



2016 MnDOT Signal Certification Accessible Pedestrian Signals

Todd Grugel, ADA Program Engineer

Joe Zilka, Assistant ADA Program Engineer
651-366-3311

Harvey Unruh, Construction Specialist
651-216-2912

Your Destination... Our Priority



MN MUTCD Push Button Criteria



42 in.
button
height

10 ft. minimum
button separation

1.5 ft. to 10 ft.
from back of curb

Adjacent to
landing

5 ft. max offset from
crosswalk edge

1803 Special Provision Highlights



- The appropriate pedestrian ramp details for each quadrant are included in the plans. **The Engineer may provide additional details to those provided in the plans that meet the PROWAG guidelines as the need arises and field conditions dictate.**
- The contractor must designate a **RESPONSIBLE** person competent in all aspects of PROWAG to assess proposed sidewalk layouts at each site before work begins.
- Any time work the contractor is performing concerns pedestrian facilities, the contractor's **RESPONSIBLE** person shall be on site.

Specification 1803 ADA Requirements



1. Verify that plan requirements can be met.

2. Notify the Engineer if any requirement(s) cannot be met.

3. Upon resolution, proceed with construction.

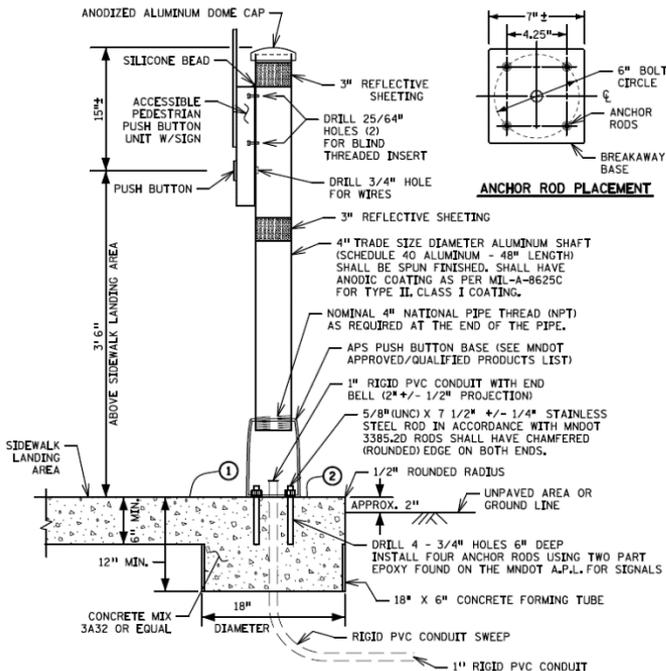
Coordination with concrete contractor required!

If the contractor constructs any pedestrian push button systems or pedestrian facilities which do not meet the criteria or the agreed upon resolution, the contractor will be responsible for correcting the deficiencies with no compensation paid for the corrective work.

APS Push Buttons Station and Location 2014



APS PUSH BUTTON STATION



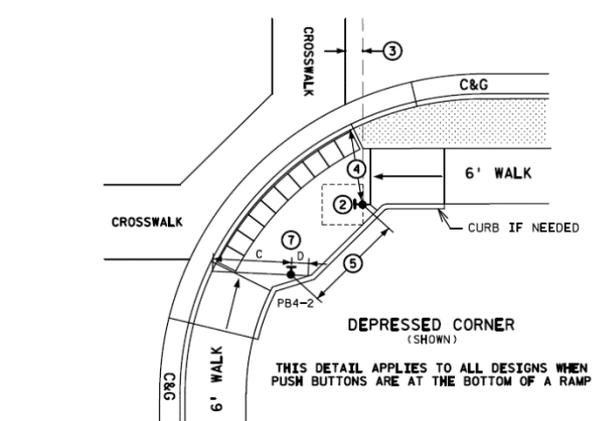
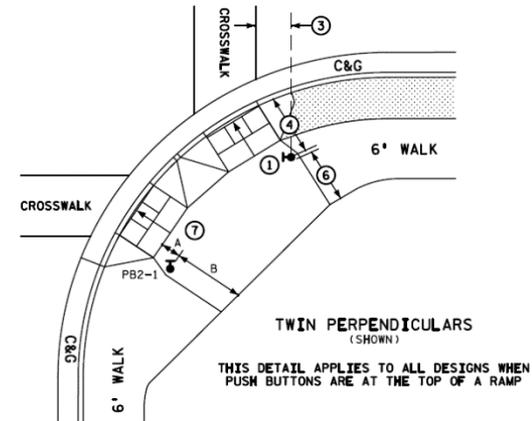
- NOTES:**
- PLACEMENT AND ORIENTATION OF THE PUSH BUTTON STATION IS CRITICAL. MOUNT THE BUTTON SO THAT THE FACE IS PARALLEL WITH THE ASSOCIATED CROSSWALK, SCREW IN POST TO A TIGHTENED POSITION BEFORE MOUNTING ACCESSIBLE PEDESTRIAN PUSH BUTTON UNIT TO THE POST.
 - ORIENT ACCESS OPENING ON THE BREAKAWAY PEDESTAL DIRECTLY BELOW THE APS BUTTON.
 - PLUMB THE PUSH BUTTON STATION WITH LEVELING SHIMS IN ACCORDANCE WITH STANDARD PLATE 8129.
 - BLIND THREADED INSERTS (RIVET NUT) MUST BE INSERTED USING MANUFACTURERS SPECIFIC INSTALLATION TOOL. NO OTHER METHOD OF INSTALLATION IS ACCEPTABLE.
 - BLIND THREADED INSERTS SHALL BE ZINC PLATED STEEL WITH 1/4 - 20 UNC THREADS. INSERT SHALL BE SUITABLE FOR USE ON A MOUNTING SURFACE WALL THICKNESS OF .337". APPROVED BLIND THREADED INSERTS CAN BE FOUND ON THE MNDOT QUALIFIED PRODUCTS LIST FOR SIGNALS.
 - A.P.S. MOUNTING BOLTS SHALL BE 1/4 - 20 STAINLESS STEEL. APPLY BRUSH ON ANTI SEIZE COMPOUND TO BOLTS PRIOR TO ASSEMBLY.
 - APPLY A BEAD OF 100% SILICONE SEALANT ALONG THE TOP OF THE PUSH BUTTON UNIT WHERE IT COMES IN CONTACT WITH THE 4" POST.
 - THE REFLECTIVE SHEETING SHALL BE WHITE AT INTERSECTION CORNERS AND SHALL BE YELLOW WHEN USED IN CENTER MEDIANS. SEE MNDOT SIGNING QUALIFIED PRODUCTS LIST (QPL) FOR APPROVED TUBE DELINEATOR SHEETING.
 - ANTI-SEIZE COMPOUND MUST BE USED ON ALL THREADED BOLTS WHEN INSTALLING PEDESTRIAN PUSH BUTTON STATIONS.
- ① THE PUSH BUTTON STATION FOUNDATION IS CONSTRUCTED AS PART OF THE SIDEWALK. INCREASE THE SIDEWALK THICKNESS TO 12" THICK (MIN) TO PROVIDE FOR THE PUSH BUTTON STATION FOUNDATION.
- ② ALL JOINTS SHALL BE A MINIMUM OF 9" FROM THE CENTER OF THE PUSH BUTTON FOUNDATION.

TYPICAL APS PEDESTRIAN PUSH BUTTON LOCATION

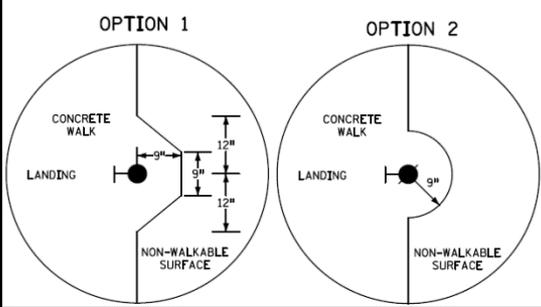
THIS IS A GENERAL DETAIL INTENDED TO SHOW THE REQUIREMENTS OF APS PUSH BUTTON LOCATION. FOR PROJECT SPECIFIC INFORMATION REGARDING PEDESTRIAN RAMP LAYOUT AND PUSH BUTTON LOCATIONS, SEE THE PLAN.

SUPPLEMENTAL GUIDANCE FOR CONSTRUCTING COMPLIANT APS PUSH BUTTONS:

- ① THE FACE OF THE BUTTON SHALL BE PARALLEL WITH THE OUTSIDE EDGE OF CROSSWALK.
- ② A MINIMUM 4 FT X 4 FT LANDING AREA SHALL BE PROVIDED ADJACENT TO EACH BUTTON, WITH A 2 PERCENT MAXIMUM SLOPE IN ALL DIRECTIONS.
- ③ BUTTONS SHALL BE WITHIN 5 FT OF THE OUTSIDE EDGE OF THE CROSSWALK.
- ④ BUTTONS SHALL BE BETWEEN 1.5 FT AND 10 FT FROM THE BACK OF CURB OR EDGE OF ROADWAY, MEASURED IN THE DIRECTION OF TRAVEL. STANDALONE PUSH BUTTON STATIONS SHOULD BE 4' MINIMUM FROM THE BACK OF CURB TO AVOID KNOCKDOWNS.
- ⑤ BUTTONS SHALL BE AT LEAST 10 FT APART.
- ⑥ PROVIDE A MAINTENANCE ACCESS ROUTE (MAR) WHEREVER POSSIBLE FOR SNOW REMOVAL PURPOSES. A MAR REQUIRES A 6 FT MINIMUM CLEAR DISTANCE BETWEEN A PUSH BUTTON AND ANY OBSTRUCTIONS, INCLUDING BUILDINGS, V-CURB, ELECTRICAL FOUNDATIONS, SIGNAL CABINETS, OR ANOTHER PUSH BUTTON.
- ⑦ BUTTON SHOULD BE 2 FT MINIMUM FROM RAMP GRADE BREAK AND BACK OF WALK.



CONTRACTOR MUST USE OPTION 1 OR 2 WHEN THE APS PUSH BUTTON IS SHOWN AT THE EDGE OF WALK. OPTION USED (OR SELECTED) MUST BE THE SAME THROUGHOUT THE ENTIRE PROJECT.



