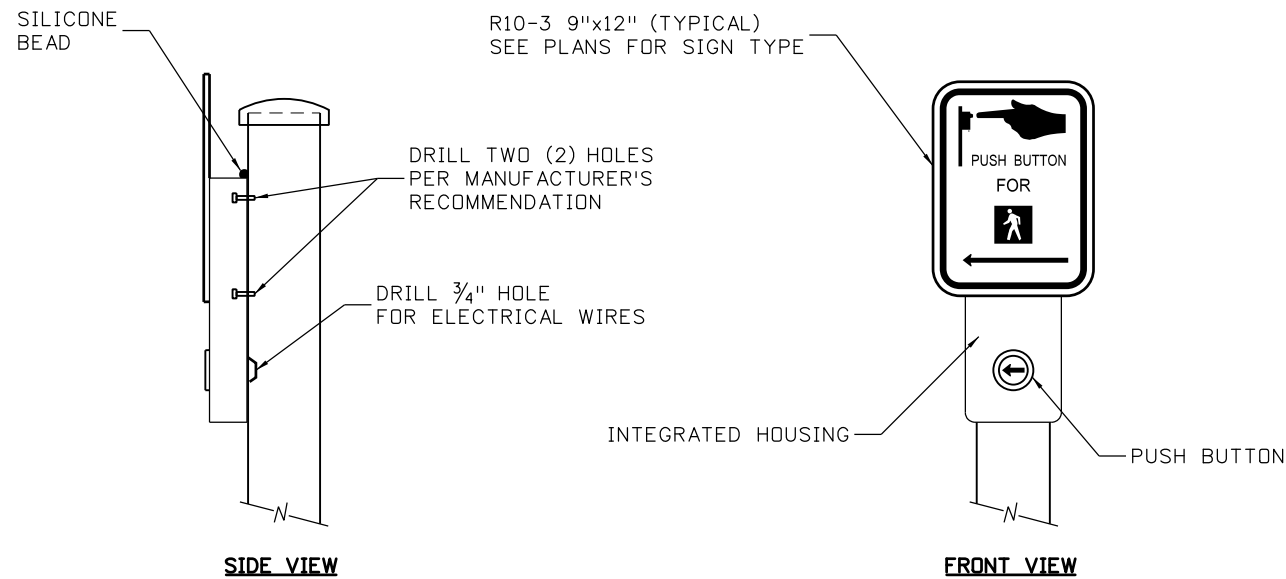
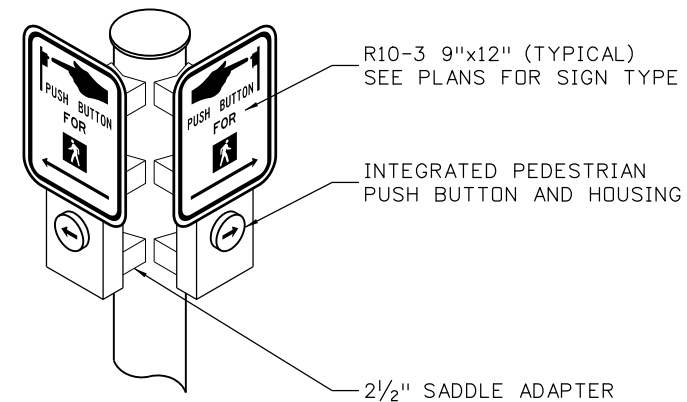


