NOTES:
1. The distance between the stop bar and signal shall not exceed 150 feet.
2. In the absence of a stop bar, the curb radii spring point should be used.
3. Maintain 8 feet (min) -12 feet (desired) between signal heads, signs, and other span equipment.
NOTES:

1. The distance between the stop bar and signal shall not exceed 150 feet.
2. In the absence of a stop bar, the curb radius spring point should be used.
3. Maintain 8 feet (min) - 12 feet (desired) between signal heads, signs, and other span equipment.
4. Utilize a 4th level LTGA for the east & west protected left movements.
NOTES:

1. The distance between the stop bar and signal shall not exceed 150 feet.

2. In the absence of a stop bar, the curb radius spring point should be used.

3. Maintain 8 feet (MIN) - 12 feet (DESIRED) between signal heads, signs, and other span equipment.

4. The approach legend of the near side case sign should be blanked out so drivers only read the case sign legend on the far side of the intersection.
NOTES:

1. The distance between the stop bar and signal shall not exceed 150 feet.
2. In the absence of a stop bar, the curb radius spring point should be used.
3. Maintain 8 feet (min) - 12 feet (desired) between signal heads, signs, and other span equipment.
4. The approach legend of the near side case sign should be blanked out so drivers only read the case sign legend on the far side of the intersection.
5. Use permissive flashing yellow left turn.
1. The distance between the stop bar and signal shall not exceed 150 feet.
2. In the absence of a stop bar, the curb radii spring point should be used.
3. Maintain 8 feet (MIN) - 12 feet (DESIRED) between signal heads, signs, and other span equipment.
4. The approach legend of the near side case sign should be blanked out so drivers only read the case sign legend on the far side of the intersection.
5. Lead left-turn shall not be permissive.
6. Pedestrian signals should be considered where pedestrian activity is evident.
7. The maximum desired distance from the center of the lane turning left to the crossroad through signal (located on the span, left of the lane turning left) should not exceed 70 feet. Additional signs and engineering judgment may be required for distances in excess of 70 feet; or at skewed intersections.
NOTES:

1. THE DISTANCE BETWEEN THE STOP BAR AND SIGNAL SHALL NOT EXCEED 150 FEET.
2. IN THE ABSENCE OF A STOP BAR, THE CURB RADII SPRING POINT SHOULD BE USED.
3. MAINTAIN 8 FEET (MIN) -12 FEET (DESIRED) BETWEEN SIGNAL HEADS, SIGNS, AND OTHER SPAN EQUIPMENT.
4. THE APPROACH LEGEND OF THE NEAR SIDE CASE SIGN SHOULD BE BLANKED OUT SO DRIVER ONLY READ THE CASE SIGN LEGEND ON THE FAR SIDE OF THE INTERSECTION.
5. PEDESTRIAN SIGNALS OPTIONAL.
1. THE DISTANCE BETWEEN THE STOP BAR AND SIGNAL SHALL NOT EXCEED 150 FEET.
2. IN THE ABSENCE OF A STOP BAR, THE CURB RADIUS SPRING POINT SHOULD BE USED.
3. MAINTAIN 8 FEET (MIN) -12 FEET (DESIRED) BETWEEN SIGNAL HEADS, SIGNS, AND OTHER SPAN EQUIPMENT.
4. THE APPROACH LEGEND OF THE NEAR SIDE CASE SIGN SHOULD BE BLANKED OUT SO DRIVERS ONLY READ THE CASE SIGN LEGEND ON THE FAR SIDE OF THE INTERSECTION.
5. PEDESTRIAN SIGNALS SHOULD BE CONSIDERED WHERE PEDESTRIAN ACTIVITY IS EVIDENT.
6. THE MAXIMUM DESIRED DISTANCE FROM THE CENTER OF THE LANE TURNING LEFT, TO THE CROSSROAD THROUGH SIGNAL (LOCATED ON THE SPAN, LEFT OF THE LANE TURNING LEFT) SHOULD NOT EXCEED 70 FEET. ADDITIONAL SIGNS AND ENGINEERING JUDGMENT MAY BE REQUIRED FOR DISTANCES IN EXCESS OF 70 FEET; OR AT SKEWED INTERSECTIONS.
NOTES:

1. The distance between the stop bar and signal shall not exceed 150 feet.
2. In the absence of a stop bar, the curb radius spring point should be used.
3. Maintain 8 feet (min) - 12 feet (desired) between signal heads, signs, and other span equipment.
4. The approach legend of the near side case sign should be blanked out so drivers only read the case sign legend on the far side of the intersection.
5. Pedestrian signals should be considered where pedestrian activity is evident.
6. The maximum desired distance from the center of the lane turning left to the crossroad through signal (located on the span, left of the lane turning left) should not exceed 70 feet. Additional signs and engineering judgment may be required for distances in excess of 70 feet; or at skewed intersections.

Head Placement Diagram

3 Phase operation with dual leading left turn phasing on trunkline.

Michigan Department of Transportation

Center Signal in Lane Line

Typical 2-Way Illuminated Case Sign

Left Only Facing East

Spring Point Should Be Used.

In the absence of a stop bar, the curb radius spring point should be used.

The distance between the stop bar and signal shall not exceed 150 feet.

Center Signal in Lane Line

Typical 2-Way Illuminated Case Sign

Left Only Facing East

Spring Point Should Be Used.

In the absence of a stop bar, the curb radius spring point should be used.

The distance between the stop bar and signal shall not exceed 150 feet.

Center Signal in Lane Line

Typical 2-Way Illuminated Case Sign

Left Only Facing East

Spring Point Should Be Used.

In the absence of a stop bar, the curb radius spring point should be used.

The distance between the stop bar and signal shall not exceed 150 feet.

Center Signal in Lane Line

Typical 2-Way Illuminated Case Sign

Left Only Facing East

Spring Point Should Be Used.

In the absence of a stop bar, the curb radius spring point should be used.

The distance between the stop bar and signal shall not exceed 150 feet.

Center Signal in Lane Line

Typical 2-Way Illuminated Case Sign

Left Only Facing East

Spring Point Should Be Used.

In the absence of a stop bar, the curb radius spring point should be used.

The distance between the stop bar and signal shall not exceed 150 feet.

Center Signal in Lane Line

Typical 2-Way Illuminated Case Sign

Left Only Facing East

Spring Point Should Be Used.

In the absence of a stop bar, the curb radius spring point should be used.

The distance between the stop bar and signal shall not exceed 150 feet.

Center Signal in Lane Line

Typical 2-Way Illuminated Case Sign

Left Only Facing East

Spring Point Should Be Used.

In the absence of a stop bar, the curb radius spring point should be used.

The distance between the stop bar and signal shall not exceed 150 feet.

Center Signal in Lane Line

Typical 2-Way Illuminated Case Sign

Left Only Facing East

Spring Point Should Be Used.

In the absence of a stop bar, the curb radius spring point should be used.

The distance between the stop bar and signal shall not exceed 150 feet.

Center Signal in Lane Line

Typical 2-Way Illuminated Case Sign

Left Only Facing East

Spring Point Should Be Used.

In the absence of a stop bar, the curb radius spring point should be used.

The distance between the stop bar and signal shall not exceed 150 feet.
NOTES:

1. THE DISTANCE BETWEEN THE STOP BAR AND SIGNAL SHALL NOT EXCEED 150 FEET.
2. IN THE ABSENCE OF A STOP BAR, THE CURB RADII SPRING POINT SHOULD BE USED.
3. MAINTAIN 8 FEET (MIN) - 12 FEET (DESIRED) BETWEEN SIGNAL HEADS, SIGNS, AND OTHER SPAN EQUIPMENT.
4. PEDESTRIAN SIGNALS SHOULD BE CONSIDERED WHERE PEDESTRIAN ACTIVITY IS EVIDENT.
5. THE MAXIMUM DESIRED DISTANCE FROM THE CENTER OF THE LANE TURNING LEFT TO THE CROSSROAD THROUGH SIGNAL (LOCATED ON THE SPAN, LEFT OF THE LANE TURNING LEFT) SHOULD NOT EXCEED 70 FEET. ADDITIONAL SIGNS AND ENGINEERING JUDGMENT MAY BE REQUIRED FOR DISTANCES IN EXCESS OF 70 FEET, OR AT SKewed INTERSECTIONS.
NOTES:

1. MEDIAN WIDTH LESS THAN 30'.
2. THE DISTANCE BETWEEN THE STOP BAR AND SIGNAL SHALT NOT EXCEED 150 FEET.
3. IN THE ABSENCE OF A STOP BAR, THE CURB RADIUS SPRING POINT SHOULD BE USED.
4. MAINTAIN 8 FEET (MIN) - 12 FEET (DESIRED) BETWEEN SIGNAL HEADS, SIGNS, AND OTHER SPAN EQUIPMENT.
NOTES:
1. MEDIAN WIDTH LESS THAN 30'.
2. THE DISTANCE BETWEEN THE STOP BAR AND SIGNAL SHALL NOT EXCEED 150 FEET.
3. IN THE ABSENCE OF A STOP BAR, THE CURB RADIUS SPRING POINT SHOULD BE USED.
4. MAINTAIN 8 FEET (MIN) - 12 FEET (DESIRED) BETWEEN SIGNAL HEADS, SIGNS, AND OTHER SPAN EQUIPMENT.
5. UTILIZE A 4TH LEVEL LTGA FOR THE EAST & WEST PROTECTED LEFT MOVEMENTS.
6. THE MAXIMUM DESIRED DISTANCE FROM THE CENTER OF THE LANE TURNING LEFT TO THE CROSSROAD THROUGH SIGNAL (LOCATED ON THE SPAN, LEFT OF THE LANE TURNING LEFT) SHOULD NOT EXCEED 70 FEET. ADDITIONAL SIGNS AND ENGINEERING JUDGMENT MAY BE REQUIRED FOR DISTANCES IN EXCESS OF 70 FEET; OR AT SKEWED INTERSECTIONS.

HEAD PLACEMENT DIAGRAM

3 PHASE OPERATION
SPLIT PHASE
NOTES:

1. MEDIAN WIDTH LESS THAN 30'.
2. THE DISTANCE BETWEEN THE STOP BAR AND SIGNAL SHALL NOT EXCEED 150 FEET.
3. IN THE ABSENCE OF A STOP BAR, THE CURB RADII SPRING POINT SHOULD BE USED.
4. MAINTAIN 8 FEET (MIN) - 12 FEET (DESIRED) BETWEEN SIGNAL HEADS, SIGNS, AND OTHER SPAN EQUIPMENT.
5. THE APPROACH LEGEND OF THE NEAR SIDE CASE SIGN SHOULD BE BLANKED OUT SO DRIVERS ONLY READ THE CASE SIGN LEGEND ON THE FAR SIDE OF THE INTERSECTION.
NOTES:

1. MEDIAN WIDTH LESS THAN 30'.
2. THE DISTANCE BETWEEN THE STOP BAR AND SIGNAL SHALL NOT EXCEED 150 FEET.
3. IN THE ABSENCE OF A STOP BAR, THE CURB RADIUS OF SPRING POINT SHOULD BE USED.
4. MAINTAIN 8 FEET (MIN) - 12 FEET (DESIRED) BETWEEN SIGNAL HEADS, SIGNS, AND OTHER SPAN EQUIPMENT.
5. THE APPROACH LEGEND OF THE NEAR SIDE CASE SIGN SHOULD BE BLANKED OUT SO DRIVERS ONLY READ THE CASE SIGN LEGEND ON THE FAR SIDE OF THE INTERSECTION.
6. PEDESTRIAN SIGNALS SHOULD BE CONSIDERED WHERE PEDESTRIAN ACTIVITY IS EVIDENT.
7. USE PERMISSIVE FLASHING YELLOW LEFT TURN.
NOTES:

1. MEDIAN WIDTH LESS THAN 30'.
2. THE DISTANCE BETWEEN THE STOP BAR AND SIGNAL SHALL NOT EXCEED 150 FEET.
3. IN THE ABSENCE OF A STOP BAR, THE CURB RADIUS SPRING POINT SHOULD BE USED.
4. MAINTAIN 8 FEET (MIN) -12 FEET (DESIRED) BETWEEN SIGNAL HEADS, SIGNS, AND OTHER SPAN EQUIPMENT.
5. LEAD LEFT-TURN SHALL NOT BE PERMISSIVE.
6. PEDESTRIAN SIGNALS SHOULD BE CONSIDERED WHERE PEDESTRIAN ACTIVITY IS EVIDENT.
7. THE MAXIMUM DESIRED DISTANCE FROM THE CENTER OF THE LANE TURNING LEFT, TO THE CROSSROAD THROUGH SIGNAL (LOCATED ON THE SPAN, LEFT OF THE LANE TURNING LEFT) SHOULD NOT EXCEED 70 FEET. ADDITIONAL SIGNS AND ENGINEERING JUDGMENT MAY BE REQUIRED FOR DISTANCES IN EXCESS OF 70 FEET; OR AT SKewed INTERSECTIONS.
NOTES:

1. Median width is 30' or more, and the distance from the x-road stop bar to the median signal is less than or equal to 150 feet.
2. In the absence of a stop bar, the curb radius spring point should be used.
3. Maintain 8 feet (MIN - 12 feet (desired)) between signal heads, signs, and other span equipment.
4. The approach legend of the near side case sign should be blanked out so drivers only read the case sign legend on the far side of the intersection.
5. Pedestrian signals should be considered where pedestrian activity is evident.

6. While phasing is possible for either roadway, usually left turns are prohibited at the intersection proper and redirected through median crossovers. The main problem is the interlocking of left turn movements.
7. To reduce the number of conductor cables crossing a span, consideration should be given to placing the controller in the median.
8. A directional bore conduit may be required to reduce the number of overhead conductors cables crossing the span to 10 or less.
NOTES:

1. Median width is 30' or more, and the distance from the X-road stop bar to the center line of the median is greater than 150 feet.
2. Design as two separate intersections.
3. The distance between the stop bar and signal shall not exceed 150 feet.
4. In the absence of a stop bar, the curb radii spring point should be used.
5. Maintain 8 feet (MIN) -12 feet (REQUIRED) between signal heads, signs, and other span equipment.
6. The approach legend of the near side case sign should be blanked out so drivers only read the case sign legend on the far side of the intersection.
7. While phasing is possible for either roadway, usually left turns are prohibited at the intersection proper and redirected through median crossovers. The main problem is the interlocking of left turn movements.
8. Pedestrian signals should be considered where pedestrian activity is evident.
9. A base mounted cabinet may be required to reduce the number of conductor cables crossing a span. Consideration should be given to placing the controller in the median.
10. A directional bore conduit may be required to reduce the number of overhead conductors cables crossing the span to 10 or less.
11. Median width is 30' or more, and the distance from the X-road stop bar to the center line of the median is greater than 150 feet.
NOTES:

1. EXCLUSIVE LEFT TURN SLOTS
2. THE DISTANCE BETWEEN THE STOP BAR AND SIGNAL SHALL NOT EXCEED 150 FEET.
3. IN THE ABSENCE OF A STOP BAR, THE CURB RADII SPRING POINT SHOULD BE USED.
4. MAINTAIN 8 FEET (MIN) - 12 FEET (DESIRED) BETWEEN SIGNAL HEADS, SIGNS, AND OTHER SPAN EQUIPMENT.
6. PEDESTRIAN SIGNALS SHOULD BE CONSIDERED WHERE PEDESTRIAN ACTIVITY IS EVIDENT.
7. TO MEET THE REQUIREMENTS FOR CONE OF VISION A 3RD 1W3C SPAN HEAD OR LOW LEVEL MAY BE REQUIRED.
NOTES:
1. EXCLUSIVE LEFT TURN SLOTS
2. THE DISTANCE BETWEEN THE STOP BAR AND SIGNAL SHALL NOT EXCEED 150 FEET.
3. IN THE ABSENCE OF A STOP BAR, THE CURB RADII SPRING POINT SHOULD BE USED.
4. MAINTAIN 8 FEET (MIN) - 12 FEET (DESIRED) BETWEEN SIGNAL HEADS, SIGNS, AND OTHER SPAN EQUIPMENT.
5. THE APPROACH LEGEND OF THE NEAR SIDE CASE SIGN SHOULD BE BLANKED OUT SO DRIVERS ONLY READ THE CASE SIGN LEGEND ON THE FAR SIDE OF THE INTERSECTION (IF THERE ARE CASE SIGNS).
6. PEDESTRIAN SIGNALS SHOULD BE CONSIDERED WHERE PEDESTRIAN ACTIVITY IS EVIDENT.
**NOTES:**

1. Median width is 30' or more, and the distance from the x-road stop bar to the median signal is greater than 150 feet.
2. Design as four separate intersections.
3. The distance between the stop bar and signal shall not exceed 150 feet.
4. In the absence of a stop bar, the curb radii spring point should be used.
5. Maintain 8 feet (min) -12 feet (desired) between signal heads, signs, and other span equipment.
6. Pedestrian signals should be considered where pedestrian activity is evident.

7. While phasing is possible for either roadway, usually left turns are prohibited at the intersection proper and redirected through median crossovers. The main problem is the interlocking of left turn movements.
8. To reduce the number of conductor cables crossing a span, consideration should be given to placing the controller in the median.
9. A base mounted cabinet may be required.
NOTES:

1. TREAT EACH CROSS OVER AS A SEPARATE INTERSECTION
2. MAINTAIN 8 FEET (MIN) - 12 FEET (DESIRED) BETWEEN SIGNAL HEADS, SIGNS, AND OTHER SPAN EQUIPMENT.
NOTES:

1. Maintain 8 feet (min) - 12 feet (desired) between signal heads, signs, and other span equipment.
NOTES:

1. THE DISTANCE BETWEEN THE STOP BAR AND SIGNAL SHALL NOT EXCEED 150 FEET.
2. MAINTAIN 8 FEET (MIN) - 12 FEET (DESIRED) BETWEEN SIGNAL HEADS, SIGNS, AND OTHER SPAN EQUIPMENT.
3. TO MEET THE REQUIREMENTS FOR CONE OF VISION - 1W3C SPAN HEADS OR LOW LEVEL MAY BE REQUIRED.
NOTES:

1. THE DISTANCE BETWEEN THE STOP BAR AND SIGNAL SHALL NOT EXCEED 150 FEET.
2. IN THE ABSENCE OF A STOP BAR, THE CURB RADIUS SPRING POINT SHOULD BE USED.
3. MAINTAIN 8 FEET (MIN) - 12 FEET (DESIRED) BETWEEN SIGNAL HEADS, SIGNS, AND OTHER SPAN EQUIPMENT.
1. Design as two separate intersections if separation is 30' or more.
2. Design as one intersection if separation is less than 30'.
3. The distance between the stop bar and signal shall not exceed 150 feet.
4. Spring point should be used in the absence of a stop bar.
5. Maintain 8 feet (min) - 12 feet (desired) between signal heads, signs, and other span equipment.
6. No case sign is necessary unless one of the approach lanes is a combination lane.

**NOTES:**
NOTES:

1. The distance between the stop bar and signal shall not exceed 150 feet.
2. In the absence of a stop bar, the curb radii spring point should be used.
3. Maintain 8 feet (min) - 12 feet (desired) between signal heads, signs, and other span equipment.
4. Pedestrian signals required unless otherwise directed.
5. Utilize a 4th level LTGA for the south protected left movements.
NOTES:

1. EXCLUSIVE LEFT TURN SLOTS
2. THE DISTANCE BETWEEN THE STOP BAR AND SIGNAL SHALL NOT EXCEED 150 FEET.
3. IN THE ABSENCE OF A STOP BAR, THE CURB RADII SPRING POINT SHOULD BE USED.
4. MAINTAIN 8 FEET (MIN) - 12 FEET (DESIRED) BETWEEN SIGNAL HEADS, SIGNS, AND OTHER SPAN EQUIPMENT.
5. THE APPROACH LEGEND OF THE NEAR SIDE CASE SIGN SHOULD BE BLANKED OUT SO DRIVERS ONLY READ THE CASE SIGN LEGEND ON THE FAR SIDE OF THE INTERSECTION (IF THERE ARE CASE SIGNS).
6. PEDESTRIAN SIGNALS SHOULD BE CONSIDERED WHERE PEDESTRIAN ACTIVITY IS EVIDENT.