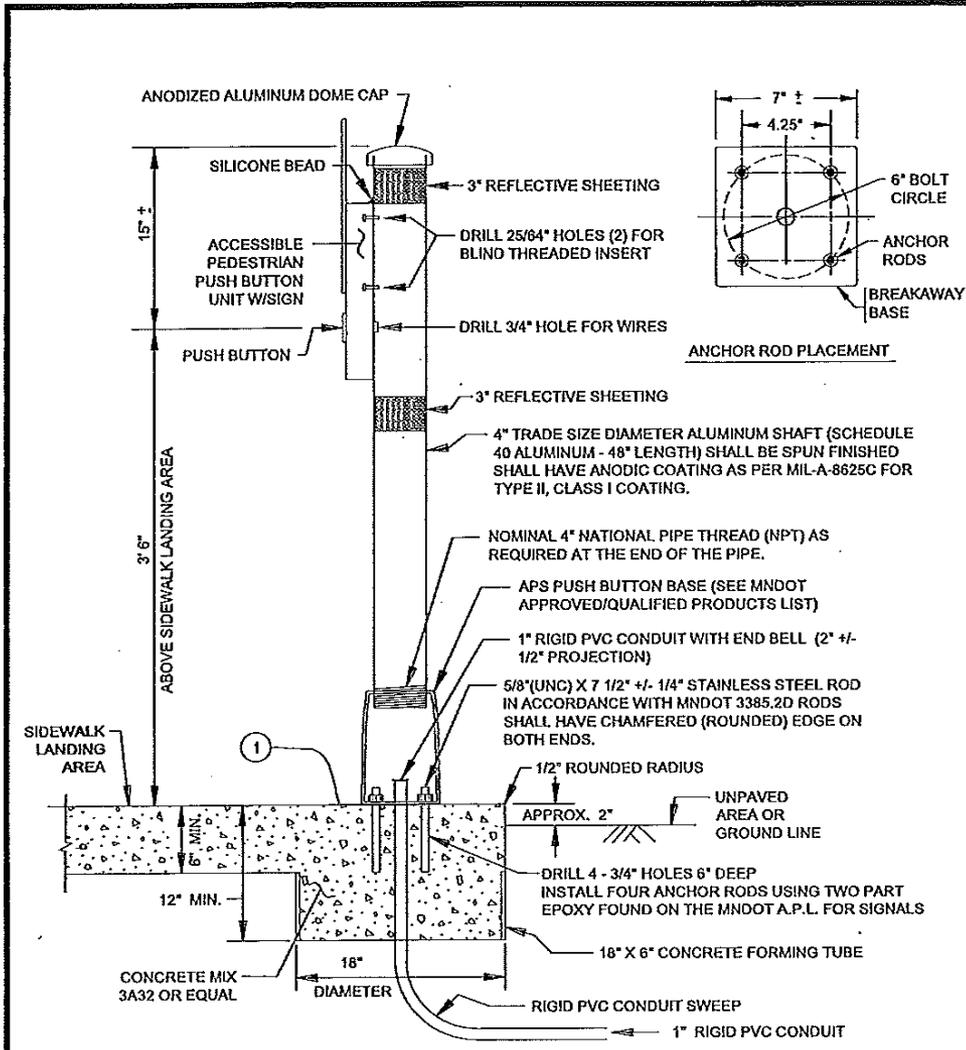
| SIGNAL CONTROL POINTS | DISTANCE TO FRONT OF LANDING (FT) | DISTANCE TO BACK OF LANDING (FT) |
|-----------------------|-----------------------------------|----------------------------------|
| PB2-1 | A | B |
| PB4-2 | C | D |

- A - DISTANCE MEASURED FROM THE PUSH BUTTON TO THE FRONT OF LANDING/TOP OF RAMP
- B - CLEAR DISTANCE MEASURED FROM THE PUSH BUTTON TO THE BACK OF LANDING/EDGE OF WALK
- C - CLEAR DISTANCE MEASURED FROM THE PUSH BUTTON TO THE OUTSIDE EDGE OF DOMES IN THE DIRECTION OF TRAVEL
- D - CLEAR DISTANCE FROM THE PUSH BUTTON TO THE BACK OF LANDING MEASURED IN THE OPPOSITE DIRECTION OF TRAVEL

NEW for all APS 2014



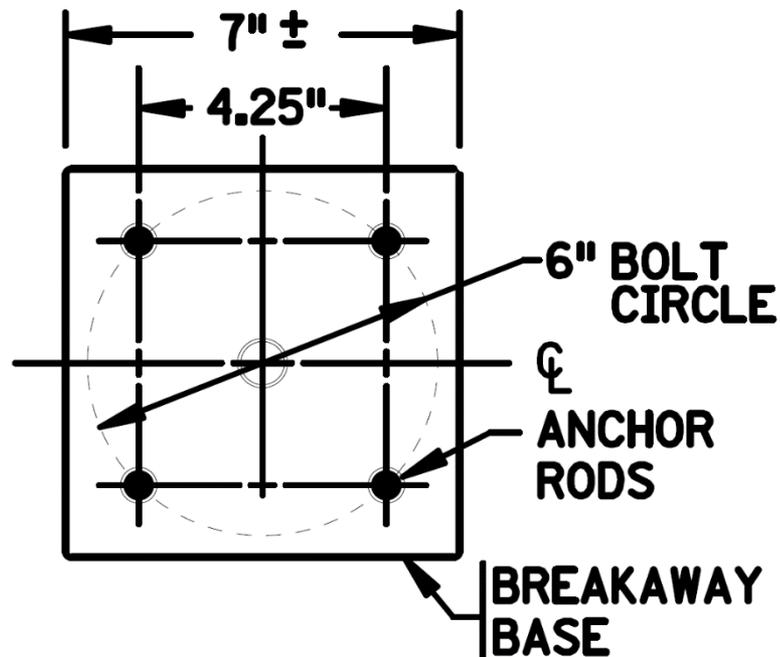
New Breakaway Pedestal Base Push Button Station



APS Push Button Station

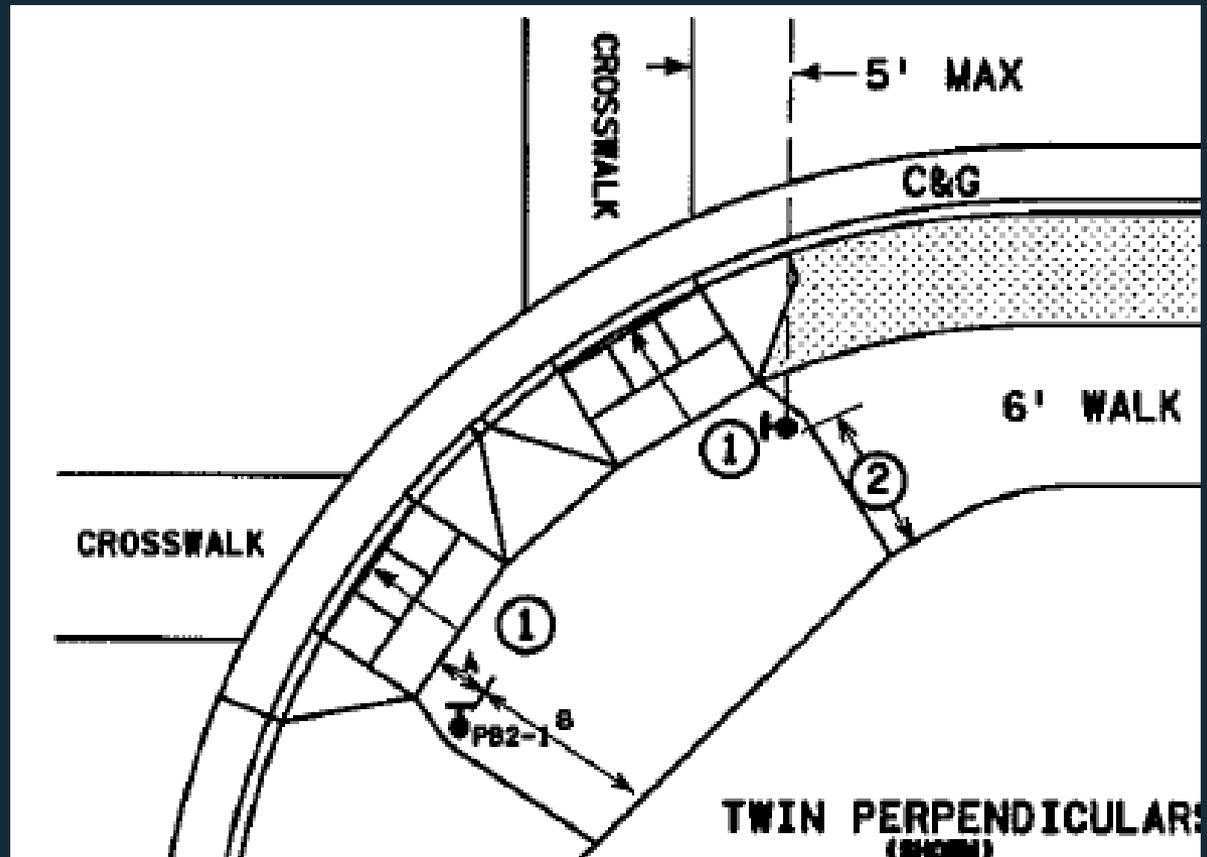


1" Rigid PVC Conduit with End Bell (2" +/- 1/2" Projection).



ANCHOR ROD PLACEMENT

Typical APS Push Button Location

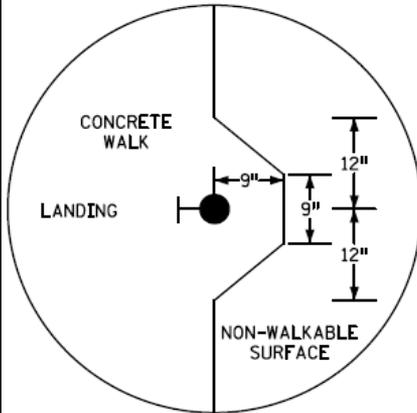


APS Push Button Station and Location

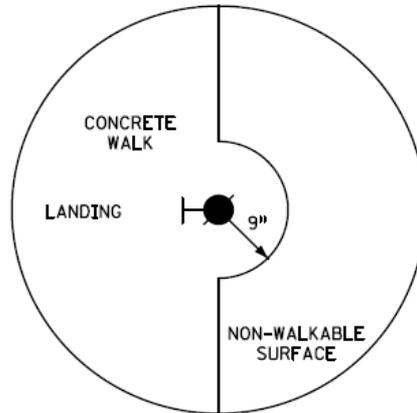


CONTRACTOR MUST USE OPTION 1 OR 2 WHEN THE APS PUSH BUTTON IS SHOWN AT THE EDGE OF WALK. OPTION USED (OR SELECTED) MUST BE THE SAME THROUGHOUT THE ENTIRE PROJECT.

OPTION 1



OPTION 2



S.A.P.



Pedestrian Signs installation

- Sign must be made with retro reflective sheeting.
- Verify Braille message plate is correct for button location.

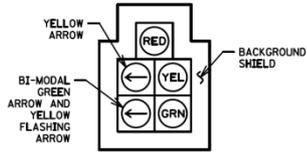


APS Push Buttons on Signal Poles

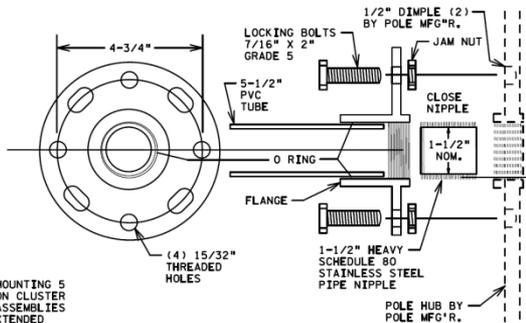


PLOT/TTED/REVISED: 10/15/2015

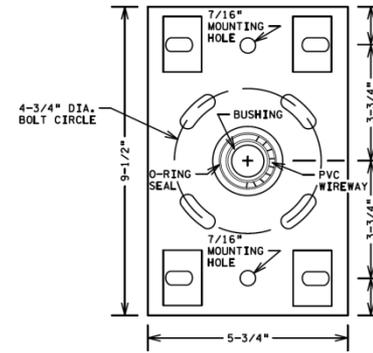
PATH & FILENAME: \\P:\P\11055055\F04 Mount Detail (10-14-15).dwg



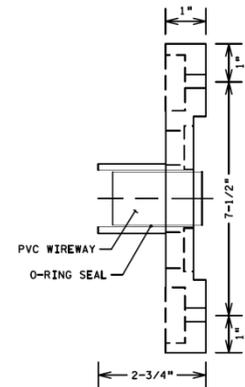
5 SECTION FYA CLUSTER HEAD DETAIL



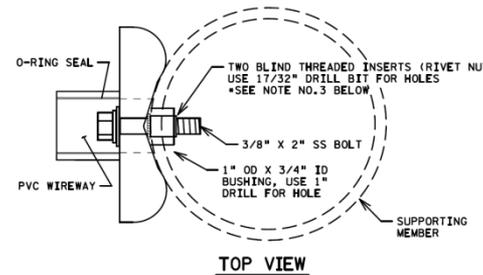
THREADED HUB AND FLANGE POLE ADAPTOR



BOLT ON HUB & FLANGE



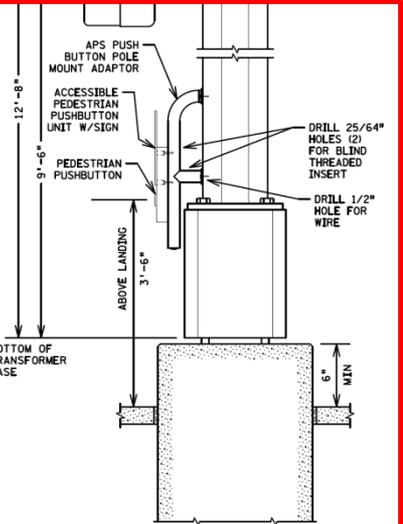
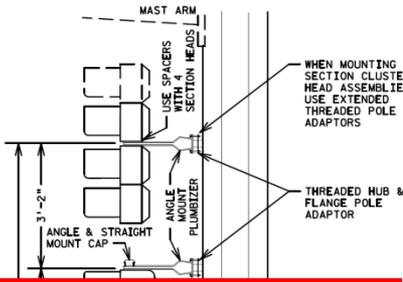
SIDE VIEW