PUSH BUTTON AND SIGN DETAIL

PEDESTRIAN PUSH BUTTON



INTEGRATED HOUSING DETAIL





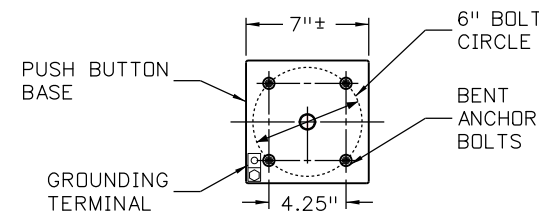
DUAL MOUNT DETAIL

ACCESSIBLE PEDESTRIAN SIGNAL

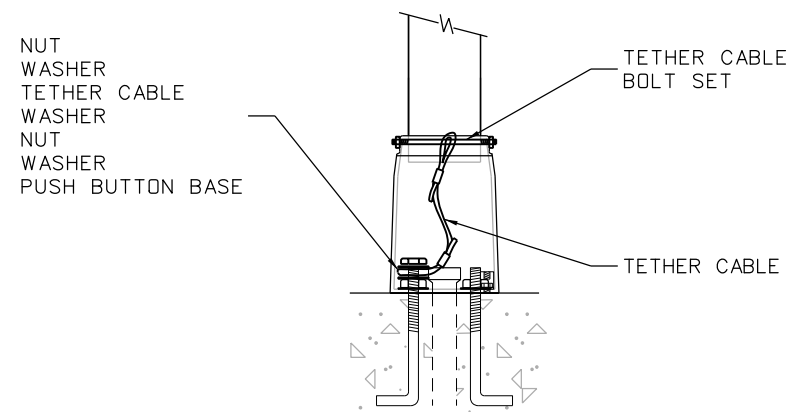
GENERAL NOTES

1. PEDESTRIAN PUSH BUTTON SHALL UTILIZE PEIZO SWITCH TECHNOLOGY. THE ACTUATOR COLOR SHALL CONTRAST WITH THE HOUSING OR MOUNTING. IF A TACTILE ARROW IS PROVIDED, THE TACTILE ARROW SHALL BE PART OF THE ACTUATOR AND SHALL CONTRAST WITH THE BACKGROUND.
2. ACCESSIBLE PEDESTRIAN SIGNAL SHALL INTEGRATE A PEDESTRIAN PUSH BUTTON INTO IT'S HOUSING. THE ACTUATOR COLOR SHALL CONTRAST WITH THE HOUSING AND SHALL VIBRATE DURING THE WALK INTERVAL. A CONTRASTING TACTILE ARROW SHALL BE PART OF THE ACTUATOR.
3. ACCESSIBLE PEDESTRIAN SIGNAL DUAL MOUNT APPLICATIONS SHALL INCLUDE THE REQUIRED AMOUNT OF 2 1/2-INCH SADDLE ADAPTERS AND ALL HARDWARE TO FACILITATE THE WORK IN ADDITION TO THE ITEMS IDENTIFIED IN NOTE 2. THE SADDLE ADAPTER HARDWARE IS SPECIFIC TO THE INSTALLED ACCESSIBLE PEDESTRIAN SIGNAL.
4. PEDESTRIAN PUSH BUTTON POST ASSEMBLY SHALL INCLUDE ALUMINUM SHAFT, PUSH BUTTON BASE, HARDWARE, ANY ADDITIONAL MOUNTING/SADDLE BRACKETS NOT IDENTIFIED IN NOTES 1 AND 3, WIRING, CONCRETE, AND ALL OTHER ITEMS NECESSARY TO COMPLETE THE WORK.
5. SIGNS SHALL BE AS SHOWN ON THE SIGNING TABULATION AND PAID FOR SEPARATLEY.
6. PEDESTRIAN PUSH BUTTON, ACCESSIBLE PEDESTRIAN SIGNAL, AND THE LOCATION OF THE PEDESTRIAN PUSH BUTTON POST ASSEMBLY SHALL BE ADA COMPLIANT AND MEET THE PROVISIONS FOUND IN SECTIONS 4E.08 THROUGH 4E.13 OF THE MUTCD.
7. INSTALL ALL SIGNS, PEDESTRIAN PUSH BUTTONS, AND ACCESSIBLE PEDESTRIAN SIGNALS PER THE MANUFACTURE'S INSTALLATION RECOMMENDATIONS.
8. APPLY ANTI-SEIZE COMPOUND TO ALL BOLTS PRIOR TO ASSEMBLY.
9. APPLY A BEAD OF 100% SILICONE SEALANT ALONG THE PUSH BUTTON UNIT WHERE IT COMES IN CONTACT WITH THE 4" ALUMINUM SHAFT (OR SADDLE BRACKETS) AND ALONG THE PUSH BUTTON BASE WHERE IT COMES IN CONTACT WITH THE CONCRETE.

Computer File Information		Sheet Revisions		 Colorado Department of Transportation 2829 W. Howard Place Denver, Colorado 80204 Phone: 303-757-9543 FAX: 303-757-9219 Safety & Traffic Engineering	PEDESTRIAN PUSH BUTTON POST ASSEMBLY DETAILS	STANDARD PLAN NO.	
Creation Date: 01/22/2020		Date:	Comments:			S-614-45	
Created By: DiNardo						Standard Sheet No. 1 of 6	
Last Modification Date:						Project Sheet Number:	
Last Modified By:							
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English					Issued By: Safety & Traffic Engineering Branch January 22, 2020		



ANCHOR ROD PLACEMENT



TETHER DETAIL

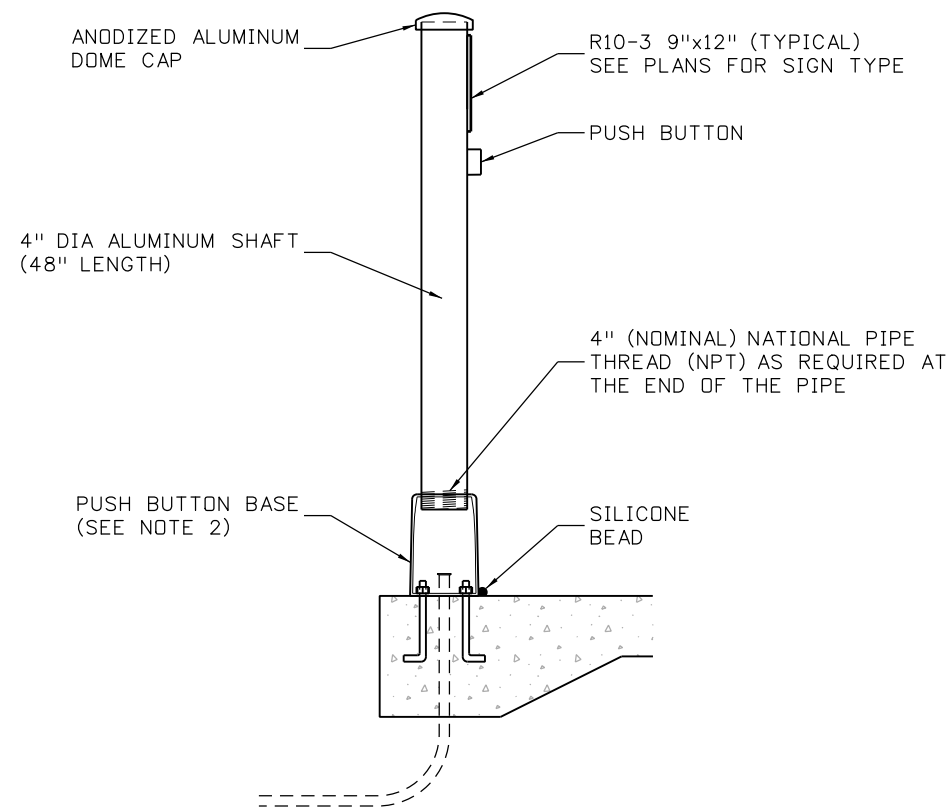
NOTES

1. POSTS SHALL BE SCHEDULE 40 ALUMINUM AND PAINTED (IF NECESSARY) WITH THE COLOR SPECIFIED IN THE PLANS ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
2. APPROVED PUSH BUTTON BASES ARE LISTED ON CDOT'S APPROVED PRODUCTS LIST WEBSITE UNDER 'TRAFFIC CONTROL\SIGNAL'.
3. ALL ELECTRICAL CONDUIT SHALL BE PVC SCHEDULE 80.
4. GROUNDING WIRE SHALL BE #10 AWG (MINIMUM) COPPER AND LAID IN THE 2 INCH PVC CONDUIT. TERMINATE GROUNDING WIRE TO THE SIGNAL GROUNDING SYSTEM IN PULLBOX.
5. POST ASSEMBLIES SHALL BE TETHERED TO AN ANCHOR BOLT. FOLLOW THE MANUFACTURE'S INSTALLATION RECOMMENDATIONS.
6. APPLY ANTI-SEIZE COMPOUND TO ALL BOLTS PRIOR TO ASSEMBLY.
7. BENT ANCHOR BOLTS SHALL BE EMBEDDED INTO NEW CONCRETE.
8. CONCRETE SHALL BE CLASS B OR MATCH THE PROPOSED SIDEWALK/CURB CONCRETE CLASS TYPE AS SPECIFIED IN THE PLANS.

