

J:\PROJECTS\2014\1401010773\_C0W\_17TH STREET SANITARY SEWER\05-CIVIL\CAD\PAV\14773\_T001.DWG  
 PLOTTED: Tuesday, May 12, 2015 @ 01:29PM

PHASING	MAJOR CONSTRUCTION ITEMS	HANDLING OF TRAFFIC	HANDLING OF SEWER FLOWS
1	Construct Line 1 in Yale from 16th Street to 17th Street (MH 1-1 to MH 1-3). Construct pavement replacement after sewer line has been installed and backfilled.	Erect and maintain Yale and 16th Street traffic control plan as shown on sheet 34. 17th Street shall be reduced to one lane of traffic in each direction utilizing the typical 1/2 road closure plan shown on sheet 39.	Contractor shall provide a bypass pumping plan that will allow for construction of this phase and maintain traffic as stipulated for this phase. Submit plan to Engineer prior to construction.
2	Construct the western-most segment of Line 1 in 17th Street (MH 1-3 to MH 1-4). Construct pavement replacement after sewer line has been installed and backfilled.	Erect and maintain 17th Street traffic control plan as shown on sheet 33. Erect and maintain traffic control on side streets in accordance with the details shown on this sheet. Yale to be closed during this phase. All other side streets may remain open.	Contractor shall provide a bypass pumping plan that will allow for construction of this phase and maintain traffic as stipulated for this phase. Submit plan to Engineer prior to construction. Contractor shall re-establish sewer connection to existing sewer lines north of MH 1-4. Portions of existing sewers between MH 1-3 and MH 1-4 shall be abandoned in place.
3	Construct the remainder of Line 1 running east-west (MH 1-4 to MH 1-9). Construct pavement replacement after sewer line has been installed and backfilled. Drop structures and stubs for lines 2 through 6 shall be constructed during this phase.	Maintain 17th Street traffic control plan as shown on sheet 33. Erect and maintain traffic control on side streets in accordance with the details shown on this sheet. 16th Street to be open during this phase. Contractor may not close two adjacent side roads at any time. The side roads and entrances denoted on the traffic control plan serve as the only access to private property. These access points may only be closed for a duration of 7 days at a time. Contractor shall coordinate closure with the City and with property owners and residents and shall arrange for mail and trash service during closures. Temporary paving shall be utilized between sewer construction activities and paving activities as required to provide access and comply with closure limitations.	Bypass pumping is not required during this phase.
4	Construct the remainder of Line 1 (MH 1-9 to MH 1-10). Connect to the new sanitary sewer constructed as part of Project No. 2230PPS. Coordinate connection with that project's contractor. Due to the nature and timing of other construction projects, the contractor shall be prepared to adjust the work necessary to connect to other sewers. This may include additional bypass pumping.	17th Street traffic shall be reduced to one lane in each direction utilizing a combination of the typical traffic control plans shown on sheet 33 and 37 as needed.	Bypass pumping is not required during this phase.
5	Construct Line 6 and attach to existing sewer. Construct pavement replacement after sewer line has been installed and backfilled. Abandon existing sewer lines and abandon or remove manholes no longer in use. Do not abandon lines until no longer in service. Coordinate with the contractor constructing Project No. 2230PPS.	17th Street traffic shall be reduced to one lane in each direction utilizing a combination of the typical traffic control plans shown on sheet 33 and 37 as needed.	Sewer flows shall be bypassed pumped around the work area or temporarily plugged. Contractor is responsible for determining the maximum length of time a line can be plugged.
6	Construct Line 5 and attach to existing sewer. Construct pavement replacement after sewer line has been installed and backfilled. Abandon existing sewer lines and abandon or remove manholes no longer in use. Do not abandon lines until no longer in service. Coordinate with the contractor constructing Project No. 2230PPS.	17th Street traffic shall be reduced to one lane in each direction utilizing a combination of the typical traffic control plans shown on sheet 33 and 37 as needed.	Sewer flows shall be bypassed pumped around the work area or temporarily plugged. Contractor is responsible for determining the maximum length of time a line can be plugged.
7	Construct Line 4 and attach to existing sewer. Construct pavement replacement after sewer line has been installed and backfilled. Abandon existing sewer lines and abandon or remove manholes no longer in use. Do not abandon lines until no longer in service. Coordinate with the contractor constructing Project No. 2230PPS.	17th Street traffic shall be reduced to one lane in each direction utilizing a combination of the typical traffic control plans shown on sheet 33 and 37 as needed.	Sewer flows shall be bypassed pumped around the work area or temporarily plugged. Contractor is responsible for determining the maximum length of time a line can be plugged.
8	Construct Line 3 and attach to existing sewer. Construct pavement replacement after sewer line has been installed and backfilled. Abandon existing sewer lines and abandon or remove manholes no longer in use. Do not abandon lines until no longer in service. Coordinate with the contractor constructing Project No. 2230PPS.	17th Street traffic shall be reduced to one lane in each direction utilizing a combination of the typical traffic control plans shown on sheet 33 and 37 as needed.	Sewer flows shall be bypassed pumped around the work area or temporarily plugged. Contractor is responsible for determining the maximum length of time a line can be plugged.
9	Construct Line 2 and attach to existing sewer. Construct pavement replacement after sewer line has been installed and backfilled. Abandon existing sewer lines and abandon or remove manholes no longer in use. Do not abandon lines until no longer in service. Coordinate with the contractor constructing Project No. 2230PPS.	17th Street traffic shall be reduced to one lane in each direction utilizing a combination of the typical traffic control plans shown on sheet 33 and 37 as needed.	Sewer flows shall be bypassed pumped around the work area or temporarily plugged. Contractor is responsible for determining the maximum length of time a line can be plugged.
10	Construct all remaining portions of the project that remain. Install pavement markings on new pavements. Perform site restoration activities.	utilize a combination of the typical traffic control plans shown as needed.	Bypass pumping is not required during this phase.

