

**CITY OF BALTIMORE  
DEPARTMENT OF GENERAL SERVICES  
BOOK OF STANDARDS - 2010  
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BC 825.09-1	Poured in Place Manhole – 6'x8'	1 of 2
BC 825.09-2	Poured in Place Manhole – 6'x8'	2 of 2

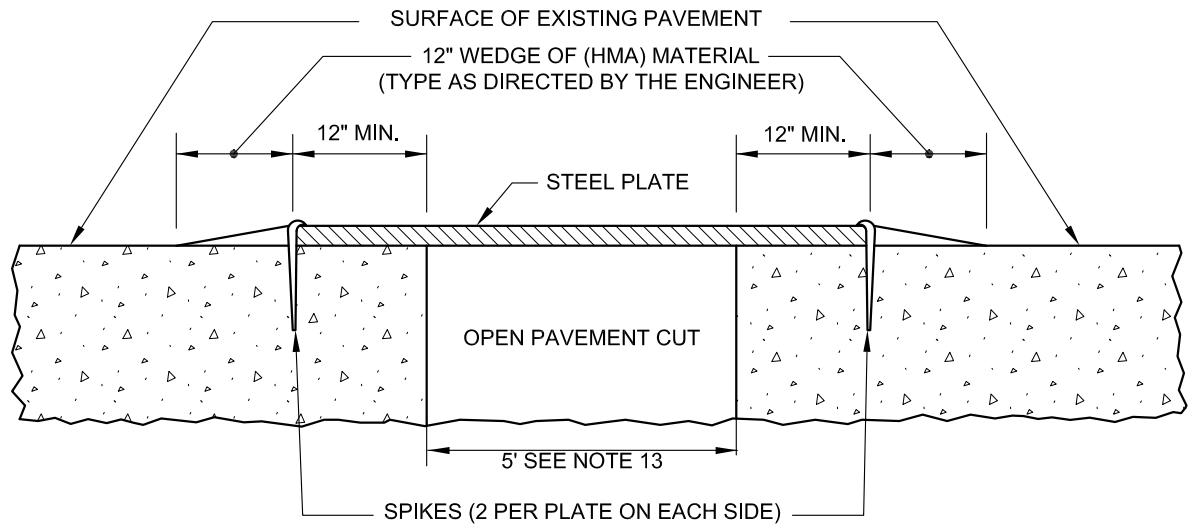
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BC 825.11	Manhole - Conduit Standard Installation	1 of 1

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BC 825.12-01	Manhole Conduit Standard 36" Cover	1 of 1 (New)
BC 825.12-02	Manhole Conduit Standard 36" Frame	1 of 1 (New)
<del>BC 825.13</del>	<del>Manhole - Conduit Standard Frame</del>	<del>1 of 1 (Deleted)</del>
<del>BC 825.14</del>	<del>Manhole - Conduit Standard Cover - DTT</del>	<del>1 of 1 (Replaced</del>
	with BC 825.14-02	
BC 825.14-02	Manhole Conduit Standard 37" Frame	2 of 2 (New)
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BC 825.15-4	6'x17'-6"x9' Precast Network Transformer Manhole - Details	4 of 5
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BC 826.01-2	Precast Line Manhole - 6'x12'x7' Headroom Bottom Half	2 of 2 (Revised)
BC 826.02-1	Precast Line Manhole - 6'x12'x8' Headroom Top Half	1 of 2 (Revised)
BC 826.02-2	Precast Line Manhole - 6'x12'x8' Headroom Bottom Half	2 of 2 (Revised)
BC 826.03-1	Precast Line Manhole - 6'x12'x9' Headroom Top Half	1 of 2 (Revised)
BC 826.03-2	Precast Line Manhole - 6'x12'x9' Headroom Bottom Half	2 of 2 (Revised)
BC 826.04	Precast Line Manhole - 6'x12'x7' - 8' -9' HR Bar Schedule	1 of 1
BC 826.05	End and Side Knockout Details - Precast Manhole	1 of 1
BC 826.06	Insert Details for Recessed Extension - Precast Manhole	1 of 1
BC 826.07-1	Precast Recessed Extension	1 of 2
BC 826.07-2	Precast Recessed Extension - Manhole Adjustments	2 of 2
BC 826.08	Accessories for Precast Manholes	1 of 1
BC 826.09	Cast-In-Place Recessed Wall Extension	1 of 1
BC 827.01-1	Precast Manhole 6'x8'x7' Headroom Top Half	1 of 2
BC 827.01-2	Precast Manhole 6'x8'x7' Headroom Bottom Half	2 of 2
BC 827.02-1	Precast Manhole 6'x8'x8' Headroom Top Half	1 of 2
BC 827.02-2	Precast Manhole 6'x8'x8' Headroom Bottom Half	2 of 2
BC 827.03	Precast Manhole 6'x8'x7'-8' HR Bar Schedule	1 of 1
BC 830.01-1	Duct Identification	1 of 6
BC 830.01-2	Duct Identification	2 of 6
BC 830.01-3	Duct Identification	3 of 6
BC 830.01-4	Duct Identification	4 of 6
BC 830.01-5	Duct Identification	5 of 6
BC 830.01-6	Duct Identification	6 of 6
BC 830.02	Conduit Transposition	1 of 1

### Category No. 8 Utilities/Signals

BC 880.01	Steel Strain Pole	1 of 1
BC 880.02	Heavy Duty Steel Strain Pole	1 of 1
BC 880.03	Joint Use Steel Strain Pole	1 of 1
BC 880.04	Heavy Duty Joint Use Steel Strain Pole	1 of 1
BC 880.05-1	Multi-Purpose Pole	1 of 2
BC 880.05-2	Multi-Purpose Pole	2 of 2
BC 880.06-1	Galvanized Steel Mast Arm Pole	1 of 3
BC 880.06-2	Galvanized Steel Mast Arm Pole	2 of 3
BC 880.06-3	Galvanized Steel Mast Arm Pole	3 of 3
BC 880.07	Push Button Post	1 of 1

<u>Std. No.</u>	<u>Description</u>	<u>Sheet No.</u>
BC 880.08	Steel Pedestal Pole	1 of 1
BC 880.09-1	Inner Harbor Type Square Steel Poles & Mast Arms	1 of 4
BC 880.09-2	Inner Harbor Type Square Steel Poles & Mast Arms	2 of 4
BC 880.09-3	Inner Harbor Type Square Steel Poles & Mast Arms	3 of 4
BC 880.09-4	Inner Harbor Type Square Steel Poles & Mast Arms	4 of 4
BC 880.10	Inner Harbor Type Square Pedestal Pole	1 of 1
BC 887.01	Pole, Post and Pedestal Foundation Details – Traffic	1 of 1
BC 887.02	Standard Anchor Bolts – Traffic	1 of 1
BC 890.01	Category ( C ) Controller Cabinet Foundation Base	1 of 1
BC 890.02	Type 332 And Category ( E ) Controller Cabinet Foundation Base	1 of 1
BC 890.10	Type 336S Cabinet Base Adapter	1 of 1
BC 890.11	Push Button Sign	1 of 1
BC 890.12	Cabinet Mounting Bracket – Traffic	1 of 1
BC 891.01	Existing Ductbank Support System	1 of 1
BC 892.01-1	Adapting Plastic Duct to Other Duct Materials	1 of 10
BC 892.01-2	Adapting Plastic Duct to Other Duct Materials	2 of 10
BC 892.01-3	Adapting Plastic Duct to Other Duct Materials	3 of 10
BC 892.01-4	Adapting Plastic Duct to Other Duct Materials	4 of 10
BC 892.01-5	Adapting Plastic Duct to Other Duct Materials	5 of 10
BC 892.01-6	Adapting Plastic Duct to Other Duct Materials	6 of 10
BC 892.01-7	Adapting Plastic Duct to Other Duct Materials	7 of 10
BC 892.01-8	Adapting Plastic Duct to Other Duct Materials	8 of 10
BC 892.01-9	Adapting Plastic Duct to Other Duct Materials	9 of 10
BC 892.01-10	Adapting Plastic Duct to Other Duct Materials	10 of 10
BC 893.01-1	Tree Root Barrier for Tree Pits	1 of 4
BC 893.01-2	Tree Root Barrier for Tree Pits	2 of 4
BC 893.01-3	Tree Root Barrier for Tree Pits	3 of 4
BC 893.01-4	Tree Root Barrier for Tree Pits	4 of 4



- NOTES:**
- 1.PLACE STEEL PLATE ON SURFACE OF EXISTING PAVEMENT.
  - 2.SPIKES TO BE DRILLED IN CONCRETE BASE, SPIKES ARE TO BE MINIMUM OF 6 IN. IN LENGTH.
  - 3.SPIKES AND HOT MIX ASPHALT (HMA) TO BE PLACED ONLY WHERE MAINTENANCE OF TRAFFIC IS REQUIRED AND IN THE PUBLIC RIGHT OF WAY.
  - 4.WELDING BY A LICENSED WELDER IS REQUIRED FOR STEEL PLATES PLACED IN MULTIPLES(TWO OR MORE).
  - 5.EACH STEEL PLATE PLACED ON SIDEWALK MUST HAVE HOT MIX ASPHALT(HMA) INSTALLED AROUND THE ENTIRETY OF PLATE.
  - 6.EACH UNUSED PLATES MUST BE IMMEDIATELY REMOVED FROM SITE AFTER PERMANENT REMOVAL FROM EXCAVATION.
  - 7.EQUIPMENT AND MATERIALS OF ANY KIND CANNOT BE STORED IN PUBLIC RIGHT OF WAY FOR FUTURE USE UNLESS A PERMIT IS OBTAINED AND APPROVED BY THE DIRECTOR OF TRANSPORTATION OR DESIGNEE.
  - 8.EACH STEEL PLATE AND EACH PIECE OF EQUIPMENT ARE SEPARATE AND FINEABLE.
  - 9.ALL STEEL PLATES MUST MEET REQUIRED TRAFFIC LOADS, AND BE SKID RESISTANT.THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE APPROPRIATE SELECTION AND MAINTENANCE OF THE STEEL PLATES.
  - 10.ALL STEEL PLATES MUST MEET ADA STANDARDS FOR COEFFICIENT OF FRICTION: FLAT PLATE=0.60, INCLINED PLATE=0.80 USING ASTM STD 1679(STEEL PLATE SPECIFICATION/DOCUMENTATION REQUIRED UPON REQUEST).
  - 11.PERMANENT PAVING MUST TAKE PLACE IMMEDIATELY AFTER THE FINAL REMOVAL OF THE STEEL PLATE.
  - 12."STEEL PLATE AHEAD" SIGNS MUST BE PLACED IN ADVANCE.
  - 13.FOR TRENCH WIDTHS EQUAL TO OR GREATER THAN 5 FT, THE STEEL PLATE AND SUPPORT SYSTEM SHALL BE INSTALLED.
  - 14.APPROACH AND ENDING PLATE OF LONGITUDINAL PLACEMENT SHALL BE ATTACHED TO THE ROADWAY BY A MINIMUM OF 1 SPIKE IN EACH CORNER OF THE PLATE. DRILL A ½ INCH DIAMETER, 5 INCH DEEP PILOT HOLE INTO THE PAVEMENT. DRIVE 1 SPIKE INTO EACH HOLE.SUBSEQUENT PLATES ARE BUTTED TO EACH OTHER AND WELDED. ASPHALT MATERIAL SHALL BE COMPACTED TO FORM RAMPS.MAXIMUM SLOPE IS 8.5% WITH A MINIMUM 12 INCH TAPER TO COVER ALL EDGES OF THE STEEL PLATES. CONTRACTOR'S PROPOSED METHOD OF SPIKING SHALL BE APPROVED BY THE DIRECTOR OF TRANSPORTATION OR DESIGNEE.

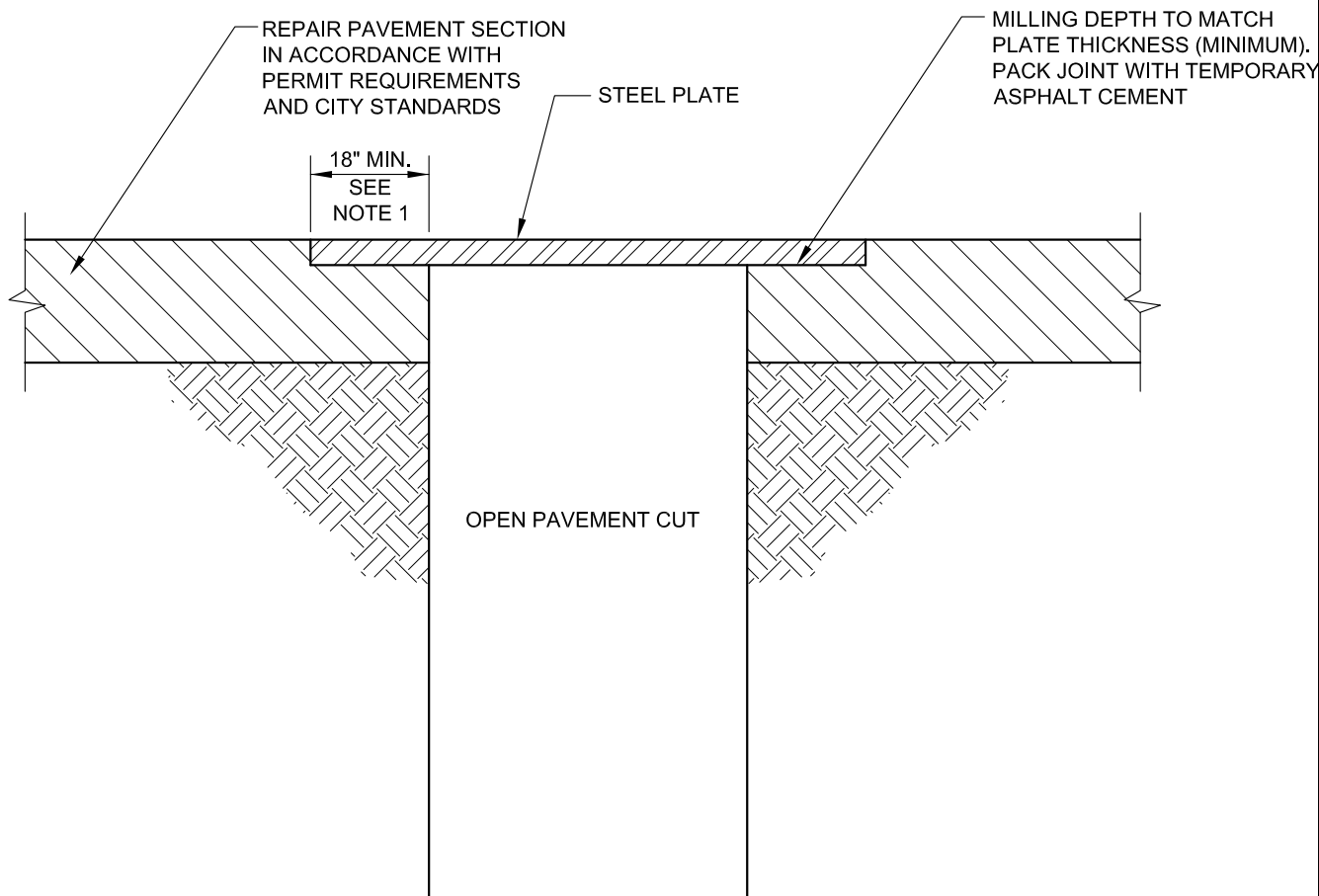


APPROVED :  
  
DIVISION CHIEF, TRANSPORTATION ENGINEERING AND CONSTRUCTION  
  
DIRECTOR, DEPARTMENT OF TRANSPORTATION

**CITY OF BALTIMORE**  
**DEPARTMENT OF TRANSPORTATION**  
**TRANSPORTATION ENGINEERING AND CONSTRUCTION**

**STREET CUT AND REPAIR**  
**TEMPORARY STEEL PLATE**


ISSUED	REVISED	REVISED
8 / 2010	08 / 2023	
<b>STANDARD NO.</b> <b>BC 576.17-1</b>		
SCALE : NONE		SHEET 1 OF 2



TYPICAL TRENCH PLATE DETAIL  
N.T.S.

**NOTE:**

1. THE CONTRACTOR SHALL PROVIDE A MINIMUM 18" LAP OF STEEL PLATE ON EACH SIDE OF TRENCH TO ASSURE NO SLIPPING OF PLATE OR COLLAPSING OF TRENCH WALL. WHERE 18" LAP CANNOT BE MET, ENGINEERING DESIGN IS REQUIRED AND SHALL BE APPROVED BY THE CITY ENGINEER.
2. STEEL PLATE MUST FIT SNUG WITHIN THE RECESSED AREA AND INSTALLED TO OPERATE WITH MINIMUM NOISE.
3. THE PAVEMENT SHALL BE COLD PLANNED TO A DEPTH EQUAL TO THE THICKNESS OF THE PLATE, AND TO A WIDTH AND LENGTH EQUAL TO THE THICKNESS OF THE PLATE, AND TO OPERATE WITH MINIMUM NOISE.
4. THIS STANDARD SHALL BE IMPLEMENTED ON ALL PROJECTS WITHIN THE VEHICULAR TRAVELWAY ANTICIPATED TO BE OPEN MORE THAN 30 DAYS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
5. WELDING BY A LICENSED WELDER IS REQUIRED FOR STEEL PLATES PLACED IN MULTIPLES (TWO OR MORE).
6. ALL STEEL PLATES MUST MEET REQUIRED TRAFFIC LOADS, AND BE SKID-RESISTANT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE APPROPRIATE SELECTION AND MAINTENANCE OF THE STEEL PLATES.
7. ALL STEEL PLATES MUST MEET ADA STANDARDS FOR COEFFICIENT OF FRICTION: FLAT PLATE = 0.60, INCLINED PLATE = 0.80 USING ASTM STD. 1679.(STEEL PLATE SPECIFICATION/DOCUMENTATION REQUIRED UPON REQUEST)
8. STEEL PLATES MUST BE REMOVED AND PERMANENT PAVEMENT SHALL BE PLACED WITHIN FIFTEEN (15) WORKING DAYS OR AS APPROVED BY THE CITY ENGINEER.
9. THE CONTRACTOR MAY BE REQUIRED TO PLACE "STEEL PLATES AHEAD" SIGNS.
10. EQUIPMENT AND MATERAILS OF ANY KIND CANNOT BE STORED IN PUBLIC RIGHT OF WAY FOR FUTURE USE UNLESS A PERMIT IS OBTAINED AND APPROVED BY THE DIRECTOR OF TRANSPORTATION OR DESIGNEE.
- 11.EACH STEEL PLATE AND EACH PIECE OF EQUIPMENT ARE SEPARATE AND FINEABLE.

	APPROVED :	<b>CITY OF BALTIMORE</b> <b>DEPARTMENT OF TRANSPORTATION</b> <b>TRANSPORTATION ENGINEERING AND</b> <b>CONSTRUCTION</b>	ISSUED	REVISED	REVISED
	DIVISION CHIEF, TRANSPORTATION ENGINEERING AND CONSTRUCTION		8 / 2010	08 / 2023	
	DIRECTOR, DEPARTMENT OF TRANSPORTATION	<b>STREET CUT AND REPAIR</b> <b>RECESSED TEMPORARY STEEL</b> <b>PLATE</b>	<b>STANDARD NO.</b> <b>BC 576.17-2</b>		
			SCALE : NONE	SHEET 2 OF 2	

**CONSTRUCTION NOTES AND REQUIREMENTS**

THE FOLLOWING NOTES ARE APPLICABLE TO THE REPAIR OF TRENCHES IN EXISTING PLAIN CEMENT CONCRETE PAVEMENT AND REINFORCED CONCRETE PAVEMENT.

**REMOVE EXISTING PAVEMENT:**

LONGITUDINAL TRENCHES:

REMOVE EXISTING PAVEMENT FOR FULL WIDTH OF SLAB BETWEEN JOINTS.

