLE	Drums	Yes	Yes	Yes	Yes	Yes	(1)	Yes	Yes	Yes	
	Conical Delineators	Yes	Yes	Yes	Yes	Yes	(1)	Yes	Yes	Yes	
	Vertical Panels	(2)	(2)	(2)	(2)	(2)	(1,2)	YES	(2)	(2)	
	Direction Indicator Barricade	NO	NO	NO	Yes	NO	NO	NO	NO	NO	
	Type 2 Barricade	(2)	(2)	(2)	(2)	NO	NO	Yes	NO	NO	
	Traffic Cones	NO	NO	(4)	(4)	(4)	NO	(4)	(4)	(4)	
FIXED	Tubular Markers	(3)	(3)	(3)	NO	(3)	Yes	NO	Yes	Yes	
	Vertical Panels	(3)	(3)	(3)	(3)	(3)	(3)	Yes	(2,3)	(2)	

- (1) Not allowed on centerline delineation along freeways or expressways.  
(2) The stripes shall slope downward to the traffic side for channelization.  
(3) May be used upon the approval of the engineer.  
(4) Daytime operations only.



No.	Revision	By	Date
TRAFFIC CONTROL CHANNELIZING DEVICES			
2017 STREET IMPROVEMENTS PROGRAM CITY OF PITTSBURG, KANSAS			
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#### ROAD CLOSED GENERAL NOTES

As shown in Figure 1, at the point where thru traffic must detour and local traffic can proceed to the location where the roadway is completely closed, the R11-3a (ROAD CLOSED # MILES AHEAD LOCAL TRAFFIC ONLY) or R11-4 (ROAD CLOSED LOCAL TRAFFIC ONLY or ROAD CLOSED TO THRU TRAFFIC) sign shall be used with Type 3 barricades (winged position), placed on the shoulders of roadway.

As shown in Figure 3, when local traffic must be allowed access into the work zone, Type 3 barricades shall be longitudinally staggered to maintain the appearance of a closed roadway. A second line of end-to-end Type 3 barricades shall be placed just beyond the last access point in the work zone, to completely close the roadway.

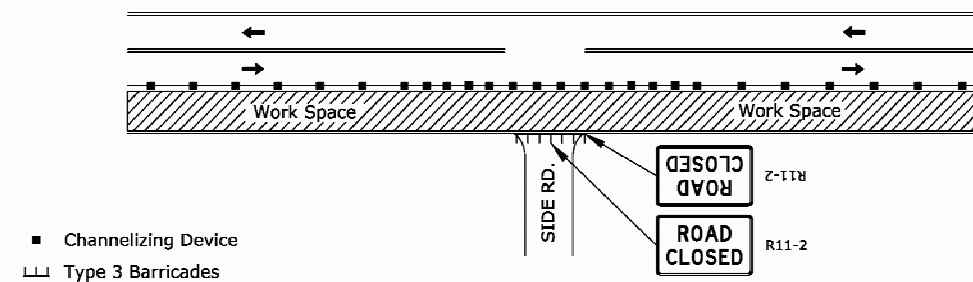
The R11-4 (ROAD CLOSED TO THRU TRAFFIC or ROAD CLOSED LOCAL TRAFFIC ONLY) sign shall be used when the distance to the point of complete closure of the roadway is less than 1 mile.

The R11-3a (ROAD CLOSED # MILES AHEAD LOCAL TRAFFIC ONLY) sign shall be used when the distance to the point of complete closure of the roadway is 1 mile or greater.

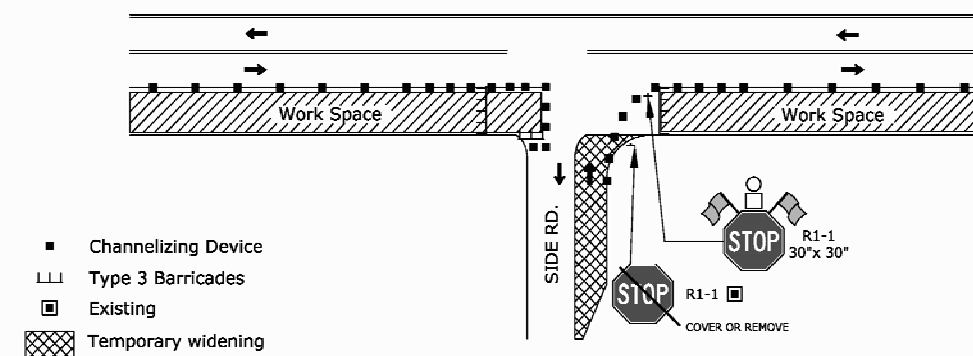
The words "BRIDGE OUT" (or BRIDGE CLOSED) may be substituted for the words "ROAD CLOSED" on the R11-3a or R11-4 sign where applicable.