TOP VIEW

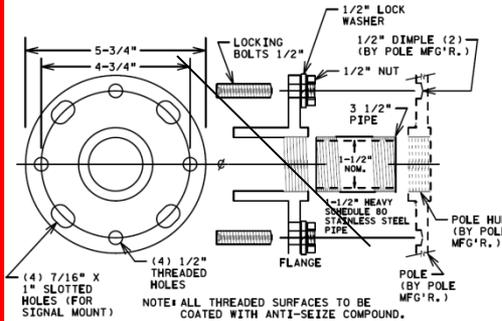


- NOTES:
1. ALL THREADED SURFACES TO BE COATED WITH ANTI-SEIZE COMPOUND.
 2. USE SIGNAL HEAD MOUNTED SPACERS FOR 4 SECTION POLY HEADS.
 3. BLIND THREADED INSERTS (RIVET NUT) MUST BE INSERTED USING MANUFACTURERS SPECIFIC INSERTION TOOL. NO OTHER METHOD IS ACCEPTABLE.
 4. SEE STANDARD PLATE NUMBER 8122 FOR ADDITIONAL PEDESTAL DETAILS.



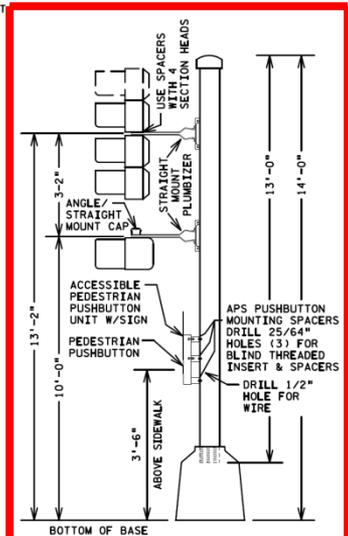
TYPICAL SIGNAL POLE MOUNTING

NOT TO SCALE



EXTENDED THREADED POLE ADAPTOR

- NOTES:
1. ALL THREADED SURFACES TO BE COATED WITH ANTI-SEIZE COMPOUND.
 2. USE SIGNAL HEAD MOUNTED SPACERS FOR 4 SECTION POLY HEADS.
 3. SEE STANDARD PLATE NUMBER 8123 FOR ADDITIONAL SIGNAL POLE DETAILS.
 4. EXTENDED THREADED POLE ADAPTOR ONLY USED WITH 5 SECTION CLUSTER HEADS.



TYPICAL PEDESTAL MOUNTING

NOT TO SCALE

| BY | DATE | REVISIONS |
|----|------|-----------|
| | | |
| | | |
| | | |

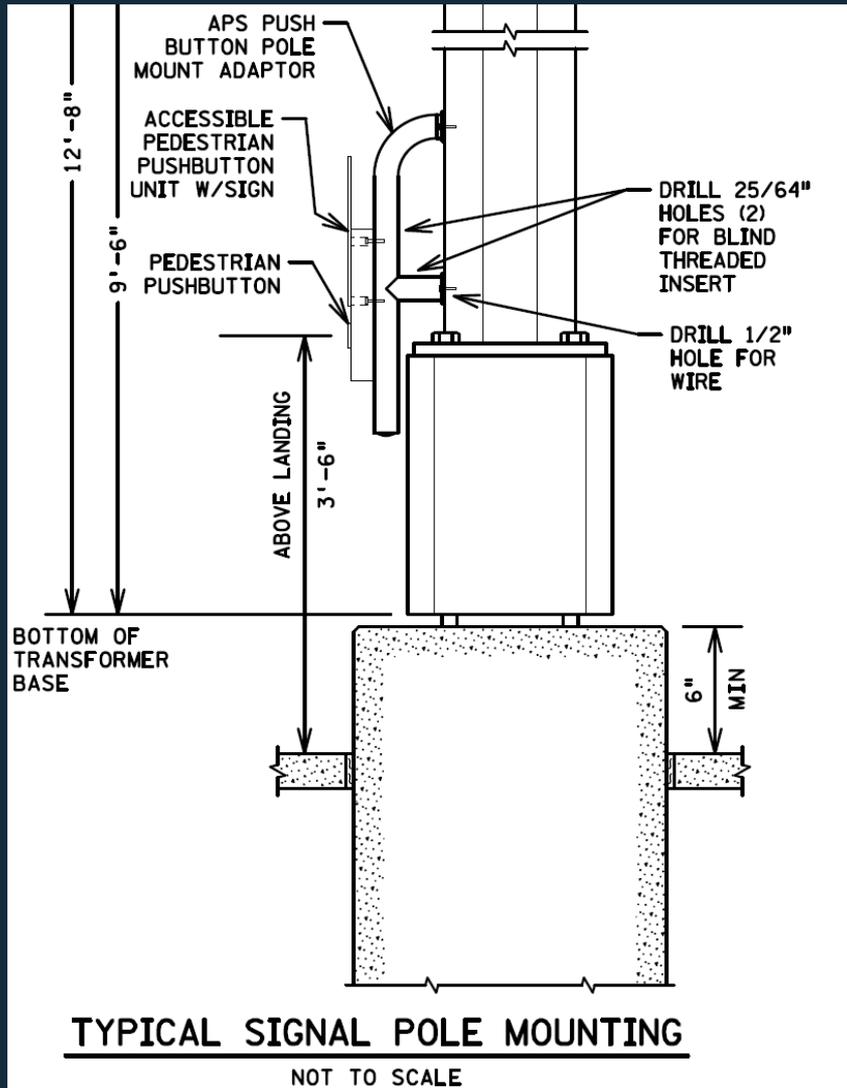
| | |
|----------------|------|
| SYSTEM ID# | T.E. |
| METER ADDRESS# | |
| MASTER ID# | T.E. |

POLE MOUNT DETAIL

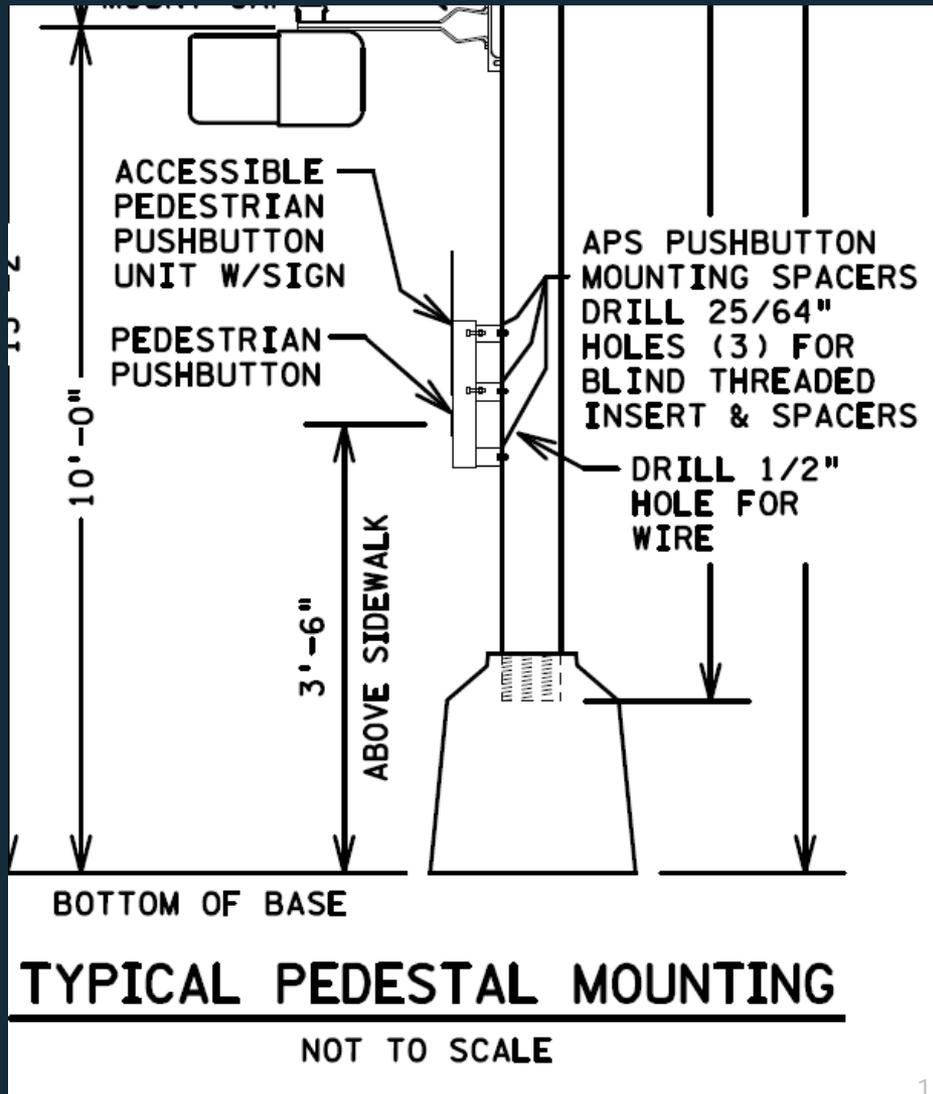
| | | | |
|-----------------|-----------|-----------|----------------|
| S.A.P. NO. | DRAWN BY# | CKD BY# | DATE: 10-14-15 |
| CERTIFIED BY | LIC. NO. | DATE: | |
| STATE PROJ. NO. | (T.H.) | SHEET NO. | OF SHEETS |

APS Push Buttons on Signal Poles

APS Pole Mount Adaptor



" Saddle Adaptor"



APS Push Buttons on Signal Poles

Signal pole
Foundations:
The APS push
button shall meet
the vertical
horizontal and
crosswalk skew
requirements.