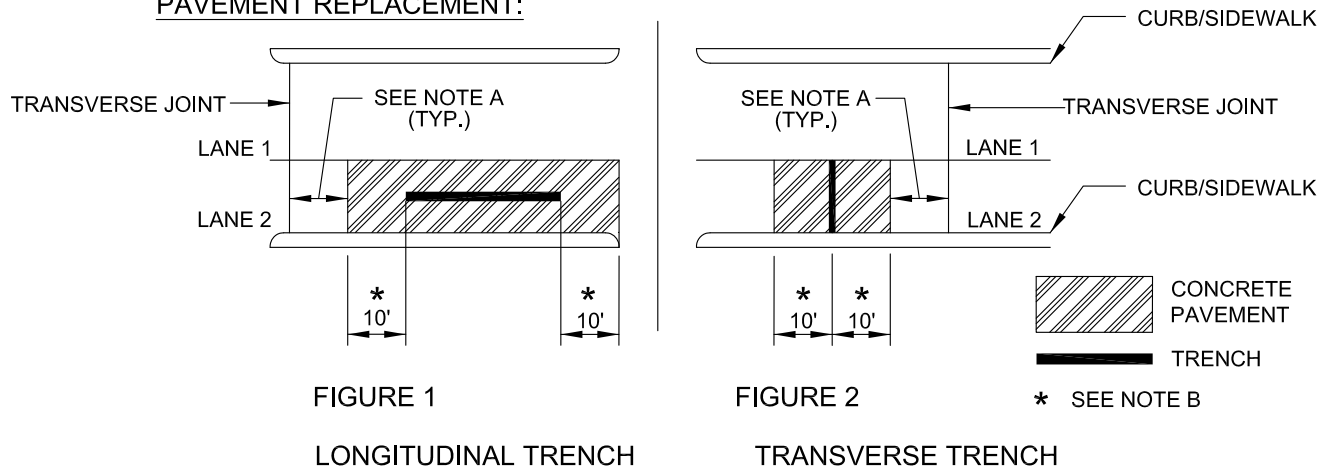
TRANSVERSE TRENCHS:

REMOVE EXISTING PAVEMENT FOR THE ENTIRE WIDTH OF SLAB AND FOR A LENGTH IN ACCORDANCE WITH THE FOLLOWING LIMITATIONS:

- A. MINIMUM LENGTH OF PAVEMENT REMOVAL SHALL BE 12 FEET (20 FEET FOR REINFORCED CONCRETE PAVEMENT).
- B. ONLY TWO TRANSVERSE CUTS MAY BE MADE IN ANY ONE SLAB BETWEEN EXISTING TRANSVERSE JOINTS.
- C. A TRANSVERSE CUT SHALL NOT BE CLOSER THAN 12 FEET (20 FEET FOR REINFORCED CONCRETE PAVEMENT) TO AN EXISTING TRANSVERSE JOINT OR CLOSER THAN 2 FEET TO THE EDGE OF TRENCH.


ALL PAVEMENT CUTS SHALL BE MADE WITH A SAW CUT 3 INCHES DEEP BEFORE BREAKING OUT EXISTING CONCRETE. SALVAGE LONGITUDINAL AND TRANSVERSE TIE BASE WHERE PAVEMENT IS REMOVED TO AN EXISTING JOINT.

**PAVEMENT REPLACEMENT:**



**NOTES:**

- A. IF THIS REPAIR ENDS WITHIN 12 FT. OF A TRANSVERSE JOINT IN PLAIN CEMENT CONCRETE PAVEMENT OR WITHIN 20 FEET OF A TRAVERSE JOINT IN REINFORCED CONCRETE PAVEMENT THE REPAIR SHALL BE EXTENDED TO THE JOINT.
- B. IF A TRANSVERSE JOINT OCCURS WITHIN THIS REPAIR AREA THE REPAIR SHALL END AT THE TRANSVERSE JOINT. THE FULL DEPTH PATCH SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
  - 1. LONGITUDINAL TRENCHES:  
REMOVE THE EXISTING PAVEMENT FOR THE ENTIRE TRAFFIC LANE WIDTH WHERE THE TRENCH IS LOCATED. REMOVE AN ADDITIONAL TEN FEET OF PAVEMENT AT THE BEGINNING AND END OF THE TRENCH. SEE FIGURE 1 ABOVE.
  - 2. TRANSVERSE TRENCH:  
REMOVE THE PAVEMENT 10' ON EACH SIDE OF THE TRENCH FOR THE ENTIRE WIDTH OF THE AFFECTED TRAFFIC LANE. SEE FIGURE 2 ABOVE.
- C. ALL PAVEMENT CUTS SHALL BE MADE WITH A SAW CUT 3 INCHES DEEP INTO CONCRETE PAVEMENT BEFORE BREAKING OUT EXISTING CONCRETE. SALVAGE LONGITUDINAL AND TRANSVERSE TIE BARS WHERE PAVEMENT IS REMOVED TO AN EXISTING JOINT.
- D. PLACEMENT OF CONCRETE PAVEMENT MUST BE COMPLETE WITHIN 7 DAYS AFTER THE COMPLETION OF BACK FILL AND COMPACTION.
- E. EQUIPMENT AND MATERIALS OF ANY KIND CANNOT BE STORED IN PUBLIC RIGHT OF WAY FOR FUTURE USE UNLESS A PERMIT IS OBTAINED AND APPROVED BY THE DIRECTOR OF TRANSPORTATION OR DESIGNEE.
- F. EACH STEEL PLATE AND EACH PIECE OF EQUIPMENT ARE SEPARATE AND FINEABLE.
- G. IF THE PERMANENT RESTORATION IMPACTS THE CROSSWALK, THEN ENTIRE LENGTH OF CROSSWALK MUST BE REPLACED BY DOT APPROVED CROSSWALK MARKING.SEE DETAIL BC 577.01.


	APPROVED :	<b>CITY OF BALTIMORE</b> DEPARTMENT OF TRANSPORTATION TRANSPORTATION ENGINEERING AND CONSTRUCTION	ISSUED	REVISED	REVISED
	DIVISION CHIEF, TRANSPORTATION ENGINEERING AND CONSTRUCTION		8 / 2010	08 / 2023	
	DIRECTOR, DEPARTMENT OF TRANSPORTATION	<b>STREET CUT AND REPAIR</b> <b>RIGID PAVEMENT</b>	STANDARD NO. BC 576.18-1		
			SCALE : NONE	SHEET 1 OF 2	

**PAVEMENT REPLACEMENT :**

1. THE TOP 6 INCHES OF THE TRENCH SHALL BE FILLED WITH COMPACTED SUBBASE (6 INCHES CRUSHER RUN AGGREGATE CR-6), ADDITIONAL THICKNESS, IF REQUIRED, SHALL BE IN ACCORDANCE WITH THE PLANS OR AS DIRECTED BY THE ENGINEER. SEE SECTION 32 11 23.10 IN SPECIFICATIONS.
2. CLEAN AND WET EDGES OF EXISTING PAVEMENT AND COMPACT AND DAMPEN SUBBASE OF ENTIRE OPENING BEFORE PLACING CONCRETE.
3. AT EXISTING JOINTS, REPLACE 3/4 INCH EXPANSION MATERIAL, EXPANSION SLEEVES OR COMPLETE EXPANSION OR CONTRACTION JOINT ASSEMBLIES AS REQUIRED BEFORE PLACING CONCRETE.
4. AT PAVEMENT CUTS, DRILL HOLE AND INSTALL 1/2 OF SPECIAL LONGITUDINAL TIE DEVICE AS DIRECTED BY THE ENGINEER AND IN ACCORDANCE WITH STANDARD BC 572.61-2.
5. REPLACE CONCRETE USING MODIFIED MIX NO. 6 CONCRETE CAPABLE OF ACHIEVING 2500 PSI WITHIN 12 HOURS. SEE SECTION 32 01 30.10, 3.6. B.2.b IN SPECIFICATIONS.
6. STEEL BARS ARE REQUIRED WHERE EXISTING PAVEMENT IS REINFORCED. COST OF MATERIAL AND PLACING STEEL BARS TO BE INCLUDED IN UNIT PRICE BID FOR PATCHING EXISTING PAVEMENT ITEMS.

**GENERAL NOTES:**

1. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH THE LATEST BALTIMORE CITY STANDARD SPECIFICATIONS.
2. THE ABOVE REQUIREMENTS ARE APPLICABLE TO ALL TYPES OF UTILITY REPAIR IN RIGID PAVEMENT.
3. INTERMITTENT UTILITY CUTS WILL NOT BE PERMITTED.
4. PROCEDURE FOR MAINTENANCE OF TRAFFIC SHALL BE APPROVED BY THE DEPARTMENT OF TRANSPORTATION (DOT), TRAFFIC DIVISION BEFORE ANY EXISTING PAVEMENT IS REMOVED.

	APPROVED :	<b>CITY OF BALTIMORE</b> <b>DEPARTMENT OF TRANSPORTATION</b> <b>TRANSPORTATION ENGINEERING AND</b> <b>CONSTRUCTION</b>	ISSUED	REVISED	REVISED
	DIVISION CHIEF, TRANSPORTATION ENGINEERING AND CONSTRUCTION		8 / 2010	10 / 2013	08/2023
	DIRECTOR, DEPARTMENT OF TRANSPORTATION	<b>STREET CUT AND REPAIR</b> <b>RIGID PAVEMENT</b>	<b>STANDARD NO.</b> <b>BC 576.18-2</b>		
			SCALE : NONE	SHEET 2 OF 2	

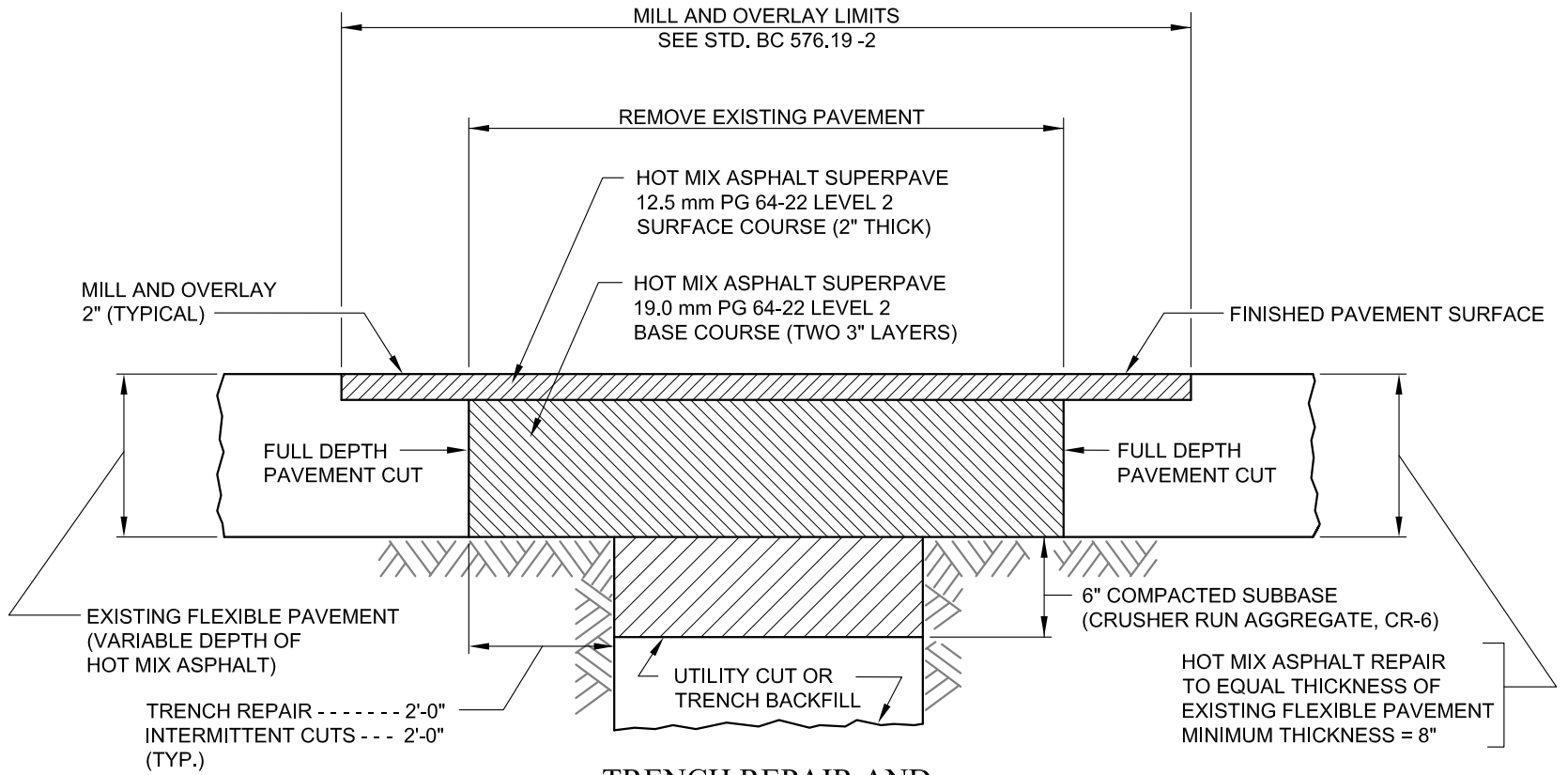




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 DIVISION CHIEF, TRANSPORTATION ENGINEERING  
 AND CONSTRUCTION  
 DIRECTOR, DEPARTMENT OF TRANSPORTATION

CITY OF BALTIMORE  
 DEPARTMENT OF TRANSPORTATION  
 ENGINEERING AND  
 CONSTRUCTION  
**STREET CUT REPAIR  
 FULL DEPTH  
 FLEXIBLE PAVEMENT**

ISSUED	8 / 2010	REVISED	08 / 2023	REVISED
STANDARD NO. BC 576.19-1				
SCALE: NONE	SHEET 1 OF 2			



**TRENCH REPAIR AND  
 INTERMITTENT UTILITY CUTS**

THIS DETAIL IS APPLICABLE TO THE REPAIR OF TRENCHES  
 AND INTERMITTENT UTILITY CUTS IN EXISTING FULL DEPTH  
 FLEXIBLE PAVEMENT.

SEE STANDARD BC 576.19-2  
 FOR CONSTRUCTION NOTES AND OTHER REQUIREMENTS.

**NOTES:**

1. EQUIPMENT AND MATERIALS OF ANY KIND CANNOT BE STORED IN PUBLIC RIGHT OF WAY FOR FUTURE USE UNLESS A PERMIT IS OBTAINED AND APPROVED BY THE DIRECTOR OF TRANSPORTATION OR DESIGNEE.
2. EACH PIECE OF EQUIPMENT & MATERIALS ARE SEPARATE AND FINEABLE.
3. PLACEMENT OF FINISH SURFACE AND BASE COURSE MUST BE COMPLETED WITHIN 7 DAYS AFTER COMPLETION OF BACKFILL AND COMPACTION TESTING.

## CONSTRUCTION NOTES AND REQUIREMENTS

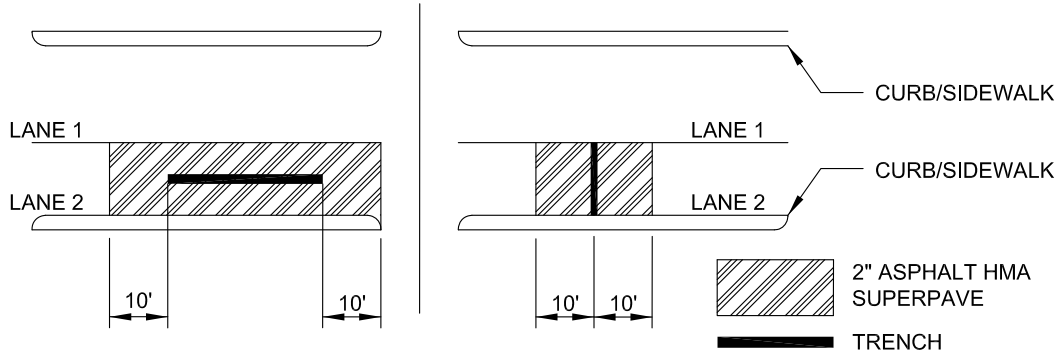
THE FOLLOWING NOTES ARE APPLICABLE TO THE REPAIR OF TRENCHES AND INTERMITTENT UTILITY CUTS IN EXISTING FULL DEPTH FLEXIBLE PAVEMENT.

SEE STANDARD BC 576.19-1 FOR CONSTRUCTION DETAILS.

### REMOVE EXISTING PAVEMENT:

EXISTING PAVEMENT SHALL BE REMOVED TO THE DIMENSIONS SHOWN ON THE CONSTRUCTION DETAIL FOR BOTH LONGITUDINAL AND TRANSVERSE PAVEMENT CUTS.

### PAVEMENT REPLACEMENT:



**FIGURE 1**  
**LONGITUDINAL TRENCH**

**FIGURE 2**  
**TRANSVERSE TRENCH**

MILLING AND OVERLAYING SHALL BE USED TO EXTEND THE LIMITS OF THE SURFACE COURSE BEYOND THE LIMITS OF THE FULL DEPTH PATCH IN ACCORDANCE WITH THE FOLLOWING:

**A. LONGITUDINAL TRENCHES:**

REMOVE THE TOP 2 INCHES OF THE EXISTING SURFACE ASPHALT PAVEMENT, BY CLEAN SAW CUT. FOR THE ENTIRE TRAFFICLANE WIDTH WHERE THE TRENCH IS LOCATED, AND RESURFACE WITH 2" INCHES OF HOT MIX ASPHALT SUPERPAVE 12.5mm. FOR SURFACE COURSE, PG64-22, LEVEL 2. ADD AN ADDITIONAL 10 FT. AT THE BEGINNING AND ENDING OF TRENCH. SEE FIGURE 1 ABOVE.

**B. TRANSVERSE TRENCH AND INTERMITTENT UTILITY CUT:**


REMOVE THE TOP 2" INCHES OF THE EXISTING SURFACE ASPHALT PAVEMENT. 10' ON EACH SIDE OF THE TRENCH AND INTERMITTENT UTILITY CUT FOR THE ENTIRE WIDTH OF THE AFFECTED TRAFFIC LANE AND RESURFACE WITH 2" HOT MIX ASPHALT SUPERPAVE 12.5mm FOR SURFACE COURSE, PG64-22, LEVEL 2. SEE FIGURE 2 ABOVE.

- THE TOP 6 INCHES OF THE TRENCH OR INTERMITTENT UTILITY CUT SHALL BE FILLED WITH COMPACTED SUBBASE (6 INCHES CRUSHER RUN AGGREGATE, CR-6). ADDITIONAL SUBBASE THICKNESS, IF REQUIRED, SHALL BE IN ACCORDANCE WITH THE PLANS OR AS DIRECTED BY THE ENGINEER. SEE 32 11 23.10 IN SPECIFICATIONS.
- COMPACT SUBBASE OF ENTIRE OPENING BEFORE PLACING HOT MIX ASPHALT. THE FLEXIBLE PAVING SHALL BE REPLACED FLUSH WITH THE FINISHED PAVEMENT SURFACE USING A BASE COURSE WITH MAXIMUM 3 INCH COMPACTED LAYERS AND A 2 INCH COMPACTED SURFACE COURSE. SEE 32 01 30.10. 3.6.A.2.b IN SPECIFICATIONS.
- ALL EXPOSED EDGES OF EXISTING FLEXIBLE PAVEMENT, THE SURFACE OF THE SUBBASE AND EACH LAYER OF HOT MIX ASPHALT SHALL BE TACK COATED IN ACCORDANCE WITH THE AFOREMENTIONED SPECIFICATIONS BEFORE THE NEXT LAYER OF HOT MIX ASPHALT IS PLACED.

**C. IF THE PERMANENT RESTORATION IMPACTS THE CROSSWALK, THEN ENTIRE LENGTH OF CROSSWALK MUST BE REPLACED BY DOT APPROVED CROSSWALK MARKING.SEE DETAIL BC577.01.**

### GENERAL NOTES:

1. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH THE LATEST BALTIMORE CITY STANDARD SPECIFICATIONS.
2. PROCEDURE FOR MAINTENANCE OF TRAFFIC SHALL BE APPROVED BY THE DEPARTMENT OF TRANSPORTATION (DOT), TRAFFIC DIVISION BEFORE ANY EXISTING PAVEMENT IS REMOVED.

