

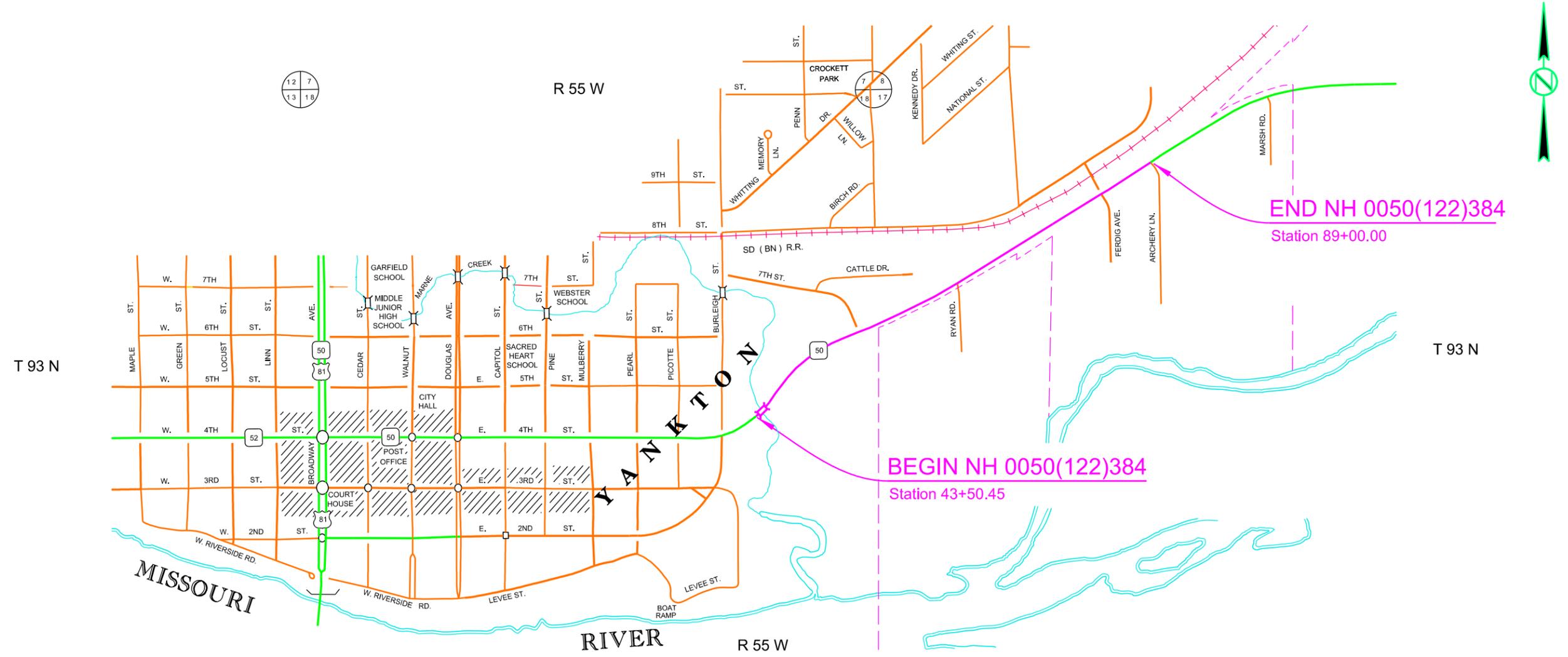
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0050(122)384	C1	C18

Section C: Traffic Control

INDEX OF SHEETS

C1	General Layout W/Index
C2-C3	Estimate with General Notes
C4-C11	Traffic Control Layouts
C12	Sign Tables
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REVISED 06/13/16 GAP

SECTION C-ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
634E0010	Flagging	200.0	Hour
634E0110	Traffic Control Signs	1,022.9	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0280	Type 3 Barricade, 8' Single Sided	25	Each
634E0285	Type 3 Barricade, 8' Double Sided	5	Each
634E0330	Temporary Raised Pavement Markers	23,280	Ft
634E0380	Tubular Marker	92	Each
634E0390	Replace Tubular Marker	46	Each
634E0420	Type C Advance Warning Arrow Board	2	Each
634E0560	Remove Pavement Marking, 4" or Equivalent	2,720	Ft
634E0600	4" Temporary Pavement Marking Tape Type I	720	Ft
634E0640	Temporary Pavement Marking	13,500	Ft
634E1002	Detour Signing	336.7	SqFt
634E1020	Temporary Business Signing	26.7	SqFt
634E2000	Longitudinal Pedestrian Barricade	200	Ft
634E2010	Temporary Pedestrian Facility(s)	Lump Sum	LS
634E2020	Temporary Curb Ramp	8	Each
634E2025	Longitudinal Pedestrian Channelizer	200	Ft
634E2030	Audible Message Device	5	Each
900E1080	Orange Plastic Safety Fence	400	Ft

SEQUENCE OF OPERATIONS

The Contractor shall follow the following Sequence of Operations unless an alternate Sequence of Operations is submitted in writing two weeks prior to the pre-construction meeting and approved by the Engineer prior to the start of work.

No work will be allowed on Friday, Saturday and Sunday during Riverboat Days which is typically the third weekend in August.

1. Detailed description of sequence of operation is as follows:
 - a. Install fixed location signs.
 - b. Move two way traffic to the eastbound lanes at Sta. 45+69.9.
 - c. Install storm sewer and drop inlet at Sta. 45+69.9. Place temporary surfacing.
 - d. Move two way traffic to the westbound lanes.
 - e. Grade, install storm sewer, curb & gutter, sidewalk, lighting and surface the eastbound lanes with PCC Pavement.
 - f. Complete the eastbound lanes work on Structure No. 68-129-205.
 - g. Move two way traffic to the eastbound lanes.
 - h. Grade, install storm sewer, curb & gutter, sidewalk, lighting and surface the westbound lanes with PCC Pavement.
 - i. Complete the westbound lanes work on Structure No. 68-129-205.
 - j. Install permanent signing and pavement marking.
2. Construction shall be completed one-half roadway width at a time, with traffic being maintained at all times.

SEQUENCE OF OPERATIONS

3. Closure time of all intersecting streets along the project shall be kept to a minimum and shall not exceed 2 consecutive intersections closed at any time.
4. Left & Right turns will be prohibited as directed by the Engineer.
5. Mail service and emergency vehicle access shall be maintained at all times.
6. Existing street lighting shall be maintained as much as practical. The Contractor shall supply a plan for approval on how street lighting shall be maintained.
7. The Contractor shall hold weekly public meetings. Also, prior to the start of any work on the project, the Contractor shall hold an initial public meeting to discuss project sequences, traffic control, goals, etc. The Contractor will be responsible for securing a time and location for these meetings.
8. When work begins on the project, the Contractor shall be responsible for maintaining the entire project. This shall include, but is not limited to, all surface maintenance, drainage, weed control and traffic signs.
9. Overwidth vehicles shall be detoured around work areas as detailed in the Traffic Control Plans.

COORDINATION BETWEEN CONTRACTORS

A separate contract for Project NH 0050(108)385 PCN 023U may be awarded to another Contractor for PCC Overlay on SD HWY 50 which starts at Sta. 89+00.

Included in Section F are 2.9 MGals of Water for Granular Material, 200 tons of Gravel Cushion and 200 tons of Asphalt Concrete Composite for traffic control purposes for temporary transitions between the two projects.

If applicable, the Contractor shall schedule work so as not to interfere with or hinder the progress of the work performed by other Contractors on the PCC Overlay project.

MAINTENANCE OF TRAFFIC

Removing, relocating, covering, salvaging and resetting of permanent traffic control devices, including delineation, shall be the responsibility of the Contractor. It is anticipated that numerous route markers, directional arrows and other signs will require covering for the detour. Cost for this work shall be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost shall be replaced by the Contractor at no cost to the State.

Existing STOP signs that are temporarily removed shall be reset prior to the end of each day's work. A stop sign on portable supports must be used whenever a permanent ground mounted stop sign is removed. Cost for this work shall be incidental to the contract unit price per square foot for Traffic Control Signs.

The Contractor will be required to maintain drainage on the project during the course of construction. This work will include the installation of Contractor furnished pipe to temporarily connect the old storm sewer to the new storm sewer system, performing the necessary shaping, and all other needed miscellaneous work. No separate payment will be made for this work. All costs of maintaining the drainage shall be incidental to the contract unit prices for the various items.

MAINTENANCE OF TRAFFIC

Where phased construction of the intersections is indicated it should be understood that the pouring sequence shall correspond with the joint details shown on the pavement layout. Each phase may require two or more individual pours.

Included in Section F are 1.7 Mgals of Water for Granular Material and 142 tons of Gravel Cushion for traffic control purposes to maintain traffic during construction. When directed by the Engineer, the Gravel Cushion shall be salvaged and used for the final shaping of the base. Cost for removal, disposal and/or reuse of this material shall be incidental to the contract unit prices for the various bid items

The Contractor shall notify the County Dispatcher and the Yankton Police Department prior to the closure of and upon reopening of any intersection.

Throughout the project, the Contractor must maintain local traffic and access to businesses and residences at all times. Adequate passage and ramping shall be provided. The Contractor shall keep businesses and residents informed of construction sequences in areas that have a direct effect on their access.

Construction signs shall not obscure existing signs and shall be a minimum of 50' to 100' from any existing signs.

Placement of temporary R1-1 STOP signs, as directed by the Engineer, will also be required where major business approaches enter the project. R1-1 STOP signs will be incidental to the contract unit price per square foot for Traffic Control Signs.

PEDESTRIAN TRAFFIC

The Contractor shall accommodate pedestrian traffic, including those with disabilities. Bicycle traffic shall also be accommodated.

The Contractor shall submit a detailed plan to the Engineer on how pedestrian and bicycle traffic will be accommodated during the various phases of the work at the affected locations. This plan should be in conformance with the details contained in these plans for pedestrian accommodation. The plan may be submitted at the Preconstruction Meeting, but shall be submitted no later than two weeks prior to the start of work.

Some options for consideration to accommodate the pedestrian traffic include:

The use of various traffic control devices, as approved by The Engineer, to maintain the pedestrians through or past the immediate work area.

Detouring pedestrians and bicycles to the opposite side of the street, alternate route(s) or around a block or city block.

Manned crossing assistance (crossing guards) combined with an accessible path.

Orange safety fence shall be used to protect pedestrian traffic from open excavations. A detectable edging shall be used with the safety fence to protect pedestrian traffic. This edging shall protrude at least 6 inches above the surface of the sidewalk or pathway, with the bottom of the edging a maximum of 2.5 inches above the surface. Examples of detectable edging for pedestrians are given in Section 6F.74 of the MUTCD. All costs to furnish, install, maintain and remove the safety fence shall be incidental to the contract price per foot for Orange Plastic Safety Fence.

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PEDESTRIAN TRAFFIC

Cost to furnish, install, relocate, maintain and remove all devices necessary to accommodate pedestrian traffic such as barricades with detectable edges, longitudinal pedestrian barriers (water or sand filled plastic barrier) with detectable edges, temporary ramps with detectable warnings shall be paid for with the respective bid items.

Cost to furnish, install, relocate, maintain and remove the temporary boardwalks and temporary crosswalks shall be paid for at the contract lump sum price for Temporary Pedestrian Facility(s).

Cost to furnish, install, relocate, maintain and remove Sidewalk Work Ahead signs, Sidewalk Closed signs, Sidewalk Closed Ahead Cross Here signs, Pedestrian Crossing warning signs shall be paid for at the contract unit price per square foot for Traffic Control Signs.

EXISTING MAILBOXES AND NEWSPAPER CONTAINERS

The Contractor will be required to relocate on temporary supports existing mailboxes and newspaper containers affected by the project as necessary in order to provide continuous mail service to the local residents and businesses throughout the project. It is anticipated that the Contractor will be required to relocate these mailboxes at least twice during construction. All mailboxes shall be located off of SD HWY 50 at the end of the project, the final location shall be coordinated with the Yankton Postmaster. The Engineer will approve the material used for temporary supports. Cost of this work shall be incidental to various contract items. The Contractor shall coordinate this work with the Yankton Postmaster at (605)665-0597.

INCIDENTS

An incident is an emergency road user occurrence or unplanned event that impedes the flow of traffic such as an accident, hazardous materials spill or similar event.

The Contractor shall set up a meeting prior to start of work to plan and coordinate the response to an incident. The Contractor will invite the Department of Transportation, the South Dakota Highway Patrol, City of Yankton representatives and local emergency response entities to the meeting.

The Contractor will be required to flag traffic, relocate signs, and adjust traffic control devices as required to warn approaching motorists of the incident and resulting queued traffic.

The Contractor shall provide adequate personnel to accomplish the necessary traffic control work in the event of an incident.

Flagging for incidents shall be paid for at contract unit price per hour. No additional payment will be made for the other work. Costs for necessary signing shall be incidental to the contract unit price per square foot for Traffic Control Signs.

DETOUR SIGNING

The Contractor will be required to install, maintain and remove the detour traffic signing in accordance with the Specifications, the MUTCD and as detailed in these plans. Detour signing shall be installed on breakaway ground mounted supports. All costs for furnishing, installing, maintaining and removing detour signs, posts and mounting hardware shall be incidental to the contract unit price per square foot for Detour Signing.

TEMPORARY RAISED PAVEMENT MARKERS

Temporary Raised Pavement Markers shall be used as temporary pavement marking on existing concrete, new concrete and asphalt concrete areas that will not be removed. Also, Raised Pavement Markers shall be used on all traffic control tapers.

The temporary raised pavement markers shall be attached to the roadway surface with a bituminous adhesive capable of being removed from the roadway.

Cost for furnishing, installing, maintaining (including cleaning and replacing, if necessary), removing markers and bituminous adhesive shall be included in the contract unit price per foot for Temporary Raised Pavement Markers.

TEMPORARY STOP BARS

White Temporary Pavement Marking Tape Type I shall be used for the stop bars as detailed in these plans and paid for at the contract unit price per foot for 4" Temporary Pavement Marking Tape Type I.

REMOVE PAVEMENT MARKING

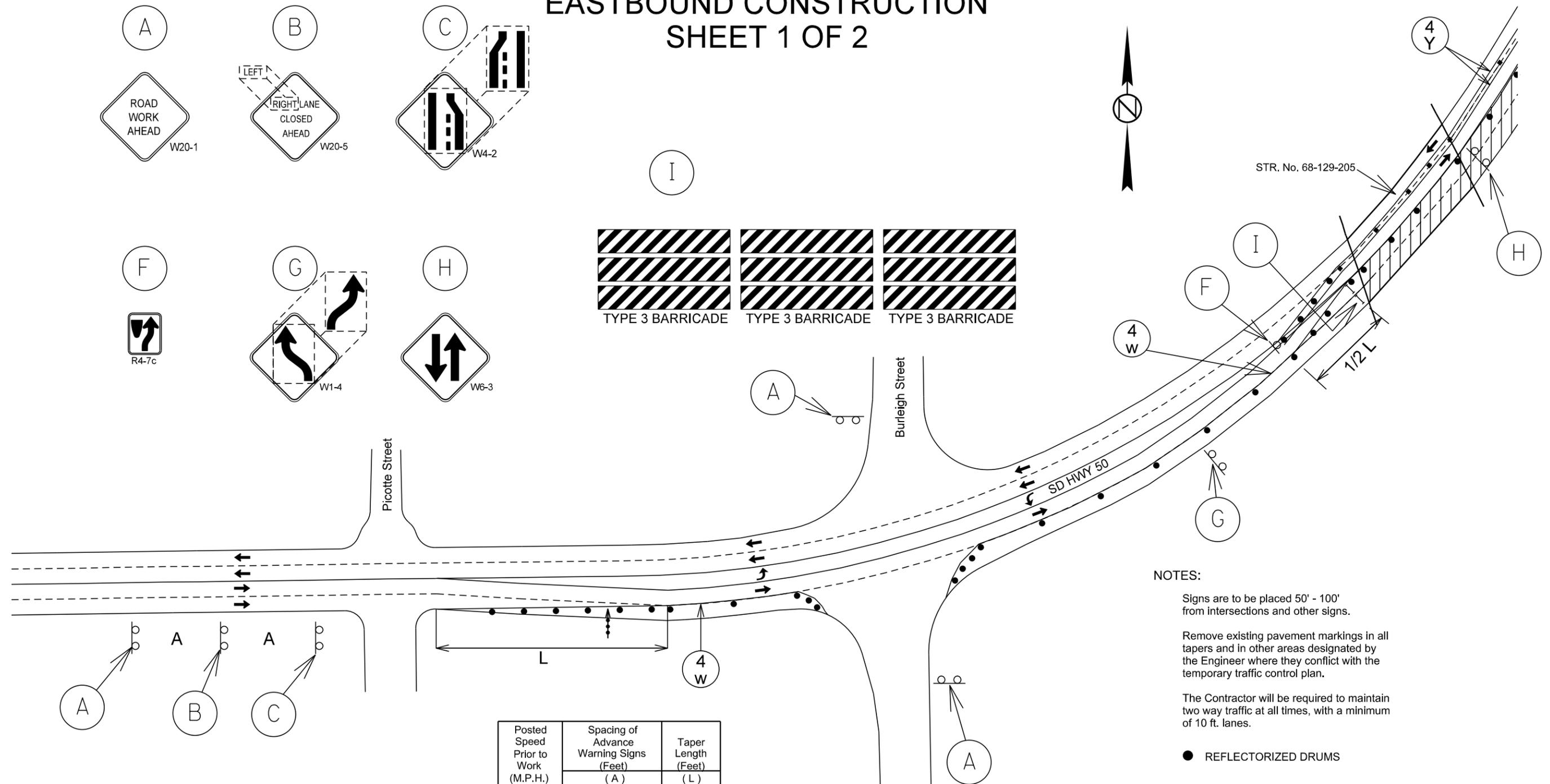
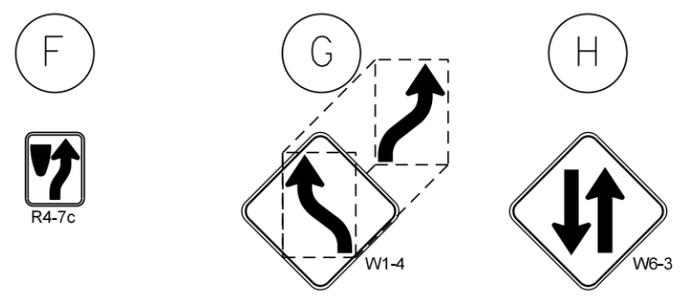
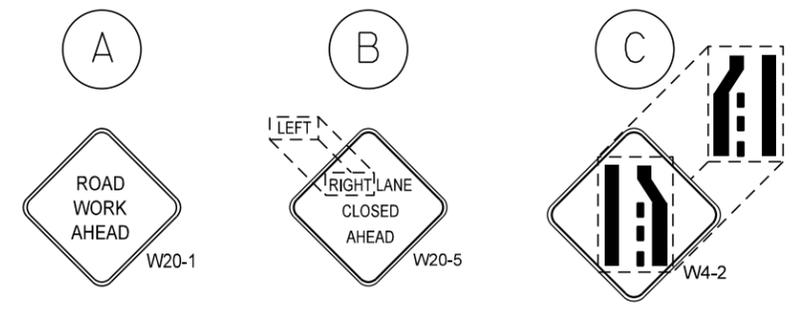
Existing pavement marking which conflicts with the desired traffic patterns detailed in traffic control layouts in the plans shall be removed by the Contractor unless otherwise shown. Removal of pavement marking shall be paid for at the contract unit price per foot for Remove Pavement Marking, 4" or Equivalent.

TEMPORARY BUSINESS SIGNING

The Contractor will be required to install and maintain "trailblazing" signs to businesses along the project that have their access affected by construction activities. A maximum of 2 signs with a maximum size of 3' wide by 2' high may be furnished by an individual business. The Contractor will be required to install the signs on temporary supports, maintain and relocate them as necessary, and remove and return the signs to the owners at the completion of the work. It is estimated that 40 signs will be furnished to the Contractor.

Cost for installing, maintaining and removing the signs shall be included in the contract unit price per square foot for Temporary Business Signing.

TRAFFIC CONTROL EASTBOUND CONSTRUCTION SHEET 1 OF 2

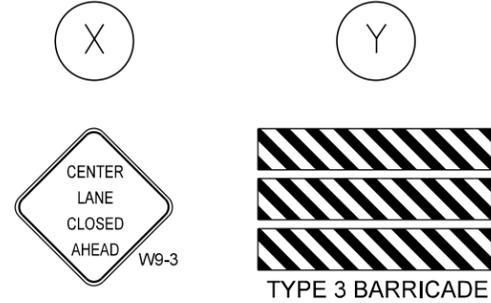
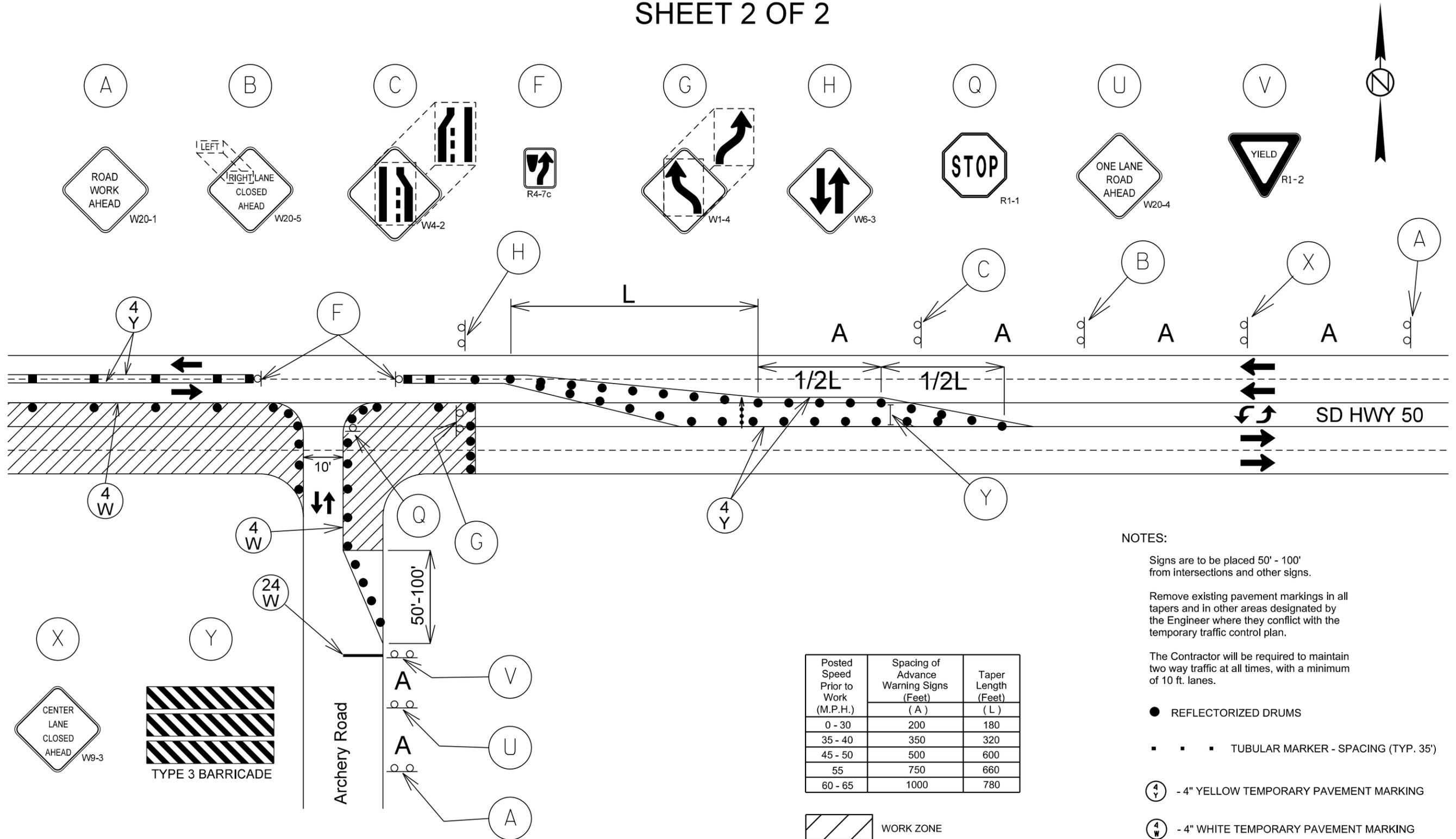


- NOTES:**
- Signs are to be placed 50' - 100' from intersections and other signs.
 - Remove existing pavement markings in all tapers and in other areas designated by the Engineer where they conflict with the temporary traffic control plan.
 - The Contractor will be required to maintain two way traffic at all times, with a minimum of 10 ft. lanes.
 - REFLECTORIZED DRUMS
 - ▪ ▪ TUBULAR MARKER - SPACING (TYP. 35')
 - ④ - 4" YELLOW TEMPORARY PAVEMENT MARKING
 - ④ - 4" WHITE TEMPORARY PAVEMENT MARKING
 - ←●●● - ADVANCE WARNING ARROW BOARD

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)
0 - 30	200	180
35 - 40	350	320
45 - 50	500	600
55	750	660
60 - 65	1000	780



TRAFFIC CONTROL EASTBOUND CONSTRUCTION SHEET 2 OF 2



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)
0 - 30	200	180
35 - 40	350	320
45 - 50	500	600
55	750	660
60 - 65	1000	780



NOTES:

Signs are to be placed 50' - 100' from intersections and other signs.

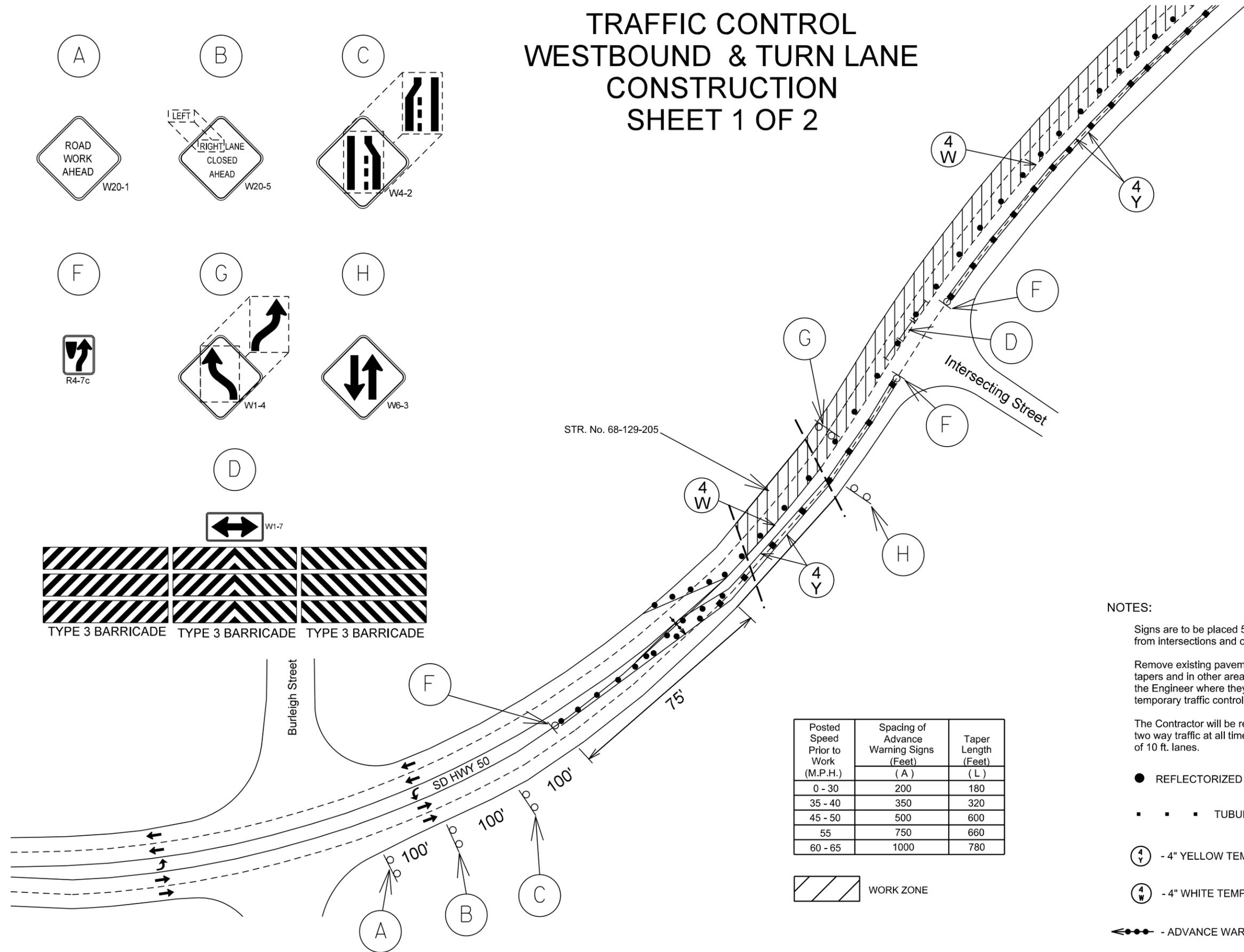
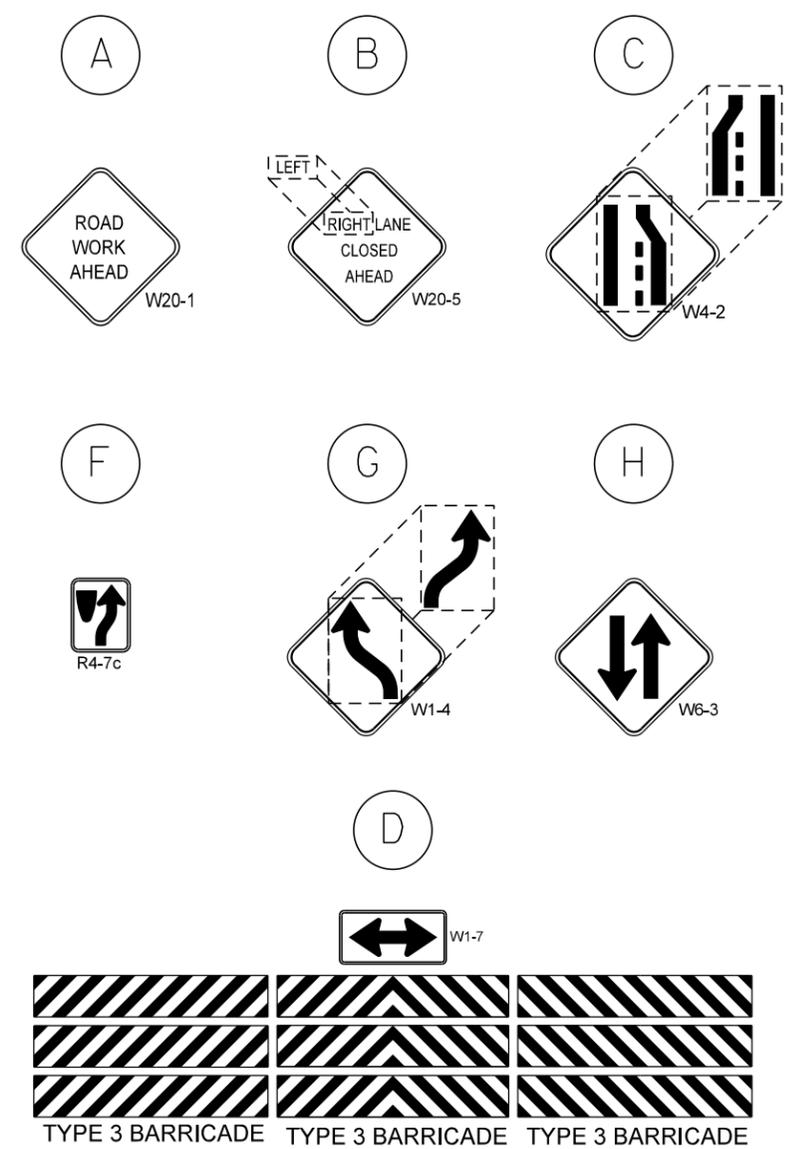
Remove existing pavement markings in all tapers and in other areas designated by the Engineer where they conflict with the temporary traffic control plan.

The Contractor will be required to maintain two way traffic at all times, with a minimum of 10 ft. lanes.

- REFLECTORIZED DRUMS
- ▪ ▪ TUBULAR MARKER - SPACING (TYP. 35')
- ④ - 4" YELLOW TEMPORARY PAVEMENT MARKING
- ④W - 4" WHITE TEMPORARY PAVEMENT MARKING
- ←••••← - ADVANCE WARNING ARROW BOARD

TRAFFIC CONTROL WESTBOUND & TURN LANE CONSTRUCTION SHEET 1 OF 2

REVISED 06/03/16 GAP



STR. No. 68-129-205

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)
0 - 30	200	180
35 - 40	350	320
45 - 50	500	600
55	750	660
60 - 65	1000	780



NOTES:

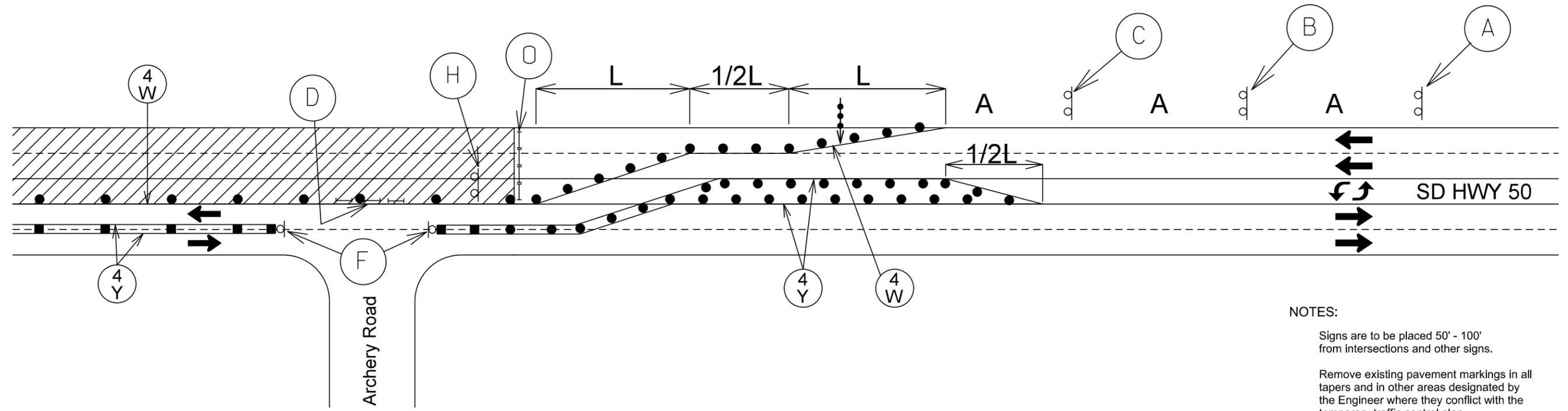
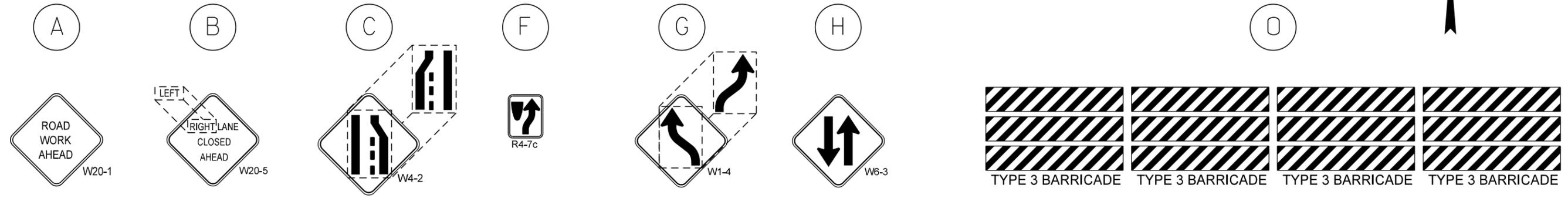
Signs are to be placed 50' - 100' from intersections and other signs.

Remove existing pavement markings in all tapers and in other areas designated by the Engineer where they conflict with the temporary traffic control plan.

The Contractor will be required to maintain two way traffic at all times, with a minimum of 10 ft. lanes.

- REFLECTORIZED DRUMS
- ▪ ▪ TUBULAR MARKER - SPACING (TYP. 35')
- ④ Y - 4" YELLOW TEMPORARY PAVEMENT MARKING
- ④ W - 4" WHITE TEMPORARY PAVEMENT MARKING
- ←•••← - ADVANCE WARNING ARROW BOARD

TRAFFIC CONTROL WESTBOUND & TURN LANE CONSTRUCTION SHEET 2 OF 2



NOTES:

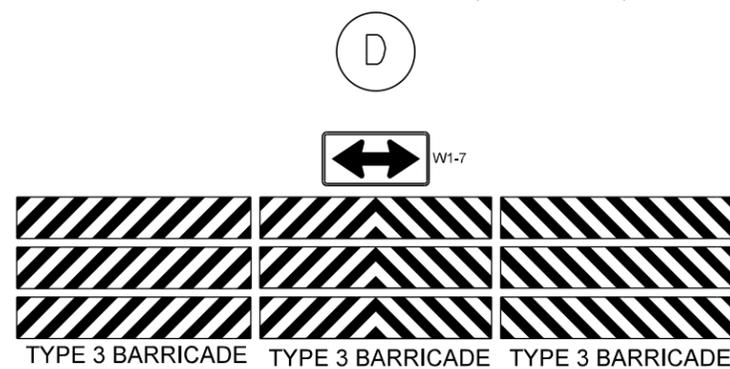
Signs are to be placed 50' - 100' from intersections and other signs.

Remove existing pavement markings in all tapers and in other areas designated by the Engineer where they conflict with the temporary traffic control plan.

The Contractor will be required to maintain two way traffic at all times, with a minimum of 10 ft. lanes.

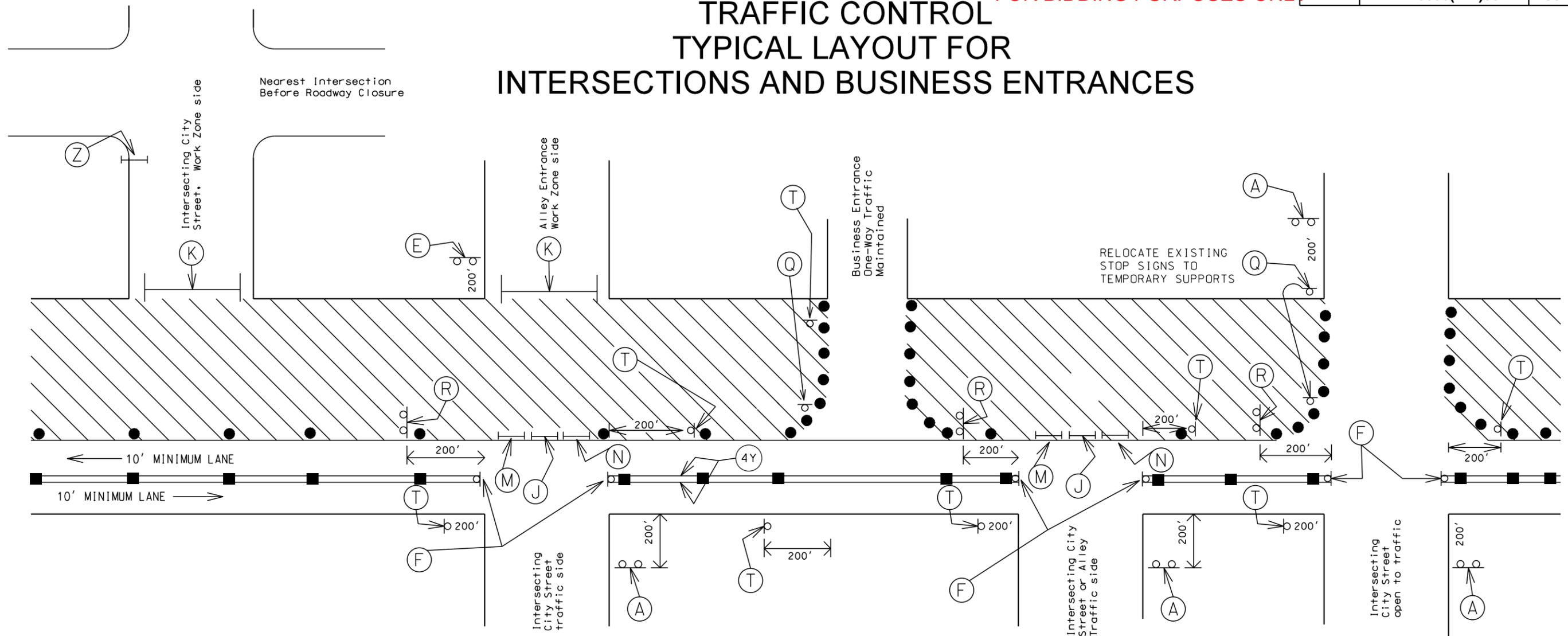
- REFLECTORIZED DRUMS
- ▪ ▪ TUBULAR MARKER - SPACING (TYP. 35')
- ④ Y - 4" YELLOW TEMPORARY PAVEMENT MARKING
- ④ W - 4" WHITE TEMPORARY PAVEMENT MARKING
- ←●●● - ADVANCE WARNING ARROW BOARD

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet)	Taper Length (Feet)
	(A)	(L)
0 - 30	200	180
35 - 40	350	320
45 - 50	500	600
55	750	660
60 - 65	1000	780



FOR BIDDING PURPOSES ONLY

TRAFFIC CONTROL TYPICAL LAYOUT FOR INTERSECTIONS AND BUSINESS ENTRANCES



- WORK ZONE
- REFLECTORIZED DRUMS - 30' SPACING ON TAPERS & 60' MAXIMUM SPACING ON TANGENT, UNLESS OTHERWISE SHOWN.
- Tubular Markers
- 4Y - 4" YELLOW RAISED PAVEMENT MARKERS

NOTES:

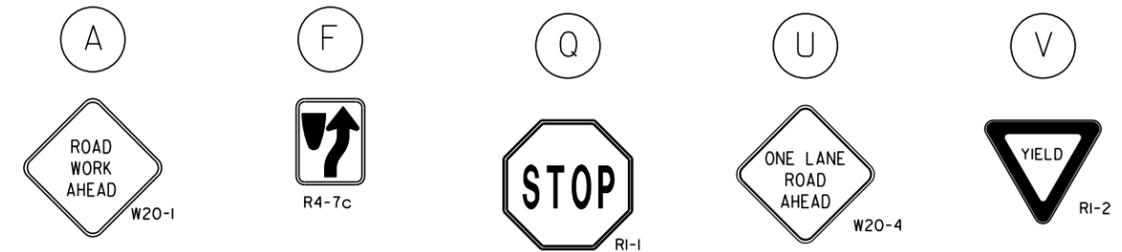
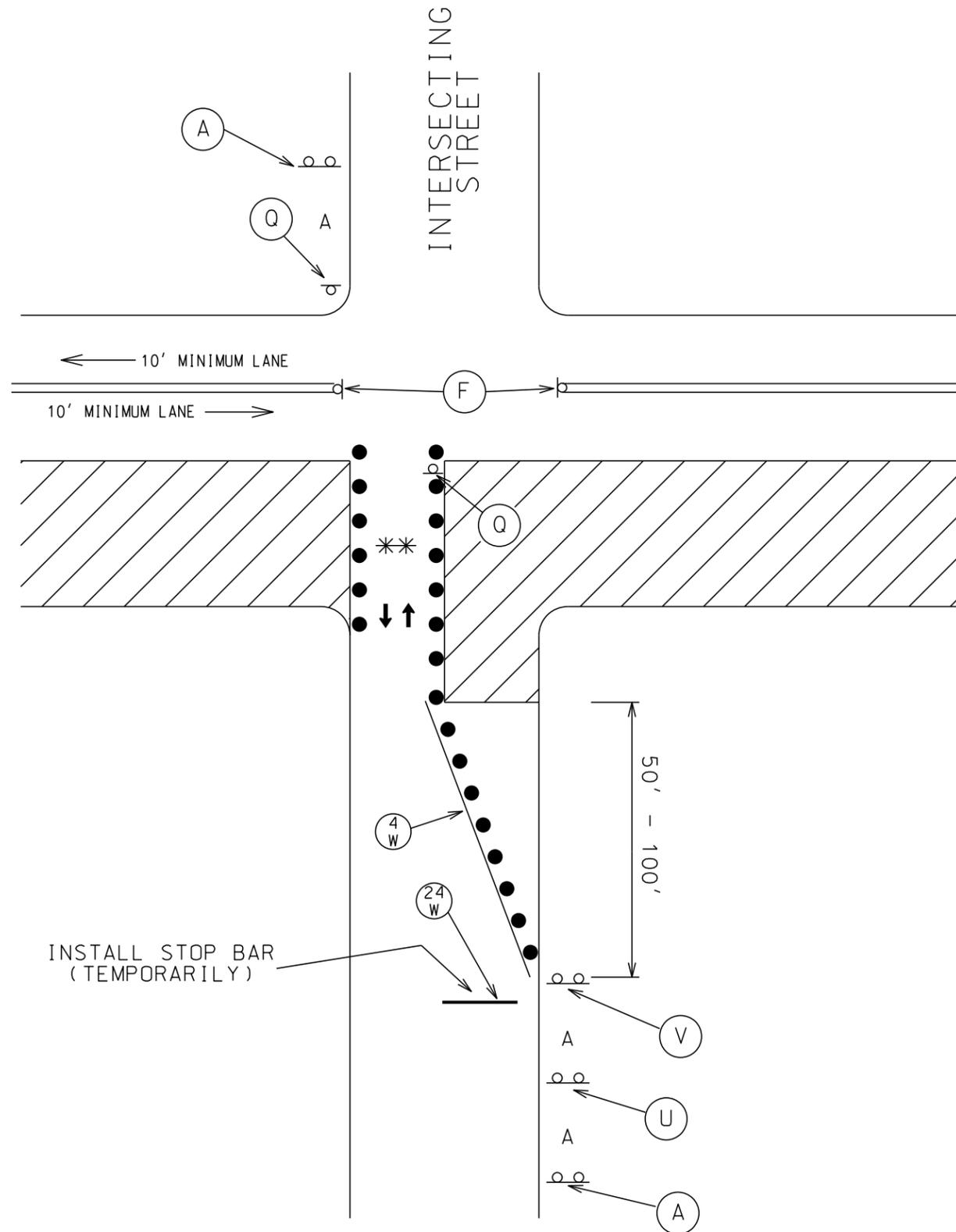
Signs are to be placed 50' -100' from intersections or other signs.

USE W8-17 SHOULDER DROP-OFF SYMBOL, ADJACENT TO FULL DEPTH CONCRETE PAVEMENT REMOVAL AREAS. INSTALL SIGNS AT 300'-400' SPACING THROUGHOUT THE PROJECT WHEN APPLICABLE.

INSTALL R3-2 NO LEFT TURNS SIGNS AT 300'-400' SPACING THROUGHOUT THE PROJECT AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL INTERSECTION CONSTRUCTION (TYPICAL)

FOR BIDDING PURPOSES ONLY



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet)	
	(A)	(L)
0 - 30	200	180
35 - 40	350	320
45 - 50	500	600
55	750	660
60 - 65	1000	780

NOTES:

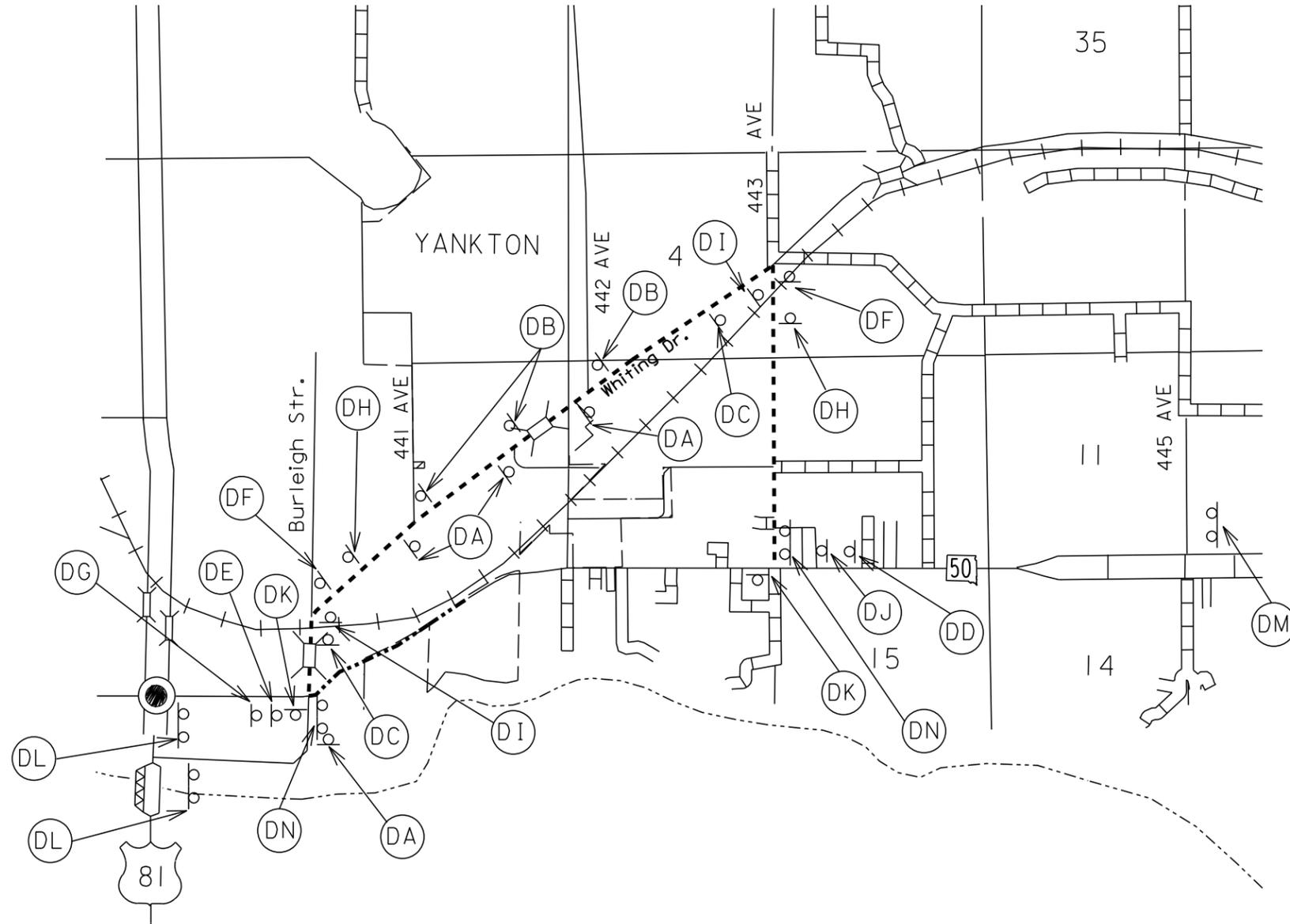
Remove existing pavement markings in all tapers and in other areas designated by the Engineer where they conflict with the temporary traffic control plan.

The Contractor will be required to maintain two way traffic at all times, with a minimum of 10 ft. lanes on Cherry Street.

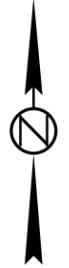
- REFLECTORIZED DRUMS
- (4Y) - 4" YELLOW TEMPORARY PAVEMENT MARKING
- (4W) - 4" WHITE TEMPORARY PAVEMENT MARKING
- ** - 10' MINIMUM LANE WIDTH



TRAFFIC CONTROL WIDTH RESTRICTION SIGNING SD HWY 50



(DA)	(DB)	(DC)	(DD)
OVERWIDTH VEHICLES SPECIAL	OVERWIDTH VEHICLES SPECIAL	OVERWIDTH VEHICLES SPECIAL	OVERWIDTH VEHICLES SPECIAL
DETOUR M4-8	DETOUR M4-8	DETOUR M4-8	DETOUR M4-8
EAST M3-2	WEST M3-4	EAST M3-2	WEST M3-4
50 M1-5	50 M1-5	50 M1-5	50 M1-5
↑ M6-3	↑ M6-3	↗ M5-1	↗ M5-1
(DE)	(DF)	(DG)	(DH)
OVERWIDTH VEHICLES SPECIAL	OVERWIDTH VEHICLES SPECIAL	OVERWIDTH VEHICLES SPECIAL	OVERWIDTH VEHICLES SPECIAL
DETOUR M4-8	DETOUR M4-8	DETOUR M4-8	DETOUR M4-8
EAST M3-2	WEST M3-4	EAST M3-2	WEST M3-4
50 M1-5	50 M1-5	50 M1-5	50 M1-5
← M6-1	← M6-1	↖ M5-1	↖ M5-1
(DI)	(DJ)	(DK)	(DL)
OVERWIDTH VEHICLES SPECIAL	OVERWIDTH VEHICLES SPECIAL	END DETOUR M4-8a	WIDTH RESTRICTION R12-5D
DETOUR M4-8	DETOUR M4-8		50 EAST 1 MILE AHEAD USE OVERWIDTH DETOUR
EAST M3-2	WEST M3-4		
50 M1-5	50 M1-5		
→ M6-1	→ M6-1		



PROJECT -
DETOUR ROUTE -

DETOUR SIGNS SHALL BE SPACED 100 - 150' FROM OTHER SIGNS.
DETOUR SIGNS SHALL NOT OBSCURE EXISTING SIGNS.

(DM)

WIDTH RESTRICTION
50 WEST
2 MILES AHEAD
USE OVERWIDTH DETOUR
R12-5D

(DN)

NO VEHICLES
OVER 10 FT. WIDE
R5-5C

SPECIAL SIGN DETAIL

24"

18" OVERWIDTH VEHICLES 4"B

1/2" BORDER - 1 1/2" CORNER RADIUS
BLACK OPAQUE BORDER/LEGEND ON
WHITE HIGH INTENSITY SHEETING BACKGROUND

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R1-1	STOP	5	30" x 30"	6.3	31.5
R1-2	YIELD	5	36" x 36"	9.0	45.0
R3-2	NO LEFT TURN (symbol)	10	24" x 24"	4.0	40.0
R4-7c	(Narrow) KEEP RIGHT (symbol)	11	18" x 30"	3.8	41.8
Special	Sidewalk Work Ahead	4	24" x 12"	2.0	8.0
R9-9	SIDEWALK CLOSED	4	24" x 12"	2.0	8.0
R9-10	SIDEWALK CLOSED with ARROW (L or R) USE OTHER SIDE	2	24" x 12"	2.0	4.0
R9-11	SIDEWALK CLOSED AHEAD with ARROW (L or R) CROSS HERE	4	24" x 18"	3.0	12.0
R9-11a	SIDEWALK CLOSED with ARROW (L or R) CROSS HERE	2	24" x 12"	2.0	4.0
R11-2	ROAD CLOSED	3	48" x 30"	10.0	30.0
R11-4	ROAD CLOSED TO THRU TRAFFIC	2	60" x 30"	12.5	25.0
W1-4	REVERSE CURVE (L or R)	4	48" x 48"	16.0	64.0
W1-7	LARGE ARROW (two directions)	5	48" x 24"	8.0	40.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	2	48" x 48"	16.0	32.0
W6-3	TWO WAY TRAFFIC (symbol)	4	48" x 48"	16.0	64.0
W8-17	SHOULDER DROP-OFF (symbol)	10	48" x 48"	16.0	160.0
W9-3	CENTER LANE CLOSED AHEAD	1	48" x 48"	16.0	16.0
W11-2	PEDESTRIAN (symbol)	2	36" x 36"	9.0	18.0
W13-1P	ADVISORY SPEED (plaque)	2	30" x 30"	6.3	12.6
W16-7P	DOWNWARD DIAGONAL ARROW (plaque)	5	24" x 12"	2.0	10.0
W16-9P	AHEAD (plaque)	5	30" x 18"	3.8	19.0
W20-1	ROAD WORK AHEAD	7	48" x 48"	16.0	112.0
W20-4	ONE LANE ROAD AHEAD	3	48" x 48"	16.0	48.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	2	48" x 48"	16.0	32.0
W21-1	WORKERS (symbol)	2	48" x 48"	16.0	32.0
W21-5	SHOULDER WORK	2	48" x 48"	16.0	32.0
W21-6	SURVEY CREW	2	48" x 48"	16.0	32.0
G20-1	ROAD WORK NEXT 1 MILE	2	36" x 18"	4.5	9.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT 1022.9			

ITEMIZED LIST FOR DETOUR SIGNS

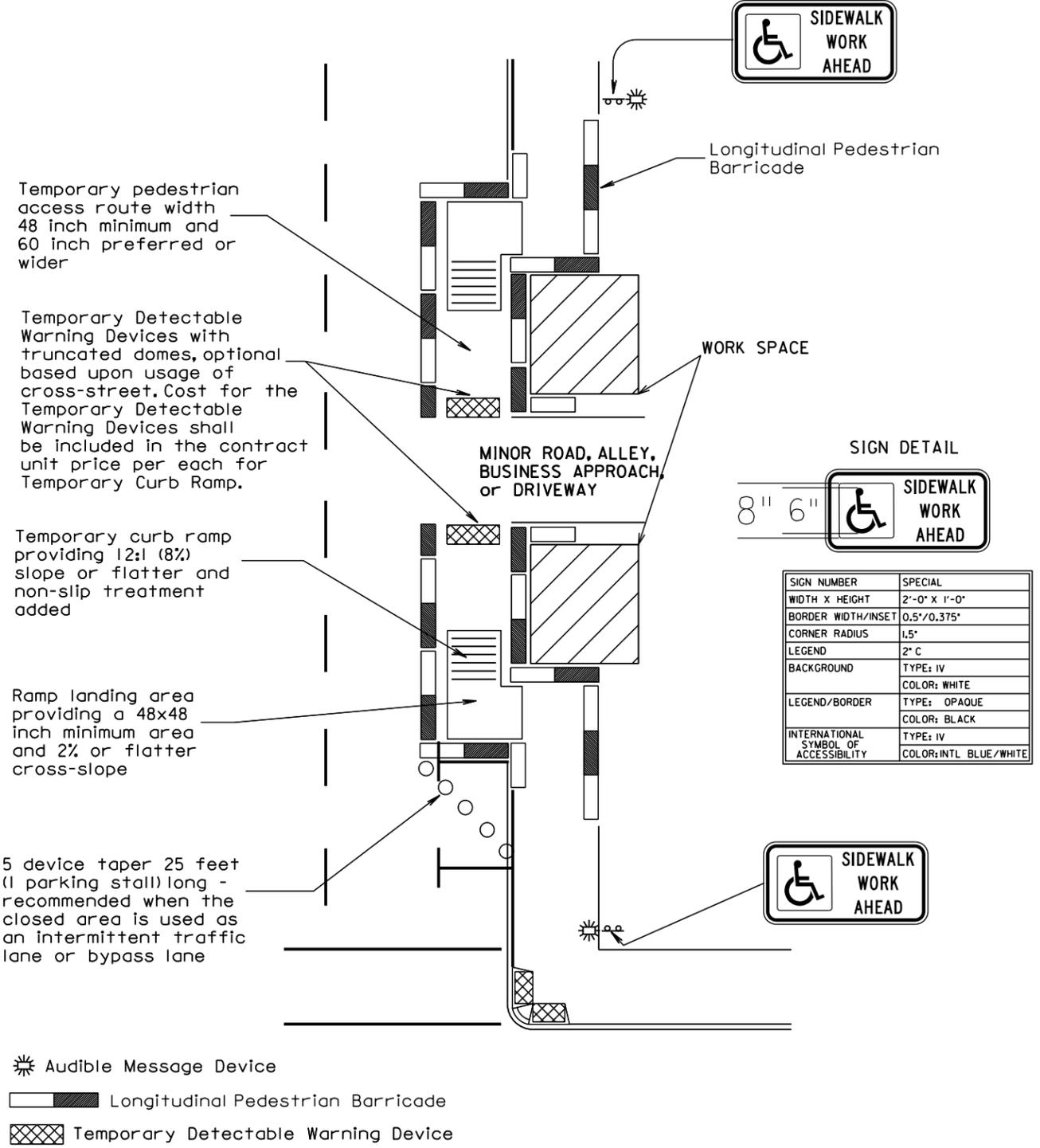
SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R5-5C	NO VEHICLES OVER 10 FT WIDE	2	72" x 24"	12	24.0
M1-5	SD ROUTE MARKER (1 or 2 digits)	20	24" x 24"	4	80.0
M3-2	DIRECTION MARKER - EAST	10	24" x 12"	2	20.0
M3-4	DIRECTION MARKER - WEST	10	24" x 12"	2	20.0
M4-8	DETOUR	20	24" x 12"	2	40.0
M4-8a	END DETOUR	2	24" x 18"	3	6.0
M5-1	ADVANCE TURN ARROW 90° (L or R)	7	21" x 15"	2	15.3
M6-1	DIRECTION ARROW - Horizontal Single Head (L or R)	6	21" x 15"	2	13.1
M6-3	DIRECTION ARROW - Vertical Single Head	7	21" x 15"	2	15.3
SPECIAL	OVERWIDTH VEHICLES	20	24" x 12"	2	40.0
R12-5D	WIDTH RESTRICTION ___ Miles WIDE (Legend Varies)	3	84" x 36"	21	63.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT 336.7			

ITEM DESCRIPTION	QUANTITY
Type 3 Barricade, 8' Single Sided	25 Each
Type 3 Barricade, 8' Double Sided	5 Each

ARROW BOARDS

ITEM DESCRIPTION	QUANTITY
Type C Arrow Board	2 Each

LOW-SPEED ROADWAY



GUIDES FOR PEDESTRIAN TRAFFIC CONTROL DEVICES
SIDEWALK BY-PASS FOR LOW SPEED ROADWAY

Temporary Curb Ramps shall be 48" minimum width with a firm, stable and non-slip surface. Protective edging with a 2" minimum height shall be installed when the curb ramp or landing platform has a vertical drop of 6" or greater or has a side apron slope steeper than 1:3 (33%). Protective edging should be considered when curb ramps or landing platforms have a vertical drop of 3" or more.

Detectable edging with 6" minimum height and contrasting color shall be installed on all curb ramp landings where the walkway changes direction (turns).

Curb ramps and landings should have a 1:50 (2%) max cross-slope.

Clear space of 48"x48" minimum shall be provided above and below the curb ramp.

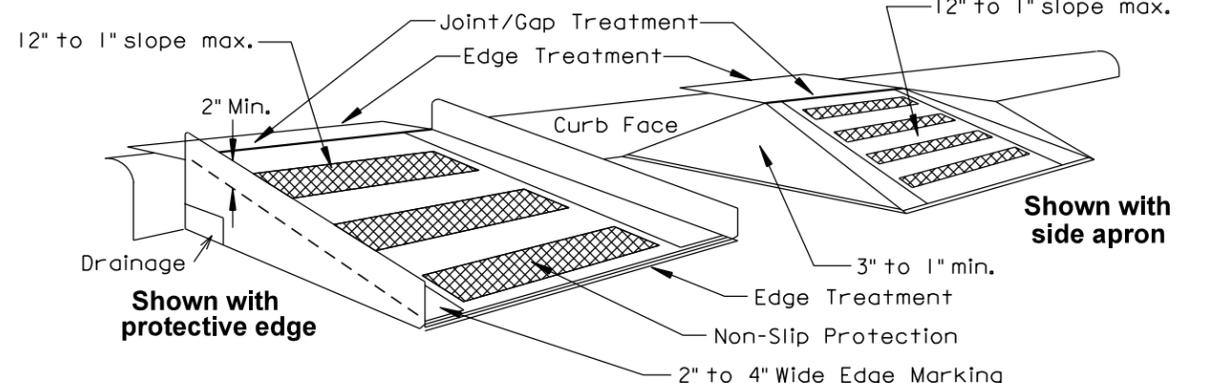
The curb ramp walkway edge shall be marked with a contrasting color 2" to 4" wide marking. The marking is optional where color contrasting edging is used.

Water flow in the gutter system shall have minimal restriction.

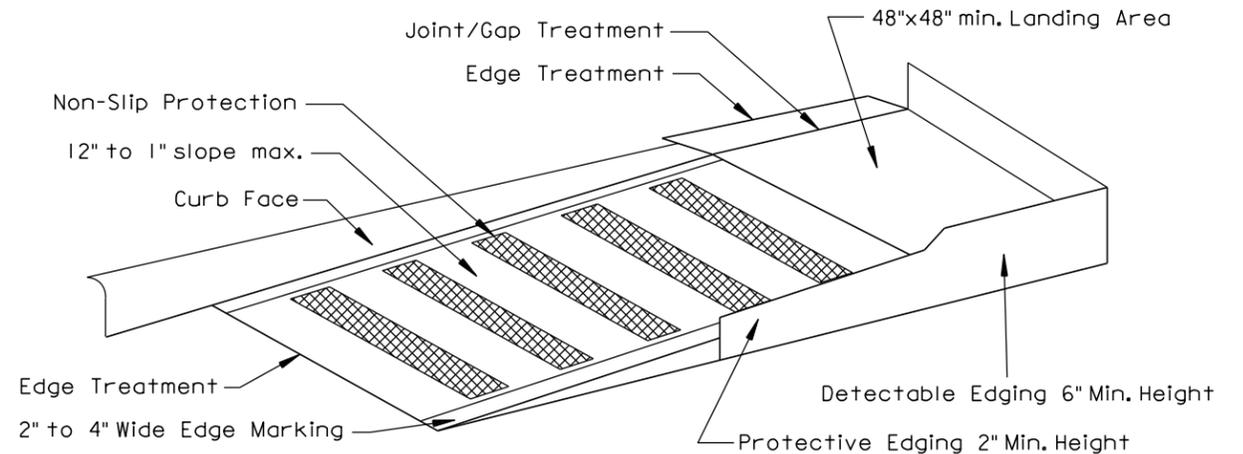
Lateral joints or gaps between surfaces shall be less than 0.5 inches wide.

Changes between surface heights should not exceed 0.5 inches. Lateral edges should be vertical up to 0.25 inches high and beveled at 1:2 between 0.25 in. and 0.5 in height.

All costs for the Temporary Curb Ramps, including labor, materials, equipment to install, maintain and remove the ramp, landing area, edge treatment, temporary detectable warning devices and detectable edging shall be included in the contract unit cost per Each for Temporary Curb Ramp.



Temporary Curb Ramp - Perpendicular to Curb

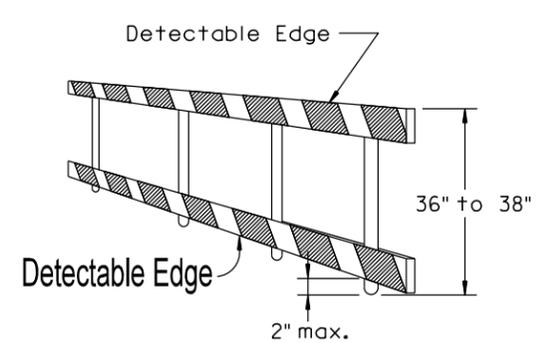
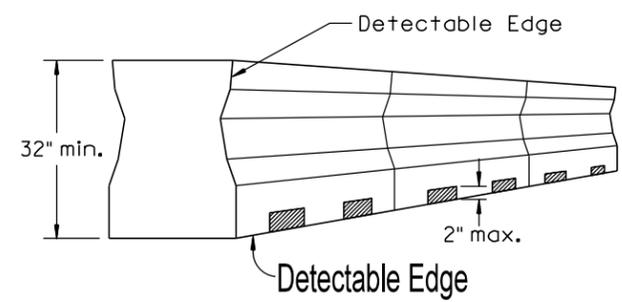


Temporary Curb Ramp - Parallel to Curb

FOR BIDDING PURPOSES ONLY

Longitudinal Pedestrian Barrier
(used to separate pedestrians and vehicles)

Longitudinal Pedestrian Barricade
(used to guide pedestrians in areas where no vehicles)



To prevent any tripping hazard to pedestrians, ballast shall be located behind or internal to the device. Any support on the front of the device shall not extend into the 48 inch minimum walkway clear space and shall have 0.5 inch maximum height above the walkway surface with approved beveling.

Detectable edges for long canes shall be continuous and 6 inches minimum high above the walkway surface and have color or markings contrasting with the walkway surface.

Devices shall not block water drainage from the walkway. A gap height or opening from the walkway surface up to 2 inches maximum height is allowed for drainage purposes.

Railings or other objects may protrude a maximum of 4 inches into the walkway clear space when located 27 inches minimum above the walkway surface.

Longitudinal channelizing devices for pedestrians shall be 32 inches high or greater. They shall not block sight distance for motorists.

- When hand guidance is required, the top rail or top surface shall:
- * be in a vertical plane perpendicular to the walkway above the detectable edge
 - * be continuous at a height of 36 to 38 inches above the walkway surface, and
 - * be supported with minimal interference to the pedestrians hands or fingers.

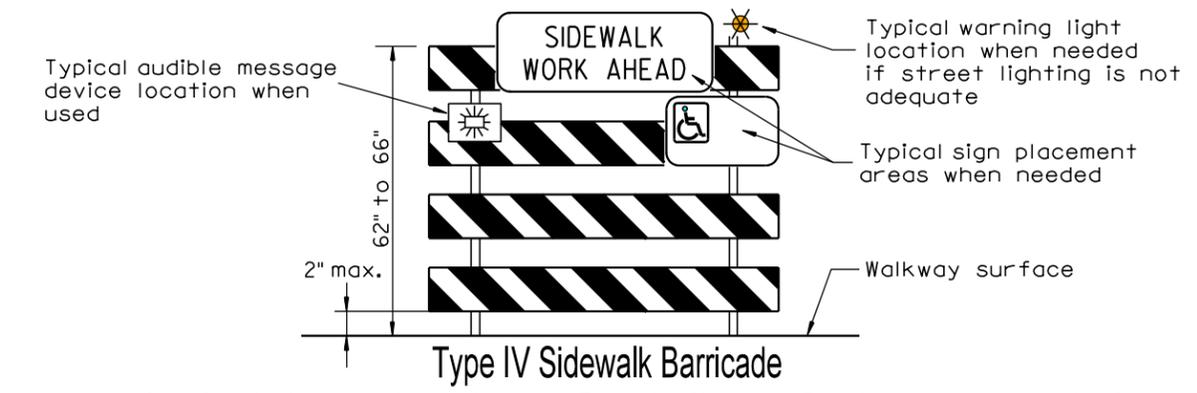
All devices shall be free of sharp or rough edges, and fasteners (bolts) shall be rounded to prevent harm to hands, arms or clothing of pedestrians.

All devices used to channelize pedestrian flow should interlock such that gaps do not allow pedestrians to stray from the channelized path.

Any pedestrian devices used to provide positive protection (traffic or hazard) for pedestrians or workers shall meet crashworthy requirements appropriate for the barriers application.

All costs for furnishing and installing the Longitudinal Pedestrian Barricade shall be incidental to the contract unit price per linear foot for Longitudinal Pedestrian Barricade.

All costs for furnishing and installing the Longitudinal Pedestrian Barrier shall be incidental to the contract unit price per linear foot for Longitudinal Pedestrian Barrier.



All costs for furnishing and installing the Type IV Sidewalk Barricade shall be paid for at the contract unit price per foot for Longitudinal Pedestrian Barricade.

When crosswalks, sidewalks or other pedestrian facilities are blocked, closed or relocated, temporary facilities shall include accessibility features.

An approved audible message device or tactile message should be provided for sight-impaired pedestrians. When used, a message device should provide a complete physical description of the temporary pedestrian detour including duration, length of (and/or distance to) the by-pass, any restrictions or hazards and project information. The number and locations of devices should be determined for each project prior to starting work. The Audible Message Device shall be paid for on a per each basis.

No vehicles, equipment or materials shall block sidewalks, pedestrian ramps or other pedestrian infrastructure without approval of the engineer.

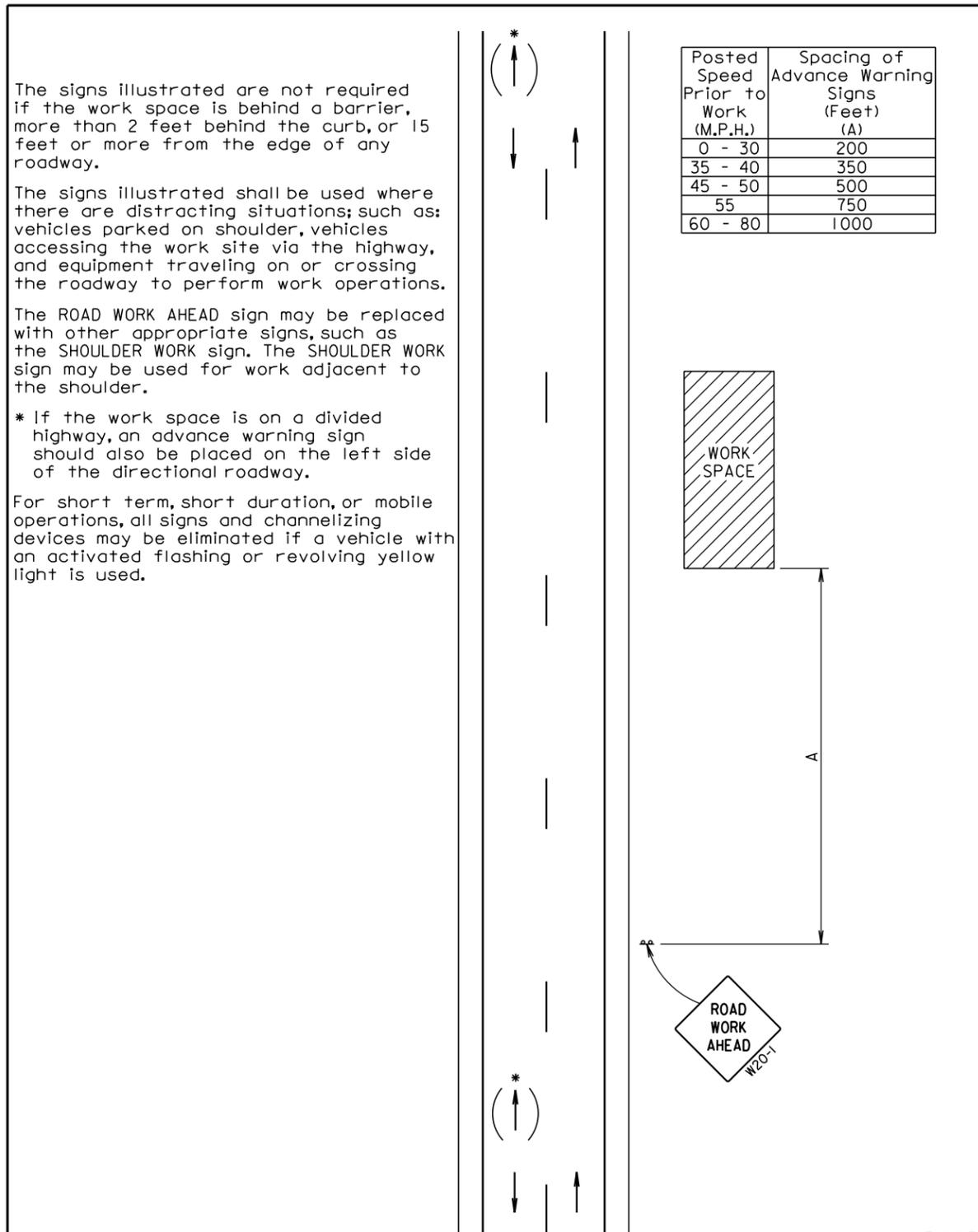
The International Symbol of Accessibility should be displayed when any walkway through a work zone has been determined to be ADA compliant. The Symbol of Accessibility shall not be displayed if persons with disabilities should not use the primary temporary pedestrian detour. The reason for the non-compliance should be posted and an alternate route should be posted when the primary temporary pedestrian detour is non-compliant to ADA standards.

Conditions that are beyond recommended standards should be documented. A walkway is non-compliant if it is missing key ADA elements such as curb ramp(s) truncated domes and detectable edging. Other restrictions or hazards may include insufficient width or pinch-point widths, traffic conflicts, steep grades, non-continuous railings, tripping hazards, or uneven/rough/soft surface conditions, etc.

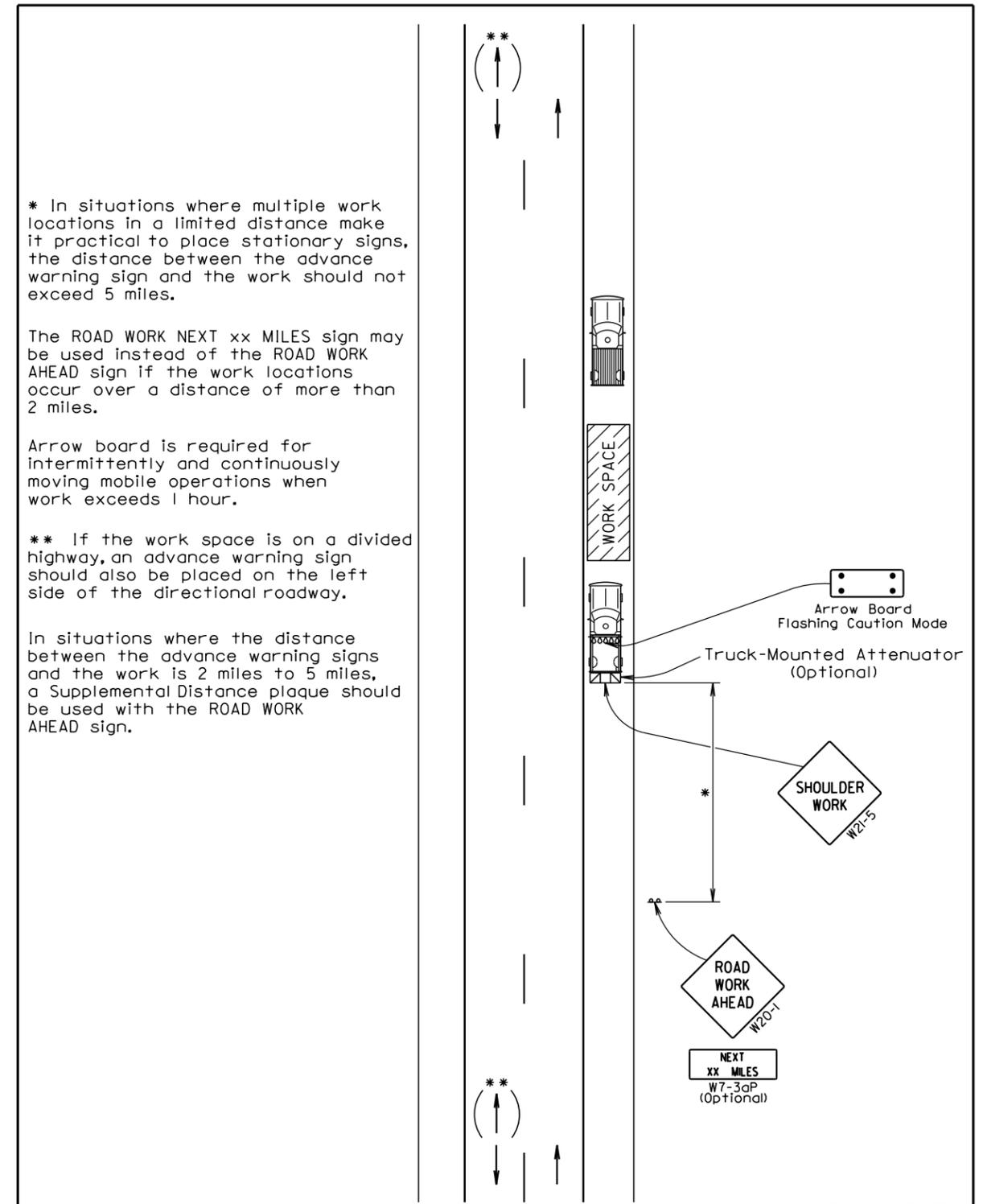
Pedestrian traffic signal displays controlling closed crosswalks shall be covered.

When a sidewalk is closed but workers are present who will provide assistance or directions to pedestrians, then the devices as shown are not required.

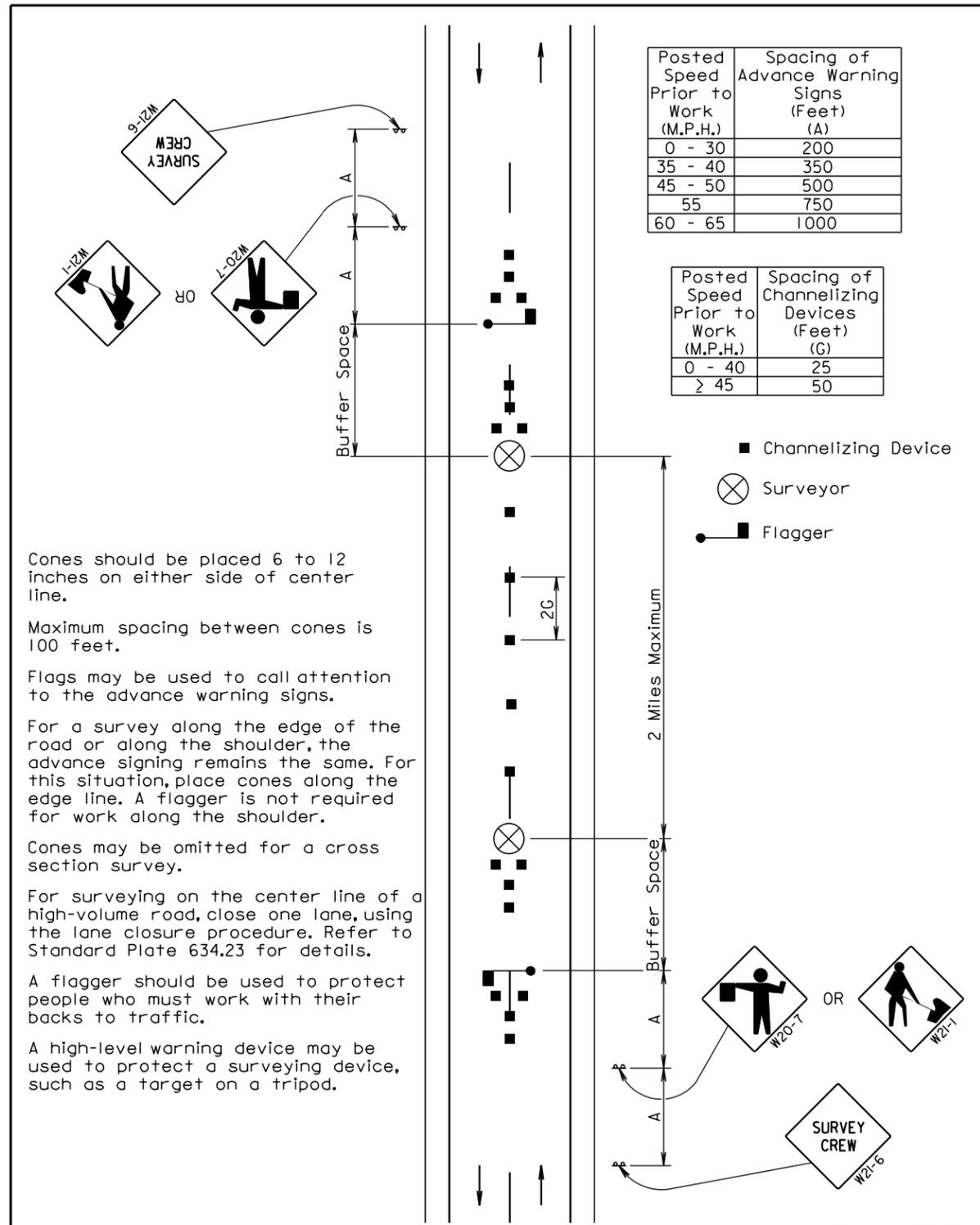
When both sides of a temporary pedestrian bypass require channelizing devices, then the devices should be a similar type (railing system, barricade, or fencing system), excluding when TTC barrier (such as concrete barrier) is used to protect pedestrians from an open traffic lane.