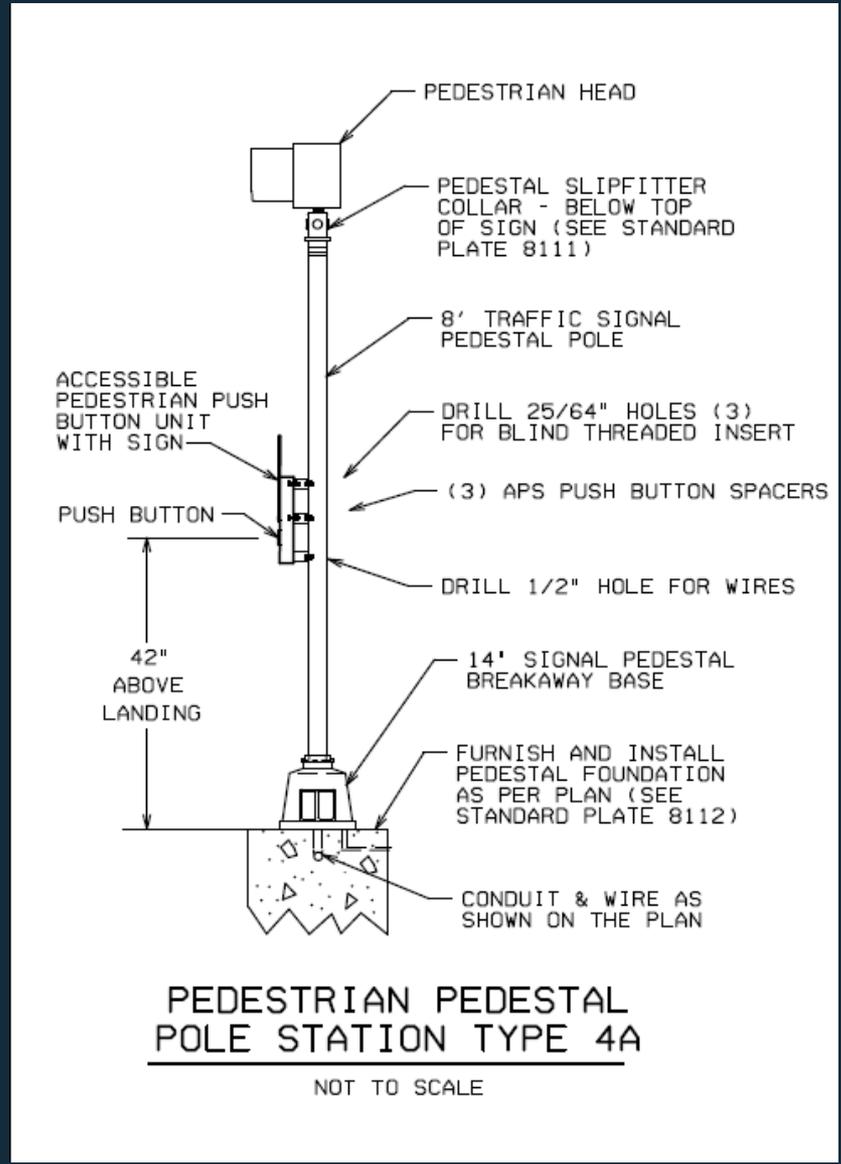
MnDOT APS Pole Mounting Adaptor



Pedestal Foundation Plate No. 8112H



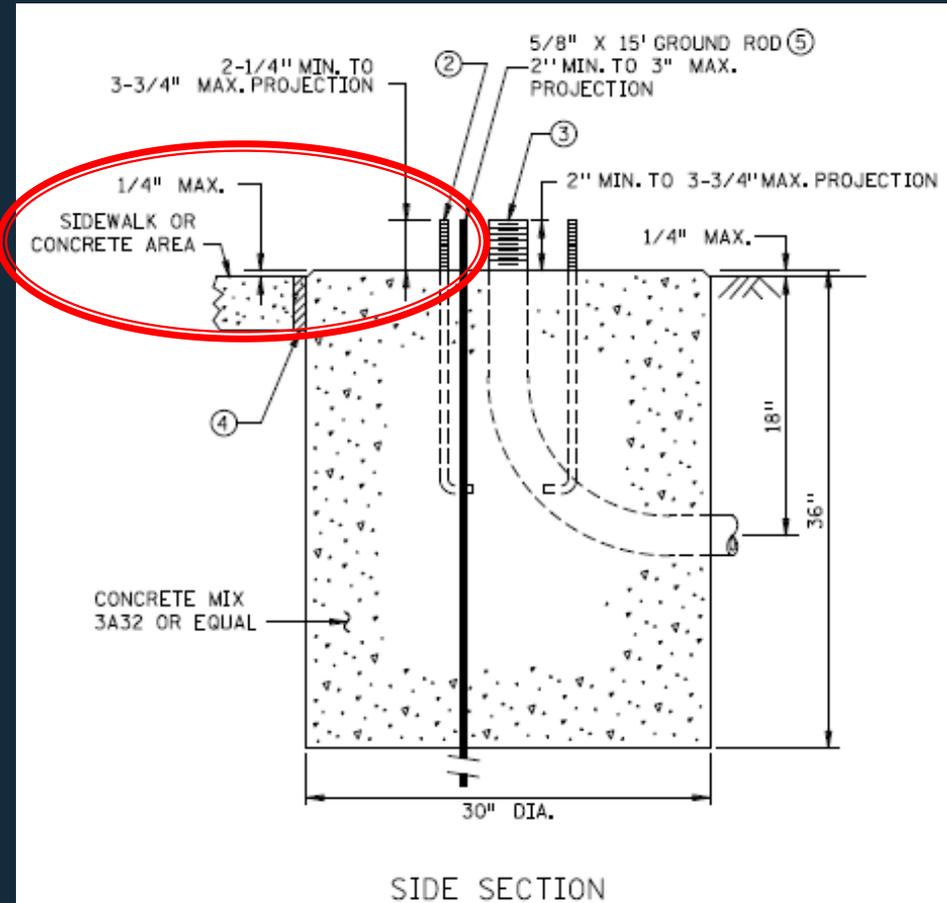
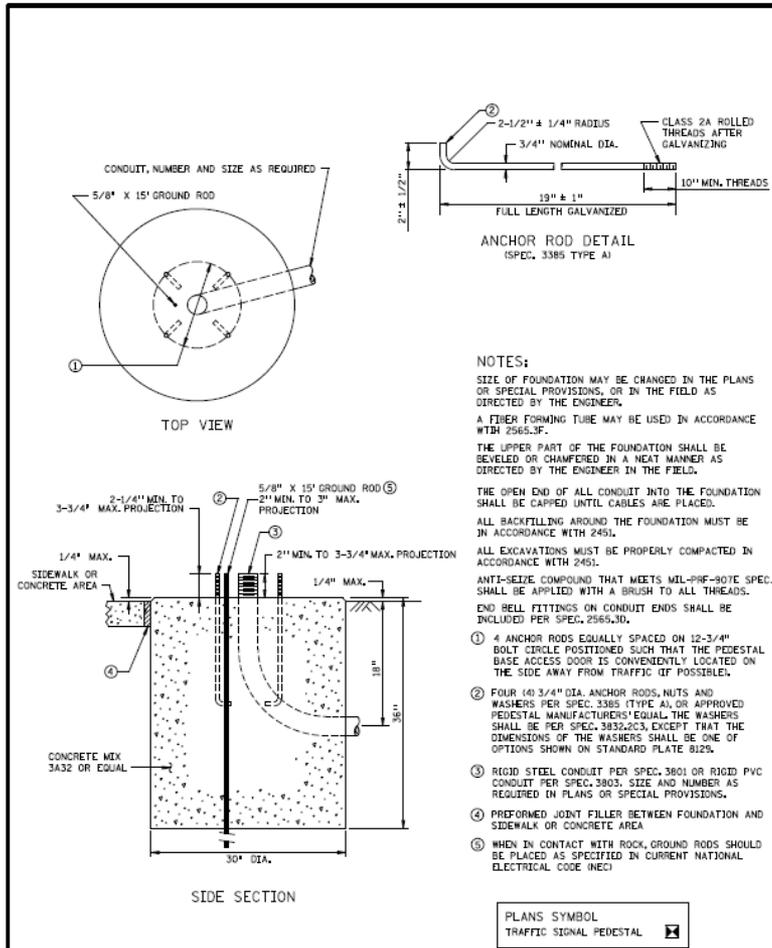
New Pedestal Foundations shall be constructed flush to within 1/4" of Landing.



Pedestal Foundation Plate No. 8112H



6/2/2014 Pedestal Foundation Detail



APPROVED JUNE 2, 2014
Christopher Ky
STATE DESIGN ENGINEER

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION
PEDESTAL FOUNDATION
(TRAFFIC CONTROL SIGNALS)

SPECIFICATION REFERENCE
2461
2565
STANDARD PLATE NO.
8112H

APS Push Buttons on Pedestals

If a push button is placed on a previously existing pedestal pole, the push button shall be installed using 3 APS push button spacers (Saddle Adaptors), and shall meet the vertical, horizontal, and crosswalk skew requirements.

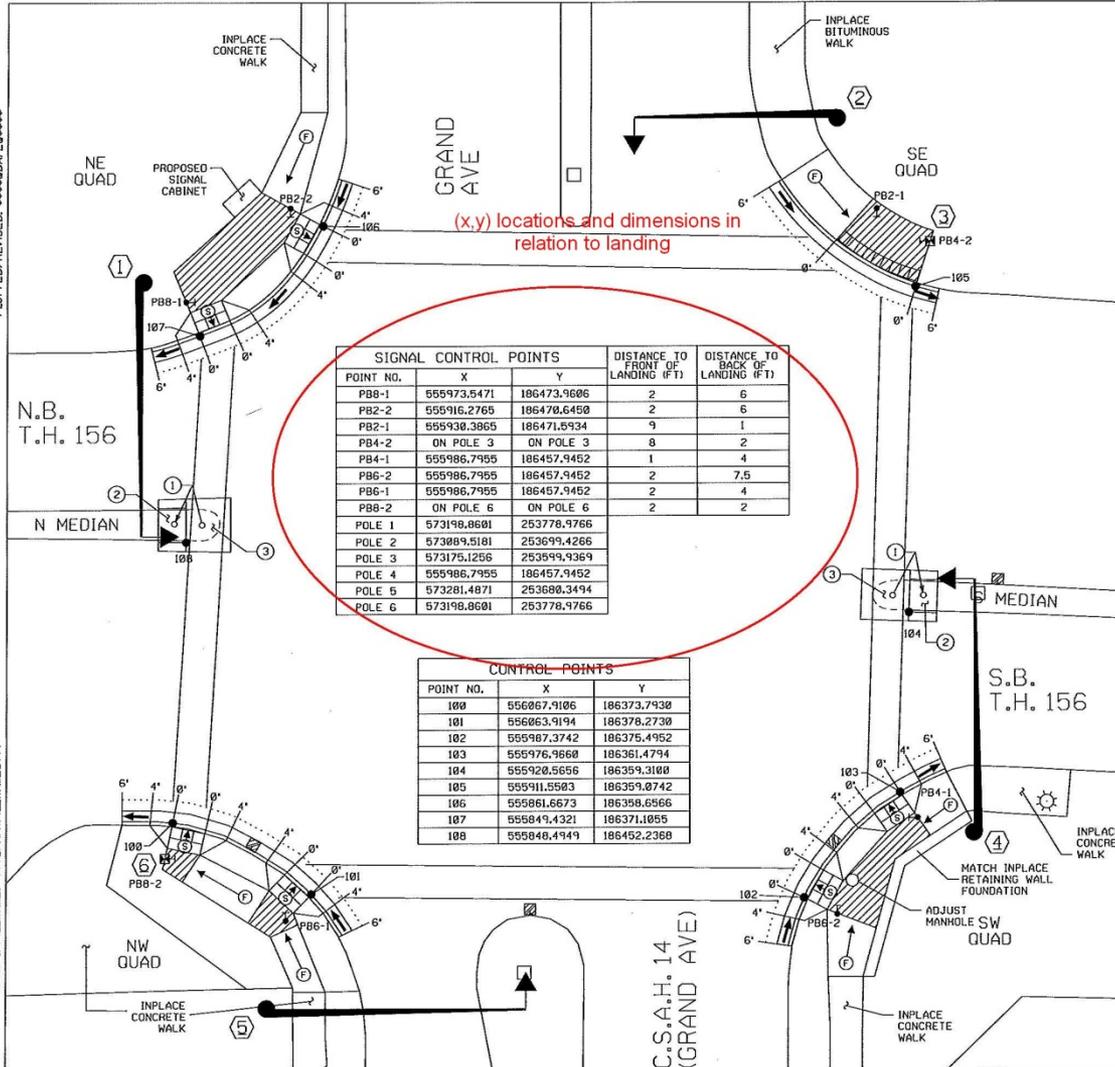


"Saddle Adaptor" on Pedestal Pole

Used on existing pedestal poles.