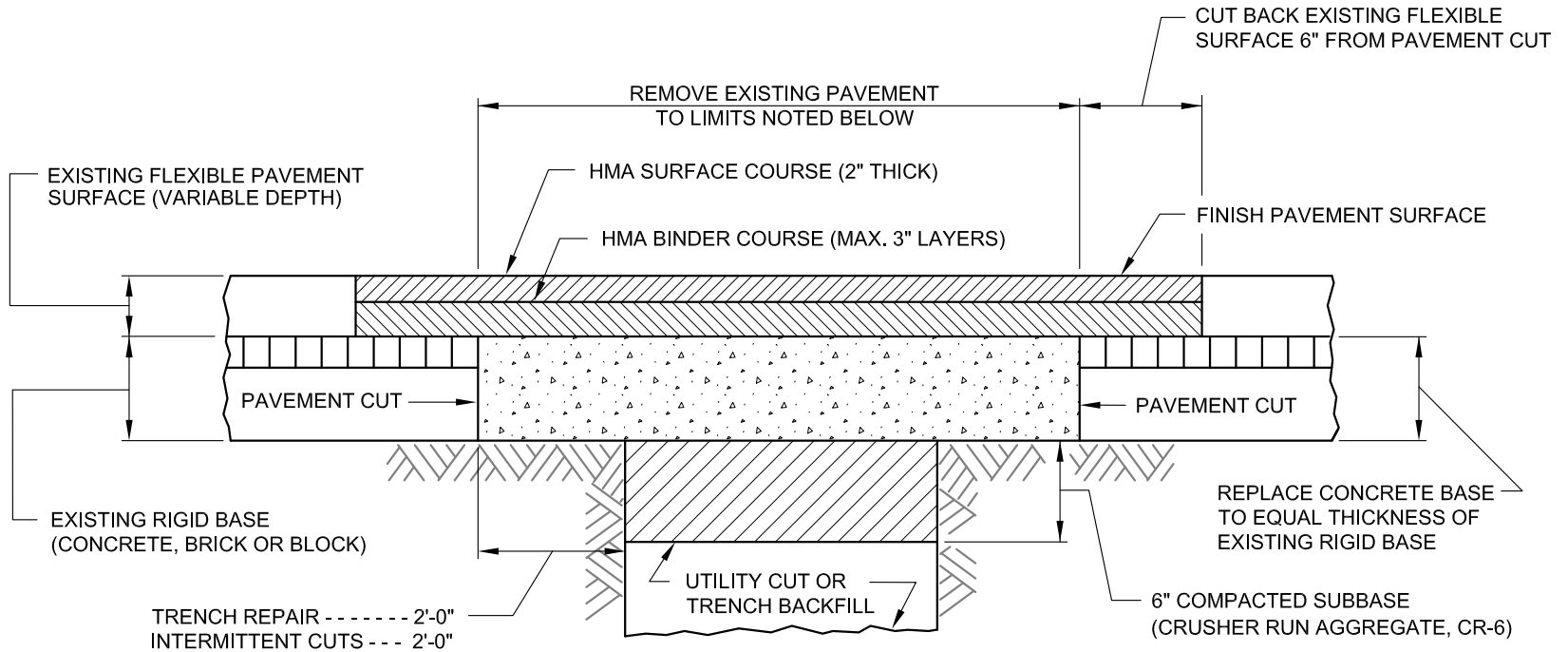
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			8 / 2010	10 / 2013	08 / 2023
	DIVISION CHIEF, TRANSPORTATION ENGINEERING AND CONSTRUCTION		<b>STREET CUT AND REPAIR</b> <b>FULL DEPTH</b> <b>FLEXIBLE PAVEMENT</b>		<b>STANDARD NO.</b> <b>BC 576.19-2</b>
DIRECTOR, DEPARTMENT OF TRANSPORTATION			SCALE : NONE	SHEET 2 OF 2	



APPROVED:  
 DIVISION CHIEF, TRANSPORTATION ENGINEERING AND CONSTRUCTION  
 DIRECTOR, DEPARTMENT OF TRANSPORTATION

CITY OF BALTIMORE  
 DEPARTMENT OF TRANSPORTATION  
 TRANSPORTATION ENGINEERING AND CONSTRUCTION  
**STREET CUT AND REPAIR**  
**FLEXIBLE SURFACE**  
**RIGID BASE**

ISSUED	8 / 2010	REVISED	08 / 2023	REVISED
STANDARD NO. BC 576.20-1				
SCALE: NONE	SHEET 1 OF 2			



**TRENCH REPAIR AND  
 INTERMITTENT UTILITY CUTS**

THIS DETAIL IS APPLICABLE TO THE REPAIR OF TRENCHES AND INTERMITTENT UTILITY CUTS IN EXISTING PAVEMENT HAVING A FLEXIBLE SURFACE AND A RIGID BASE.

SEE STANDARD BC 576.20-2 FOR CONSTRUCTION NOTES AND OTHER REQUIREMENTS.

**NOTES:**

1. EQUIPMENT AND MATERIALS OF ANY KIND CANNOT BE STORED IN PUBLIC RIGHT OF WAY FOR FUTURE USE UNLESS A PERMIT IS OBTAINED AND APPROVED BY THE DIRECTOR OF TRANSPORTATION OR DESIGNEE.
2. EACH PIECE OF EQUIPMENT AND MATERIALS ARE SEPARATE AND FINEABLE.
3. PLACEMENT OF FINISH SURFACE AND BASE COURSE MUST BE COMPLETED WITHIN 7 DAYS AFTER COMPLETION OF BACKFILL AND COMPACTION TESTING.

CONSTRUCTION NOTES AND REQUIREMENTS

THE FOLLOWING NOTES ARE APPLICABLE TO THE REPAIR OF TRENCHES AND INTERMITTENT UTILITY CUTS IN EXISTING PAVEMENT HAVING A FLEXIBLE SURFACE AND A RIGID BASE.

SEE STANDARD BC 576.20-1 FOR CONSTRUCTION DETAILS

**REMOVE EXISTING PAVEMENT:**

- EXISTING PAVEMENT SHALL BE REMOVED TO THE DIMENSIONS SHOWN ON THE CONSTRUCTION DETAIL FOR BOTH LONGITUDINAL AND TRANSVERSE PAVEMENT CUTS. WHERE IT CAN BE DETERMINED THAT A PAVEMENT CUT IS LOCATED WITHIN 2 FEET OF AN EXISTING JOINT, THE ADDITIONAL WIDTH OF EXISTING BRICK AND CONCRETE BASE FROM THE PAVEMENT CUT TO THE EXISTING JOINT SHALL ALSO BE REMOVED.
- SALVAGE LONGITUDINAL AND TRANSVERSE TIE BARS WHERE PAVEMENT IS REMOVED TO AN EXISTING JOINT. CUT BACK EXISTING FLEXIBLE SURFACING AS SHOWN.

**PAVEMENT REPLACEMENT:**

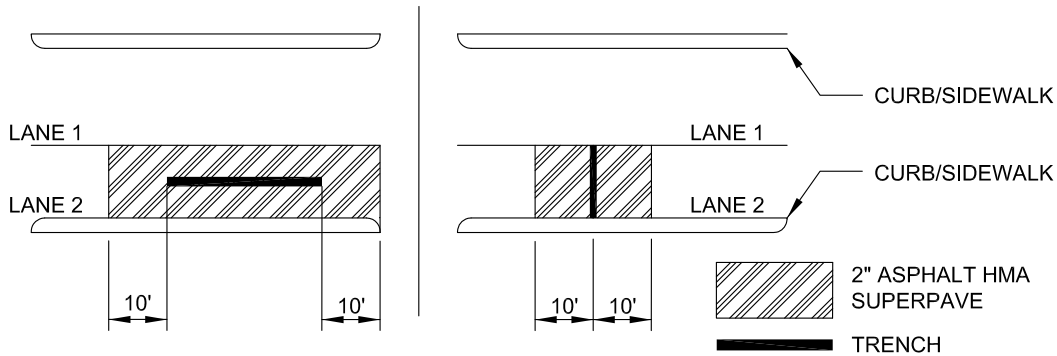
- THE TOP 6 INCHES OF THE TRENCH OR INTERMITTENT UTILITY CUT SHALL BE FILLED WITH COMPACTED SUBBASE. TYPE OF SUBBASE MATERIAL AND ADDITIONAL THICKNESS, IF REQUIRED SHALL BE IN ACCORDANCE WITH THE PLANS OR AS DIRECTED BY THE ENGINEER. SEE SECTION 32 11 23.10 IN SPECIFICATIONS.
- CLEAN AND WET EDGES OF EXISTING PAVEMENT AND COMPACT AND DAMPEN SUBBASE OF ENTIRE OPENING BEFORE PLACING CONCRETE. AT EXISTING JOINTS, REPLACE 3/4 INCH EXPANSION MATERIAL, EXPANSION SLEEVES OR COMPLETE EXPANSION AND CONTRACTION JOINT ASSEMBLIES AS REQUIRED BEFORE PLACING CONCRETE.
- AT PAVEMENT CUTS, DRILL HOLE AND INSTALL 1/2 OF LONGITUDINAL TIE DEVICE AS DIRECTED BY THE ENGINEER AND IN ACCORDANCE WITH STANDARD BC 572.61-2 PLACE CONCRETE BASE USING MODIFIED MIX 6 CONCRETE. \* SEE SECTION 32 01 30.10 IN SPECIFICATIONS.
- THE FLEXIBLE PAVING SHALL BE REPLACED FLUSH WITH THE FINISHED PAVEMENT SURFACE USING A BINDER COURSE WITH MAXIMUM 3 INCH COMPACTED LAYERS AND A 2 INCH COMPACTED SURFACE COURSE. SEE SECTION 32 01 17.59 IN SPECIFICATIONS.
- ALL EXPOSED EDGES OF EXISTING FLEXIBLE PAVEMENT, THE SURFACE OF CONCRETE BASE AND EACH LAYER OF HOT MIX ASPHALT (HMA) BINDER COURSE SHALL BE PRIMED WITH A MATERIAL SATISFACTORY TO THE ENGINEER BEFORE THE NEXT LAYER OF HMA MIXTURE IS PLACED.

**GENERAL NOTES:**

- ALL WORK TO BE PERFORMED IN ACCORDANCE WITH THE LATEST BALTIMORE CITY STANDARD SPECIFICATIONS.
- PROCEDURE FOR MAINTENANCE OF TRAFFIC SHALL BE APPROVED BY THE DEPARTMENT OF TRANSPORTATION (DOT), TRAFFIC DIVISION BEFORE ANY EXISTING PAVEMENT IS REMOVED.
- IF THE PERMANENT RESTORATION IMPACTS THE CROSSWALK, THEN ENTIRE LENGTH OF CROSSWALK MUST BE REPLACED BY DOT APPROVED CROSSWALK MARKING. SEE DETAIL BC577.01.

\* CAPABLE OF ACHIEVING A COMPRESSIVE STRENGTH OF TWENTYFIVE HUNDRED (2500) PSI WITHIN TWELVE (12) HOURS.

**PAVEMENT REPLACEMENT:**




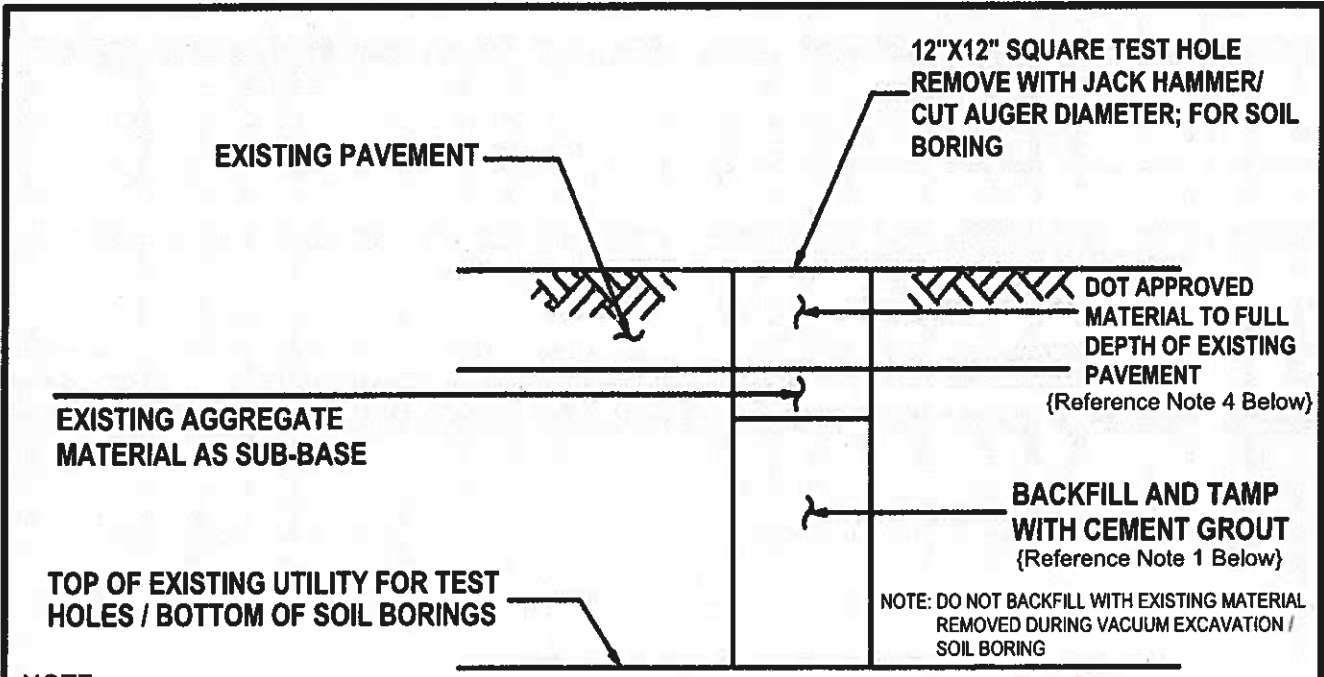
**FIGURE 1**

**LONGITUDINAL TRENCH**

**FIGURE 2**

**TRANSVERSE TRENCH**

	APPROVED:	<p align="center"><b>CITY OF BALTIMORE</b>  <b>DEPARTMENT OF TRANSPORTATION</b>  <b>TRANSPORTATION ENGINEERING AND</b>  <b>CONSTRUCTION</b></p> <p align="center"><b>STREET CUT AND REPAIR</b>  <b>FLEXIBLE SURFACE</b>  <b>RIGID BASE</b></p>	ISSUED	REVISED	REVISED
	DIVISION CHIEF, TRANSPORTATION ENGINEERING AND CONSTRUCTION		8 / 2010	10 / 2013	08 / 2023
	DIRECTOR, DEPARTMENT OF TRANSPORTATION		<p align="center"><b>STANDARD NO.</b>  <b>BC 576.20-2</b></p>		
			SCALE : NONE	SHEET 2 OF 2	

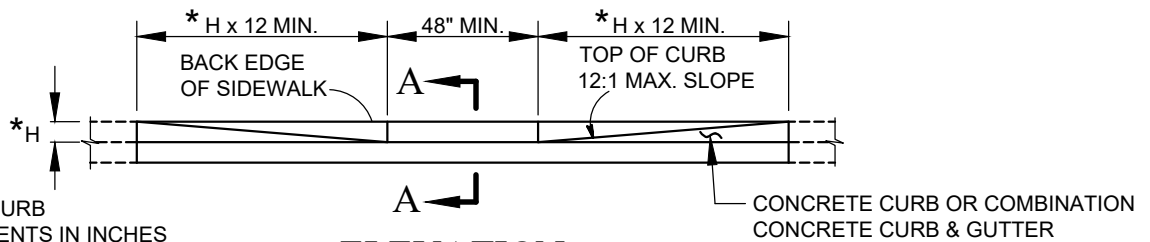
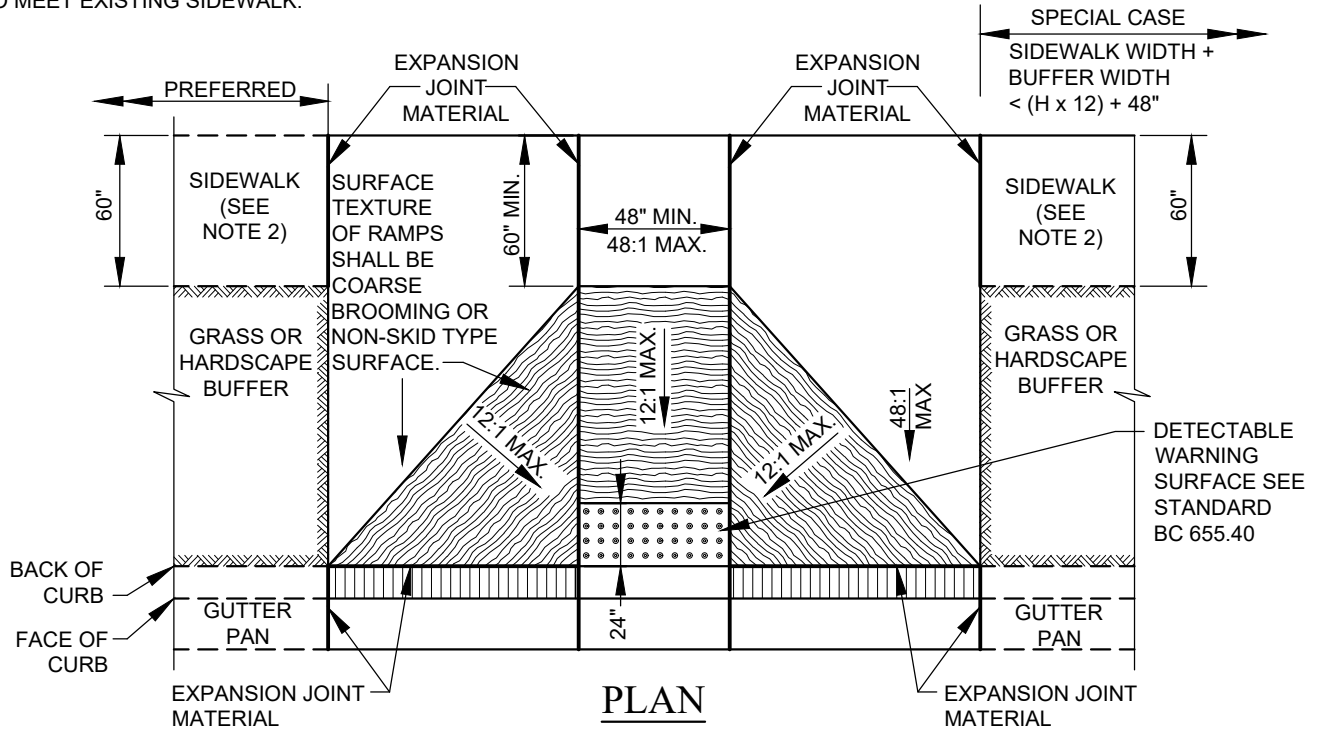


**NOTE:**

1. SEALING MATERIALS BELOW THE AGGREGATE BASE SHALL CONSIST OF EITHER NEAT CEMENT AND WATER OR A CEMENT BENTONITE GROUT. NEAT CEMENT AND WATER SHALL BE COMPOSED OF ONE (1) BAG OF PORTLAND CEMENT TO FIVE (5) TO EIGHT (8) GALLONS OF WATER. CEMENT GROUT SHALL BE COMPOSED OF NOT MORE THAN TWO (2) PARTS OF SAND AND ONE (1) PART OF CEMENT (PER BAG OF CEMENT) TO FIVE (5) TO EIGHT (8) GALLONS OF WATER.
  - a.) NEAT CEMENT GROUT W/C = 0.53
  - b.) CEMENT BENTONITE GROUT (5% BY WEIGHT OF CEMENT)
2. UPON SATISFACTORY COMPLETION OF A BORING, THE MEASUREMENT OF THE ZERO HOUR AND 2-HOUR GROUNDWATER LEVEL AS WELL AS THE BOTTOM DEPTH OF HOLE AT EACH READING, AND THE ACCEPTANCE THEREOF BY BCDOT, THE CONTRACTOR SHALL BE REQUIRED TO SEAL THE BORE HOLE. THE PURPOSES OF SEALING THE BORE HOLE ARE TO PREVENT POSSIBLE CONTAMINATION OF THE GROUNDWATER BY INFILTRATION FROM THE SURFACE AND TO CONFINE WATER WITHIN AN AQUIFER. SEALING MATERIAL SHALL BE PLACED IN SUCH A WAY THAT THE ENTIRE HOLE IS COMPLETELY FILLED WITHOUT VOIDS AND THAT THE SEALING MATERIALS IS IN CLOSE CONTACT WITH THE SIDES OF THE HOLE. IN CAVING GROUND, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AN OPEN HOLE UNTIL THE 24-HOUR WATER TABLE IS OBTAINED AND THE SEALING MATERIAL IS PLACED. THE METHOD PROPOSED BY THE CONTRACTOR TO INTRODUCE SEALING MATERIAL INTO THE HOLE WILL BE SUBJECT TO APPROVAL BY BCDOT BEFORE SEALING BEGINS. ALL APPLICABLE RULES AND REGULATIONS OF LOCAL, STATE, AND FEDERAL AGENCIES PERTAINING TO PREVENTING CONTAMINATION OF GROUNDWATER SHALL BE OBSERVED.
3. MEASUREMENT OF THIS ITEM WILL BE ON A LINEAR FOOT BASIS AND WILL BE THE ACTUAL DISTANCE FROM THE GROUND SURFACE TO THE LOWEST ELEVATION PENETRATED. PAYMENT FOR THIS ITEM WILL BE MADE AT THE CONTRACT UNIT PRICE PER LINEAR FOOT FOR "SEALING BORE HOLES", WHICH PRICE SHALL INCLUDE ALL REMOVAL AND DISPOSAL OF EXCESS SOIL MATERIALS, LABOR, TOOLS, EQUIPMENT, AND ALL INCIDENTALS NECESSARY TO COMPLETE THIS ITEM AS SPECIFIED HEREIN AND/OR DIRECTED BY BCDOT.
4. BORING FILL TO BE BENTONITE SLURRY TO BE BELOW AGGREGATE BASE. MATERIAL ABOVE THE AGGREGATE BASE TO BE A DOT APPROVED MATERIAL TO FILL DEPTH OF EXISTING PAVEMENT; FOR RIGID PAVEMENTS - CONCRETE & FOR FLEXIBLE PAVEMENT/COMPOSITE PAVEMENT - AQUAPHALT.