**NOTES:**

CONFLICTING SIGNS AND SIGNS NOT IN USE:

SIGNS THAT ARE IN CONFLICT WITH THE TEMPORARY TRAFFIC CONTROL PLAN OR DO NOT APPLY TO THE TRAFFIC OPERATIONS SHALL BE IMMEDIATELY REMOVED, TURNED SO NOT VISIBLE TO TRAFFIC FROM ANY DIRECTION, OR COMPLETELY COVERED WITH ADEQUATE OPAQUE WATERPROOF MATERIAL.

TAPE SHALL NOT BE APPLIED TO THE FACE OF THE SIGN.

AS THE VARIOUS CONSTRUCTION ACTIVITIES PROGRESS, CERTAIN SITUATIONS MAY ARISE THAT WILL PRECLUDE ADHERING TO THE ORIGINAL CONSTRUCTION SEQUENCE OR WHICH, IN THE OPINION OF THE CONTRACTOR, WOULD READILY ADAPT THEMSELVES TO A MORE EFFICIENT PHASING OPERATION. SHOULD THIS OCCUR, THE CONTRACTOR MAY SUBMIT TO THE ENGINEER AN ALTERNATIVE PLAN FOR APPROVAL.

CONTRACTOR SHALL MAINTAIN EXISTING DRAINAGE SYSTEM DURING CONSTRUCTION AND ADDRESS LOCAL DRAINAGE ISSUES AS NECESSARY DURING CONSTRUCTION. TEMPORARY DRAINAGE MEASURES WILL BE SUBSIDIARY TO OTHER ITEMS IN THE CONTRACT. CONTRACTOR SHALL PROVIDE FOR DRAINAGE IN SUMP AREAS OPENED TO TRAFFIC. PONDED STORMWATER IN SUMP AREAS WILL NOT BE ALLOWED.

