

EXAMPLE INTERSECTION DETAIL SHEET

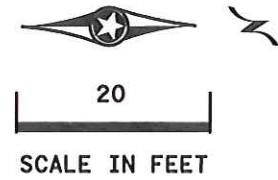
Only one intersection per sheet

See MnDOT Standard Legend on ADA website

LEGEND	
XXX	CONTROL POINTS AT GUTTER FLOW LINE
[Symbol]	TRUNCATED DOMES (SEE STANDARD PLATE 7038)
[Symbol]	CONSTRUCT CONCRETE CURB & GUTTER
[Symbol]	BITUMINOUS TREATMENT-SEE TABULATIONS
X"	CURB HEIGHT
[Symbol]	LANDING AREA - 4' X 4' MIN. DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS
[Symbol]	INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%
[Symbol]	INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%
[Symbol]	DRAINAGE FLOW ARROW

PLOTTED/REVISED: 31-JAN-2013

2ND AVE



20-scale required

Level 3 quadrant because of vertical constraint (a step to match, in this case)

Always explain vertical tie-ins using contractor-friendly terms

Include a cross reference to Tabulation when an intersection requires both Level 1 and 2/3 designs. Do not show removals or planned construction at the Level 1 quadrant.

Reverse gutter used to help make up elevation

For Level 2 quadrants, include only one Control Point on ramps. Locate this point at the outside edge of domes. Select the Trunk Highway side for depressed corner or fan ramps.

Label specific ramp slope (to the nearest full %) and length if and only when they are non-compliant

GUTTER CONTROL POINTS			
POINT NUMBER	X	Y	ELEVATION
NE CORNER			
101	556102.00	149645.05	950.34
102	556088.97	149645.03	950.78
103	556088.49	149644.99	950.90
104	556088.10	149644.89	950.87
105	556088.02	149644.87	950.83
106	556082.95	149643.18	950.72
107	556082.48	149643.06	950.68
108	556082.00	149643.03	950.39
109	556077.00	149643.03	950.17
110	555990.10	149682.87	950.90
111	555952.27	149593.11	950.87
NW CORNER			
112	555990.10	149682.87	-
SE CORNER			
113	556064.73	149553.76	951.46
114	556064.73	149567.38	951.40
115	556064.66	149578.76	951.32
116	556064.73	149579.39	951.28
117	556064.92	149582.76	951.25
118	556067.61	149588.39	951.17
119	556073.17	149592.34	951.10
120	556077.17	149593.13	950.74
121	556077.17	149591.39	950.65
122	556064.73	149553.76	951.46
123	556064.73	149567.38	951.40

① SEE TABULATION X FOR CURB RAMP CONSTRUCTION QUANTITIES.

z's provided when curb flow lines are changed vertically/horizontally

Level 3 quadrant because of vertical constraint (a step to match, in this case) and because of the non-compliant ramp slope

When including (x,y,z) for directional curb, select three points: outside edge of domes and two on the flow line.

Level 3 quadrant because of vertical constraint (an alcove to match, in this case)

CONCRETE WALK TO MATCH INPLACE DOORWAY ALCOVE/SLAB

RAMP RUNNING SLOPE TO BE 10% FOR 7.5'

R=12'
X=556074.20
Y=149655.03

R=13'
X=556077.65
Y=149580.14

DISTRICT #: INSERT DISTRICT NAME HERE
IPLOT NAME: I123
FILENAME: IP_PWP-d1446403randdpl.dgn

INTERSECTION A

INTERSECTION DETAILS

EXAMPLE INTERSECTION DETAIL SHEET

Only one intersection per sheet

Level 2 quadrant because the new ramp doesn't align with the approaching back of walk

Level 2 quadrant because the new ramp doesn't align with the approaching back of walk

When raising gutter flow lines, ensure that positive drainage is maintained from the road surface to the gutter.

Include a cross reference to Tabulation when an intersection requires both Level 1 and 2/3 designs. Do not show removals or planned construction at the Level 1 quadrant.

Always explain vertical tie-ins using contractor-friendly terms

Level 3 quadrant because of vertical constraint (a step to match, in this case)

Always include this clarification to communicate that the flow line raise is an intentional design.
If a gutter profile isn't included, add this explanation of difference between in-place and proposed to the Control Points table.

See MnDOT Standard Legend on ADA website

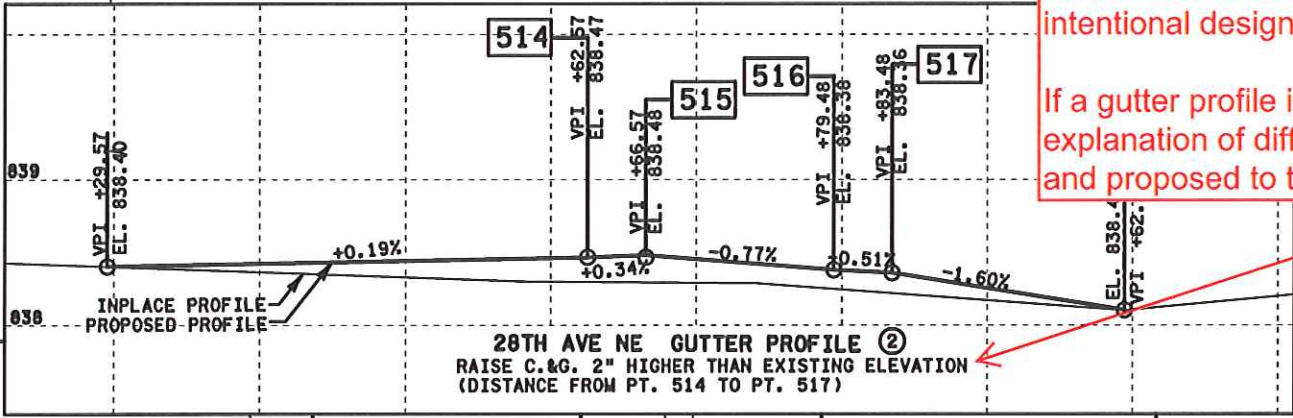
(Optional) gutter profile example

20-scale required

GUTTER CONTROL POINTS				
PT NO.	QUAD	X	Y	ELEVATION
T.H. XX AND 28TH AVE NE				
514	SE	531116.8046	179802.4751	838.47
515	SE	531117.7912	179806.4751	838.44
516	SE	531122.7409	179814.0921	838.39
517	SE	531125.7125	179816.1107	838.38
518	SW	531072.4314	179827.0358	-
519	NW	531071.8900	179887.8420	-

LEGEND

- XXX DETAIL POINTS
- [Symbol] TRUNCATED DOMES (SEE STANDARD PLATE 7038)
- [Symbol] CONSTRUCT CONCRETE CURB & GUTTER
- [Symbol] CROSSWALK
- [Symbol] TRAFFIC DIRECTION
- [Symbol] LANDING AREA - 4' X 4' MIN. DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS
- [Symbol] INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%
- [Symbol] INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%
- [Symbol] DRAINAGE FLOW ARROW
- [Symbol] REGRADE AND REPLACE WITH SOD
- [Symbol] 5' T.E. MEASURED FROM BACK OF SIDEWALK



SEE TABULATION X FOR CURB RAMP CONSTRUCTION QUANTITIES.

DISTRICT #: INSERT DISTRICT NAME HERE
IPLOT NAME: raise
FILENAME: IP_PWP-d1446403-d272669_ada10.dgn

SIGNAL REPLACEMENT WITH APS EXAMPLE PLAN

Only one intersection per sheet

Include (x,y) for the center of all proposed push button, pedestal, and signal pole locations. The point numbers will cross reference with the Signal Plan.

Distances from push button to front and back of landing included to provide for the 6 ft MAR (Maintenance Access Route), or the 4 ft minimum PAR, and to emphasize the MN MUTCD criteria that push buttons should be adjacent to a landing (and not at ramp grade breaks).

SIGNAL CONTROL POINTS			DISTANCE TO FRONT OF LANDING (FT)	DISTANCE TO BACK OF LANDING (FT)
POINT NO.	X	Y		
PB8-1	555973.5471	186473.9606	2	6
PB2-2	555916.2765	186470.6450	2	6
PB2-1	555930.3865	186471.5934	9	1
PB4-2	ON POLE 3	ON POLE 3	8	2
PB4-1	555986.7955	186457.9452	1	4
PB6-2	555986.7955	186457.9452	2	7.5
PB6-1	555986.7955	186457.9452	2	4
PB8-2	ON POLE 6	ON POLE 6	2	2
POLE 1	573198.8601	253778.9766		
POLE 2	573089.5181	253699.4266		
POLE 3	573175.1256	253599.9369		
POLE 4	555986.7955	186457.9452		
POLE 5	573281.4871	253680.3494		
POLE 6	573198.8601	253778.9766		

CONTROL POINTS		
POINT NO.	X	Y
100	556067.9106	186373.7930
101	556063.9194	186378.2730
102	555987.3742	186375.4952
103	555976.9660	186361.4794
104	555920.5656	186359.3100
105	555911.5503	186359.0742
106	555861.6673	186358.6566
107	555849.4321	186371.1055
108	555848.4949	186452.2368

For Level 2 quadrants, include only one Control Point on ramps. Locate this point at the outside edge of domes. Select the Trunk Highway side for depressed corner or fan ramps.

See MnDOT Standard Legend on ADA website

- PROPOSED SIGNAL POLE
- PROPOSED PEDESTAL
- PEDESTRIAN PUSH BUTTON STATION
- PEDESTRIAN PUSH BUTTON
- CONTROL POINTS AT GUTTER FLOW LINE
- TRUNCATED DOMES (SEE STANDARD PLATE 7038)
- CONSTRUCT CONCRETE CURB & GUTTER
- BITUMINOUS TREATMENT-SEE TABULATIONS
- CURB HEIGHT
- LANDING AREA - 4' X 4' MIN. DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS
- INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%
- INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%
- DRAINAGE FLOW ARROW

LOCATION	TABULATED QUANTITIES							
	REMOVE CONC. WALK	REMOVE CONC. CURB & GUTTER	MILL AND PATCH BITUMINOUS PAVEMENT	CONCRETE WALK	CONCRETE CURB & GUTTER	CONCRETE CURB DESIGN V	TRUNCATED DOMES	
	SQ FT	LIN FT	LIN FT	SQ FT	LIN FT	LIN FT	SQ SF	35' RAD SECTION SF
NE QUAD	293	45	45	548	45	-	24	-
SE QUAD	110	-	-	-	-	-	-	40
S MEDIAN	59	-	-	-	-	-	-	-
SW QUAD	-	-	-	-	-	-	-	-
NW QUAD	275	-	-	-	-	-	-	-
N MEDIAN	60	20	-	29	10	-	-	-
TOTALS	797	168	983	1440	136	-	72	40

Quantity tabulation included only if it's a standalone signal project. ADA pay item quantities are otherwise included in the Plan Tabulations and SEQ.

GENERAL NOTES:

- PROVIDE A SAWCUT AT THE REMOVAL LIMIT OR THE NEAREST JOINT OF THE CONCRETE WALK AND CONCRETE CURB & GUTTER. ALL SAWCUTS SHALL BE INCIDENTAL.
- LANDINGS SHALL BE CONNECTED TO EXISTING SIDEWALKS MAINTAINING A 4' WIDE (MINIMUM) PEDESTRIAN ACCESS ROUTE WITH A CROSS SLOPE THAT DOES NOT EXCEED 2.0% AND A RUNNING SLOPE THAT DOES NOT EXCEED 8.3%.
- ALL PERPENDICULAR RAMPS ARE 4' LONG UNLESS OTHERWISE NOTED.
- LOCATE ALL NEW HANDHOLES OUTSIDE OF THE PAR.
- THE OUTSIDE EDGE OF CROSSWALK MARKINGS SHALL LINE UP WITH THE OUTSIDE EDGE OF TRUNCATED DOMES.

- ① SALVAGE AND INSTALL SIGN.
- ② SHORTEN MEDIAN NOSE TO MAKE ROOM FOR NEW CROSSWALK. CONSTRUCT CONCRETE NOSE - SEE STANDARD PLATE 7113.
- ③ CONSTRUCT CONCRETE PAVEMENT TO FILL THE AREA WHERE THE CONCRETE MEDIAN NOSE IS TO BE REMOVED. MATCH INPLACE PAVEMENT THICKNESS.

Draft ramp lengths to scale.

Always explain vertical tie-ins using contractor-friendly terms

PLOTTED/REVISED: 01-FEB-2013

DISTRICT #: INSERT DISTRICT NAME HERE
 IPLOT NAME: rebuild
 PATH & FILENAME: IP_PWP-d146403_SamplePlan.dgn

BY	DATE	REVISIONS	SYSTEM ID: 20937	T.E. 5112	PEDESTRIAN CROSSWALK DETAILS TRAFFIC CONTROL SIGNAL SYSTEM T.H. 156 AT C.S.A.H. 14 (GRAND AVE.) IN SOUTH ST. PAUL, DAKOTA COUNTY	S.A.P. NO.	DRAWN BY:	CKD BY:	DATE:	
			METER ADDRESS: 236 STATE HWY 156			CERTIFIED BY _____	LIC. NO. _____	DATE: _____		
			MASTER ID: 21720	T.E.		STATE PROJ. NO. XXXX-XX (T.H. XXX)	SHEET NO. X OF XX SHEETS			

APS UPGRADE EXAMPLE INTERSECTION DETAIL

Only one intersection per sheet

Include (x,y)s for the center of all proposed push button, pedestal, and signal pole locations. The point numbers will cross reference with the Signal Plan.

Distances from push button to front and back of landing included to provide for the 6 ft MAR (Maintenance Access Route), or the 4 ft minimum PAR, and to emphasize the MN MUTCD criteria that push buttons should be adjacent to a landing (and not at ramp grade breaks).

SIGNAL CONTROL POINTS			DISTANCE TO FRONT OF LANDING (FT)	DISTANCE TO BACK OF LANDING (FT)
POINT NO.	X	Y		
PB8-1	ON POLE 1	ON POLE 1	5	3
PB2-2	555916.2765	186470.6450	2	6
PB2-1	555930.3865	186471.5934	9	1
PB4-2	ON POLE 3	ON POLE 3	8	2
PB4-1	555986.7955	186457.9452	1	4
PB6-2	555986.7955	186457.9452	2	7.5
PB6-1	555986.7955	186457.9452	2	4
PB8-2	ON POLE 6	ON POLE 6	2	2
POLE 1	573198.8601	253778.9766		
POLE 2	573089.5181	253699.4266		
POLE 3	573175.1256	253599.9369		
POLE 4	555986.7955	186457.9452		
POLE 5	573281.4871	253680.3494		
POLE 6	573198.8601	253778.9766		

CONTROL POINTS		
POINT NO.	X	Y
100	556067.9106	186373.7930
101	556063.9194	186378.2730
102	555987.3742	186375.4952
103	555976.9660	186361.4794
104	555920.5656	186359.3100
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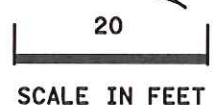
For Level 2 quadrants, include only one Control Point on ramps. Locate this point at the outside edge of domes. Select the Trunk Highway side for depressed corner or fan ramps.

Draft ramp lengths to scale.

Always explain vertical tie-ins using contractor-friendly terms

See MnDOT Standard Legend on ADA website

- INPLACE SIGNAL POLE
- INPLACE PEDESTAL
- PEDESTRIAN PUSH BUTTON STATION
- PEDESTRIAN PUSH BUTTON
- CONTROL POINTS AT GUTTER FLOW LINE
- TRUNCATED DOMES (SEE STANDARD PLATE 7038)
- CONSTRUCT CONCRETE CURB & GUTTER
- BITUMINOUS TREATMENT-SEE TABULATIONS
- CURB HEIGHT
- LANDING AREA - 4' X 4' MIN. DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS
- INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%
- INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%
- DRAINAGE FLOW ARROW



GENERAL NOTES:

- PROVIDE A SAWCUT AT THE REMOVAL LIMIT OR THE NEAREST JOINT OF THE CONCRETE WALK AND CONCRETE CURB & GUTTER. ALL SAWCUTS SHALL BE INCIDENTAL.
- LANDINGS SHALL BE CONNECTED TO EXISTING SIDEWALKS MAINTAINING A 4' WIDE (MINIMUM) PEDESTRIAN ACCESS ROUTE WITH A CROSS SLOPE THAT DOES NOT EXCEED 2.0% AND A RUNNING SLOPE THAT DOES NOT EXCEED 8.3%.
- ALL PERPENDICULAR RAMPS ARE 4' LONG UNLESS OTHERWISE NOTED
- THE OUTSIDE EDGE OF CROSSWALK MARKINGS SHALL LINE UP WITH THE OUTSIDE EDGE OF TRUNCATED DOMES.

- ① SALVAGE AND INSTALL SIGN.
- ② SHORTEN MEDIAN NOSE TO MAKE ROOM FOR NEW CROSSWALK. CONSTRUCT CONCRETE NOSE - SEE STANDARD PLATE 7113.
- ③ CONSTRUCT CONCRETE PAVEMENT TO FILL THE AREA WHERE THE CONCRETE MEDIAN NOSE IS TO BE REMOVED. MATCH INPLACE PAVEMENT THICKNESS.

PLOTTED/REVISED: 01-FEB-2013

DISTRICT #: INSERT DISTRICT NAME HERE
 IPLOT NAME: retro
 PATH & FILENAME: IP_PWP-d1446403vretrodgn

BY	DATE	REVISIONS	SYSTEM ID: 20937	T.E. 5112	PEDESTRIAN CROSSWALK DETAILS TRAFFIC CONTROL SIGNAL SYSTEM T.H. 156 AT C.S.A.H. 14 (GRAND AVE.) IN SOUTH ST. PAUL, DAKOTA COUNTY	S.A.P. NO.	DRAWN BY:	CKD BY:	DATE:	
			METER ADDRESS: 236 STATE HWY 156			CERTIFIED BY _____	LIC. NO. _____	DATE: _____		
			MASTER ID: 21720	T.E.		STATE PROJ. NO. XXXX-XX (T.H. XXX)	SHEET NO. X OF XX SHEETS			

CONTROL POINTS			
	X	Y	Z
100	512723.48	212898.65	893.10
101	512729.06	212905.35	893.19
102	512729.79	212912.65	893.24
103	512729.57	212916.43	893.48
104	512734.67	212916.76	893.62
105	512719.34	212898.65	893.68
106	512717.31	212898.65	893.64
107	512718.46	212898.65	893.61
108	512718.01	212916.86	893.57
109	512718.87	212915.43	893.56
110	512719.23	212910.02	893.52
111	512719.47	212902.43	893.18
112	512722.99	212908.48	893.48

LEVEL 3 ISLAND (A.K.A. PORK CHOP) EXAMPLE DETAIL

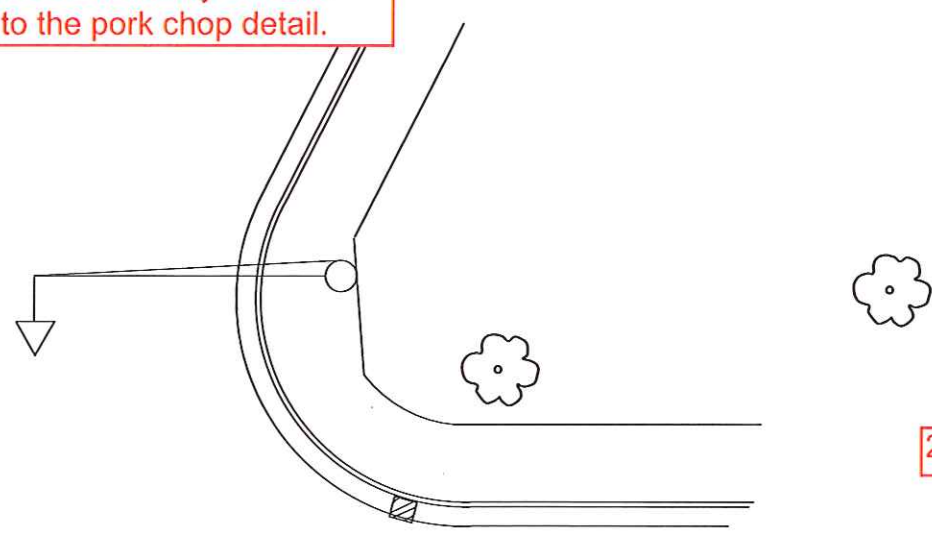
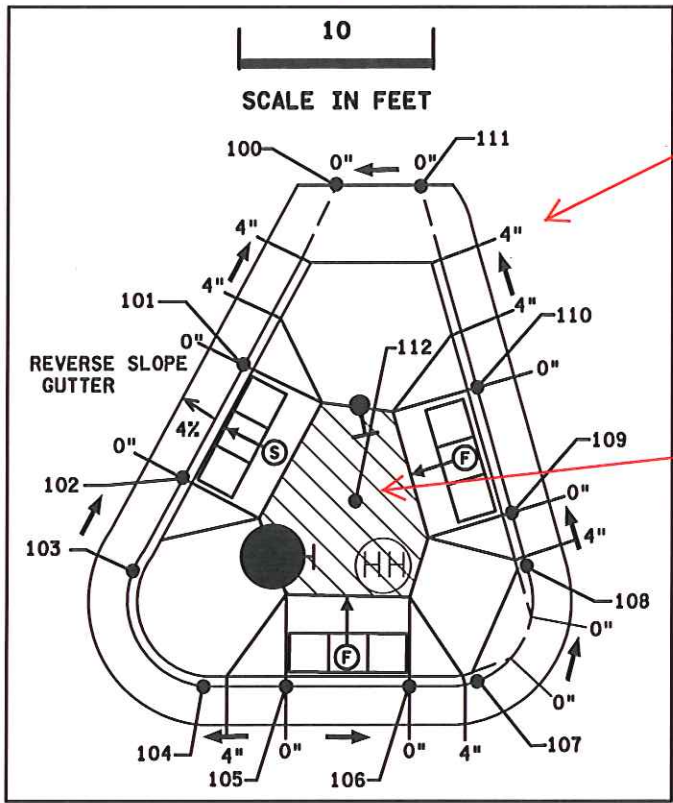
All quadrants on this sheet would ordinarily contain Level 2/3 details in addition to the pork chop detail.

(x,y,z) included because the inplace island curb and gutter will be entirely rebuilt.

10-scale used to display details only because ramp slopes couldn't fit in on a 20-scale

4" curb height preferred for islands. 4" curb height required if design speed is 45 mph or greater, in accordance with Road Design Manual 4-4.04.

(x,y,z) on the landing applies because of the reconstruction scope. The control point on the landing is included only for and for all reconstruction projects.



See MnDOT Standard Legend on ADA website

LEGEND

- INPLACE SIGNAL POLE
- PROPOSED SIGNAL POLE
- PEDESTRIAN PUSH BUTTON STATION
- PEDESTRIAN PUSH BUTTON
- CONTROL POINTS AT GUTTER FLOW LINE
- TRUNCATED DOMES (SEE STANDARD PLATE 7038)
- CONSTRUCT CONCRETE CURB & GUTTER
- C" CURB HEIGHT
- LANDING AREA - 4' X 4' MIN. DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS
- INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%
- INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%
- DRAINAGE FLOW ARROW

CONSTRUCTION PLAN DETAILS

SAMPLE PLAN