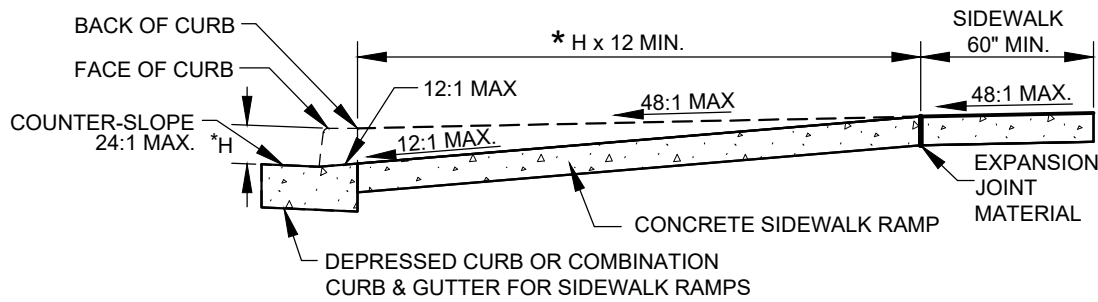
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	DIVISION CHIEF, TRANSPORTATION ENGINEERING AND CONSTRUCTION  DIRECTOR, DEPARTMENT OF TRANSPORTATION	<b>SEALING SOIL BORING</b> <b>&amp; UTILITY TEST HOLES</b>	06/2023		
			<b>STANDARD NO.</b> <b>BC 576.23</b>		
			SCALE: NONE	SHEET 1 OF 1	

NOTE: USE ONE 5' SIDEWALK PANEL AS TRANSITION TO MEET EXISTING SIDEWALK.



\* - H = HEIGHT OF CURB  
ALL MEASUREMENTS IN INCHES

### ELEVATION



### SECTION A-A

### NOTES

1. TO BE USED ON WIDE SIDEWALKS OR SIDEWALKS WITH SIGNIFICANT SEPARATION FROM THE ROADWAY WHERE THE GEOMETRY SPECIFIED IN THE DETAILS ABOVE CAN BE SATISFIED. MAY BE MODIFIED TO PARTICULAR LOCATION.
2. WHERE 60" SIDEWALK CAN NOT BE PROVIDED, A DESIGN WAIVER MUST BE REQUESTED.
3. NO TRAVERSABLE SLOPE ON THE RAMP OR SIDEWALK SHALL EXCEED 12:1 IN THE DIRECTION OF PEDESTRIAN TRAVEL, OR 48:1 PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN TRAVEL.
4. EXPANSION JOINT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH STD. BC 655.01.
5. SIDEWALK RAMPS TO BE SHOWN ON PLANS SYMBOLICALLY AND REFERENCED WITH THE CENTER OF THE RAMP ALIGNED TO A STATION ON THE CONSTRUCTION CENTERLINE. SEPARATE DETAILS SHALL BE SHOWN WHERE PROPOSED RAMP VARIES FROM STANDARD CASES.



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DIRECTOR, DEPARTMENT OF TRANSPORTATION

CITY OF BALTIMORE  
DEPARTMENT OF TRANSPORTATION  
TRANSPORTATION ENGINEERING AND CONSTRUCTION

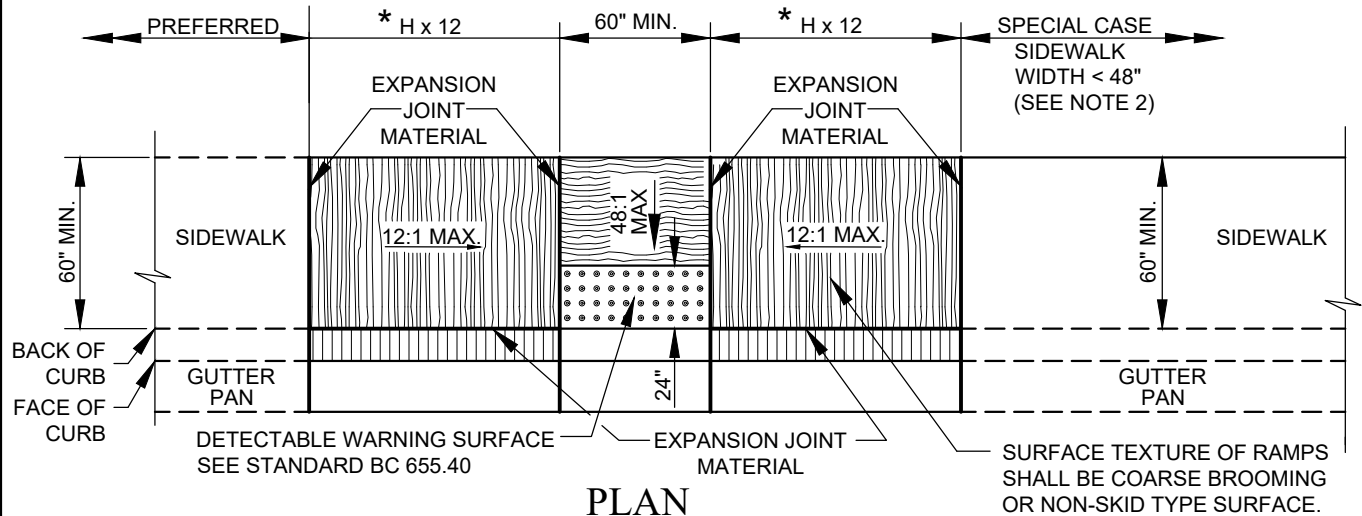
**SIDEWALK RAMPS  
PERPENDICULAR**

ISSUED	REVISED	REVISED
8 / 2010	10 / 2013	03 / 2023

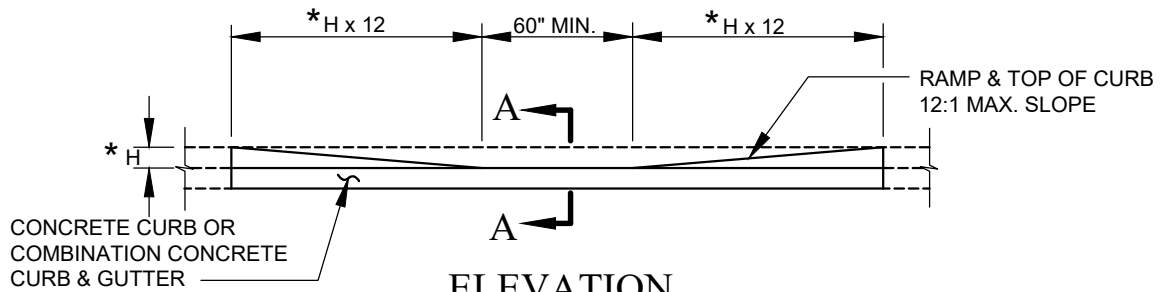
STANDARD NO.  
BC 655.11

SCALE : NONE SHEET 1 OF 1

NOTE: USE ONE 5' SIDEWALK PANEL AS TRANSITION TO MEET EXISTING SIDEWALK

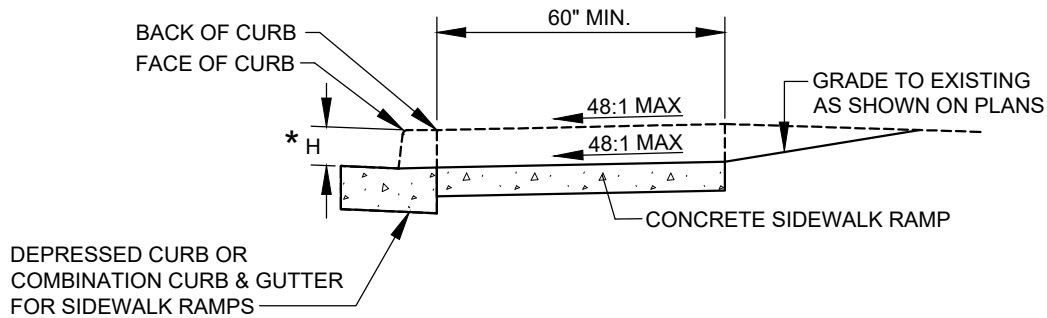


**PLAN**



**ELEVATION**

\* - H = HEIGHT OF CURB  
ALL MEASUREMENTS IN INCHES



**SECTION A-A**

**NOTES**

1. TO BE USED WHERE SIDEWALK IS ADJACENT TO THE CURB. THIS STD. MAY BE MODIFIED TO SUIT A PARTICULAR LOCATION.
2. WHERE 60" SIDEWALK CAN NOT BE PROVIDED, A DESIGN WAIVER MUST BE REQUESTED.
3. NO TRAVERSABLE SLOPE ON THE RAMP OR SIDEWALK SHALL EXCEED 12:1 IN THE DIRECTION OF PEDESTRIAN TRAVEL, OR 48:1 PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN TRAVEL. THE CROSS-SLOPE OF LANDING AREA CANNOT EXCEED GARDE OF ROADWAY.
4. EXPANSION JOINT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH STD. BC 655.01.
5. SIDEWALK RAMPS TO BE SHOWN ON PLANS SYMBOLICALLY AND REFERENCED WITH THE CENTER OF THE RAMP ALIGNED TO A STATION ON THE CONSTRUCTION CENTERLINE. SEPARATE DETAILS SHALL BE SHOWN WHERE PROPOSED RAMP VARIES FROM STANDARD CASES.



APPROVED :  
  
DIVISION CHIEF, TRANSPORTATION ENGINEERING AND CONSTRUCTION  
  
DIRECTOR, DEPARTMENT OF TRANSPORTATION

**CITY OF BALTIMORE  
DEPARTMENT OF TRANSPORTATION  
TRANSPORTATION ENGINEERING AND  
CONSTRUCTION**

**SIDEWALK RAMPS  
PARALLEL**

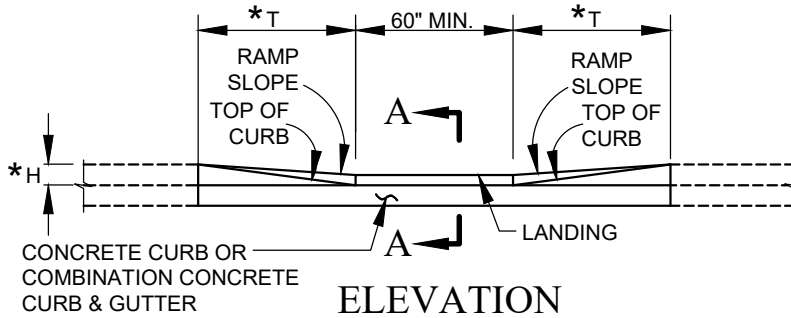
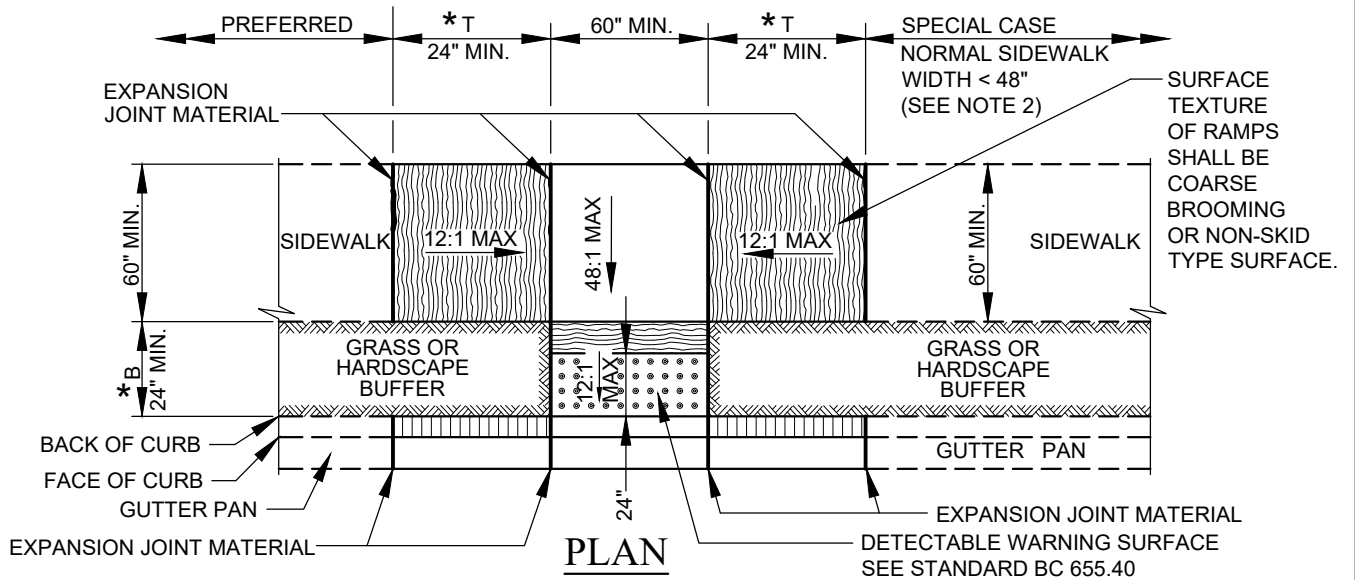
ISSUED	REVISED	REVISED
8 / 2010	10 / 2013	03 / 2023

**STANDARD NO.  
BC 655.12**

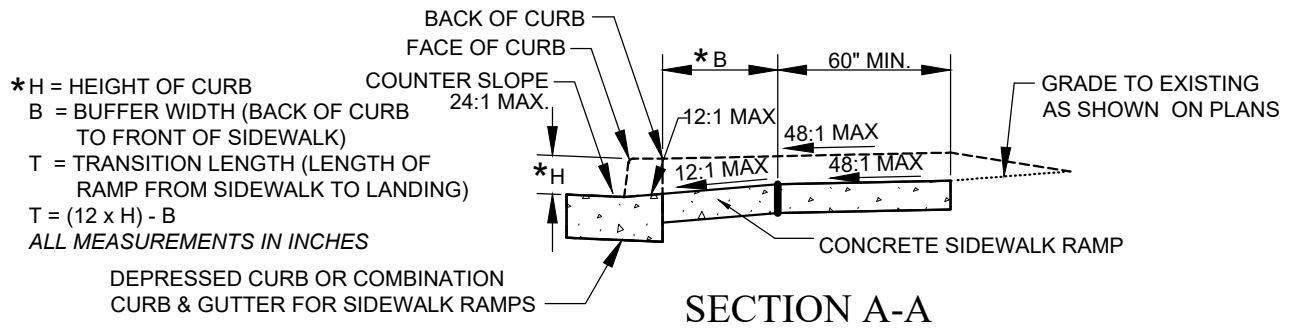
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**NOTE:**

-USE ONE 5' SIDEWALK PANEL AS TRANSITION IF NEEDED TO MEET EXISTING SIDEWALK(15' MAX. REBUILD).



**NOTE:**  
 -FOR BUFFER WIDTHS LESS THAN 24", WIDEN SIDEWALK TO BACK OF CURB AS SHOWN FOR THE SPECIAL CASE, THEN BUILD PARALLEL RAMP USING STANDARD BC-655.12.  
 -IF THE BUFFER AREA IS GREATER THAN OR EQUAL TO 4' THE LANDING AREA MUST BE 2% X 2%. IF THE BUFFER AREA IS LESS THAN 4' THE LANDING AREA CROSS-SLOPE CANNOT EXCEED THE GRADE OF THE ROAD.



\*H = HEIGHT OF CURB  
 B = BUFFER WIDTH (BACK OF CURB TO FRONT OF SIDEWALK)  
 T = TRANSITION LENGTH (LENGTH OF RAMP FROM SIDEWALK TO LANDING)  
 $T = (12 \times H) - B$   
 ALL MEASUREMENTS IN INCHES

**NOTES**

1. TO BE USED WHERE AT LEAST 7'-0" EXISTS BETWEEN THE BACK OF CURB AND THE BACK OF SIDEWALK. THIS STANDARD MAY BE MODIFIED TO SUIT A PARTICULAR LOCATION.
2. WHERE 60" SIDEWALK CAN NOT BE PROVIDED, A DESIGN WAIVER MUST BE REQUESTED.
3. NO TRAVERSABLE SLOPE ON THE RAMP OR SIDEWALK SHALL EXCEED 12:1 IN THE DIRECTION OF PEDESTRIAN TRAVEL, OR 48:1 PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN TRAVEL.
4. EXPANSION JOINT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH STD. BC 655.01.
5. SIDEWALK RAMPS TO BE SHOWN ON PLANS SYMBOLICALLY AND REFERENCED WITH THE CENTER OF THE RAMP ALIGNED TO A STATION ON THE CONSTRUCTION CENTERLINE. SEPARATE DETAILS SHALL BE SHOWN WHERE PROPOSED RAMP VARIES FROM STANDARD CASES.



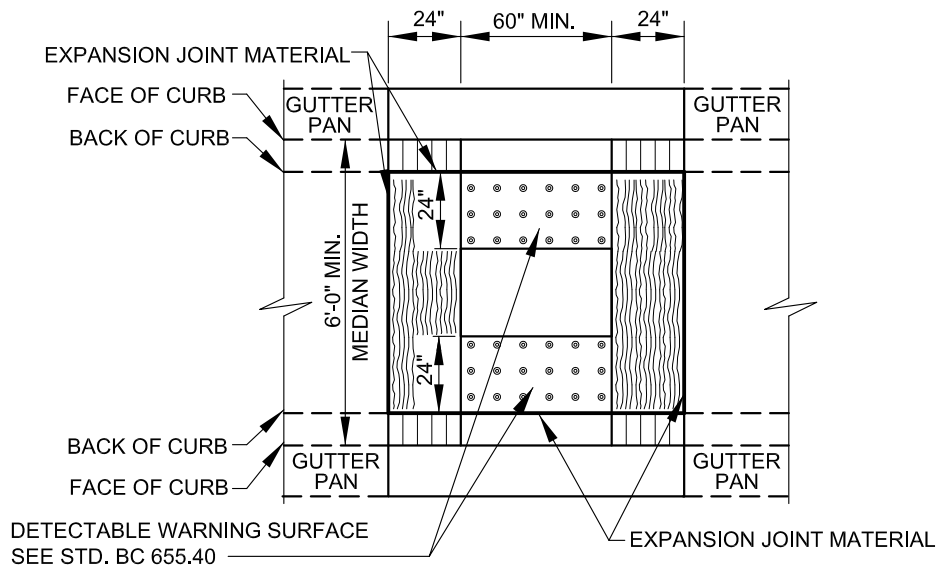
APPROVED:  
 \_\_\_\_\_  
 DIVISION CHIEF, TRANSPORTATION ENGINEERING AND CONSTRUCTION  
 \_\_\_\_\_  
 DIRECTOR, DEPARTMENT OF TRANSPORTATION

**CITY OF BALTIMORE**  
**DEPARTMENT OF TRANSPORTATION**  
**TRANSPORTATION ENGINEERING AND CONSTRUCTION**

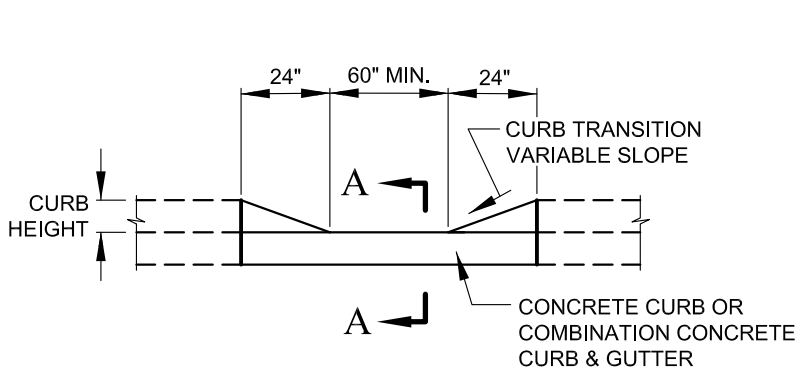
**SIDEWALK RAMPS COMBINATION**

ISSUED	REVISED	REVISED
8 / 2010	10 / 2013	03 / 2023
<b>STANDARD NO.</b>		
<b>BC 655.13</b>		
SCALE : NONE	SHEET 1 OF 1	

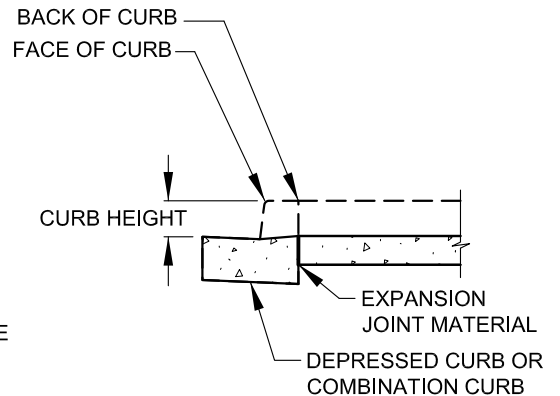




**PLAN**



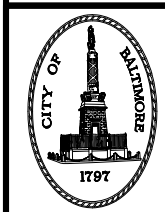
**ELEVATION**



**SECTION A-A**

**NOTES**

1. TO BE USED WHERE A STREET-LEVEL PEDESTRIAN CROSSING IS REQUIRED THROUGH RAISED MEDIANS OR RAISED ISLANDS AND THERE IS INSUFFICIENT WIDTH TO PROVIDE A RAMPED MEDIAN OR ISLAND OPENING (STD. BC 655.22).
2. WHERE 60" CUT THROUGHS CANNOT BE PROVIDED A DESIGN WAIVER MUST BE REQUESTED.
3. EXPANSION JOINT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD BC 655.01.
4. CUT-THROUGH MEDIAN AND ISLAND OPENINGS TO BE SHOWN ON PLANS SYMBOLICALLY AND REFERENCED WITH THE CENTER OF THE OPENING ALIGNED TO A STATION ON THE CONSTRUCTION CENTERLINE. SEPARATE DETAILS SHALL BE SHOWN WHERE PROPOSED OPENING VARIES FROM STANDARD METHODS.