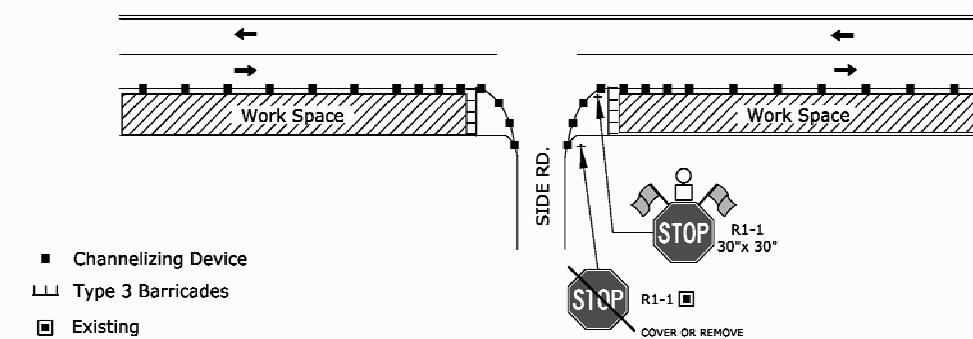
No.	Revision	By	Date
TRAFFIC CONTROL CLOSURES			
2017 STREET IMPROVEMENTS PROGRAM CITY OF PITTSBURG, KANSAS			
Designed by	JJR	Date	JULY 2017
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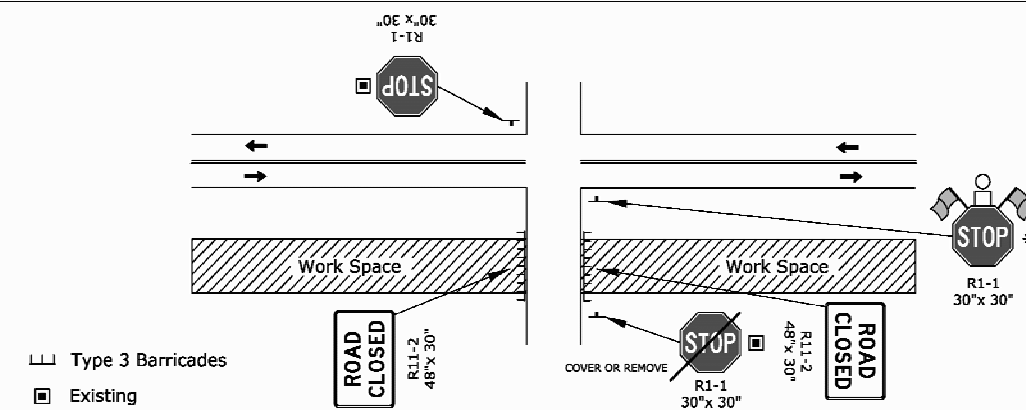
**FIGURE 1: SIDE ROAD OR ENTRANCE CLOSED THROUGH WORK AREA**



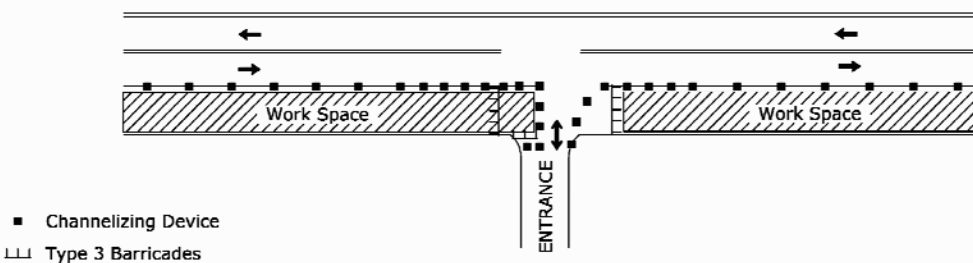
**FIGURE 4: SIDE ROAD OR ENTRANCE CONSTRUCTED HALF AT A TIME:  
TWO WAY TRAFFIC REQUIRED**