ALL TRAFFIC CONTROL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

IN EACH CONSTRUCTION PHASE ON 17TH STREET, THE WATER LINE WILL NEED TO BE CONSTRUCTED PRIOR TO TRENCHING FOR SANITARY SEWER INSTALLATION. THE CONTRACTOR MAY, AT THE APPROVAL OF THE ENGINEER, CONSTRUCT THE WATER LINE COMPLETELY BEFORE SANITARY SEWER WORK BEGINS ON 17TH STREET. TEMPORARY ACCOMMODATIONS FOR TRAFFIC MAY BE REQUIRED AT NO ADDITIONAL COST TO THE CITY.

**NOTES:**  
BARRICADE PLACEMENT:

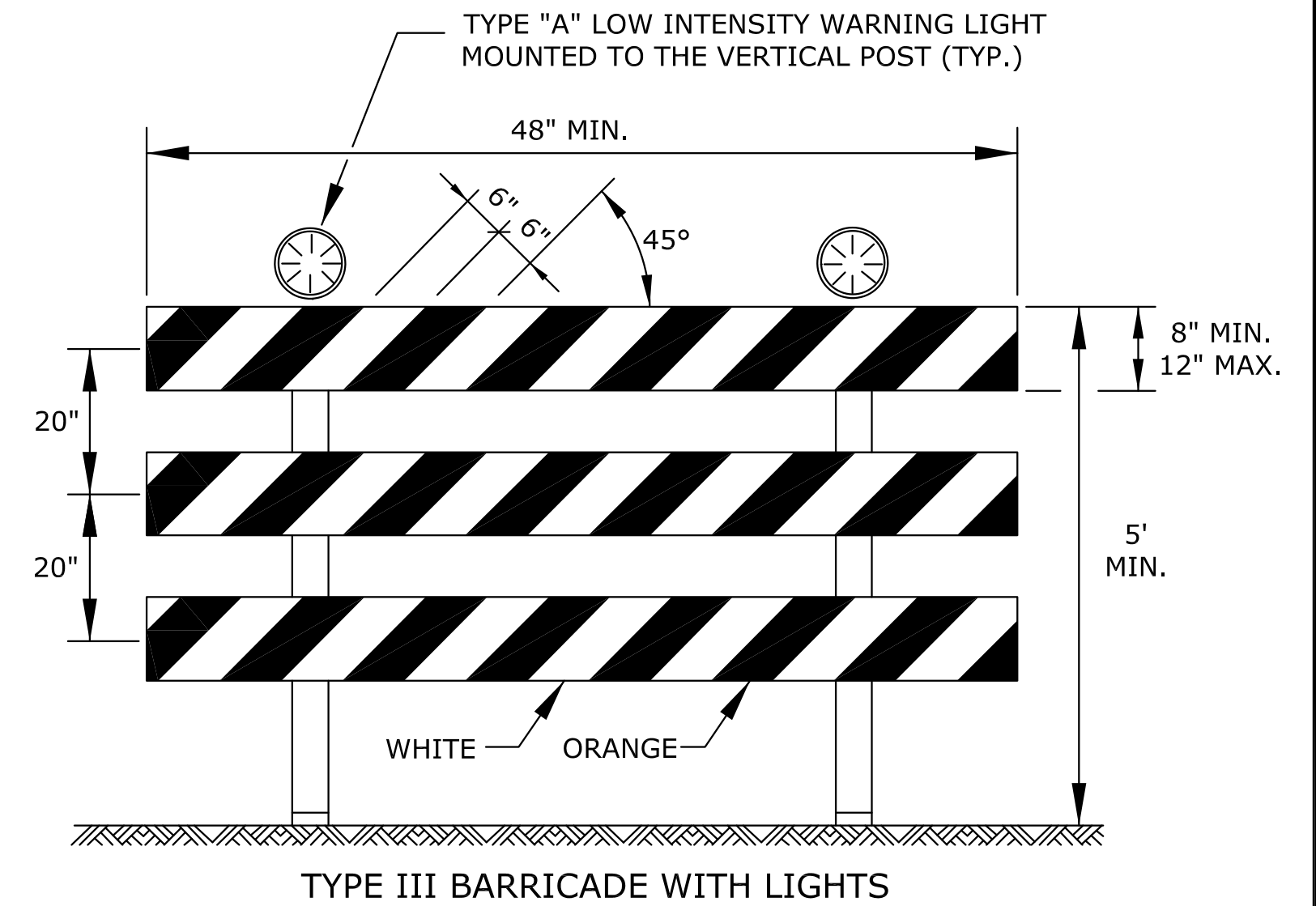
**A) COMPLETE ROAD CLOSURE**

WHEN A ROADWAY IS CLOSED, TYPE III BARRICADES SHALL BE PLACED END-TO-END TO COMPLETELY COVER THE ROADWAY AND SHOULDERS. WHEN ACCESS MUST BE ALLOWED FOR CONSTRUCTION OR OTHER OFFICIAL/GOVERNMENT VEHICLES, TYPE III BARRICADES SHALL BE LONGITUDINALLY STAGGERED FAR ENOUGH APART FROM ONE ANOTHER TO ALLOW SAFE PASSAGE OF VEHICLES AND MAINTAIN THE APPEARANCE OF A CLOSED ROADWAY. TYPE III BARRICADES SHALL BE REALIGNED AND PLACED END-TO-END TO DENY ANY ACCESS WHEN THE CONSTRUCTION ACTIVITY HAS CEASED FOR THE DAY.

**B) ROAD CLOSED - LOCAL TRAFFIC**

AS SHOWN IN FIGURE 4, WHEN LOCAL TRAFFIC MUST BE ALLOWED ACCESS INTO THE WORK ZONE, TYPE III BARRICADES SHALL BE LONGITUDINALLY STAGGERED TO MAINTAIN THE APPEARANCE OF A CLOSED ROADWAY. A SECOND LINE OF END-TO-END TYPE III BARRICADES SHALL BE PLACED JUST BEYOND THE LAST ACCESS POINT IN THE WORK ZONE, TO COMPLETELY CLOSE THE ROADWAY AS DESCRIBED IN NOTE 2-A.

AS SHOWN IN FIGURE 1 AND FIGURE 3, 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 III BARRICADES (WINGED POSITION), PLACED ON THE SHOULDERS OF ROADWAY.