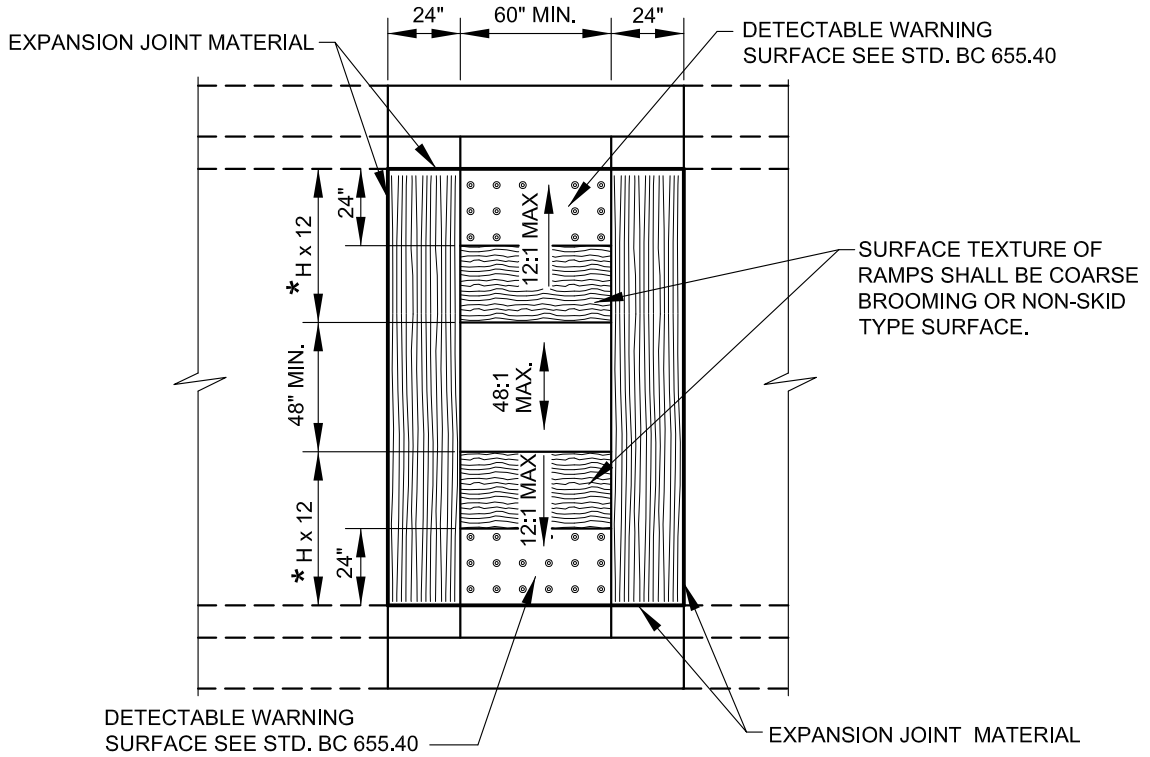


APPROVED :  
  
 \_\_\_\_\_  
 DIVISION CHIEF, TRANSPORTATION ENGINEERING  
 AND CONSTRUCTION  
  
 \_\_\_\_\_  
 DIRECTOR, DEPARTMENT OF TRANSPORTATION

**CITY OF BALTIMORE**  
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**TRANSPORTATION ENGINEERING AND**  
**CONSTRUCTION**

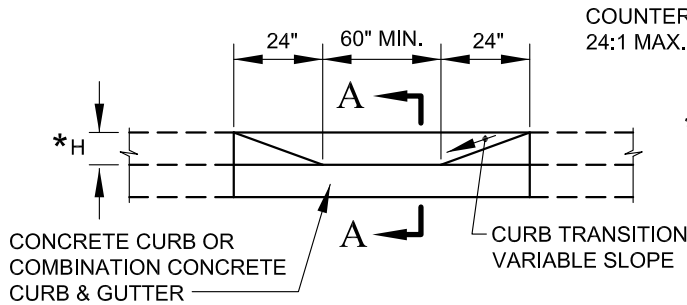
**CUT-THROUGH**  
**MEDIAN AND ISLAND OPENINGS**

ISSUED	REVISED	REVISED
8 / 2010	10 / 2013	03 / 2023
<b>STANDARD NO.</b> <b>BC 655.21</b>		
SCALE : NONE	SHEET 1 OF 1	

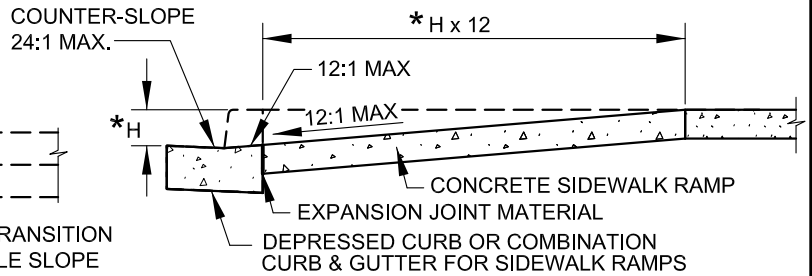


\* H = HEIGHT OF CURB  
ALL MEASUREMENTS IN INCHES

**PLAN**



**ELEVATION**



**SECTION A-A**

**NOTES**

1. TO BE USED WHERE A PEDESTRIAN ACCESS ROUTE CROSSES RAISED MEDIANS OR RAISED ISLANDS AND THERE IS SUFFICIENT WIDTH TO SATISFY THE GEOMETRY OUTLINED IN THIS STANDARD.
2. EXPANSION JOINT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD BC 655.01.
3. RAMPED MEDIAN AND ISLAND OPENINGS TO BE SHOWN ON PLANS SYMBOLICALLY AND REFERENCED WITH THE CENTER OF THE OPENING ALIGNED TO A STATION ON THE CONSTRUCTION CENTERLINE. SEPARATE DETAILS SHALL BE SHOWN WHERE PROPOSED OPENING VARIES FROM STANDARD METHODS.
4. WHERE 60" OPENINGS CANNOT BE USED A DESIGN WAIVER MUST BE REQUESTED.



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DIRECTOR, DEPARTMENT OF TRANSPORTATION

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TRANSPORTATION ENGINEERING AND  
CONSTRUCTION**

**RAMPED  
MEDIAN AND ISLAND OPENINGS**

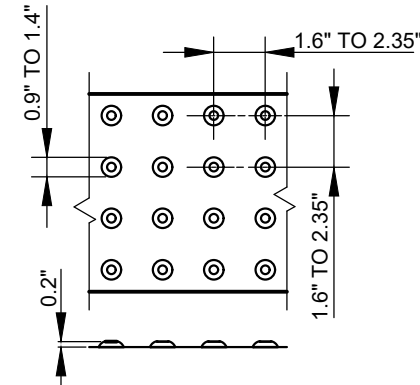
ISSUED	REVISED	REVISED
8 / 2010	10 / 2013	03 / 2023

**STANDARD NO.  
BC 655.22**

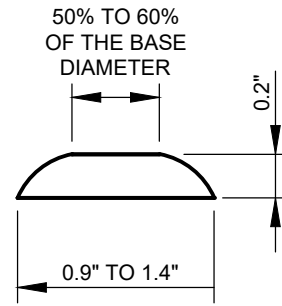
SCALE : NONE SHEET 1 OF 1

# DETAILS FOR DETECTABLE WARNING SURFACE

SEE PLACEMENT GUIDELINES BELOW

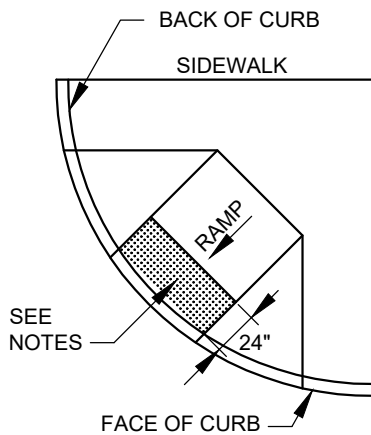


**DOMES SPACING**

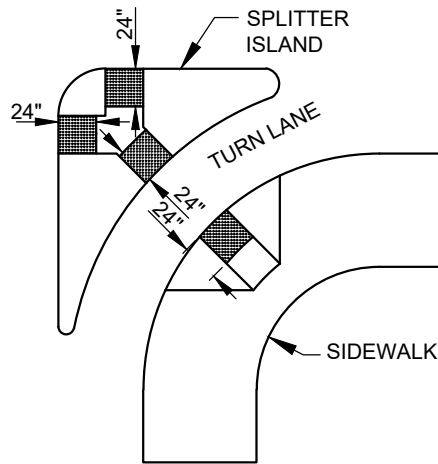


**DOMES SECTION**

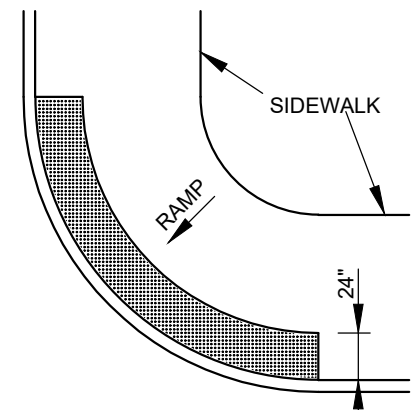
## PLACEMENT GUIDELINES



**SHARED CURB RAMP**



**REFUGE ISLAND**



**BLENDED CURB**

WHERE ISLANDS OR MEDIANS ARE LESS THAN 6 FEET WIDE, THE DETECTABLE WARNING SURFACE SHOULD EXTEND ACROSS THE FULL LENGTH OF THE CUT THROUGH THE ISLAND OR MEDIAN

## NOTES

1. THE DETECTABLE WARNING SURFACE SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 TO 8 INCHES FROM THE FACE OF CURB.
2. FOR SKEWED APPLICATIONS DETECTABLE WARNING SURFACE SHALL BE PLACED SO THAT THE DOMES CLOSEST TO THE BACK OF CURB ARE NO LESS THAN 0.5" AND NO MORE THAN 3.0" FROM THE BACK OF CURB. TRUNCATED DOME SURFACES SHALL BE FABRICATED TO PROVIDE FULL DOMES ONLY.
3. DETECTABLE WARNING SURFACES ARE REQUIRED AT STREET CROSSING ALLEY & SIGNALIZED INTERSECTIONS.



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DIVISION CHIEF, TRANSPORTATION ENGINEERING AND CONSTRUCTION

DIRECTOR, DEPARTMENT OF TRANSPORTATION

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CONSTRUCTION**

**DETECTABLE WARNING SURFACES**

ISSUED	REVISED	REVISED
8 / 2010	03 / 2023	

**STANDARD NO.  
BC 655.40**

SCALE : NONE

SHEET 1 OF 1

## STEEL SCHEDULE

MARK	SIZE	LENGTH	NO. OF PIECES
A	9	13'-0"	8
B	6	5'-9"	4
C	6	5'-2"	4
D	6	4'-10"	6
E	6	7'-0"	14
F	9	7'-0"	6
G	6	2'-9"	4
H	6	2'-2"	4
I	6	1'-10"	6
J	5	4'-8"	8
K	6	13'-0"	12
L	6	5'-6"	8
M	6	7'-0"	12
N	7	7'-0"	12
O	6	2'-6"	8
P	5	6'-0"	120
Q	6	7'-0"	28
Q	6	7'-0"	32
Q	6	7'-0"	36
R *	5	7'-4"	48
R **	5	8'-4"	48
R ***	5	9'-4"	144
S *	6	13'-0"	28
S **	6	13'-0"	32
S ***	6	13'-0"	72
T	5	3'-2"	8

- \* 7 FT HEADROOM
- \*\* 8 FT HEADROOM
- \*\*\* 9 FT HEADROOM

**NOTES:**

THIS MANHOLE WAS DESIGNED IN ACCORDANCE WITH A.A.S.H.T.O. STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DATED 1996, INCLUDING ALL INTERIM SPECIFICATIONS THROUGH 2002. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO BALTIMORE CITY STANDARDS.

LOADING: HS25 TRUCK LOADING

**MATERIALS**

**CONCRETE:**

4,000 PSI COMPRESSIVE STRENGTH AFTER 28 DAYS.

CONCRETE DESIGN: SERVICE LOAD DESIGN METHOD -  $f' = 1,600$  PSI.

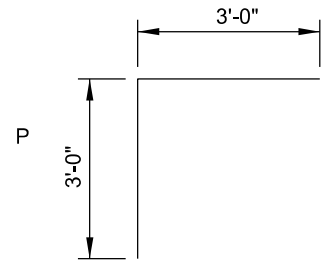
**STEEL**

60,000 PSI YIELD STRENGTH - GRADE 60

REINFORCING STEEL DESIGN -  $f = 24,000$  PSI

REINFORCING STEEL IN THE ROOF SLAB SHALL BE EPOXY COATED

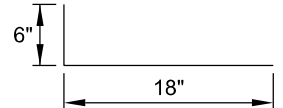
A THRU N



BAR SUPPORTS

(A) 1 1/2 - BC - A

(B) # 3 REINFORCING BARS  
INSTALL AT RANDOM  
LOCATIONS, AS NEEDED.



(C) PULLING IRONS SHALL BE INSTALLED AT THE JUNCTION OF THE FLOOR AND WALL AND WALL AND ROOF. LOCATION OF PULLING IRONS TO BE CENTERED ON END WALLS AND OPPOSITE DUCT BANKS, OR KNOCK - OUTS ON SIDE WALLS.



APPROVED:

Ola Olamide

CHIEF, CONDUIT DIVISION

DIRECTOR, DEPARTMENT OF TRANSPORTATION

**CITY OF BALTIMORE  
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CONDUIT DIVISION**

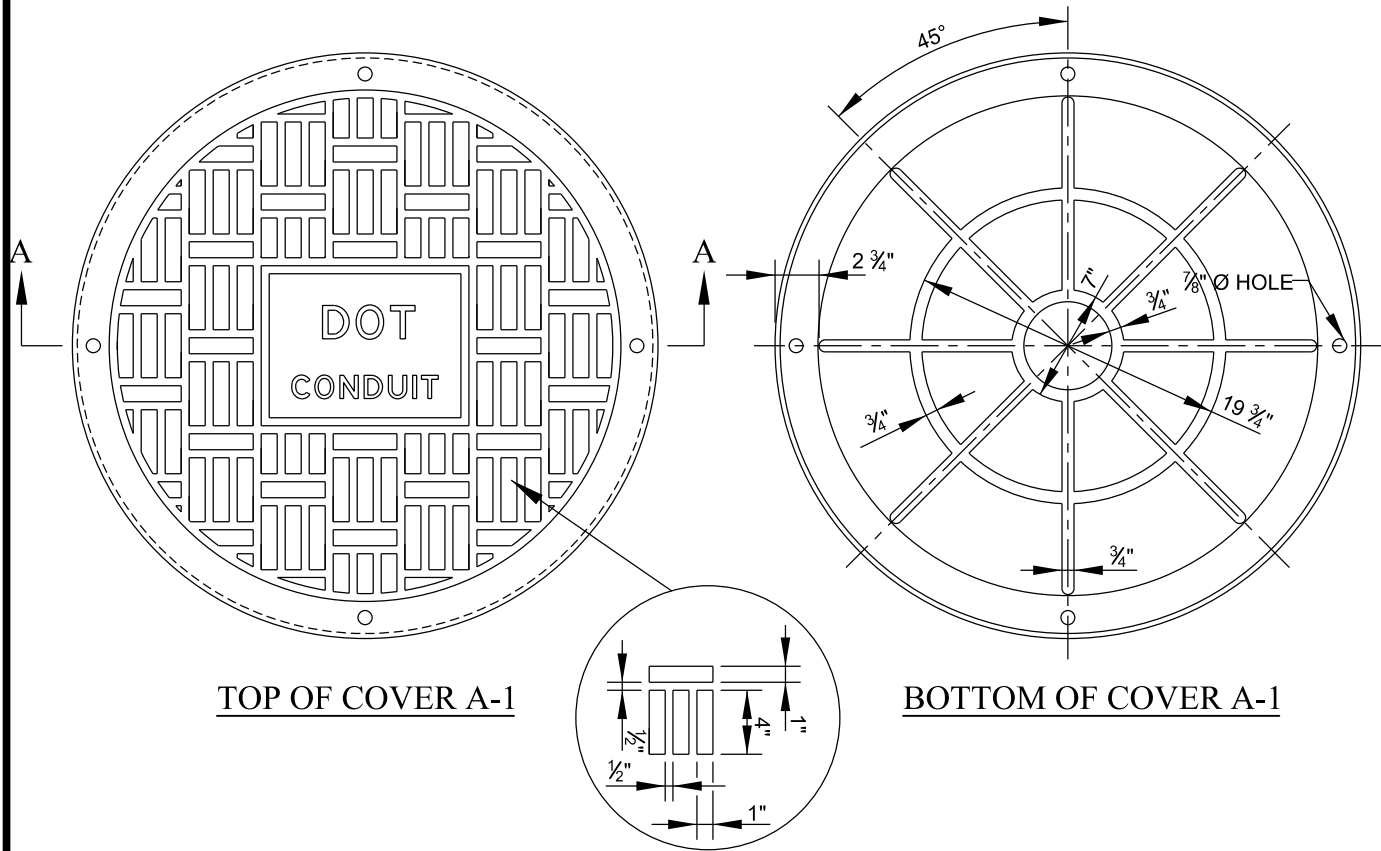
**STEEL DETAILS FOR  
6 FT x 12 FT LINE MANHOLE**

ISSUED	REVISED	REVISED
7 / 2023		

**STANDARD NO.  
BC 825.01**

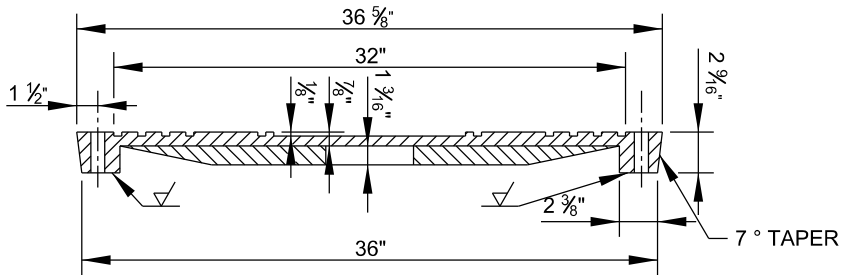
SCALE : NONE

SHEET 1 OF 1



TOP OF COVER A-1

BOTTOM OF COVER A-1



SECTION A-A

GRAY IRON A48-No. 30B

NOTE:

FOR TRANSIT AND TRAFFIC MANHOLE  
COVERS CHANGE THE LETTERS DOT TO DTT

NOTE:

AVERAGE WEIGHT OF MANHOLE  
COVER - APPROX. 323 LBS.