**FIGURE 2: SIDE ROAD OR ENTRANCE OPEN THROUGH WORK AREA**



**FIGURE 5: SIDE ROAD OPEN THROUGH WORK AREA ON DIVIDED ROADWAY**



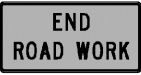
**FIGURE 3: LOW VOLUME ENTRANCE CONSTRUCTED HALF AT A TIME**

Note: Consider large vehicles making right turns into and out of entrance and use figure 4 as needed



No.	Revision	By	Date
TRAFFIC CONTROL ACCESS THROUGH THE WORK AREA			
2017 STREET IMPROVEMENTS PROGRAM CITY OF PITTSBURG, KANSAS			
Designed by	JJR	Date	JULY 2017
			Sh. 18 of 21


SIGN LAYOUT INFORMATION



END ROAD WORK  
KG20-2

STD. SIZE  
EXPWY/FREEWAY


6" C  
48"x 24"



WAIT FOR PILOT CAR  
KG20-5

STD. SIZE  
EXPWY/FREEWAY

6" C  
48"x 24"




WORK ZONE  
KM4-20

STD. SIZE  
EXPWY/FREEWAY


3" C  
24"x 6"

6" C  
48"x 12"



NEXT X MILES  
W7-3a


Mileage to be determined by the engineer.



GROOVED PAVEMENT  
W8-15

STD. SIZE  
EXPWY/FREEWAY


8" D  
48"x 48"



LOOSE GRAVEL  
W8-7

STD. SIZE  
EXPWY/FREEWAY


8" D  
48"x 48"



UNEVEN LANES  
W8-15p

STD. SIZE  
EXPWY/FREEWAY

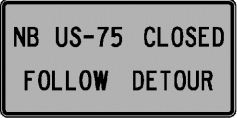
30"x 24"



SHOULDER DROP-OFF  
W8-17P (OPTIONAL)

STD. SIZE  
EXPWY/FREEWAY

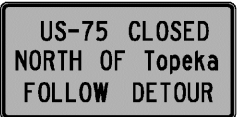
30"x 24"



NB US-75 CLOSED FOLLOW DETOUR  
SP-01 (SPECIAL SIGN)

STD. SIZE  
EXPWY/FREEWAY

6" C  
10" D



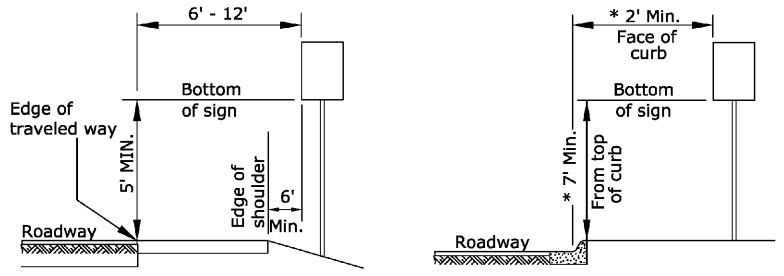
US-75 CLOSED NORTH OF Topeka FOLLOW DETOUR  
SP-02 (SPECIAL SIGN)

STD. SIZE  
EXPWY/FREEWAY

UPPERCASE: 6" C  
UPPERCASE: 10" D

LOWERCASE: 4.5" C  
LOWERCASE: 8" D

ALL CITY NAMES AND STREET NAMES ON SPECIAL SIGNS AND DESTINATION SIGNS MUST HAVE UPPER AND LOWER CASE LETTERS.

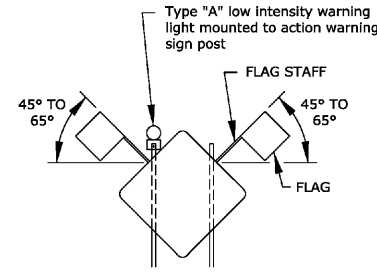


Rural

- 1) Ground-mounted signs shall be mounted at a minimum height of 5' measured from the bottom of sign to the near edge of the pavement.
- 2) Large signs having an area exceeding 50 square feet installed on multiple breakaway posts shall be mounted a minimum of 7' above the ground.
- 3) The height of the secondary sign mounted below another sign may be 4' measured from the bottom of the sign to the near edge of the pavement. Signs shall not overlap each other.