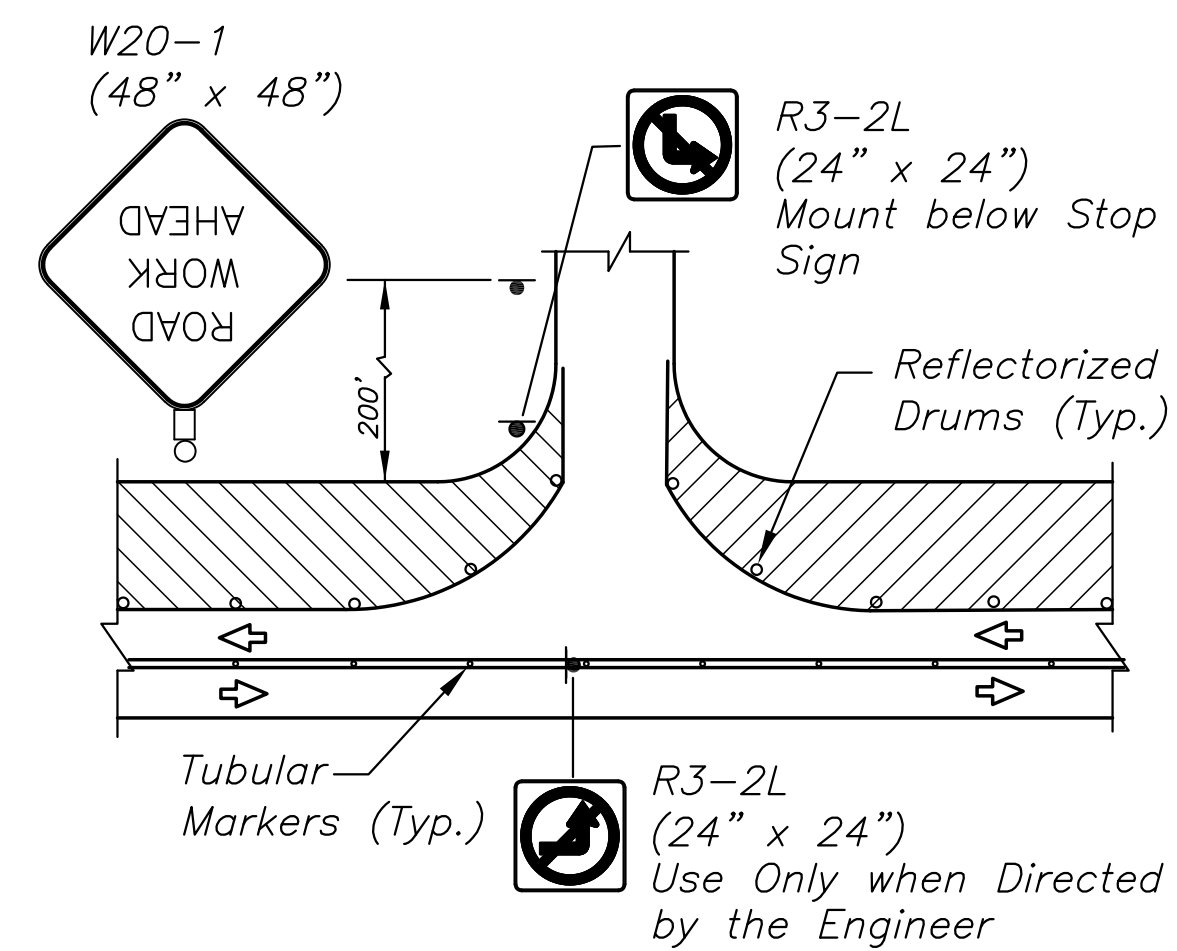


TYPE III BARRICADE WITH LIGHTS

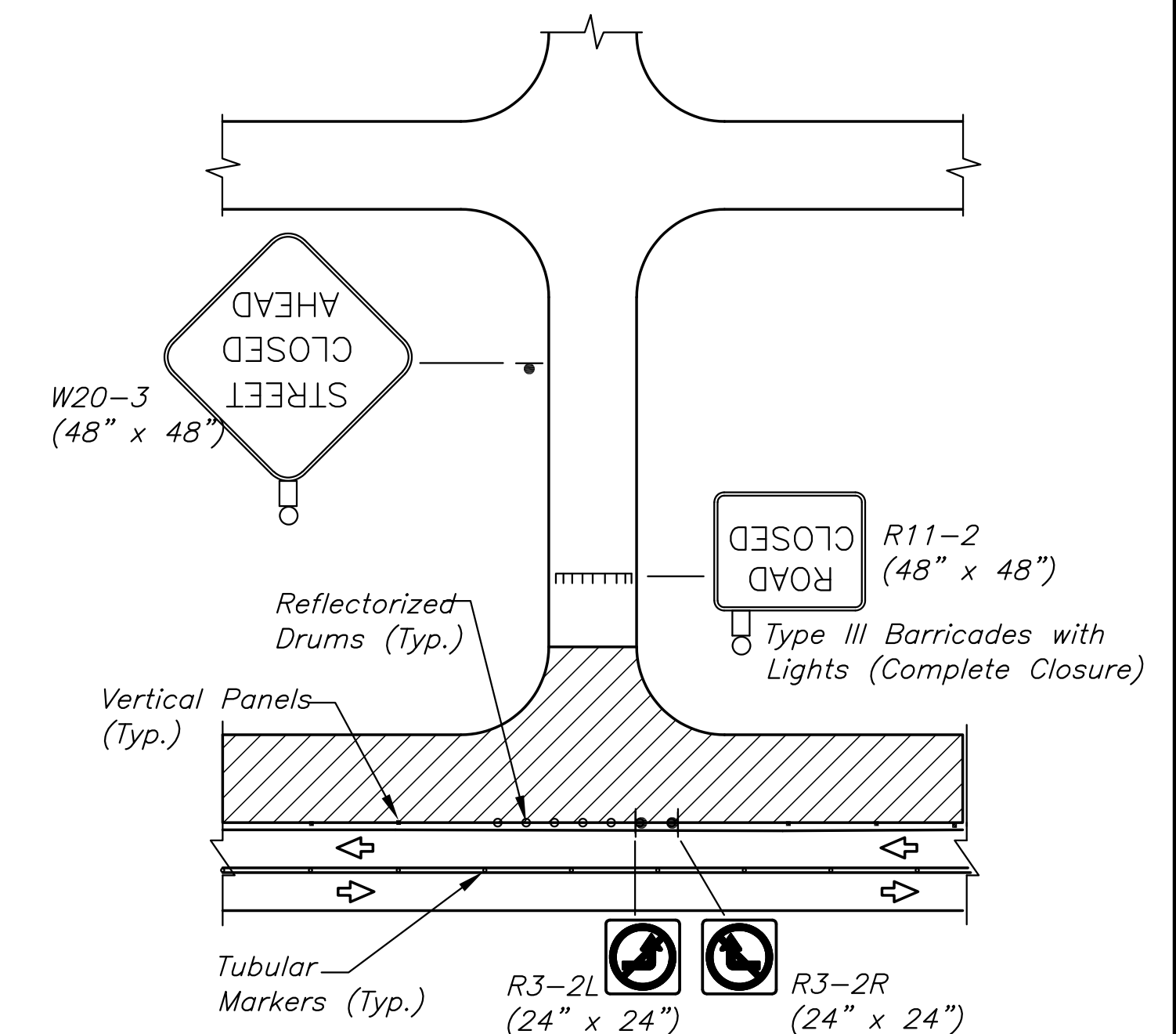
THE ENTIRE AREA OF BARRICADE RAILS, BOTH FRONT AND BACK, SHALL HAVE ASTM TYPE III SHEETING. THE STRIPES SHALL SLOPE DOWNWARD TO THE SIDE TRAFFIC IS TO PROCEED OR TOWARD THE CENTER OF THE ROADWAY AT ROAD CLOSURES. APPROVED SIGNS MOUNTED ON THE TYPE III BARRICADES SHOULD NOT COVER MORE THAN 50% OF THE TOP TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS. WHEN BARRICADES ARE PLACED END-TO-END OR STAGGERED, A TYPE "A" LOW INTENSITY WARNING LIGHT SHALL BE MOUNTED TO THE VERTICAL POST NEAR EACH OUTSIDE CORNER OF THE END BARRICADES.

**LEGEND**

- Type III Barricades with lights
- Mount On Type III Barricade
- Type B Warning Light
- One Post Sign
- Two Post Sign
- Traffic Flow
- Work Area
- Reflectorized Drum
- Tubular Marker
- Vertical Panel
- Mount Overhead on Signal Cross-arm



TYPICAL ENTRANCE AND SIDE STREET  
(TWO-WAY TRAFFIC ON MAIN ROAD)



TYPICAL CLOSED SIDE STREET

©2015 MKEC Engineering All Rights Reserved www.mkec.com These drawings and their contents, including, but not limited to, all concepts, designs, & ideas are the exclusive property of MKEC Engineering (MKEC), and may not be used or reproduced in any way without the express consent of MKEC.

**CONSTRUCTION SEQUENCE SUMMARY**

PROJECT NO.	468-85021	
DATE	MARCH 2015	
SCALE	NONE	
DESIGNED	DRAWN	CHECKED
JRA	WNJ	JRA
NO.	REVISION	DATE

SHEET NO.