Signalized Intersection Plan Details



(x,y) locations and dimensions in relation to landing

| POINT NO. | X | Y | DISTANCE TO FRONT OF LANDING (FT) | DISTANCE TO BACK OF LANDING (FT) |
|-----------|-------------|-------------|-----------------------------------|----------------------------------|
| PB8-1 | 555973.5471 | 186473.9606 | 2 | 6 |
| PB2-2 | 555916.2765 | 186470.6480 | 2 | 6 |
| PB2-1 | 555930.3865 | 186471.5934 | 9 | 1 |
| PB4-2 | ON POLE 3 | ON POLE 3 | 8 | 2 |
| PB4-1 | 555986.7985 | 186457.9452 | 1 | 4 |
| PB6-2 | 555986.7985 | 186457.9452 | 2 | 7.5 |
| PB6-1 | 555986.7985 | 186457.9452 | 2 | 4 |
| PB8-2 | ON POLE 6 | ON POLE 6 | 2 | 2 |
| POLE 1 | 573198.8681 | 253778.9766 | | |
| POLE 2 | 573089.5181 | 253699.4266 | | |
| POLE 3 | 573175.1266 | 253599.9369 | | |
| POLE 4 | 555986.7985 | 186457.9452 | | |
| POLE 5 | 573281.4871 | 253680.3494 | | |
| POLE 6 | 573198.8681 | 253778.9766 | | |

| 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 | 555911.5583 | 186359.0742 |
| 106 | 555861.6673 | 186358.6566 |
| 107 | 555849.4321 | 186371.1855 |
| 108 | 555840.4199 | 186452.2368 |

LEGEND

- 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
- 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

TABULATED QUANTITIES

| LOCATION | REMOVE CONC. WALK | | REMOVE CONC. CURB & GUTTER | | MILL AND PATCH BITUMINOUS PAVEMENT | | CONCRETE WALK | | CONCRETE CURB & GUTTER | | CONCRETE CURB DESIGN V | | TRUNCATED DOMES | |
|----------|-------------------|--------|----------------------------|--------|------------------------------------|--------|---------------|--------|------------------------|--------|------------------------|-----------------|-----------------|----|
| | 50 FT | LIN FT | 50 FT | LIN FT | 50 FT | LIN FT | 50 FT | LIN FT | 50 FT | LIN FT | SQ | 36' RAD SECTION | SQ | SF |
| NE QUAD | 293 | 45 | 45 | 548 | 45 | - | 24 | - | - | - | - | - | - | - |
| SE QUAD | 118 | 31 | 31 | 329 | 31 | - | - | - | - | - | - | - | - | 40 |
| S MEDIAN | 59 | 26 | 26 | 28 | 26 | - | - | - | - | - | - | - | - | - |
| SW QUAD | - | 20 | 391 | 129 | 20 | - | 24 | - | - | - | - | - | - | - |
| NW QUAD | 275 | 20 | 592 | 377 | 20 | - | 24 | - | - | - | - | - | - | - |
| N MEDIAN | 68 | 26 | - | 29 | 10 | - | - | - | - | - | - | - | - | - |
| TOTALS | 797 | 168 | 983 | 1448 | 136 | - | 72 | 40 | - | - | - | - | - | - |

- 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.

- 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.

DISTRICT #: 202 DISTRICTS: 202
 IPLOT NAME: 236_STATE_JMY_156
 PATH & FILENAME: sssapath\FILENAME.dwg
 PLOTTED/REVISED: ssssdwgdate

| | | | | | | | | |
|----------|------------|-----------------|--|-----------------|------------------------------------|--------------------------|---------------|-------------|
| BY _____ | DATE _____ | REVISIONS _____ | SYSTEM ID: 20937 _____ | T.E. 5112 _____ | S.A.P. NO. _____ | DRAWN BY: _____ | CKD BY: _____ | DATE: _____ |
| _____ | _____ | _____ | METER ADDRESS: 236_STATE_JMY_156 _____ | _____ | CERTIFIED BY _____ | LIC. NO. _____ | DATE: _____ | _____ |
| _____ | _____ | _____ | MASTER ID: 21220 _____ | T.E. _____ | STATE PROJ. NO. XXXX-XX (T.H. XXX) | SHEET NO. X OF XX SHEETS | | |

PEDESTRIAN CROSSWALK DETAILS
 TRAFFIC CONTROL SIGNAL SYSTEM
 T.H. 156 AT C.S.A.H. 14 (GRAND AVE.)
 IN SOUTH ST. PAUL, DAKOTA COUNTY

APS Signals New for 2013

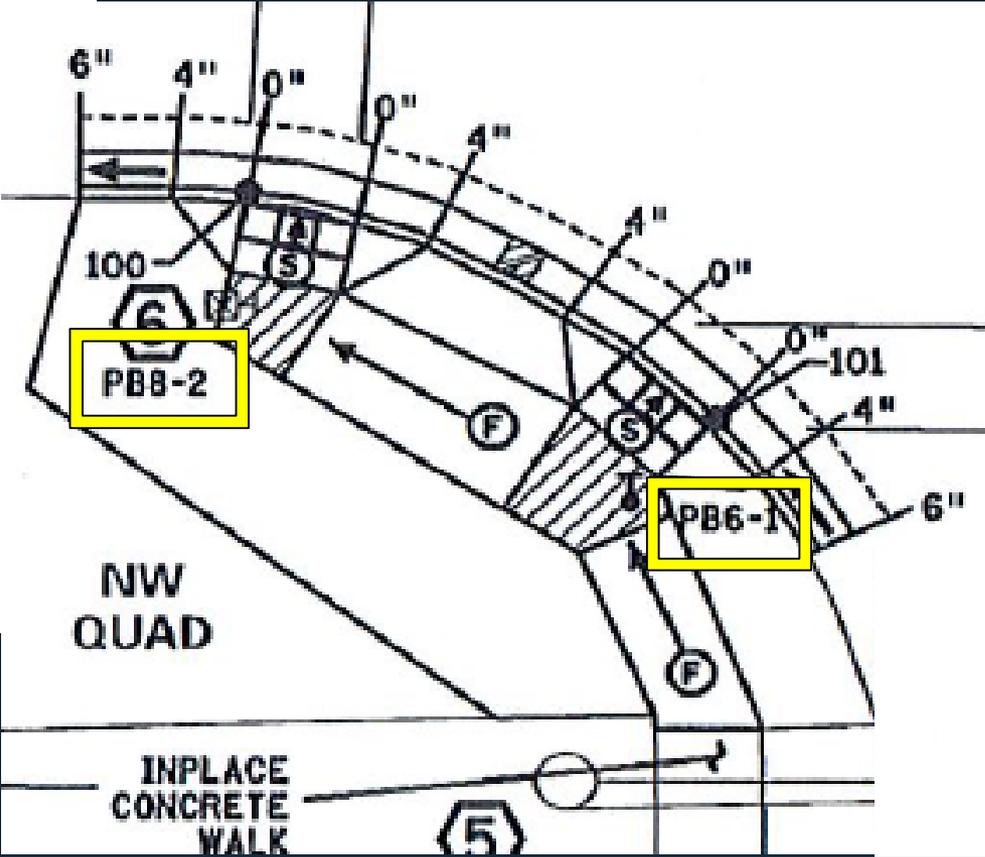


- Signal Control Points
- PB8-2 and PB6-1

| 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 |

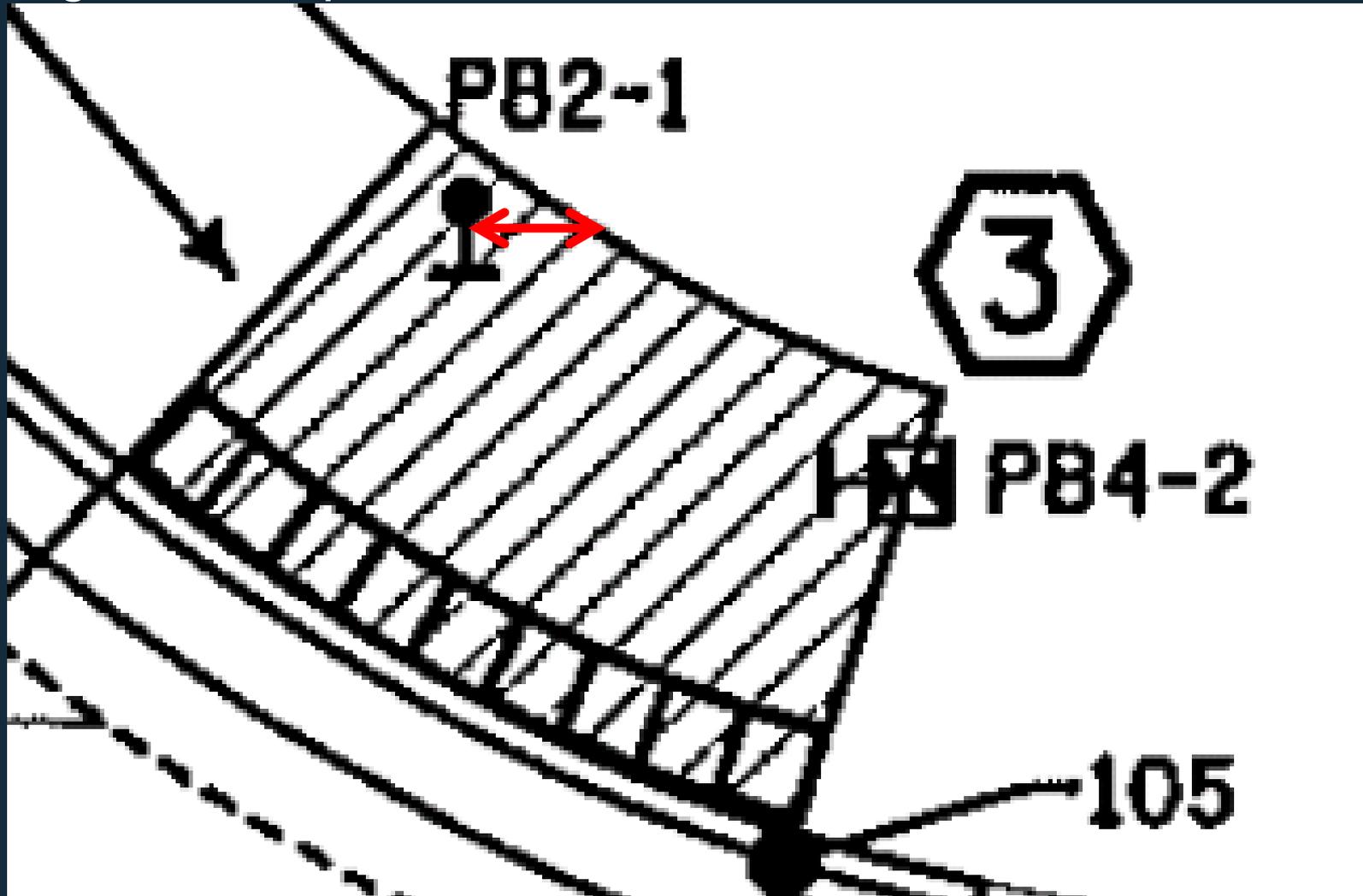
| CONTROL POINTS | | |
|----------------|-------------|-------------|
| POINT NO. | X | Y |
| 100 | 558067.9106 | 186373.7930 |
| 101 | 556063.9194 | 186378.2730 |
| 102 | 555987.3742 | 186375.4952 |
| 103 | 555976.9660 | 186361.4794 |
| 104 | 555920.5656 | 186359.3100 |
| 105 | 555911.5503 | 186359.0742 |
| 106 | 555861.6673 | 186358.6566 |
| 107 | 555849.4321 | 186371.1055 |
| 108 | 555848.4949 | 186452.2368 |