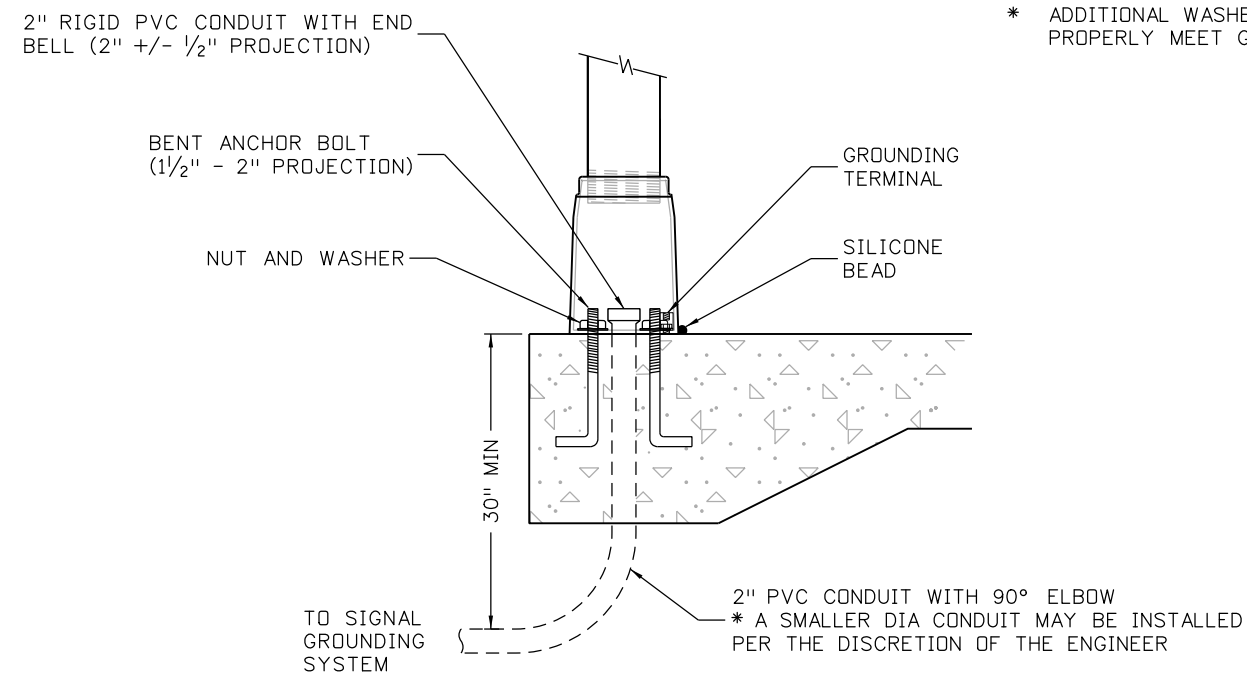
ANCHOR ROD MOUNTING HARDWARE

- 4 EA - 5/8" x 8" A449, TYPE 1, GALVANIZED BENT ANCHOR BOLT
- 4 EA - 5/8" A563DH HEAVY HEX, GALVANIZED HEX NUT
- 4 EA - 5/8" F436 WASHER