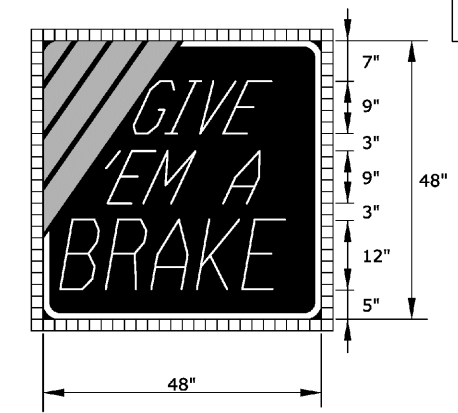
Urban

- 1) Signs shall be mounted at a minimum height of 7' measured from the bottom of sign to the near edge of the pavement.
- 2) Neither portable nor permanent sign supports should be located on sidewalks or areas designated for pedestrian or bicycle traffic.
- 3) Signs mounted lower than 7' should not project more than 4" into pedestrian facilities.
- 4) The height from of the secondary sign mounted below another sign may be 6' measured from the bottom of sign to the near edge of the pavement. Signs shall not overlap each other.
- 5) Large signs having an area exceeding 50 square feet installed on multiple breakaway posts shall be mounted a minimum of 7' above the ground.
- \* 6) Pedestrian detour signing shall be a minimum of 2' measured from the top of the pedestrian pathway to the bottom of the sign and shall not protrude into the walkway nor shall it project beyond the back of curb.

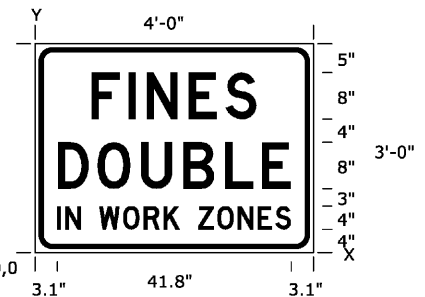


When the sign width is equal to or greater than 9', three or more wood posts may be used with a minimum of 4' between the centerline of each post. All signs less than 9' in width shall use a maximum of two wood posts.

- In the case of hitting rock when driving posts
1. Shift the sign location. Do not violate minimum sign spacing.
  2. With the engineer's approval, use acceptable alternative sign stands.



KI-104a



KI-105a

SIGN NUMBER	GIVE EM A BRAKE
WIDTH x HEIGHT	4'-0" x 4'-0"
BORDER WIDTH	1.0"
CORNER RADIUS	4.0"
STRIPE WIDTH	3.0"
MOUNTING	GROUND
BACKGROUND	TYPE: NON-REFLECTIVE COLOR: BLACK
LEGEND/BORDER	TYPE: REFLECTIVE COLOR: WHITE
LEGEND FONT	DUTCH 801 ROMAN SWC 25 DEGREE SLANT
STRIPES	TYPE: REFLECTIVE COLOR: ORANGE

SIGN NUMBER	FINES DOUBLE
WIDTH x HEIGHT	4'-0" x 3'-0"
BORDER WIDTH	0.9"
CORNER RADIUS	3.0"
MOUNTING	GROUND
BACKGROUND	TYPE: REFLECTIVE COLOR: WHITE
LEGEND/BORDER	TYPE: NON-REFLECTIVE COLOR: BLACK

DIMENSIONS IN INCHES SPACINGS ARE TO START OF NEXT LETTER

Y FONT	LETTER SPACINGS														HT LEN
23.0 D	9.7	6.4	3.2	7.3	6.4	5.4	9.7								8.0
11.0 D	3.9	6.9	7.5	7.3	7.3	6.4	4.9	3.9							8.0
4.0 D	3.1	1.6	2.7	3.2	4.3	3.8	3.6	2.8	3.2	3.4	3.8	3.6	3.2	2.7	3.1

Notes:

Typically, there are two sets of informational signs installed per project: one for each direction of traffic.

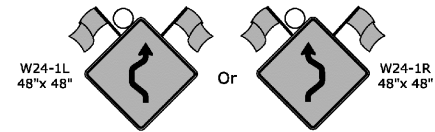
Install signs a minimum of 500' in advance of the road work ahead sign. The engineer may designate a more appropriate location if conditions dictate.

The informational signs are not to interfere with the traffic control signs for the project.

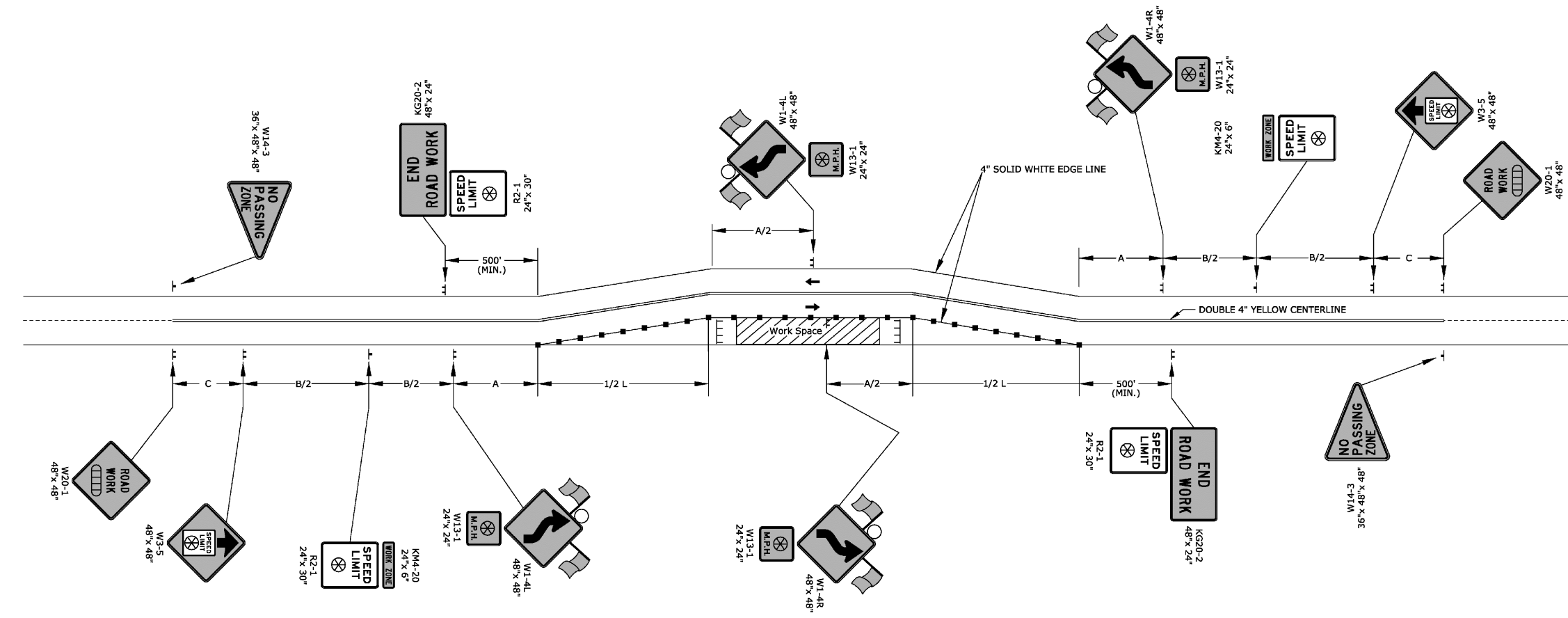


No.	Revision	By	Date
TRAFFIC CONTROL WORK ZONE SIGNS			
2017 STREET IMPROVEMENTS PROGRAM CITY OF PITTSBURG, KANSAS			
Designed by JUR		Date JULY 2017	Sht. 19 of 21





One W24-1 may be used per approach where the tangent distance between two reverse curves is less than 600 ft. If used, use in place of the first W1-4 and eliminate the second.



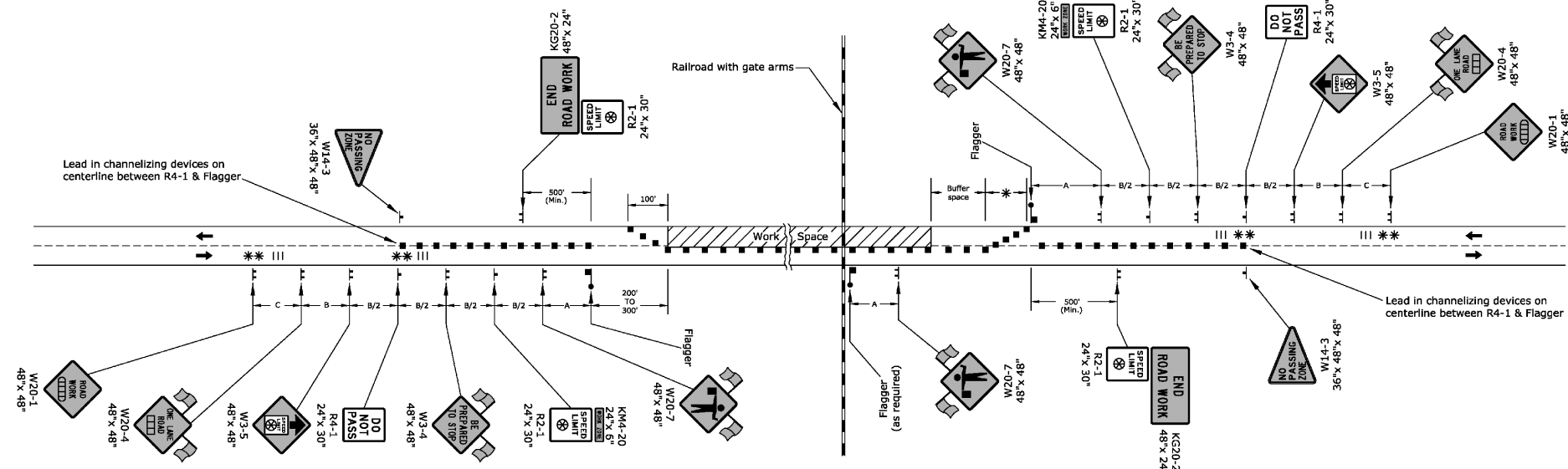
- Channelizing device
- ▬ Type 3 barricades
- ⬆ Ahead, 1500 ft, or 1 mile
- ⊗ Speed to be determined by the Engineer
- Type "A" low intensity warning light



No.	Revision	By	Date
<p>TRAFFIC CONTROL LANE CLOSURE DETAIL</p> <p>2017 STREET IMPROVEMENTS PROGRAM CITY OF PITTSBURG, KANSAS</p>			
Designed by JJR	Date JULY 2017	Sht. 20 of 21	



FLAGGER



**USE TE731 FOR FLAGGER OR PILOT CAR ON ROADWAYS  
WITH CONCRETE SHOULDERS GREATER THAN 8 FT.**

Notes:

Trucks hauling material to the project should STOP at the Flagger. After stopping, upon approval of the Engineer, trucks may be allowed to move around the Flagger.

Place a Flagger at all highway and major collector intersections and at-grade railroad intersections with lights and gates in the work space to control traffic crossing the tracks to the left of the gate arm. The need for a Flagger at minor side road intersections shall be determined by the Engineer. Place a W20-7 (Flagger symbol) sign on each side road that is controlled by a Flagger.

Existing signs shall not be covered or removed between Flagger stations.

Temporary rumble strips may be used in lieu of lead in channelizing devices when the roadway is less than or equal to 30' including paved shoulders. When extenuating circumstances exist, the Area Engineer may elect to eliminate both the lead in channelizers and the rumble strips.

\* Minimum six (6) channelizers spaced at 20' intervals.

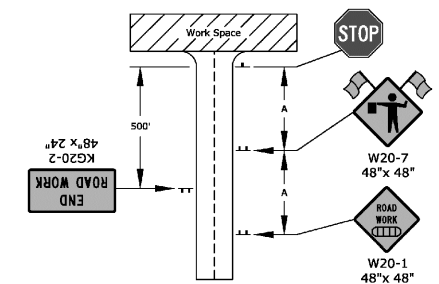
**\*\* Optional rumble strips may be placed: One set between the W20-1 and W20-4, and one set between the R4-1 and W3-4, on each approach.**

△ Not required on substantial maintenance projects (1R).

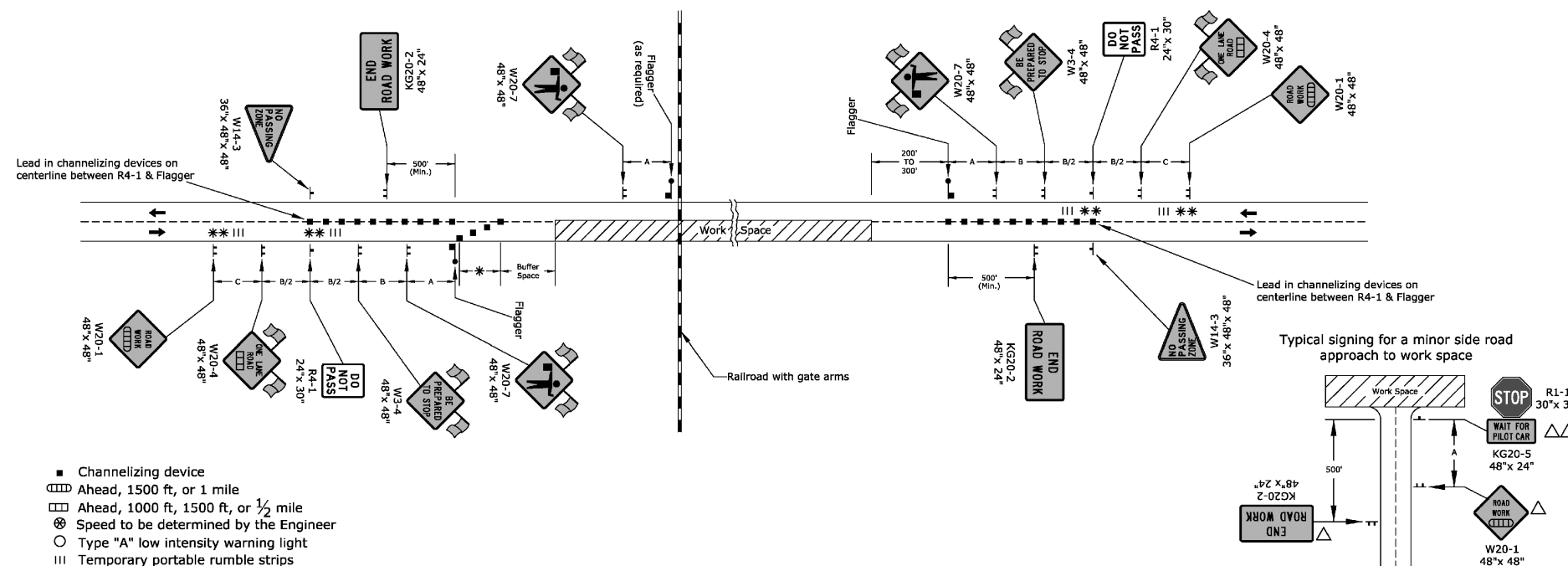
△△ The KG20-5 (WAIT FOR PILOT CAR) sign shall be mounted on an approved portable support and not attached to the existing stop sign post.

The KG20-5 sign shall be placed immediately in front of the existing stop sign, a minimum of 6" below the bottom of the stop sign. The sign should be removed or covered when there is no pilot car.

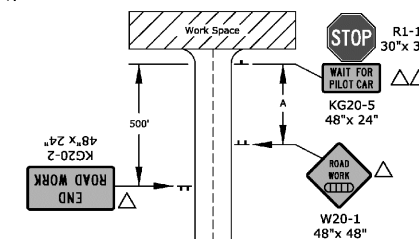
Typical signing for highway or major collector approach to work space



### FLAGGER AND PILOT CAR



Typical signing for a minor side road approach to work space



- Channelizing device
- ▤ Ahead, 1500 ft, or 1 mile
- ▥ Ahead, 1000 ft, 1500 ft, or 1/2 mile
- ⊗ Speed to be determined by the Engineer
- Type "A" low intensity warning light
- ▨ Temporary portable rumble strips

No.	Revision	By	Date
<p>TRAFFIC CONTROL FLAGGER AND PILOT CAR DETAIL</p>			
<p>2017 STREET IMPROVEMENTS PROGRAM CITY OF PITTSBURG, KANSAS</p>			
Designed by JJR		Date JULY 2017	Sht. 21 of 21