Signalized Intersection Plan Details



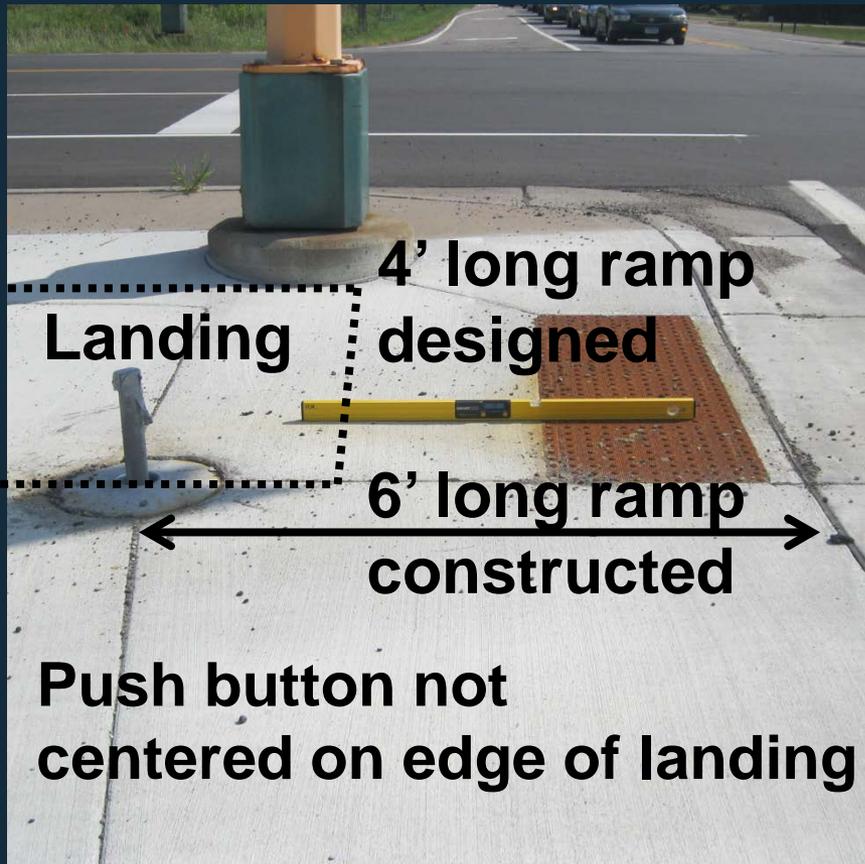
- If staked dimension will not work consult the Engineer as per 1803 .



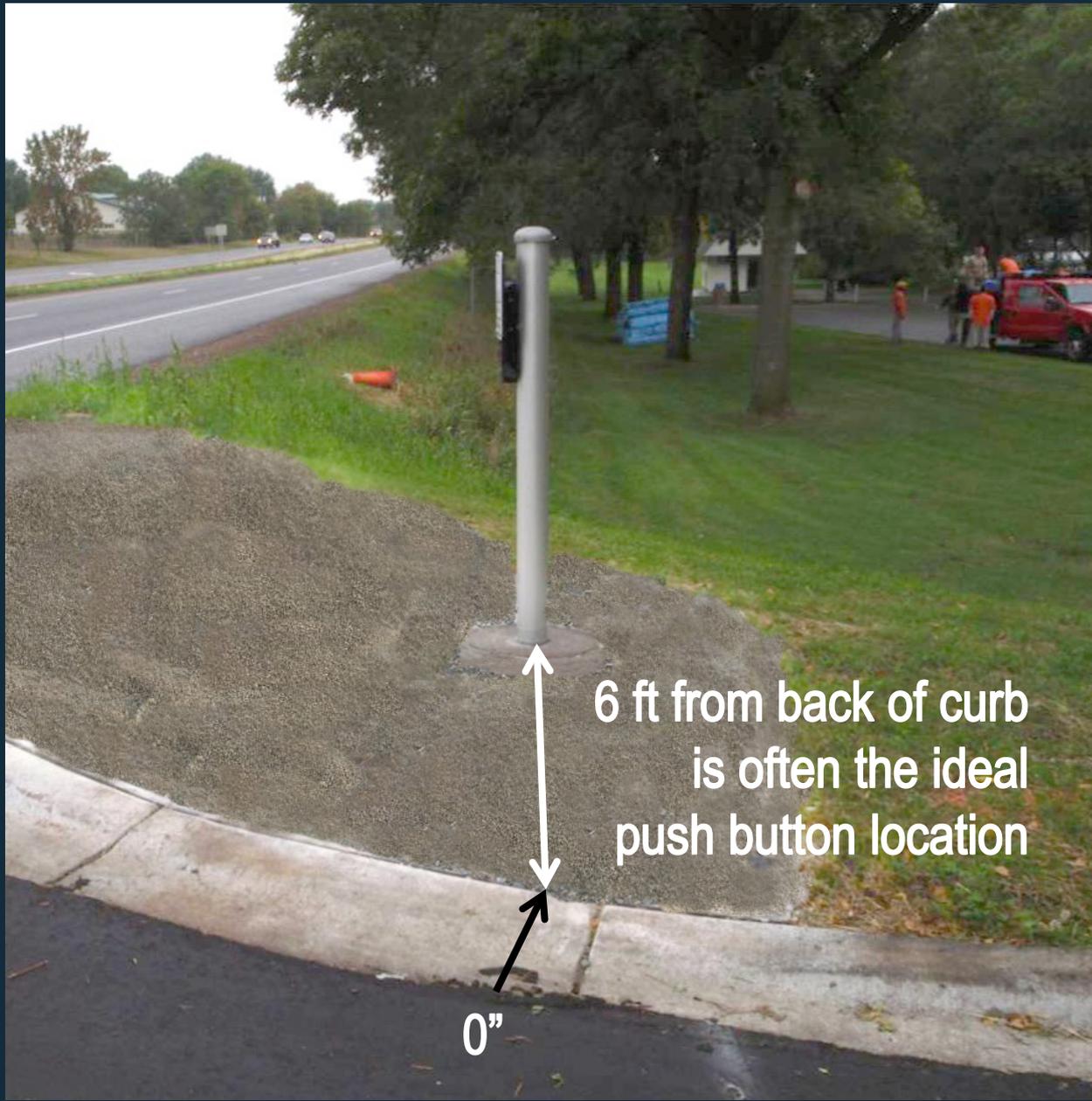
ADA Curb Ramp New for 2013



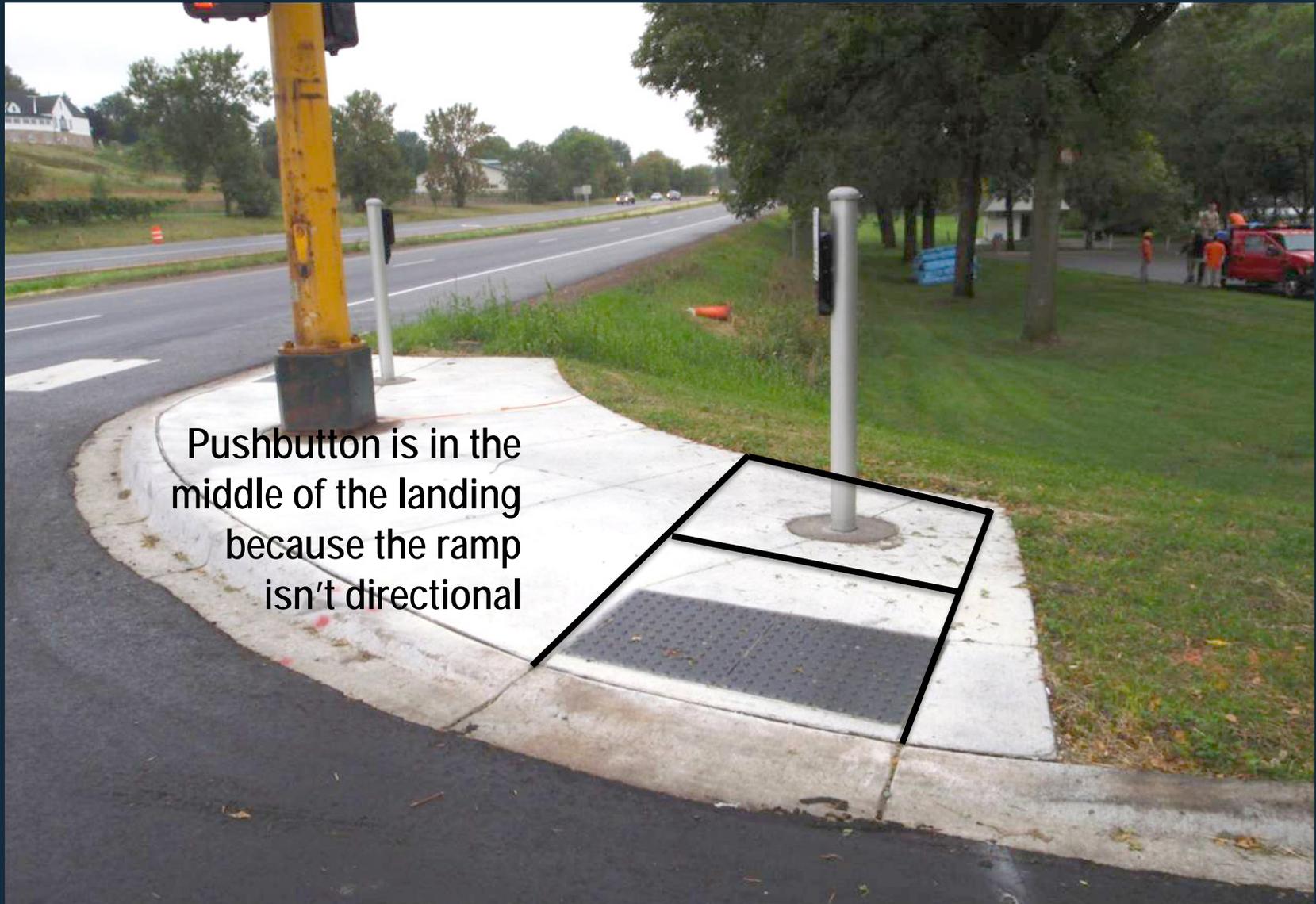
- Additional plan information will minimize rework



Know the Proposed Ramp Design



Know the Proposed Ramp Design



Pushbutton is in the middle of the landing because the ramp isn't directional

Pedestrian Signal Systems

All new hand holes shall be placed outside the PAR
Inclusive of ramps and landings.



APS Compliance Checklist



APS Compliance Checklists link to SharePoint and the Guidance is on ADA web site.

MnDOT ADA Compliance Checklist for APS

SP: [] ? City: [] District: []
 Intersection: [] ? Quadrant: [] ?
 Construction Year: [] ?

1) Are push button stations placed and push button faces oriented in accordance with standards? ? Yes No

2) Is there a minimum 4' x 4' landing adjacent to each push button? ? Yes No

3) Distance from crosswalk edge to push button face (ft): ?
 Trunk Hwy Side Street

4) Distance from the push button to the back of curb: (measured in the direction of the pedestrian travel in ft) ?
 Trunk Hwy Side Street

5) Distance between push buttons (ft): ?

6) Push button height (inches): ?
 Trunk Hwy Side Street

7) Push button side reach (inches): ?
 Trunk Hwy Side Street

8) Is APS system fully compliant? ?

If **NO**, check one of the following reasons why. Explain why the component(s) didn't meet compliance (see ADA Compliance Checklist Guidance for additional directions and attach pages if needed):

Topography ? Structure(s) ? Utilities ? Contractor ?

[]

9) Has a 6' maintenance access route (MAR) been maintained? ? Yes No

10) Are push buttons situated at least 2' away from both the back of walk and ramp grade break? ? Yes No

11) Are all newly constructed hand-hole(s) located outside of pedestrian access route (PAR)? ? Yes No

12) Push buttons placed according to the plan details? Yes No

If no, please describe/explain:

[]

Printed Name: [] Date (mm/dd/yyyy): []

I certify that the information entered on this form is accurate to the best of my knowledge and that I fully understand the checklist standards and am qualified to carry out the inspection.