* ADDITIONAL WASHERS AND HEX NUTS MAY BE REQUIRED TO PROPERLY MEET GROUNDING AND TETHERING REQUIREMENTS

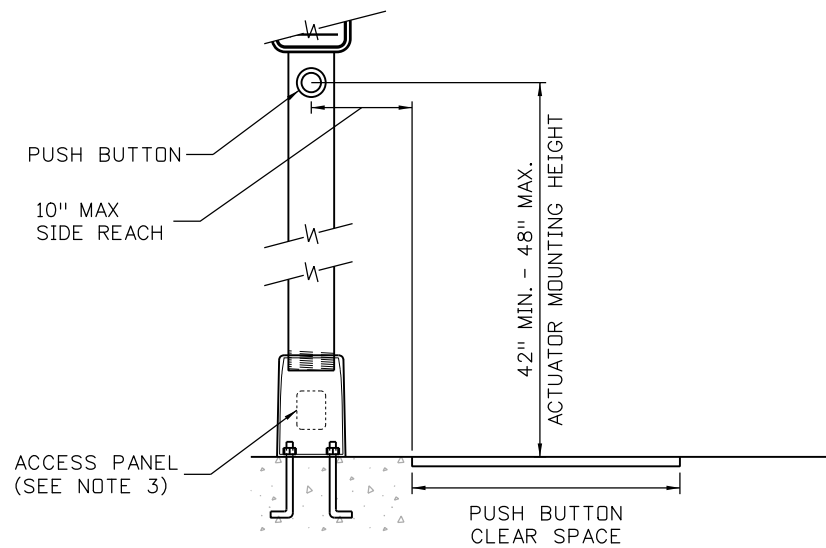


PEDESTRIAN PUSH BUTTON POST ASSEMBLY

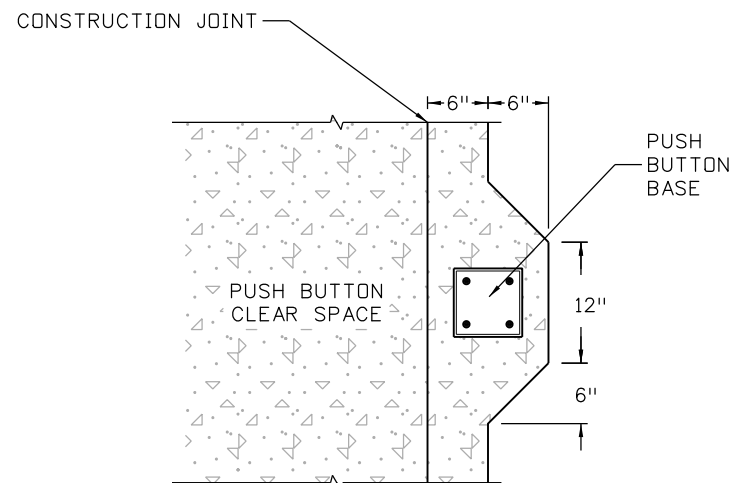


PEDESTAL BASE DETAIL

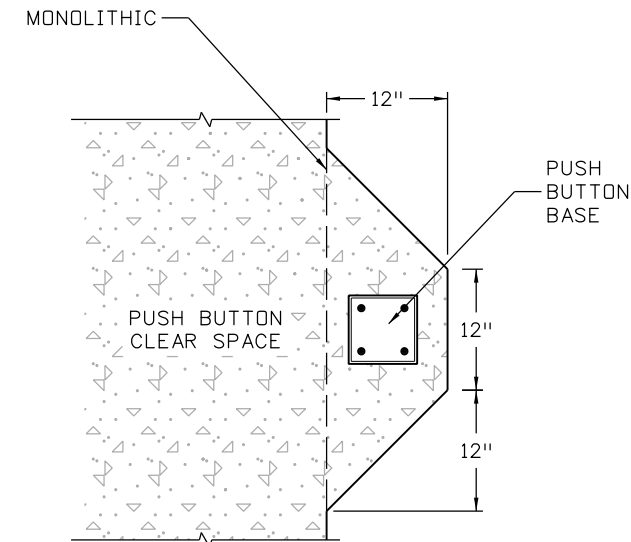
Computer File Information		Sheet Revisions		<p>Colorado Department of Transportation 2829 W. Howard Place Denver, Colorado 80204 Phone: 303-757-9543 FAX: 303-757-9219</p> <p>Safety & Traffic Engineering MKB</p>	<p>PEDESTRIAN PUSH BUTTON POST ASSEMBLY DETAILS</p> <p>Issued By: Safety & Traffic Engineering Branch January 22, 2020</p>	STANDARD PLAN NO.	
Creation Date: 01/22/2020		Date:	Comments:			S-614-45	
Created By: DiNardo						Standard Sheet No. 2 of 6	
Last Modification Date:						Project Sheet Number:	
Last Modified By:							
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English							



FRONT VIEW



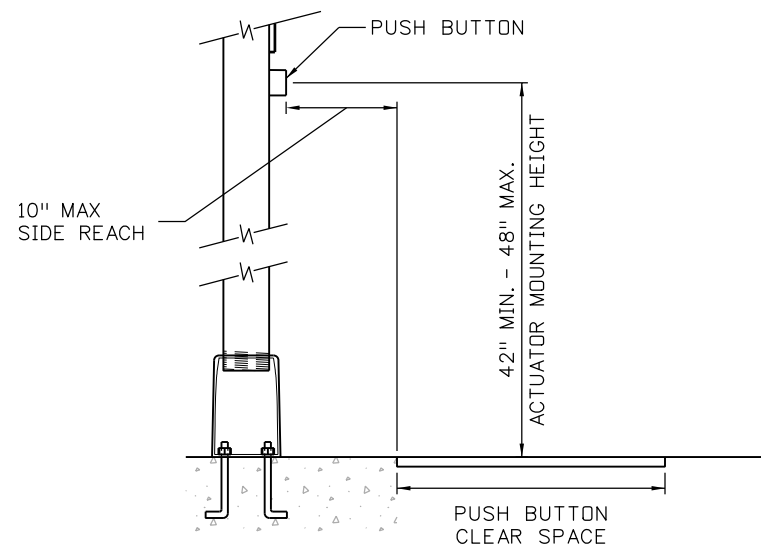
PLAN VIEW



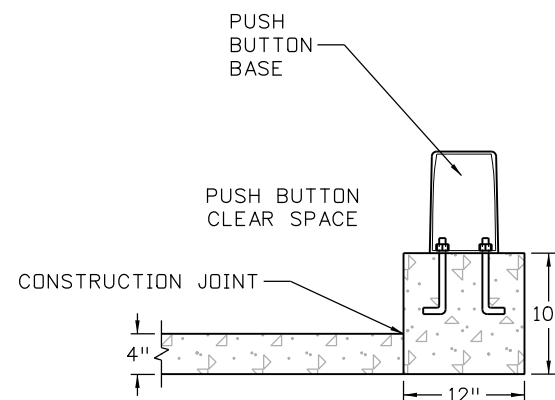
PLAN VIEW

NOTES

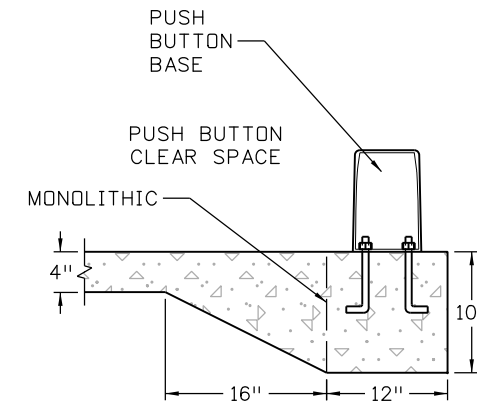
1. 10 INCHES IS THE MAXIMUM SIDE REACH ALLOWED. THE PEDESTRIAN PUSH BUTTON SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE PUSH BUTTON CLEAR SPACE.
2. BENT ANCHOR BOLTS SHALL MAINTAIN A MINIMUM CLEAR COVER FROM THE EDGE OF CONCRETE FOR THE FOLLOWING INSTALLATION CONDITIONS:
 - 2 INCH CLEAR COVER FOR INSTALLATIONS UTILIZING FORMWORK
 - 3 INCH CLEAR COVER FOR INSTALLATIONS AGAINST EARTH
3. THE ACCESS PANEL SHOULD BE LOCATED ON THE OPPOSITE SIDE OF THE PUSH BUTTON BASE IN RELATION TO THE PEDESTRIAN PUSH BUTTON. IF THERE IS NOT 3 FEET OF ACCESS ROOM BEHIND THE PANEL, LOCATE THE ACCESS PANEL BELOW THE PEDESTRIAN PUSH BUTTON.