APPROVED:

*Ola Olamide*  
CHIEF, CONDUIT DIVISION

DIRECTOR, DEPARTMENT OF TRANSPORTATION

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DEPARTMENT OF TRANSPORTATION  
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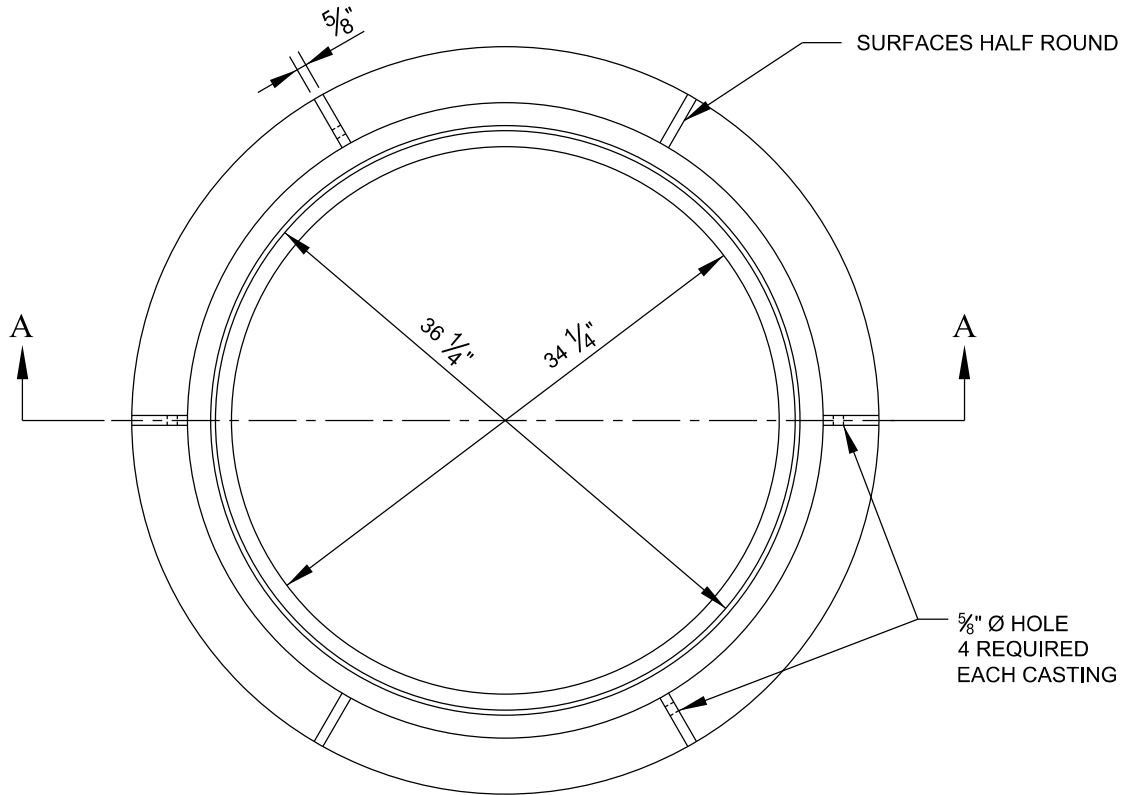
**MANHOLE - CONDUIT  
STANDARD 36" COVER**

ISSUED	REVISED	REVISED
7 / 2023		

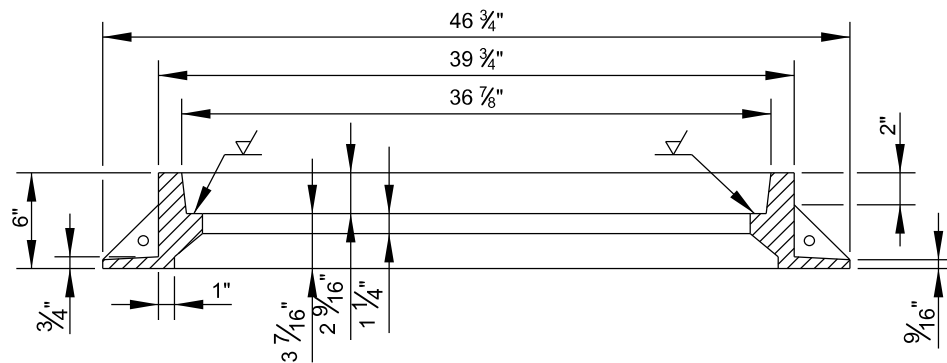
**STANDARD NO.  
BC 825.12-01**

SCALE : NONE

SHEET 1 OF 1



PLAN OF CASTING A-2



SECTION A-A

AVERAGE WEIGHT OF CASTING A-2 - 350 LBS.



APPROVED :

*Ola Olamide*  
CHIEF, CONDUIT DIVISION

DIRECTOR, DEPARTMENT OF TRANSPORTATION

CITY OF BALTIMORE  
DEPARTMENT OF TRANSPORTATION  
CONDUIT DIVISION

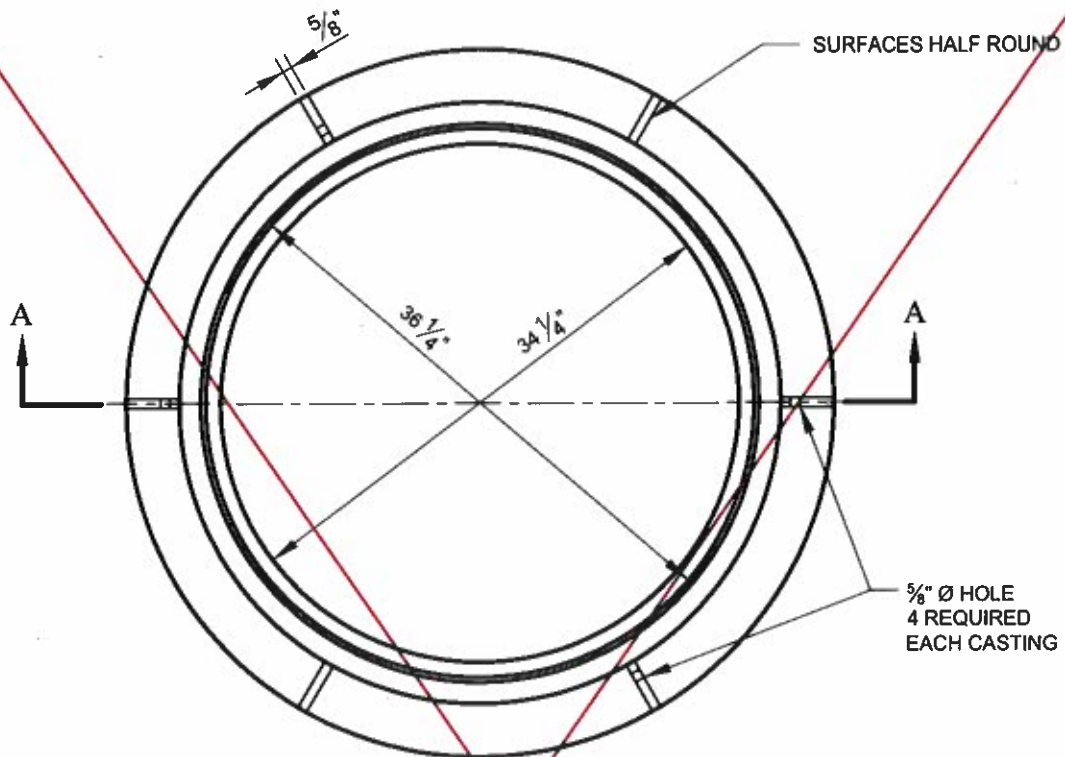
**MANHOLE - CONDUIT  
STANDARD 36" FRAME**

ISSUED	REVISED	REVISED
7 / 2023		

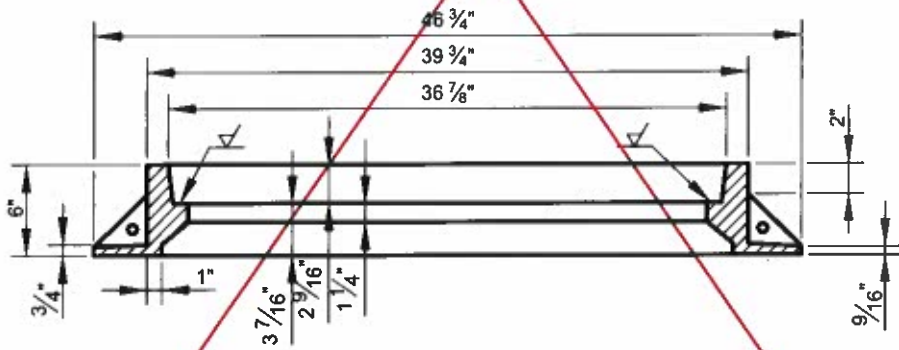
STANDARD NO.  
BC 825.12-02

SCALE : NONE

SHEET 1 OF 1



~~PLAN OF CASTING A-2~~  
~~DELETE THIS DETAIL~~



**SECTION A-A**

AVERAGE WEIGHT OF CASTING A-2 - 350 LBS.



APPROVED:  
*Rashid Z. Baker*  
CHIEF, CONDUIT DIVISION  
*Khaliq Zaid*  
DIRECTOR, DEPARTMENT OF TRANSPORTATION

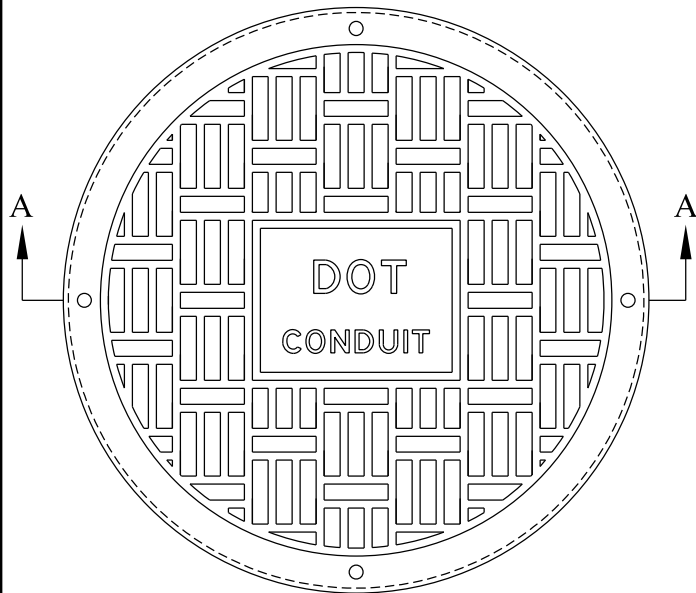
CITY OF BALTIMORE  
DEPARTMENT OF TRANSPORTATION  
CONDUIT DIVISION

**MANHOLE - CONDUIT  
STANDARD FRAME**

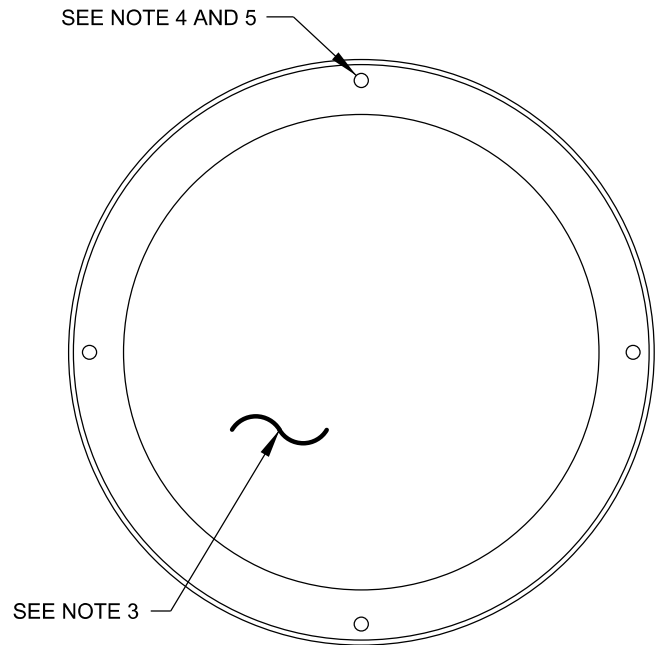
ISSUED	REVISED	REVISED
8 / 2010		

STANDARD NO.  
BC 825.13

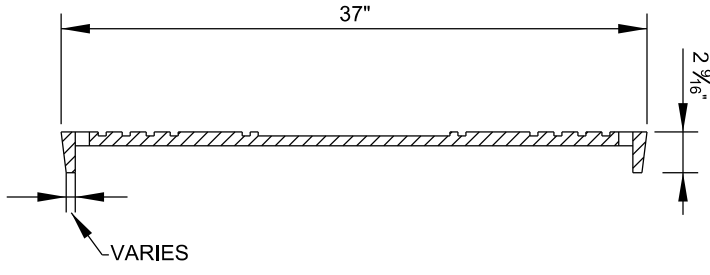
SCALE : NONE      SHEET 1 OF 1



TOP OF COVER



BOTTOM OF COVER



SECTION A-A

NOTES:

1. MANHOLE COVER TO BE TRAFFIC RATED AASHTO M306.
2. MANHOLE SHALL BE GRAY IRON ASTM A48- CLASS 308 MIN.
3. COVER BOTTOM SHALL BE EITHER:
  - A. INTERNAL WEBBING/RIBBING. OR
  - B. FLAT PLATE BOTTOM WITH A MINIMUM OF 3 CLIPS TO ALLOW FOR STACKING/STORAGE OF COVERS
4. (4) PICK HOLES. HOLES CAN BE LOCATED IN THE EXTERIOR FLANGE OR WITHIN THE FLAT PLATE BOTTOM.
5. PICK HOLE DIAMETER SHALL BE 7/8" OR 1".
6. PROVIDE MATCHING CHAMFER TAPER BETWEEN CONDUIT MANHOLE FRAME AND COVER.
7. FOR TRANSIT AND TRAFFIC MANHOLES COVERS CHANGE THE LETTERS DOT TO DTT.



APPROVED :  
*Ola Olamide*  
 CHIEF, CONDUIT DIVISION  
 DIRECTOR, DEPARTMENT OF TRANSPORTATION

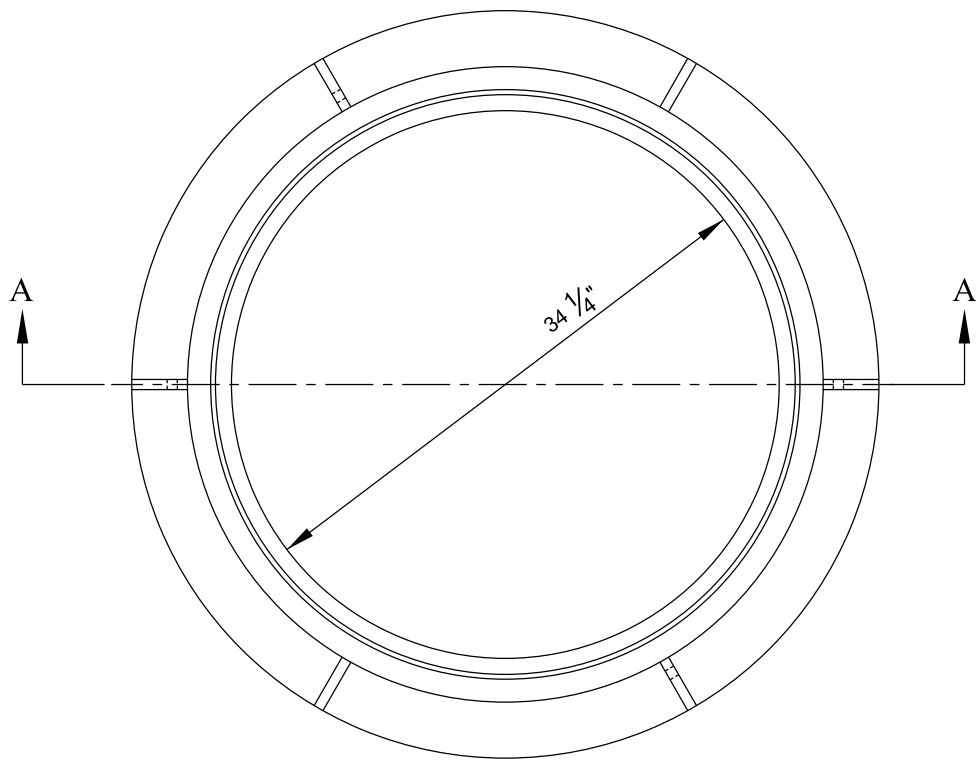
CITY OF BALTIMORE  
 DEPARTMENT OF TRANSPORTATION  
 CONDUIT DIVISION

**MANHOLE - CONDUIT  
 STANDARD 37" COVER**

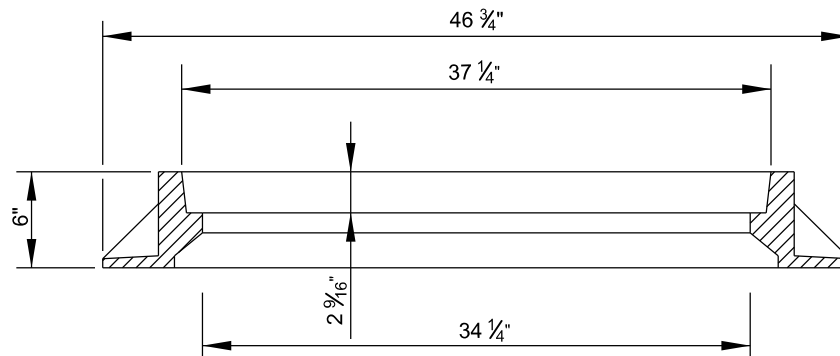
ISSUED	REVISED	REVISED
7 / 2023		

STANDARD NO.  
 BC 825.14-01  
 SCALE : NONE      SHEET 1 OF 1





PLAN OF CASTING FRAME



SECTION A-A

NOTES:

1. MANHOLE COVER TO BE TRAFFIC RATED AASHTO M306.
2. MANHOLE SHALL BE GRAY IRON ASTM A48 - CLASS 30B MIN.
3. PROVIDE CHUCKING AREA AND HANDLING HOLES AS PER THE MANUFACTURERS DETAIL.
4. PROVIDE 37 1/4" DIAMETER FOR FRAMES PAIRED WITH STANDARD 37" DOT CONDUIT MANHOLE COVER, BC 825.14-01.