Submit to SharePoint Library Pg. 1



ADA Compliance Checklist Guidance [APS] (Accessible Pedestrian Signals)

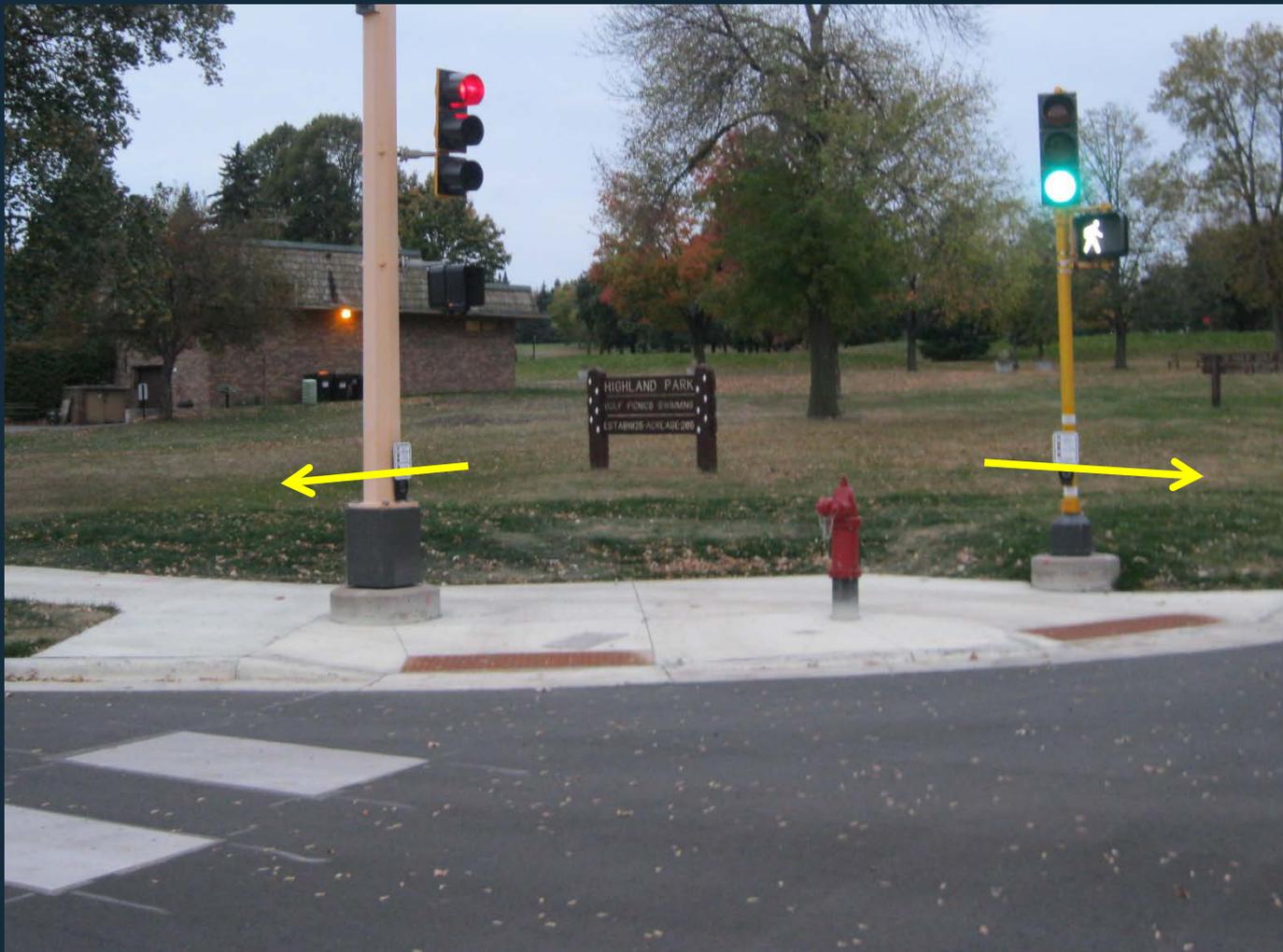


All 2014 and future ADA work including carryover projects need to follow this guidance and compliance forms need to be entered electronically.

APS Compliance Checklist



1) Push buttons stations are properly placed and the push button faces are oriented properly.



APS Compliance Checklist



2) There must be a 4' x 4' landing adjacent to the push button.



APS Compliance Checklist



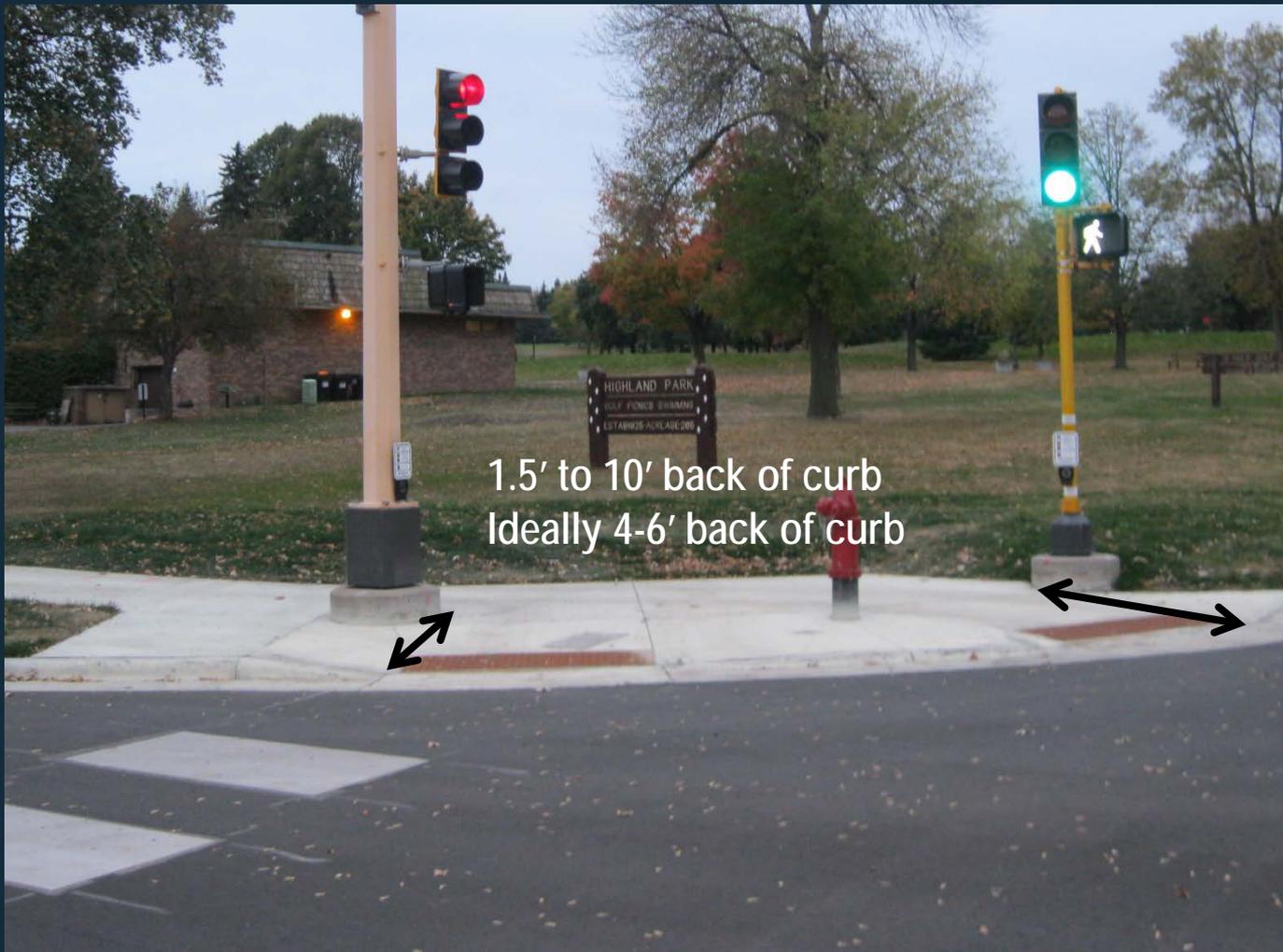
3) Distance from crosswalk edge to push button face:



APS Compliance Checklist



4) Distance from the push buttons to the back of curb:

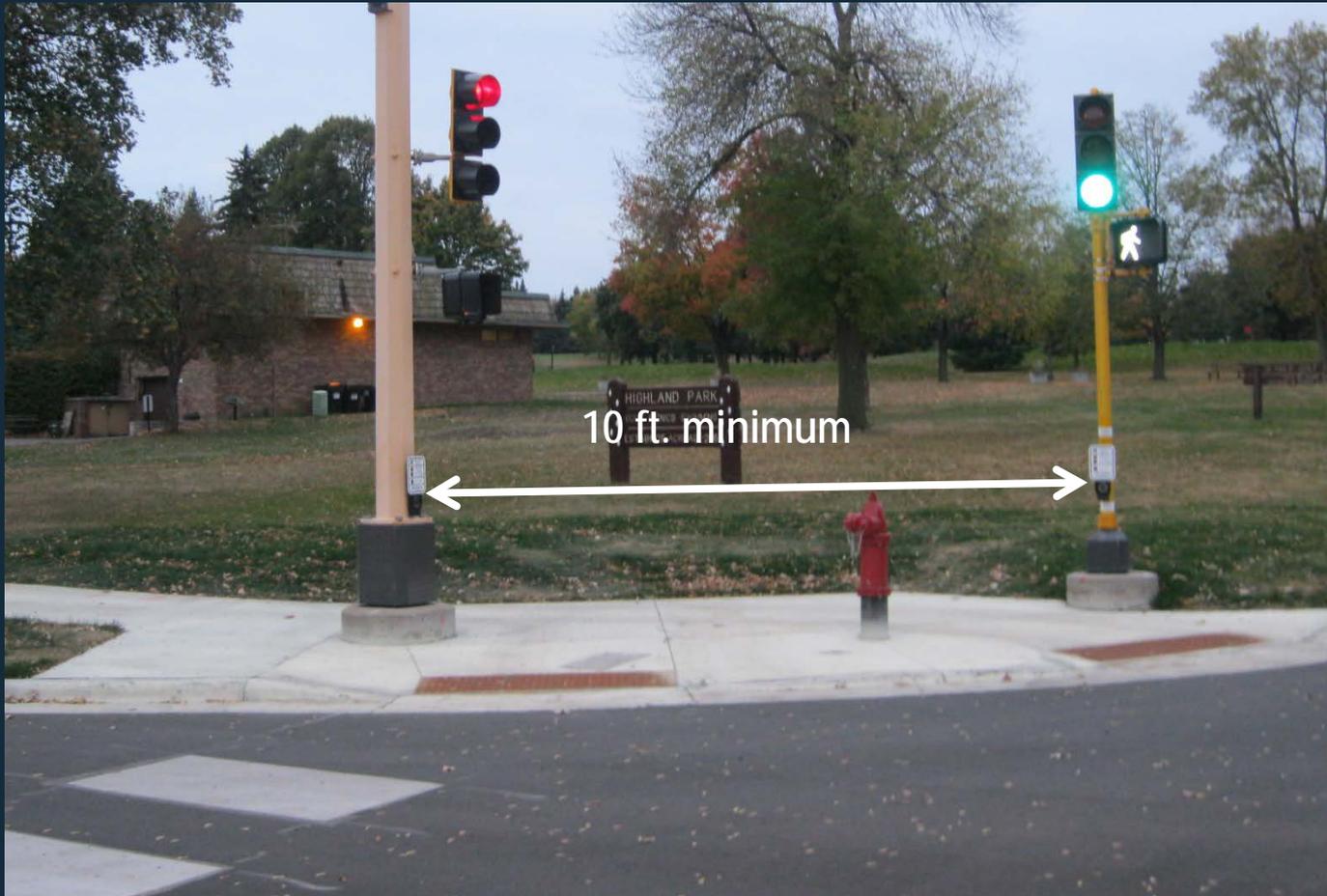


1.5' to 10' back of curb
Ideally 4-6' back of curb

APS Compliance Checklist



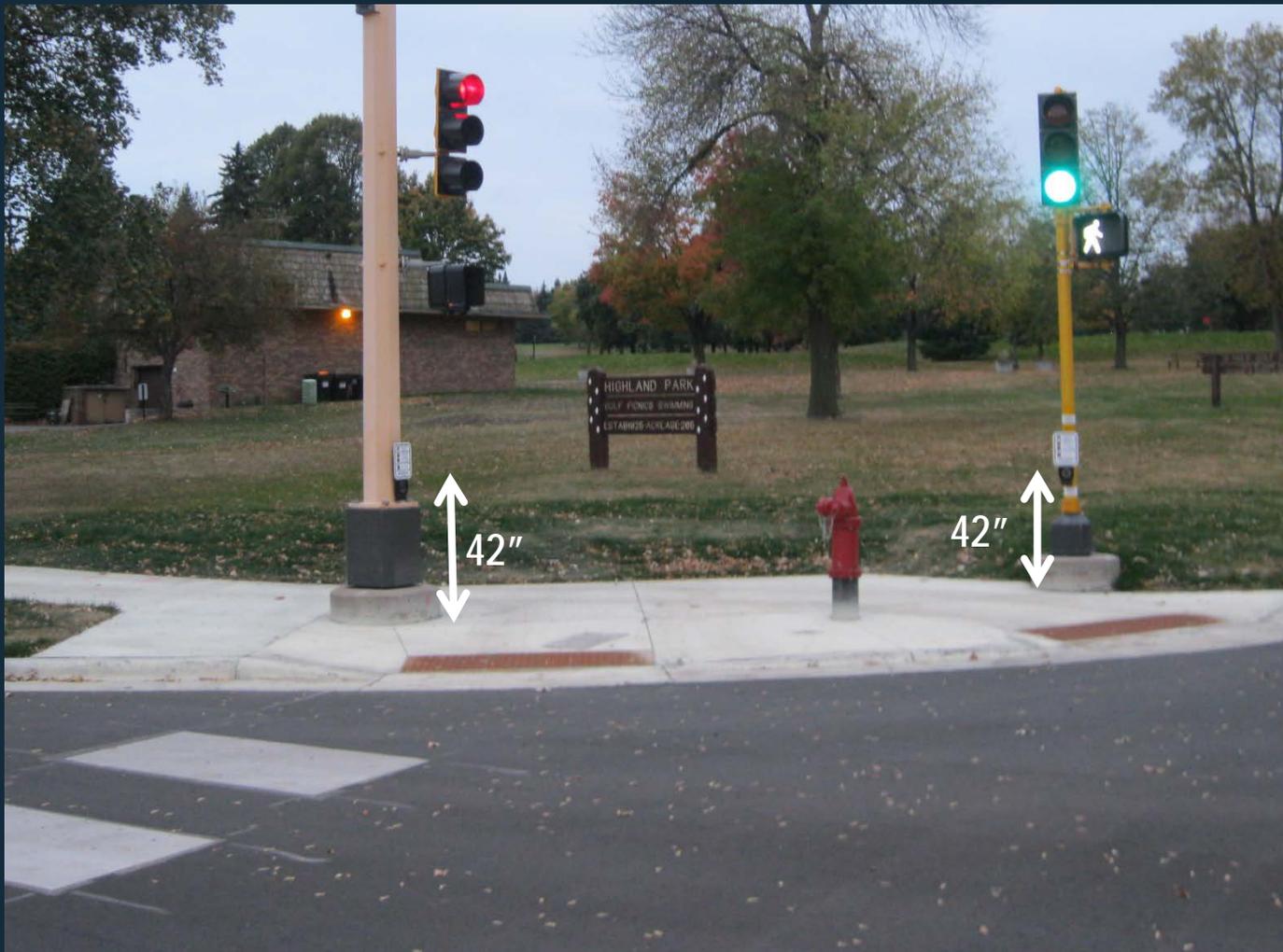
5) Distance between the push buttons: _____



APS Compliance Checklist



6) Push button height: _____



APS Compliance Checklist

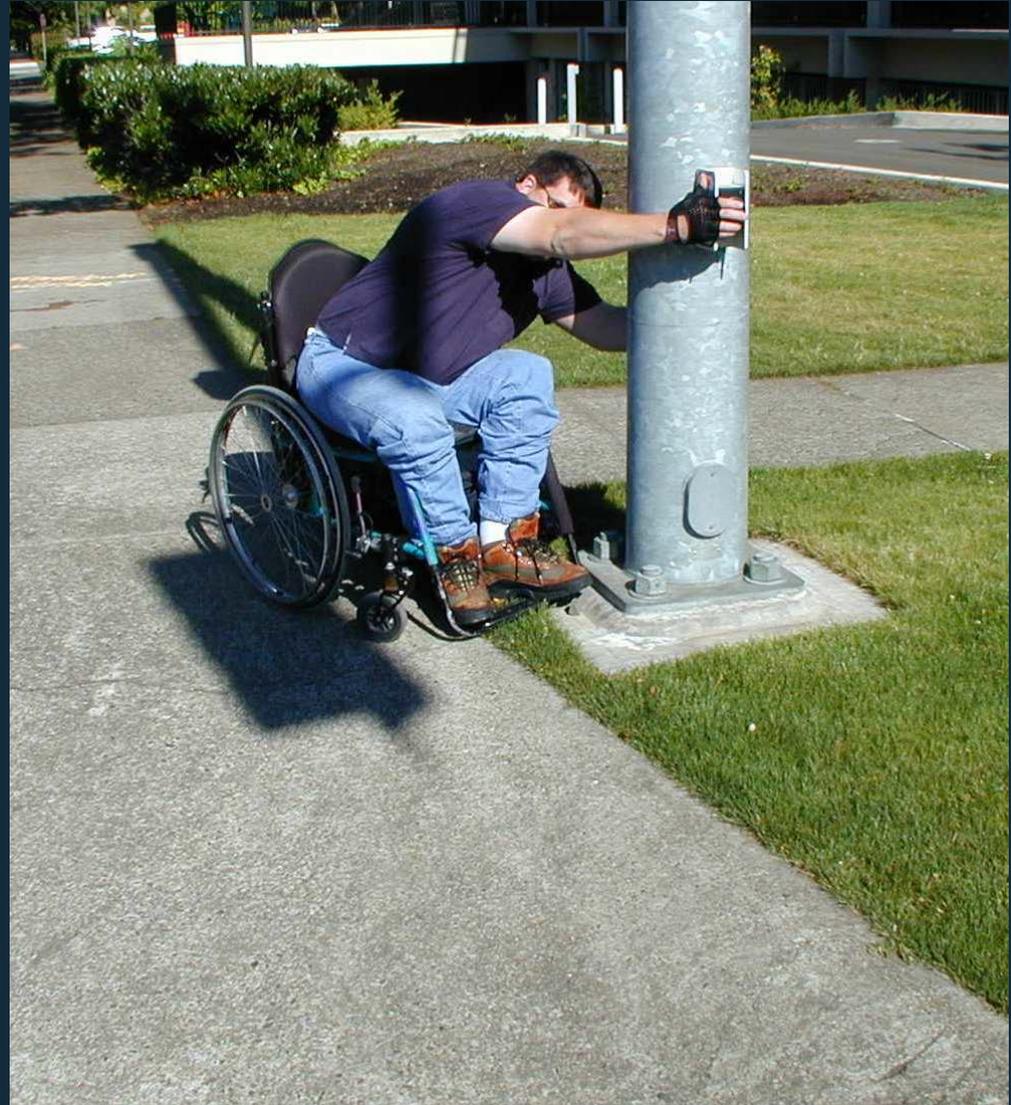


7) The push button needs an unobstructed side reach of 10" maximum.



Lessons Learned

Locating APS push buttons



Coordination with concrete contractor



Must have a level landing adjacent to push button

Coordination with concrete contractor



PB at grade break, no PAR

If two crosswalks meet...



Crosswalks intersect each other in roadway

Offset to crosswalk is greater than 5 ft. or the distance between buttons will be less than 10 ft.

MnDOT's 4 ft minimum setback



Pushbutton is too close to the roadway

Button at outside edge of crosswalk



Push button should be here for user consistency

Buttons at outside edge of crosswalks



Button interferes with ramp



Button in middle of sidewalk



Button in middle of 10' trail

- Does button location pass the eye test from both directions.



Buttons at outside edge of crosswalks



- 1803 (G) Push Button shall be located at the outside crosswalk edge...



**Push Button is
improperly oriented**

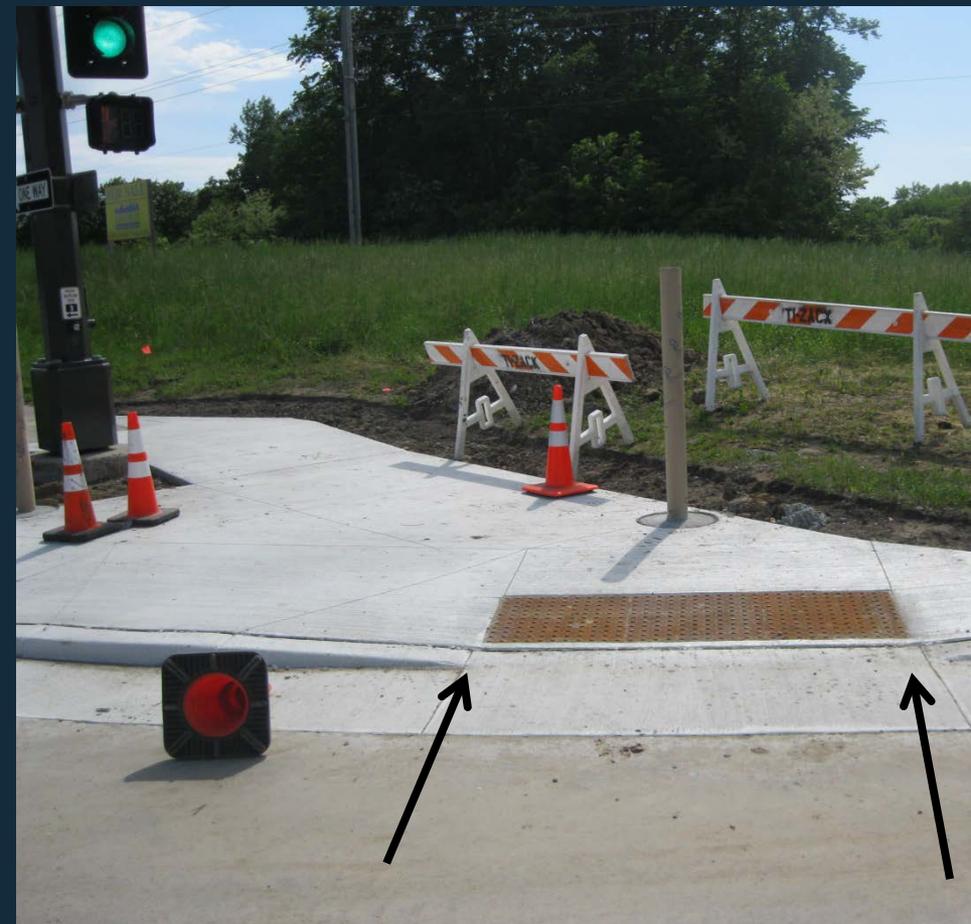
Lessons Learned

- This light foundation was placed in the 4' Minimum PAR due to utility conflicts on a full reconstruction project.



Rework costs everybody

- Check curb cuts if it doesn't look right consult the Engineer as per 1803.



10" horizontal offset exceeded



Questions?

Your Destination...Our Priority