SIDE VIEW



PROFILE VIEW



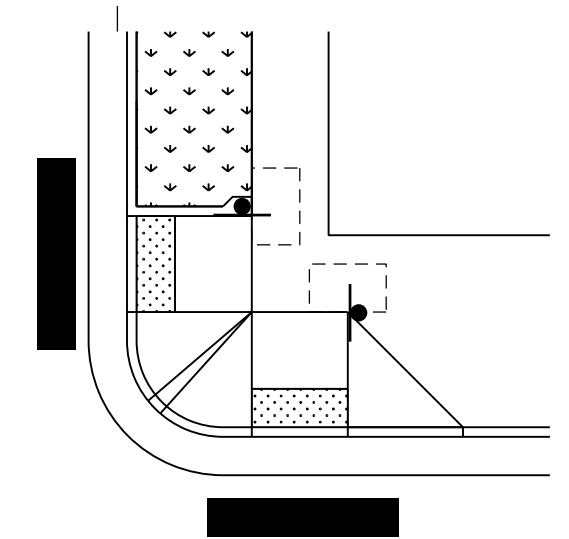
PROFILE VIEW

PUSH BUTTON LOCATION DETAIL

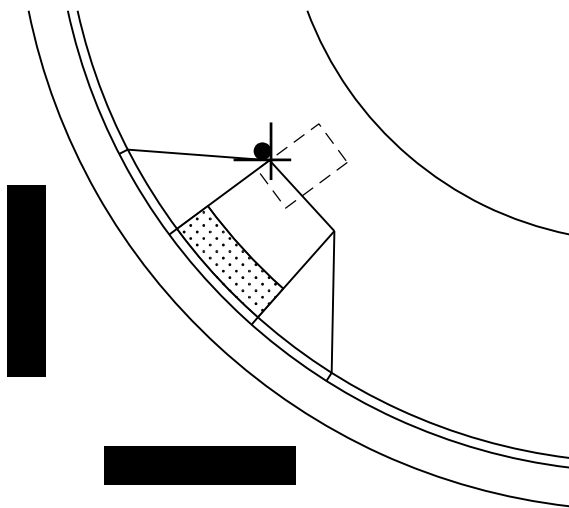
IN-CURB INSTALLATION

SIDEWALK ADJACENT INSTALLATION

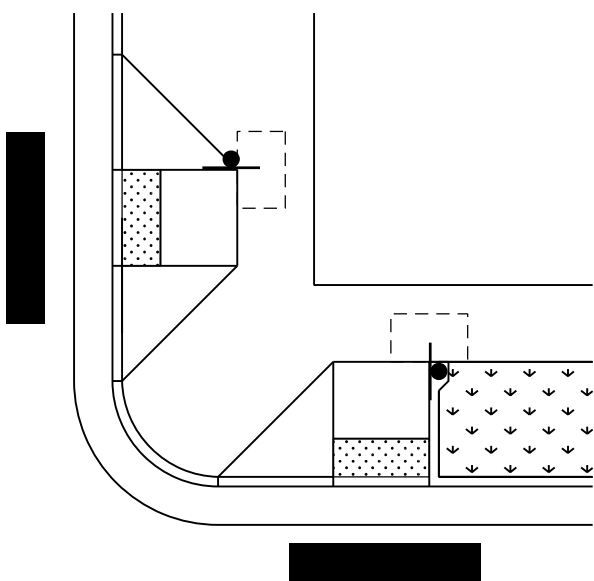
Computer File Information		Sheet Revisions		Colorado Department of Transportation 2829 W Howard Place Denver, Colorado 80204 Phone: 303-757-9543 FAX: 303-757-9219 Safety & Traffic Engineering MKB	PEDESTRIAN PUSH BUTTON POST ASSEMBLY DETAILS	STANDARD PLAN NO.
Creation Date: 01/22/2020		Date:	Comments:			S-614-45
Created By: DiNardo						Standard Sheet No. 3 of 6
Last Modification Date:						
Last Modified By:						
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English					Issued By: Safety & Traffic Engineering Branch January 22, 2020	Project Sheet Number:



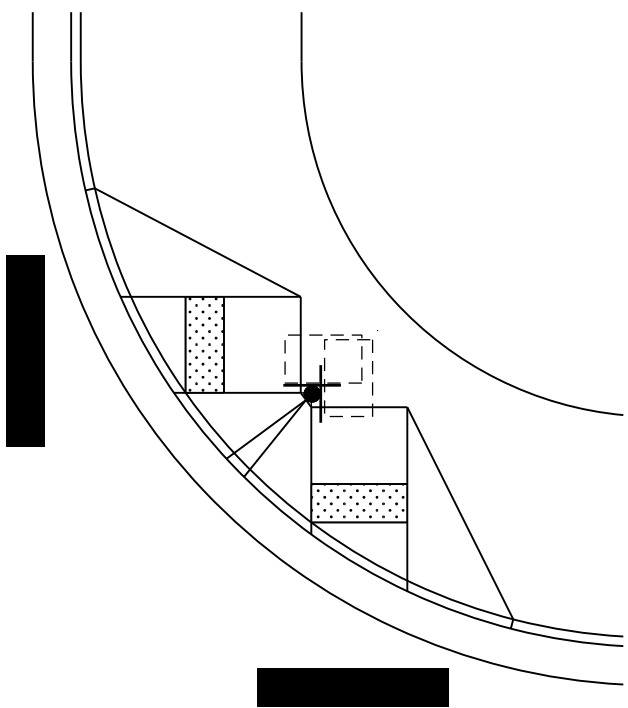
TYPE 1 RAMPS FOR WIDE SIDEWALK



TYPE 1 RAMP



TYPE 1 RAMPS FOR WIDE SIDEWALK






TYPE 1 DIRECTIONAL RAMPS

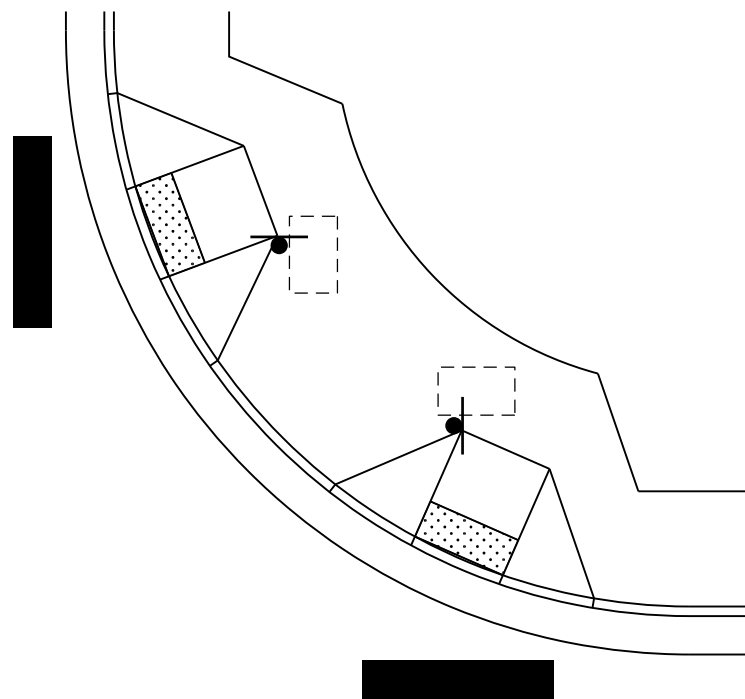
NOTES

1. PEDESTRIAN PUSH BUTTON POST ASSEMBLIES SHOWN ON SHEETS 4 THRU 6 ARE RECOMMENDED LOCATIONS. IF THE RECOMMENDED LOCATIONS ARE NOT FEASIBLE, SEE NOTES 6, 7 & 8 FOR ALTERNATE LOCATION PLACEMENTS.
2. SEE STANDARD M-608-1 FOR ALL SLOPE, LENGTH, ALLOWABLE USE, AND OTHER REQUIREMENTS FOR CURB RAMPS.
3. A CLEAR SPACE SHALL BE PROVIDED ADJACENT TO THE PEDESTRIAN PUSH BUTTON. THE CLEAR SPACE SHALL MEASURE 2.5 FEET (MINIMUM) IN WIDTH AND 4 FEET (MINIMUM) IN THE DIRECTION OF PEDESTRIAN TRAVEL.
4. THE CLEAR SPACE SHALL HAVE A RUNNING SLOPE CONSISTENT WITH THE GRADE OF THE ADJACENT PEDESTRIAN ACCESS ROUTE AND A CROSS SLOPE OF 2.0% MAXIMUM. PLACEMENT OF THE PEDESTRIAN PUSH BUTTON POST ASSEMBLY AT THE CORNER OF THE CLEAR SPACE IS ACCEPTABLE AS LONG AS THE SIDE REACH AND MOUNTING HEIGHT ARE MET.
5. MOUNTING HEIGHT OF THE PEDESTRIAN PUSH BUTTON SHALL BE BETWEEN 42 AND 48 INCHES.
6. THE PEDESTRIAN PUSH BUTTON SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE PUSH BUTTON CLEAR SPACE. 10 INCHES IS THE MAXIMUM SIDE REACH ALLOWED.
7. THE PEDESTRIAN PUSH BUTTON POST ASSEMBLY SHOULD BE PLACED BETWEEN 1.5 AND 6 FEET FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT. WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO MEET THIS DISTANCE, IT SHOULD NOT BE PLACED FARTHER THAN 10 FEET FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT. PEDESTRIAN PUSH BUTTON POST ASSEMBLIES SHALL NOT OBSTRUCT THE REQUIRED 4 FOOT PEDESTRIAN ACCESS PATH.
8. THE PEDESTRIAN PUSH BUTTON POST ASSEMBLY SHALL BE PLACED WITHIN 5 FEET OF THE EDGE OF CROSSWALK/CROSSING.
9. MOUNT THE PEDESTRIAN PUSH BUTTON, THE SIGN, AND/OR SIGN HOUSING SO THAT THE FACE IS PARALLEL WITH THE ASSOCIATED CROSSWALK/CROSSING.
10. SCREW THE SHAFT TO A TIGHTENED POSITION BEFORE MOUNTING THE PEDESTRIAN PUSH BUTTON UNIT TO THE SHAFT.
11. PLUMB THE PEDESTRIAN PUSH BUTTON POST ASSEMBLY WITH LEVELING SHIMS.
12. TWO PUSH BUTTONS ON THE SAME CORNER SHOULD BE SEPARATED BY 10 FEET. WHERE THERE ARE PHYSICAL CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THIS SEPARATION, THE PUSH BUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.
13. WHEN TWO PUSH BUTTONS ARE SEPARATED BY LESS THAN 10 FEET, ACCESSIBLE PEDESTRIAN SIGNALS SHALL BE INSTALLED AND THE SPEECH WALK MESSAGE SHALL BE ACTIVATED.

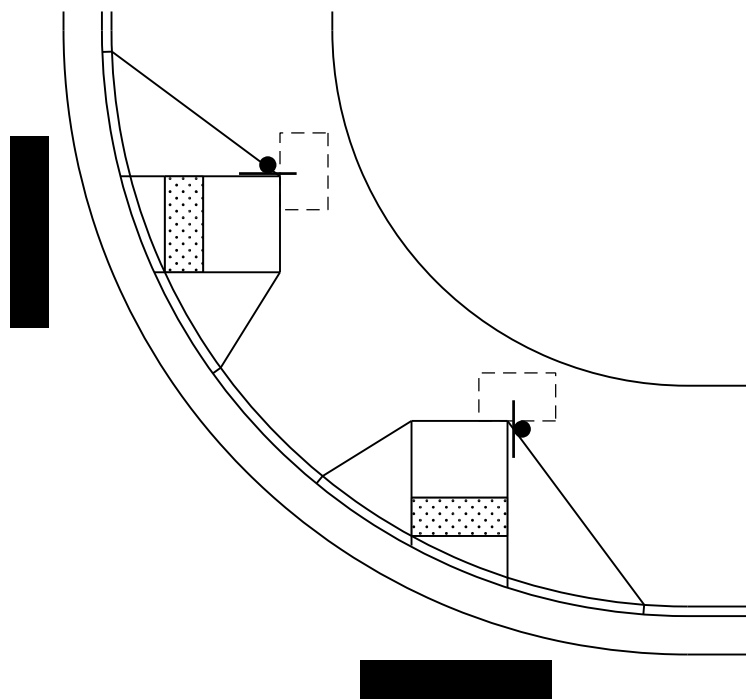
LEGEND

-  PEDESTRIAN PUSH BUTTON POST ASSEMBLY
-  CLEAR SPACE (2.5' x 4') (MINIMUMS)