APPROVED :

*Ola Olamide*  
CHIEF, CONDUIT DIVISION

DIRECTOR, DEPARTMENT OF TRANSPORTATION

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DEPARTMENT OF TRANSPORTATION  
CONDUIT DIVISION

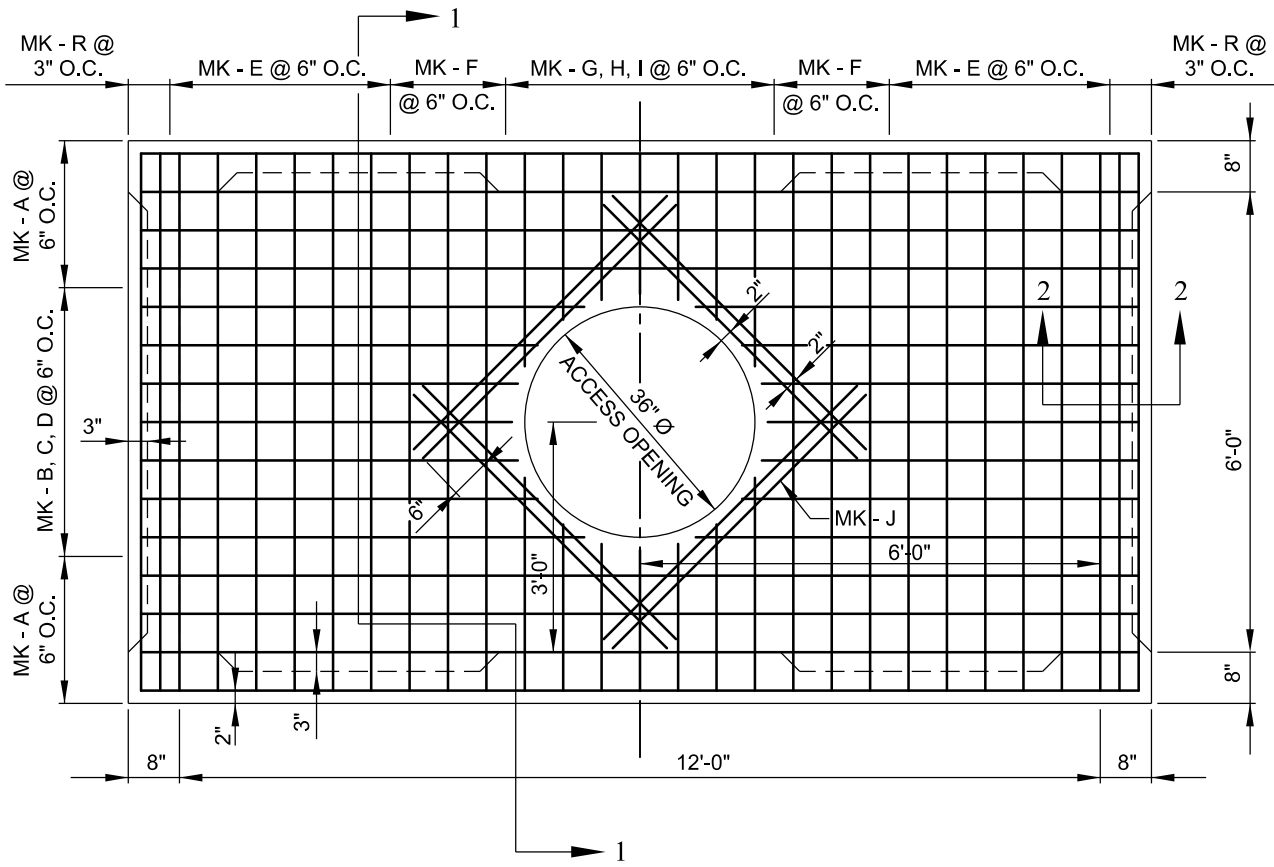
**MANHOLE - CONDUIT  
STANDARD 37" FRAME**

ISSUED	REVISED	REVISED
7 / 2023		

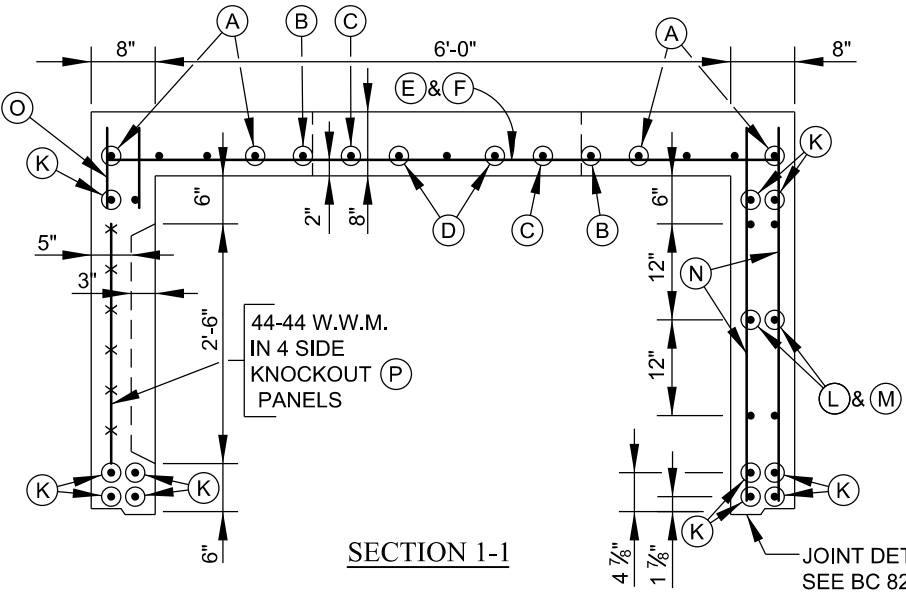
**STANDARD NO.  
BC 825.13-02**

SCALE : NONE

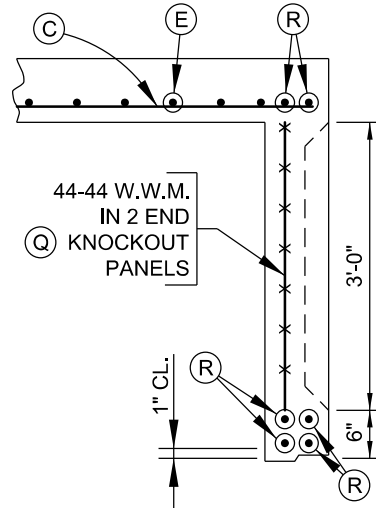
SHEET 1 OF 1



PLAN - TOP HALF



SECTION 1-1



SECTION 2-2

BOTTOM HALF (6' x 12' x 7' MANHOLE) SEE BC 826.01-2  
 BAR SCHEDULE (6' x 12' x 7' MANHOLE) SEE BC 826.04  
 KNOCKOUT DETAILS SEE BC 826.05  
 INSERTS FOR RECESSED EXTENSION SEE BC 826.06  
 ACCESSORIES FOR PRECAST MANHOLES SEE BC 826.08  
 STANDARD ACCESS STACK SEE BC 825.11  
 PRECAST RECESSED EXTENSION SEE BC 826.07-1

GENERAL NOTES

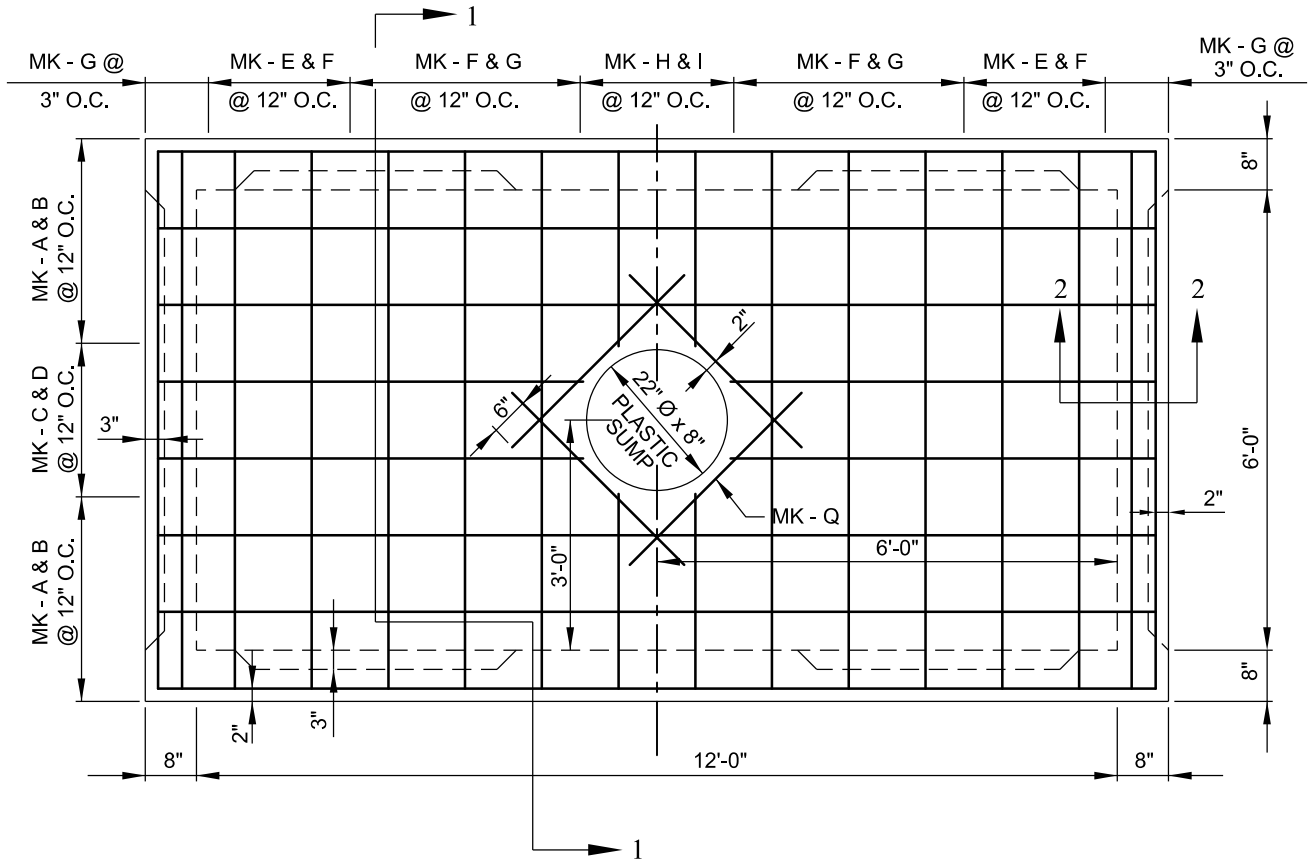
SPECIFICATIONS-----LATEST DEPARTMENT OF GENERAL SERVICES  
 CONCRETE-----f'c = 5,000 PSI - MIX AS APPROVED BY ENGR.  
 REINFORCING-----ASTM A615, GRADE 60  
 WELDED WIRE MESH---ASTM A185  
 LOADING-----HS 25 TRUCK LOADING



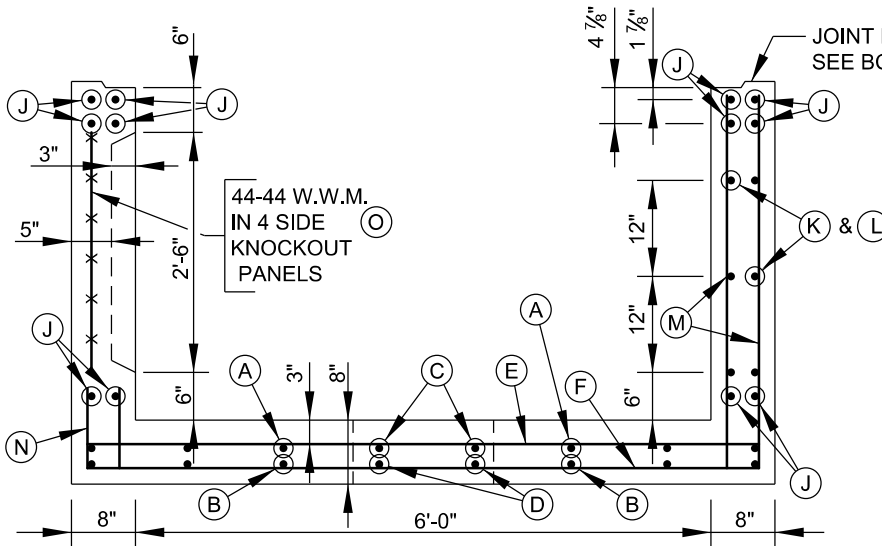
APPROVED:  
*Ola Olamide*  
 CHIEF, CONDUIT DIVISION  
 DIRECTOR, DEPARTMENT OF TRANSPORTATION

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 DEPARTMENT OF TRANSPORTATION  
 CONDUIT DIVISION  
**PRECAST LINE MANHOLE  
 6' x 12' x 7' HEADROOM  
 TOP HALF**

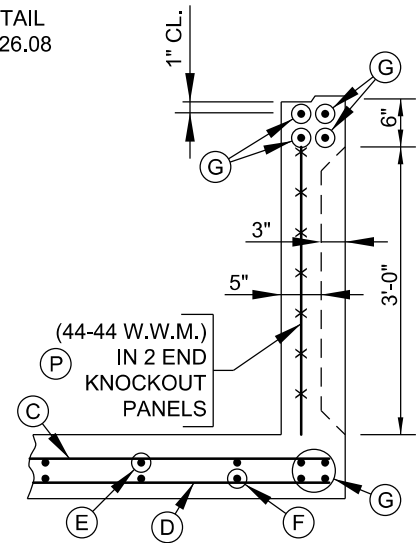
ISSUED	REVISED	REVISED
7 / 2023		
STANDARD NO. BC 826.01-1		
SCALE: NONE	SHEET 1 OF 2	



PLAN - BOTTOM HALF



SECTION 1-1



SECTION 2-2

TOP HALF (6' x 12' x 7' MANHOLE) SEE BC 826.01-1  
 BAR SCHEDULE (6' x 12' x 7' MANHOLE) SEE BC 826.04  
 KNOCKOUT DETAILS SEE BC 826.05  
 INSERTS FOR RECESSED EXTENSION SEE BC 826.06  
 ACCESSORIES FOR PRECAST MANHOLES SEE BC 826.08  
 STANDARD ACCESS STACK SEE BC 825.11  
 PRECAST RECESSED EXTENSION SEE BC 826.07-7

GENERAL NOTES

SPECIFICATIONS-----LATEST DEPARTMENT OF GENERAL SERVICES  
 CONCRETE -----  $f'_c = 5,000$  PSI - MIX AS APPROVED BY ENGR.  
 REINFORCING ----- ASTM A615, GRADE 60  
 WELDED WIRE MESH--- ASTM A185  
 LOADING ----- HS 25 TRUCK LOADING

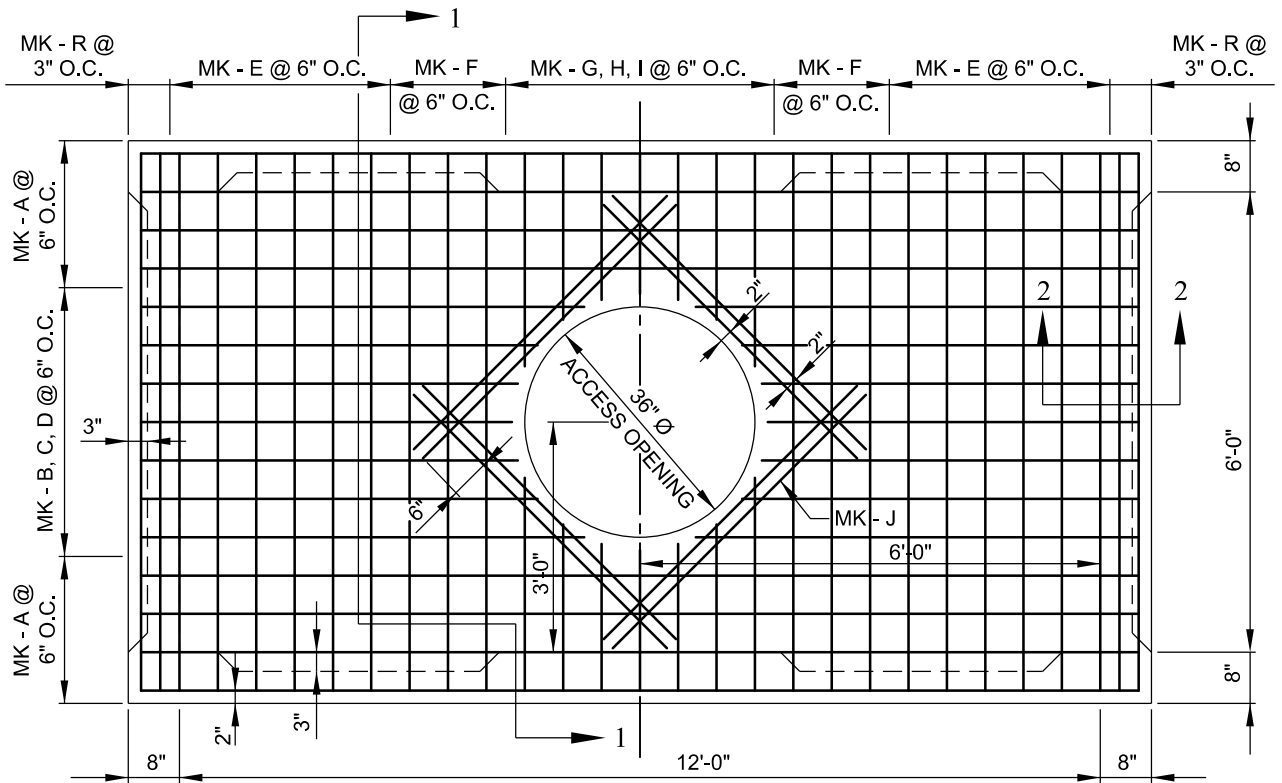


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*Ola Olamide*  
 CHIEF, CONDUIT DIVISION  
 DIRECTOR, DEPARTMENT OF TRANSPORTATION

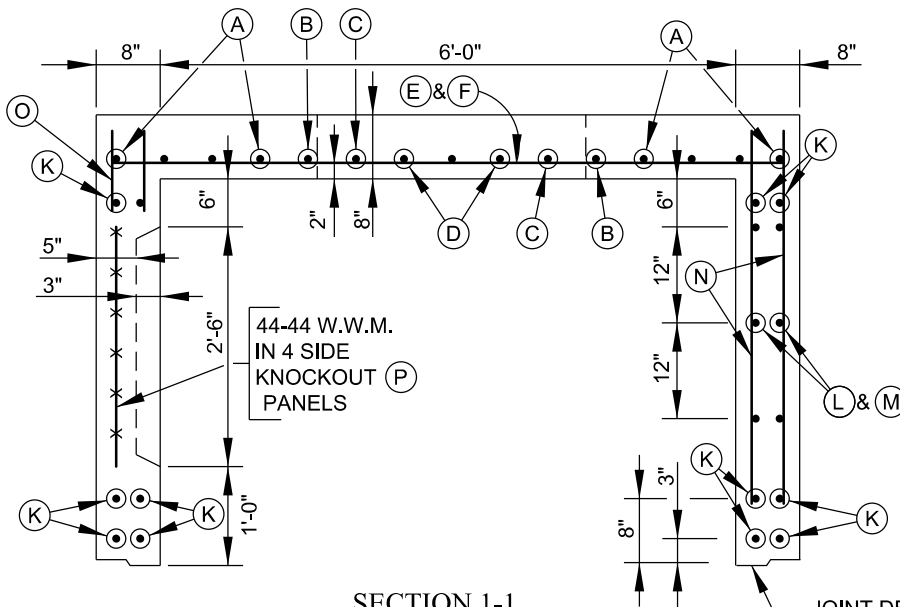
CITY OF BALTIMORE  
 DEPARTMENT OF TRANSPORTATION  
 CONDUIT DIVISION

PRECAST LINE MANHOLE  
 6' x 12' x 7' HEADROOM  
 BOTTOM HALF

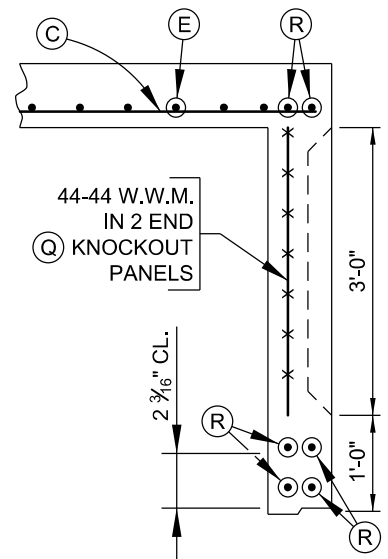
ISSUED	REVISED	REVISED
7 / 2023		
STANDARD NO. BC 826.01-2		
SCALE: NONE	SHEET 2 OF 2	



PLAN - TOP HALF



SECTION 1-1



SECTION 2-2

JOINT DETAIL  
SEE BC 826.08

BOTTOM HALF (6' x 12' x 8' MANHOLE) SEE BC 826.02-2  
 BAR SCHEDULE (6' x 12' x 8' MANHOLE) SEE BC 826.04  
 KNOCKOUT DETAILS SEE BC 826.05  
 INSERTS FOR RECESSED EXTENSION SEE BC 826.06  
 ACCESSORIES FOR PRECAST MANHOLES SEE BC 826.08  
 STANDARD ACCESS STACK SEE BC 825.11  
 PRECAST RECESSED EXTENSION SEE BC 826.07-1

GENERAL NOTES

SPECIFICATIONS ----- LATEST DEPARTMENT OF GENERAL SERVICES  
 CONCRETE -----  $f'_c = 5000$  PSI - MIX AS APPROVED BY ENGR.  
 REINFORCING ----- ASTM A615, GRADE 60  
 WELDED WIRE MESH -- ASTM A185  
 LOADING ----- HS 25 TRUCK LOADING



APPROVED:

*Ola Olamide*

CHIEF, CONDUIT DIVISION

DIRECTOR, DEPARTMENT OF TRANSPORTATION

CITY OF BALTIMORE  
 DEPARTMENT OF TRANSPORTATION  
 CONDUIT DIVISION

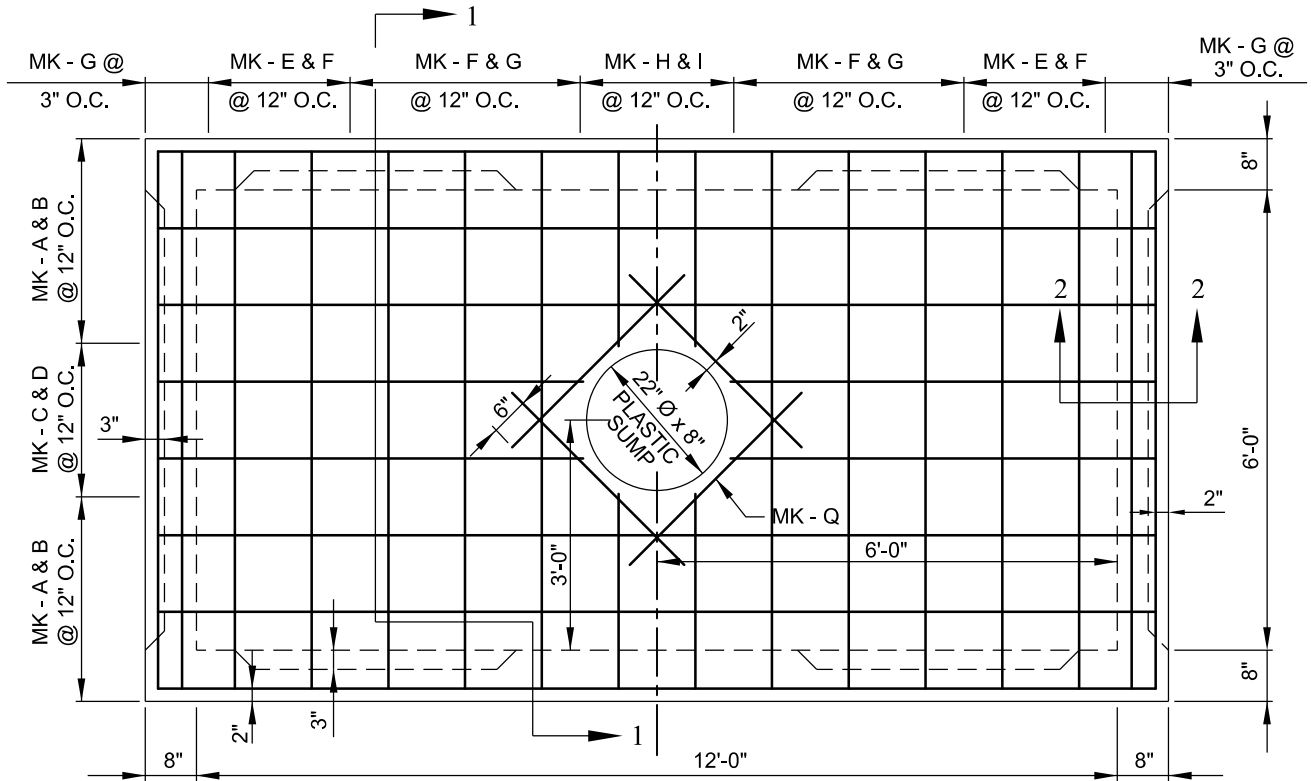
PRECAST LINE MANHOLE  
 6' X 12' X 8' HEADROOM  
 TOP HALF

ISSUED	REVISED	REVISED
7 / 2023		

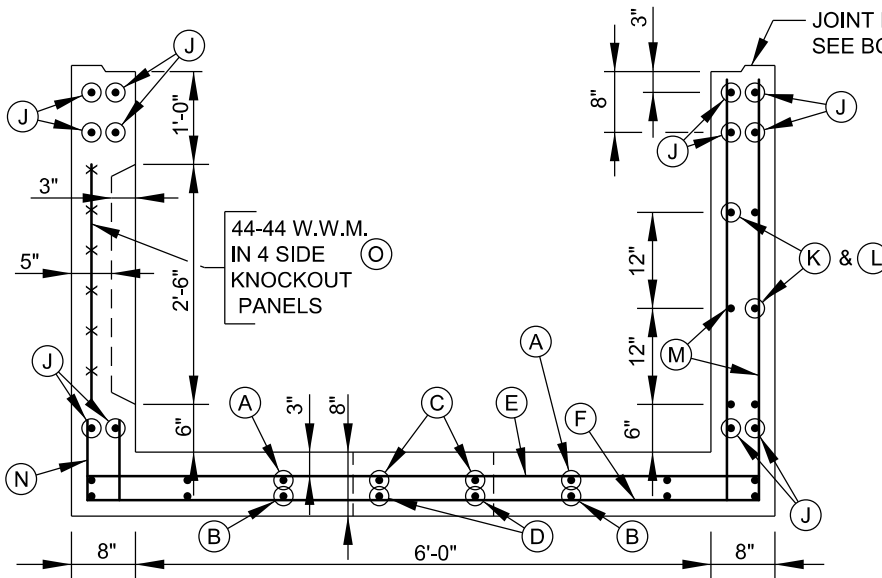
STANDARD NO.  
 BC 826-02-1

SCALE: NONE

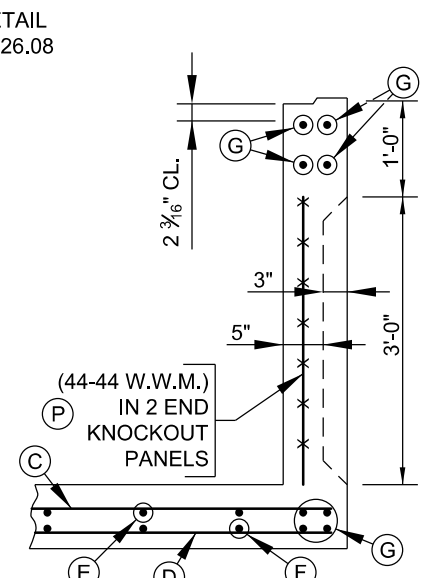
SHEET 1 OF 2



PLAN - BOTTOM HALF



SECTION 1-1



SECTION 2-2

TOP HALF (6' x 12' x 8' MANHOLE) SEE BC 826.02-1  
 BAR SCHEDULE (6' x 12' x 8' MANHOLE) SEE BC 826.04  
 KNOCKOUT DETAILS SEE BC 826.05  
 INSERTS FOR RECESSED EXTENSION SEE BC 826.06  
 ACCESSORIES FOR PRECAST MANHOLES SEE BC 826.08  
 STANDARD ACCESS STACK SEE BC 825.11  
 PRECAST RECESSED EXTENSION SEE BC 826.07-1

GENERAL NOTES

SPECIFICATIONS-----LATEST DEPARTMENT OF GENERAL SERVICES  
 CONCRETE-----f'c = 5,000 PSI - MIX AS APPROVED BY ENGR.  
 REINFORCING-----ASTM A615, GRADE 60  
 WELDED WIRE MESH---ASTM A185  
 LOADING-----HS 25 TRUCK LOADING

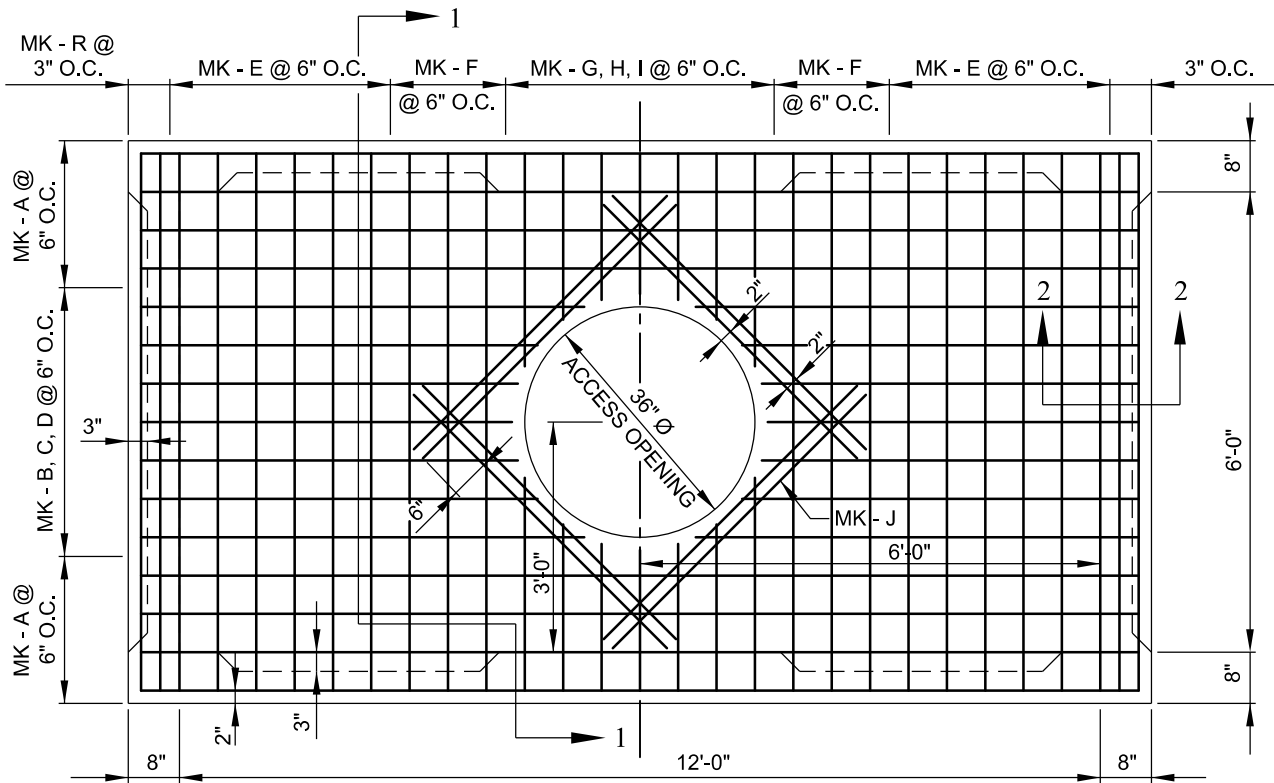


APPROVED:  
*Ola Olamide*  
 CHIEF, CONDUIT DIVISION  
 DIRECTOR, DEPARTMENT OF TRANSPORTATION

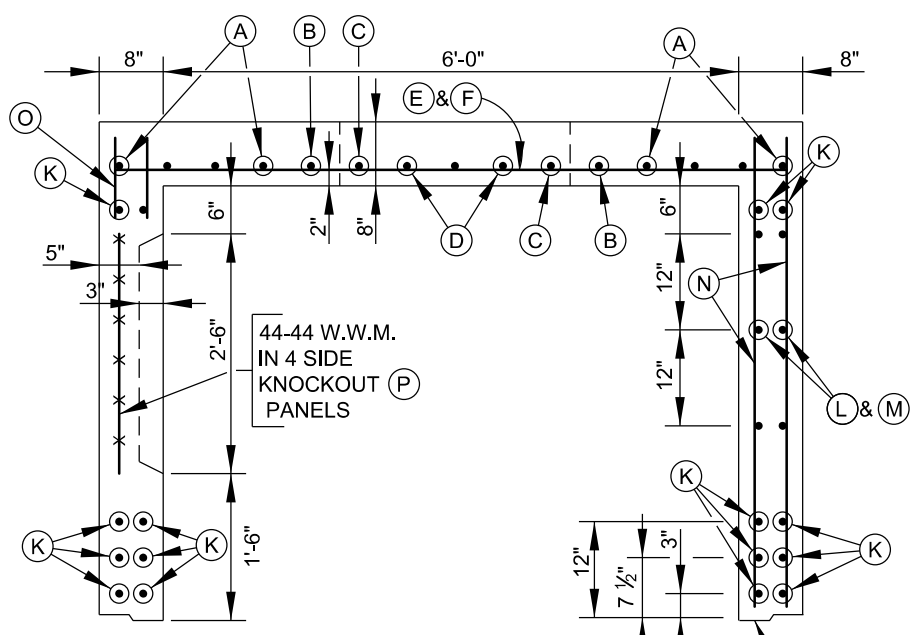
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 DEPARTMENT OF TRANSPORTATION  
 CONDUIT DIVISION

PRECAST LINE MANHOLE  
 6' x 12' x 8' HEADROOM  
 BOTTOM HALF

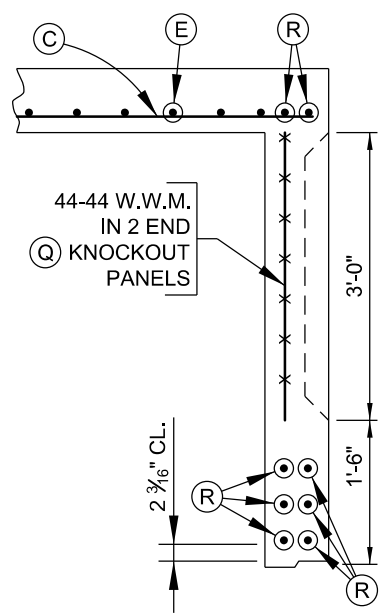
ISSUED	REVISED	REVISED
7 / 2023		
STANDARD NO. BC 826.02-2		
SCALE: NONE	SHEET 2 OF 2	



PLAN - TOP HALF



SECTION 1-1



SECTION 2-2

JOINT DETAIL  
SEE BC 826.08

BOTTOM HALF (6' x 12' x 9' MANHOLE) SEE BC 826.03-2  
 BAR SCHEDULE (6' x 12' x 9' MANHOLE) SEE BC 826.06  
 KNOCKOUT DETAILS SEE BC 826.05  
 INSERTS FOR RECESSED EXTENSION SEE BC 826.06  
 ACCESSORIES FOR PRECAST MANHOLES SEE BC 826.08  
 STANDARD ACCESS STACK SEE BC 825.11  
 PRECAST RECESSED EXTENSION SEE BC 826.07-1

GENERAL NOTES

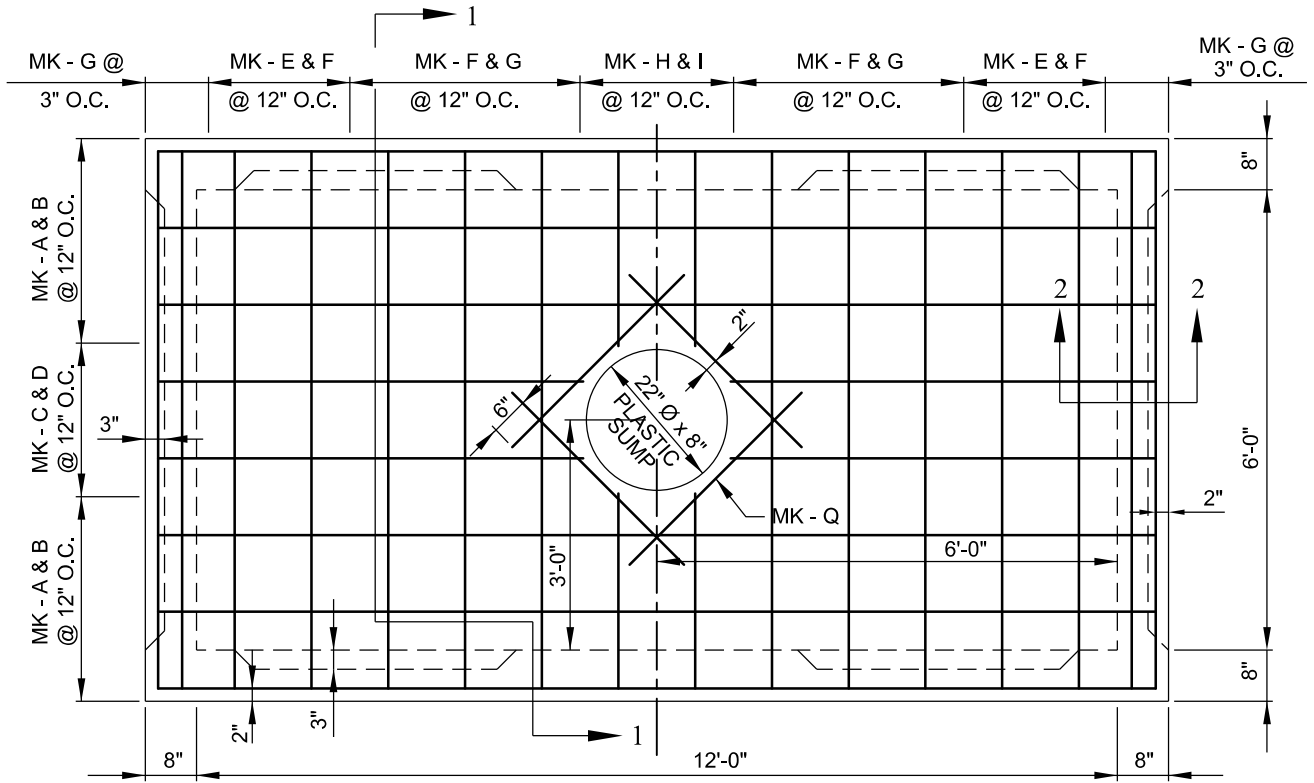
SPECIFICATIONS ----- LATEST DEPARTMENT OF GENERAL SERVICES  
 CONCRETE ----- f'c = 5000 PSI - MIX AS APPROVED BY ENGR.  
 REINFORCING ----- ASTM A615, GRADE 60  
 WELDED WIRE MESH -- ASTM A185  
 LOADING ----- HS 25 TRUCK LOADING



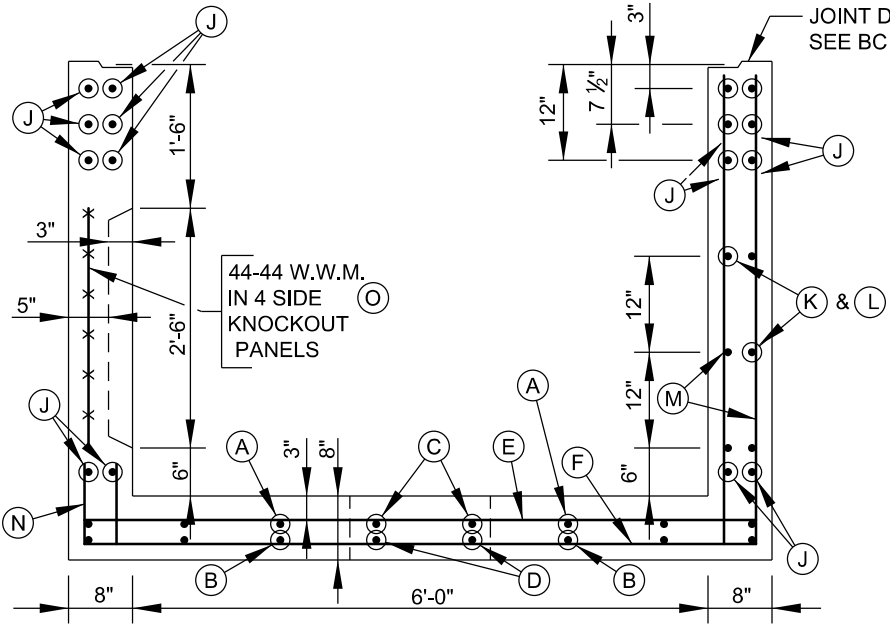
APPROVED:  
*Ola Olamide*  
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 DIRECTOR, DEPARTMENT OF TRANSPORTATION

CITY OF BALTIMORE  
 DEPARTMENT OF TRANSPORTATION  
 CONDUIT DIVISION  
**PRECAST LINE MANHOLE  
 6' X 12' X 9' HEADROOM  
 TOP HALF**

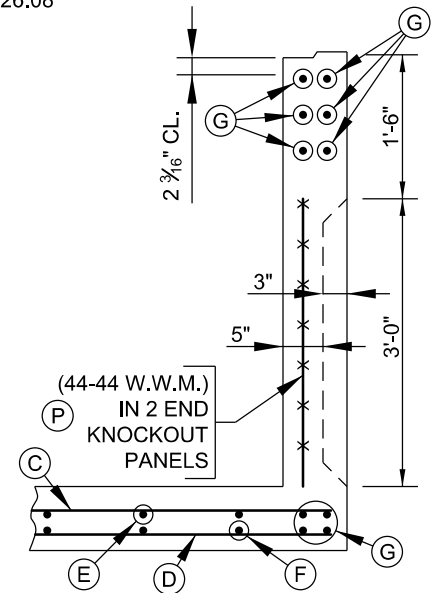
ISSUED	REVISED	REVISED
7 / 2023		
STANDARD NO. BC 826.03-1		
SCALE: NONE	SHEET 1 OF 2	



PLAN - BOTTOM HALF



SECTION 1-1



SECTION 2-2

TOP HALF (6' x 12' x 9' MANHOLE) SEE BC 826.03-1  
 BAR SCHEDULE (6' x 12' x 9' MANHOLE) SEE BC 826.04  
 KNOCKOUT DETAILS SEE BC 826.05  
 INSERTS FOR RECESSED EXTENSION SEE BC 826.06  
 ACCESSORIES FOR PRECAST MANHOLES SEE BC 826.08  
 STANDARD ACCESS STACK SEE BC 825.11  
 PRECAST RECESSED EXTENSION SEE BC 826.07-1

GENERAL NOTES

SPECIFICATIONS ----- LATEST DEPARTMENT OF GENERAL SERVICES  
 CONCRETE ----- f'c = 5000 PSI - MIX AS APPROVED BY ENGR.  
 REINFORCING ----- ASTM A615, GRADE 60  
 WELDED WIRE MESH -- ASTM A185  
 LOADING ----- HS 25 TRUCK LOADING



APPROVED:  
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 CHIEF, CONDUIT DIVISION  
 DIRECTOR, DEPARTMENT OF TRANSPORTATION

CITY OF BALTIMORE  
 DEPARTMENT OF TRANSPORTATION  
 CONDUIT DIVISION  
**PRECAST LINE MANHOLE  
 6' x 12' x 9' HEADROOM  
 BOTTOM HALF**

ISSUED	REVISED	REVISED
7 / 2023		
STANDARD NO. BC 826.03-2		
SCALE: NONE	SHEET 2 OF 2	