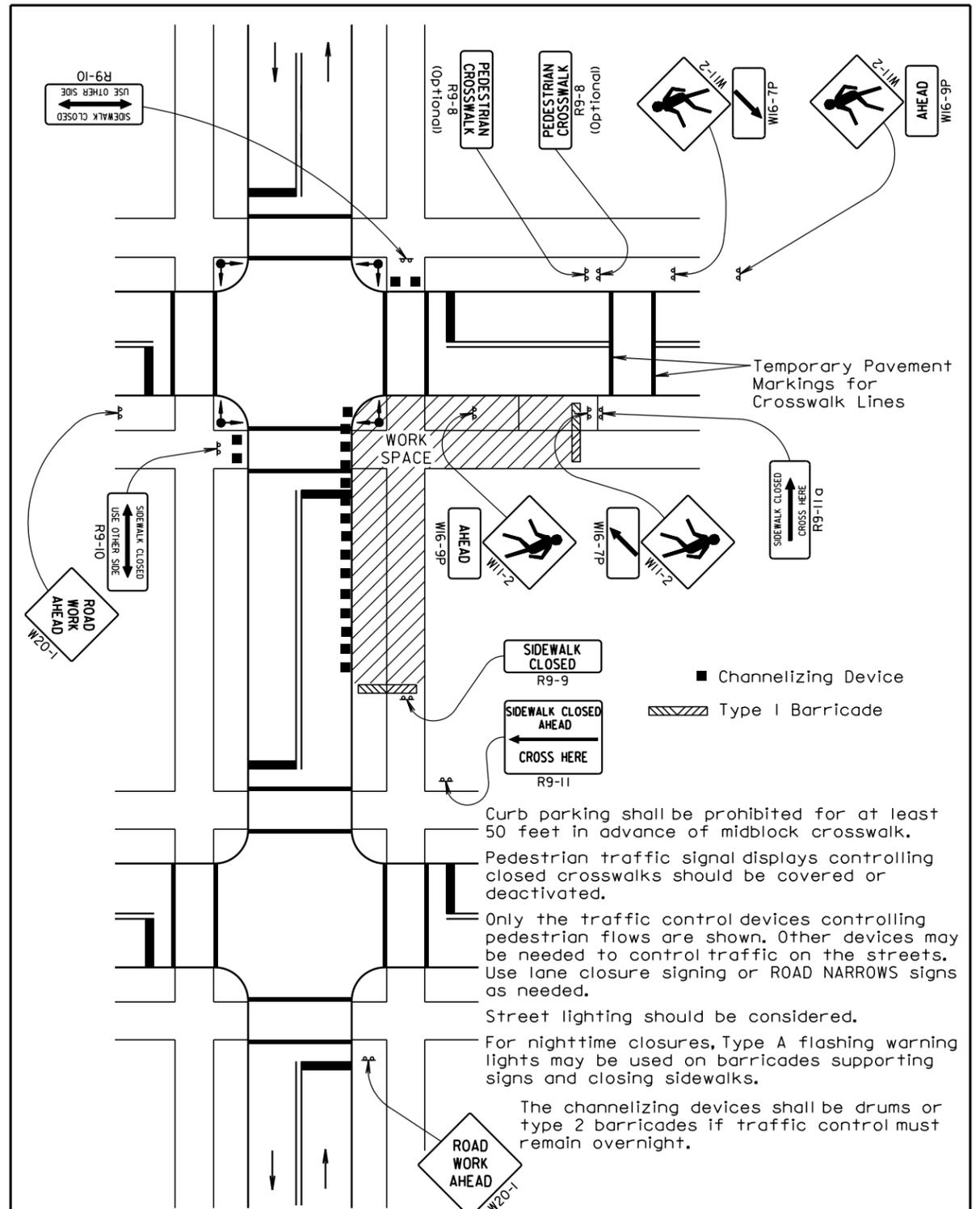
April 15, 2015



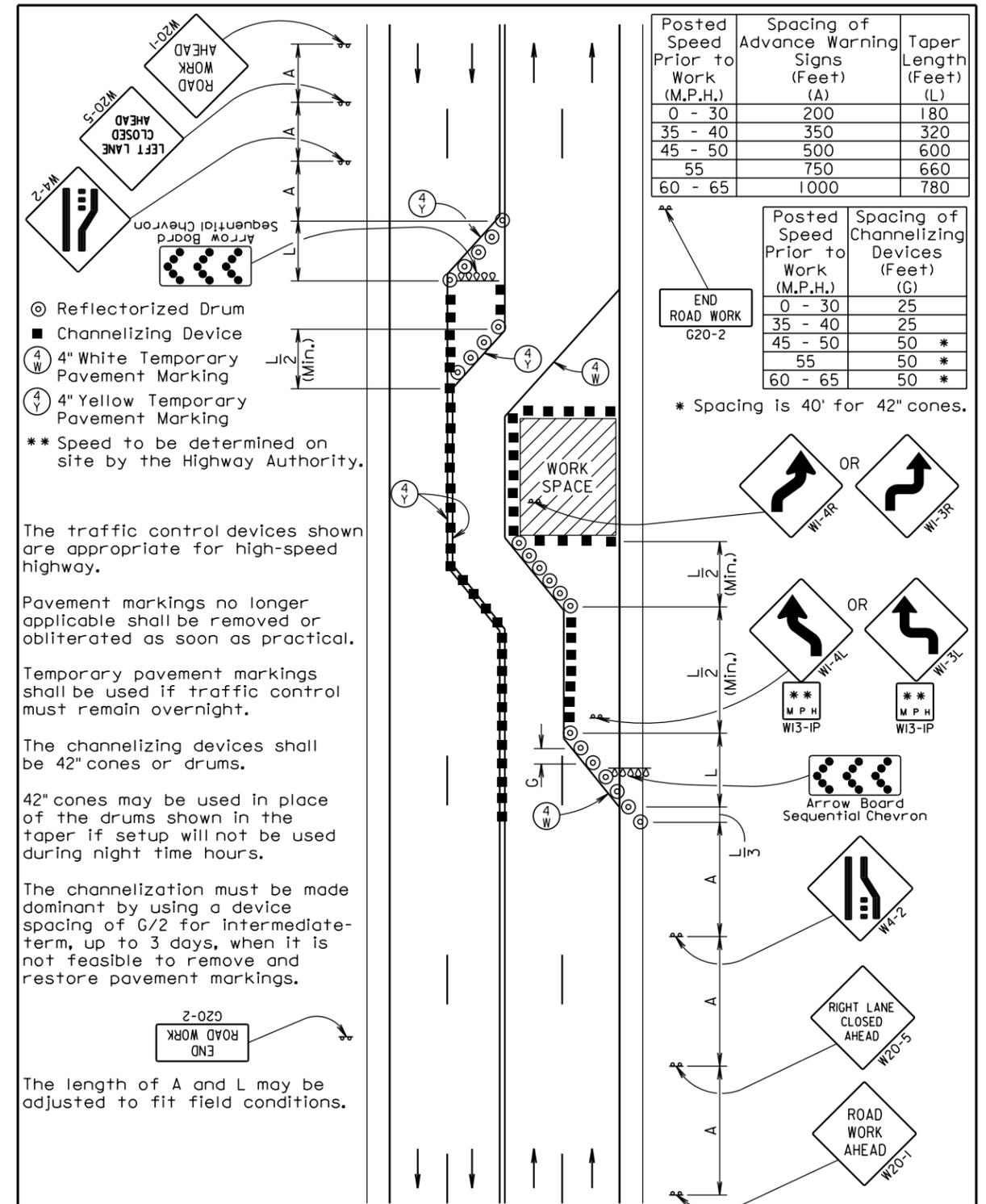
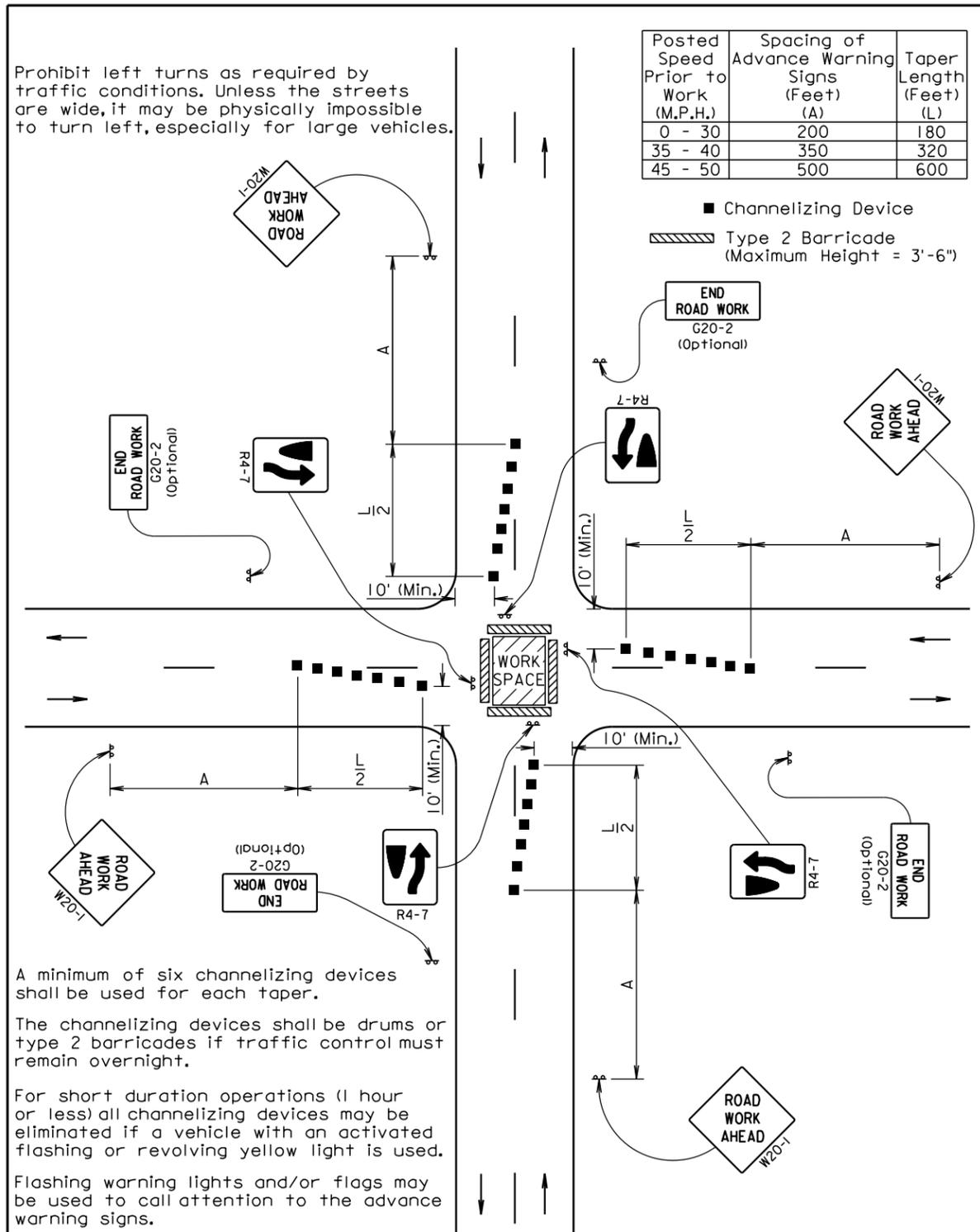
September 22, 2014

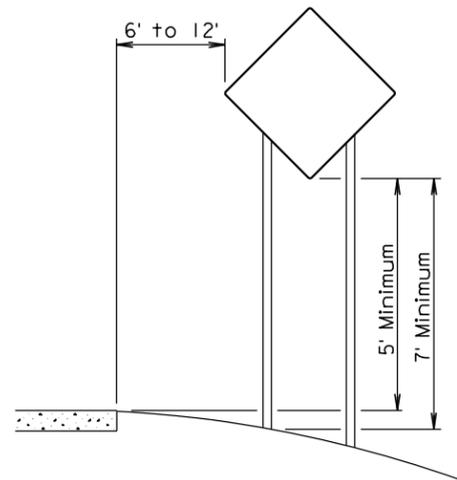


September 22, 2014

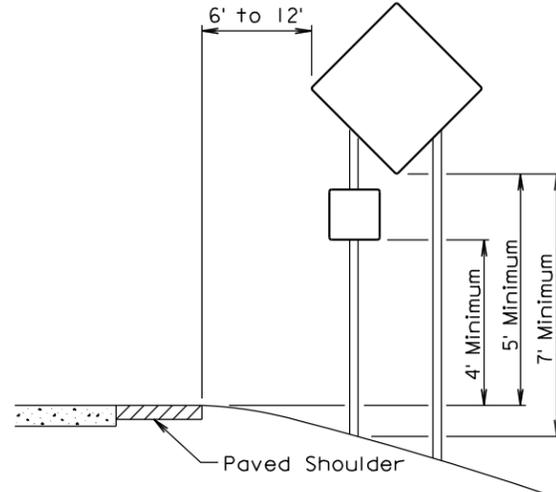


September 22, 2014

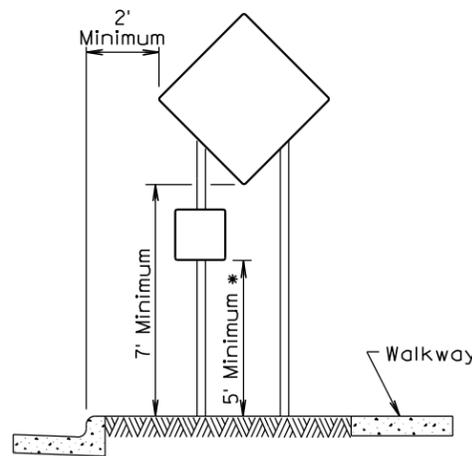




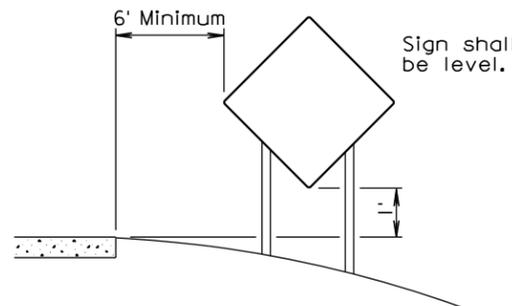
RURAL DISTRICT



RURAL DISTRICT WITH SUPPLEMENTAL PLATE



URBAN DISTRICT



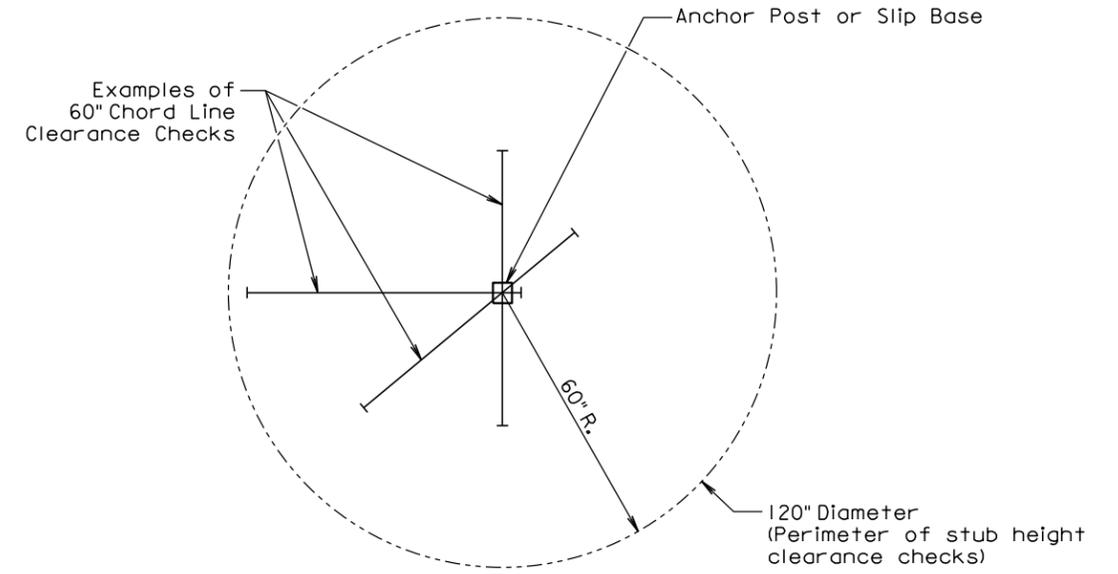
RURAL DISTRICT 3 DAY MAXIMUM

(Not applicable to regulatory signs)

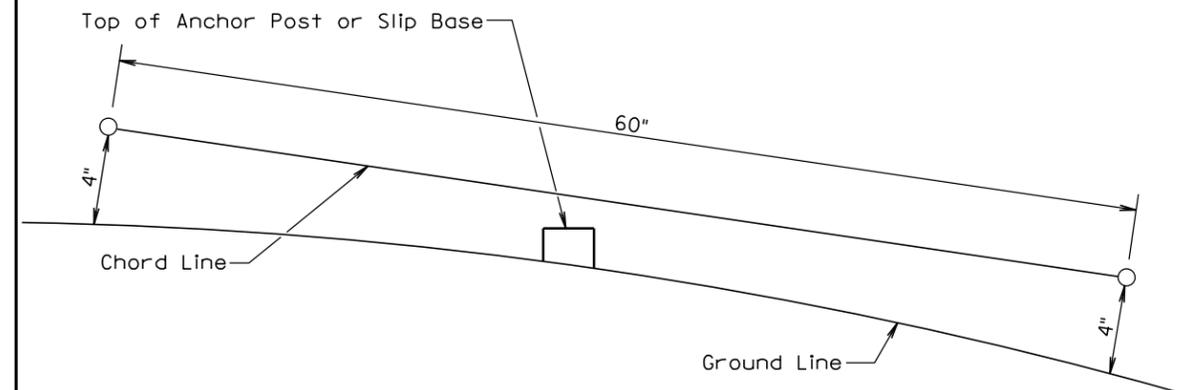
* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.

September 22, 2014

Published Date: 2nd Qtr. 2016	S D D O T	CRASHWORTHY SIGN SUPPORTS (Typical Construction Signing)	PLATE NUMBER 634.85
			Sheet 1 of 1



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

The top of anchor posts and slip bases SHALL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

At locations where there is curb and gutter adjacent to the breakaway sign support, the stub height shall be a maximum of 4" above the ground line at the localized area adjacent to the breakaway support stub.

The 4" stub height clearance is not necessary for U-channel lap splices where the support is designed to yield (bend) at the base.

July 1, 2005

Published Date: 2nd Qtr. 2016	S D D O T	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1