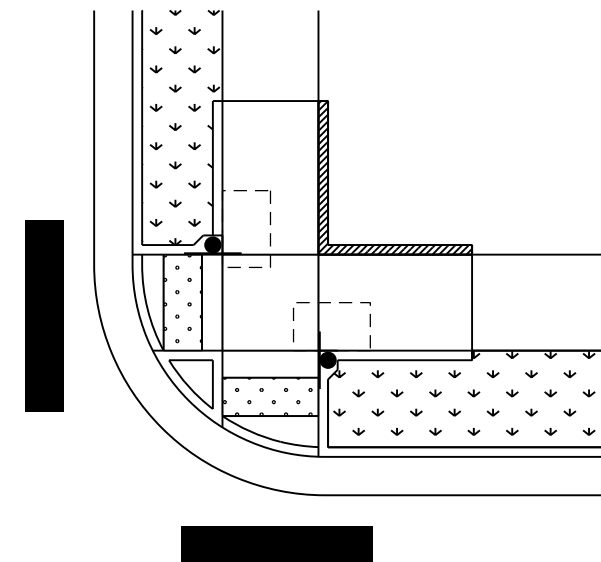
Computer File Information		Sheet Revisions		 Colorado Department of Transportation 2829 W. Howard Place Denver, Colorado 80204 Phone: 303-757-9543 FAX: 303-757-9219 Safety & Traffic Engineering MKB	PEDESTRIAN PUSH BUTTON POST ASSEMBLY DETAILS	STANDARD PLAN NO.	
Creation Date: 01/22/2020		Date:	Comments:			S-614-45	
Created By: DiNardo						Standard Sheet No. 4 of 6	
Last Modification Date:					Issued By: Safety & Traffic Engineering Branch January 22, 2020		
Last Modified By:					Project Sheet Number:		
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English							



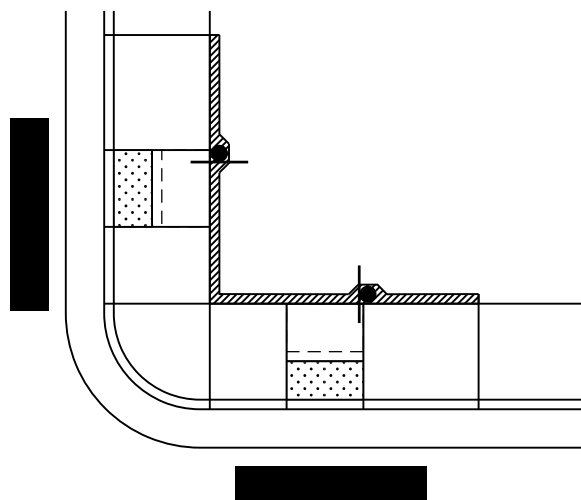
TYPE 1 PERPENDICULAR RAMPS



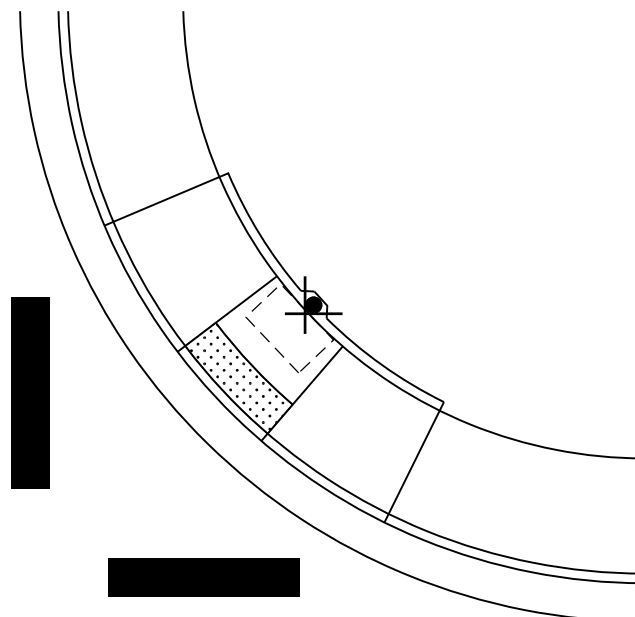
TYPE 1 DIRECTIONAL RAMPS



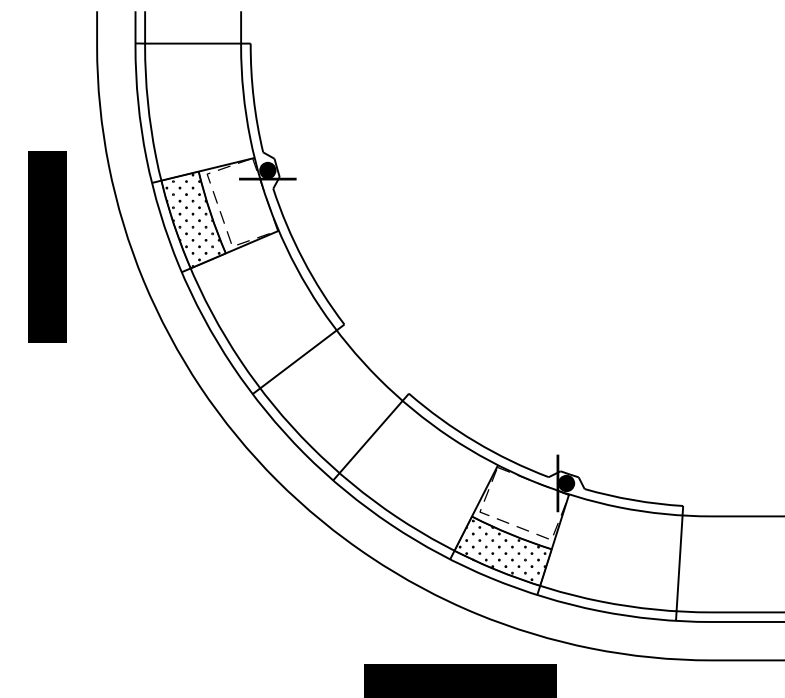
TYPE 1 COMBINATION RAMP



TYPE 2 RAMPS SMALL RADIUS



TYPE 2 RAMP (DIAGONAL)




TYPE 2 RAMPS LARGE RADIUS

Computer File Information	
Creation Date:	01/22/2020
Created By:	DiNardo
Last Modification Date:	
Last Modified By:	
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	

Sheet Revisions	
Date:	Comments

Colorado Department of Transportation



2829 W. Howard Place
 Denver, Colorado 80204
 Phone: 303-757-9543 FAX: 303-757-9219

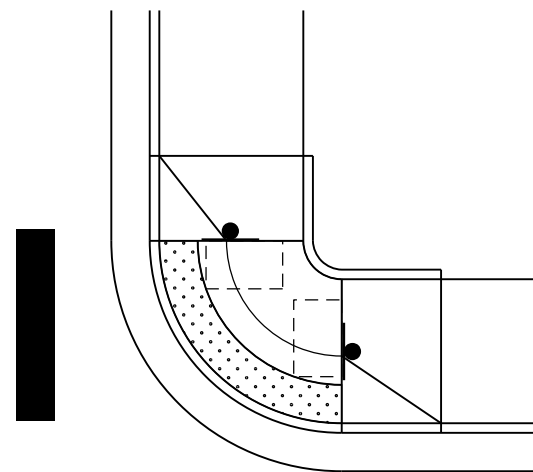
Safety & Traffic Engineering **MKB**

**PEDESTRIAN PUSH BUTTON
 POST ASSEMBLY DETAILS**

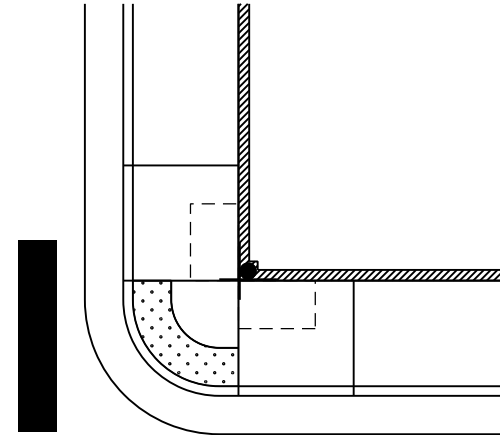
Issued By: Safety & Traffic Engineering Branch January 22, 2020

STANDARD PLAN NO.
S-614-45
Standard Sheet No. 5 of 6

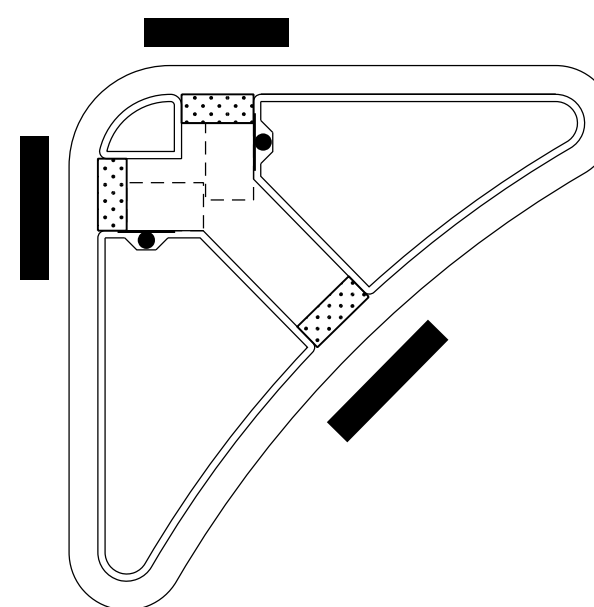
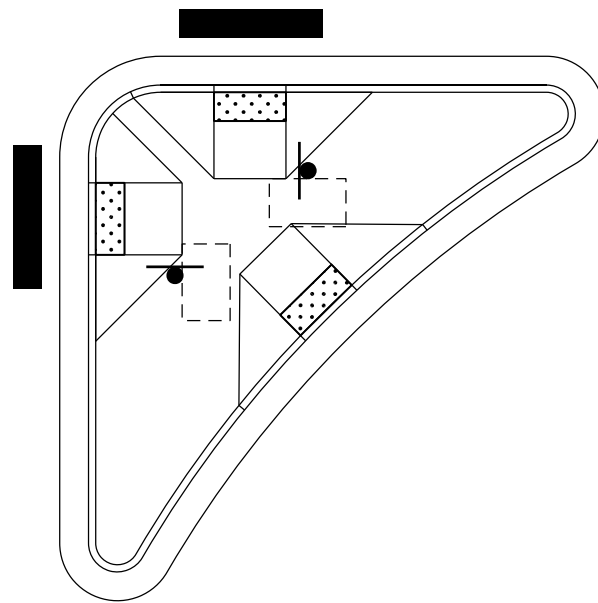
Project Sheet Number:



BLENDED TRANSITION



DEPRESSED CORNER




INTERSECTION ISLANDS

Computer File Information	
Creation Date:	01/22/2020
Created By:	DiNardo
Last Modification Date:	
Last Modified By:	
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	

Sheet Revisions	
Date:	Comments

Colorado Department of Transportation



2829 W. Howard Place
 Denver, Colorado 80204
 Phone: 303-757-9543 FAX: 303-757-9219

Safety & Traffic Engineering MKB

PEDESTRIAN PUSH BUTTON
 POST ASSEMBLY DETAILS

Issued By: Safety & Traffic Engineering Branch January 22, 2020

STANDARD PLAN NO.
S-614-45
Standard Sheet No. 6 of 6
Project Sheet Number: