

RESOLUTION NO. 5302-16

A RESOLUTION UPDATING THE PUBLIC WORKS CONSTRUCTION CODE

WHEREAS, Tualatin Municipal Code (TMC) 2-3-010 establishes the Public Works Construction Code (PWCC) as the standards, specifications and procedures used for all Public Works Construction within the City

WHEREAS, under Tualatin Municipal Code 2-3-020, the City Engineer has the duty to maintain and update the PWCC, subject to Council approval by resolution.

WHEREAS, the PWCC was adopted by Council resolution on October 8, 2001, and subsequently amended on February 11, 2002; October 14, 2002; March 10, 2003; March 22, 2004; April 12, 2010; July 26, 2010; September 26, 2011; and February 25, 2013; and

WHEREAS, the City Engineer is recommending the PWCC be amended;

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF TUALATIN, OREGON, that:

Section 1. The City adopts the most recent version of the Manual on Uniform Traffic Control Devices and the Standard Specifications supplemented by the State of Oregon (MUTCD). To the extent the PWCC contains a reference to an older version, the newest version controls.

Section 2. PWCC Section 202.1.00 is deleted and replaced to read as follows:

201.1.01 Scope

This chapter covers the standards for the design of public works and water quality facilities, and the preparation and submittal of plans for public works and water quality construction. Except as provided otherwise in a specific section, these standards and regulations apply to all public works and water quality construction within the City.

All public works facilities must be designed and constructed in accordance with the Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG).

Section 3. PWCC Section 202.2.00 is deleted and replaced to read as follows:

202.2.00 Plan View

Plan views must show the following:

- 1) Right-of-way, property lines, tract, permanent and temporary easement lines.
- 2) Subdivision name, lot numbers, street names, and other identifying labels. Street names are subject to the approval of the City.
- 3) Location and stationing of existing and proposed street centerlines and curb faces at a minimum of 100-foot intervals.
- 4) Horizontal alignment and curve data of street centerline and curb returns.
- 5) Public utilities and trees (8" in diameter and larger) in conflict with the construction or operation of the street and drainage facilities.
- 6) Location, stationing, and size of drainage and water quality facilities. Facility stationing must be located in relationship to the street stationing. Show drainage facilities both upstream and downstream of the project. Direction of drainage flows must be shown with arrows.
- 7) Match lines with sheet number references.
- 8) Top of curb elevations along curb returns and cul-de-sacs at quarter-points, PC and TL points, and at 100-foot stations.
- 9) Location of the low points of street grades and curb returns.
- 10) Curb ramp locations and designs including slopes, elevations and other dimensions necessary to construct curb ramps in accordance with PROWAG.
- 11) Crown lines along portions of streets transitioning from one typical section to another.
- 12) Traffic control plan, including temporary and permanent striping and signing.
- 13) Centerline stationing of all intersecting streets.
- 14) Location and description of existing survey monuments including, but not limited to, property corners, section corners, quarter corners, and donation land claim corners.
- 15) Legend.

- 16) Permittee and developer's name, address, and phone number (including emergency after hours number).
- 17) Size, location, material type, grade or slope of all existing utilities including, but not limited to, sanitary sewer, domestic water, storm water, electric, telephone, gas, and cable tv, and size, location, material type, elevation, and proposed scope of the proposed utility.
- 18) Location of existing buildings, wells, septic tanks, drain fields, fuel tanks, other buried structures, driveways, mailboxes, signs, and any other existing facilities.
- 19) The total square footage of new impervious area for projects other than single family residences and duplexes. This determination needs to be differentiated into public (within rights-of-way) and private jurisdictions.
- 20) FEMA designated 100-year floodplains and floodways, or areas of flooding during a 100-year storm event.
- 21) Wetland, greenway, water quality facilities, and associated buffer strips or undisturbed corridors, or significant natural resource areas.
- 22) An erosion control plan must be provided and must include the following:
 - a. The topography of the site (existing and proposed).
 - b. Graveled access points (dimensioned).
 - c. Sediment fences, as proposed.
 - d. Post construction sediment fences, as proposed.
 - e. Filtration control for existing inlets, as proposed.
 - f. Clearing limits.
 - g. Details corresponding to each control measure.
 - h. The total square footage of this site.
 - i. Other proposed measures, i.e. detention ponds.
 - j. Landscaping (existing and proposed).
- 23) Detail sheets must be provided, as proposed.

24) Any other information deemed necessary by the City Engineer to clarify and show details of the project.

Section 4. PWCC Section 203.2.02 is deleted and replaced to read as follows:

203.2.02 Sight Distance

The most recent AASHTO Guidelines as outlined in "A Policy on Geometric Design of Highways and Streets" must be used to develop safe streets, with particular emphasis on the four types of controls that apply to at-grade intersections:

- 1) No control, but allowing vehicles to adjust speed.
- 2) Yield control where vehicles on the minor intersecting roadway must yield to vehicles on the major intersecting roadway.
- 3) Stop control where traffic on the minor roadway must stop prior to entering the major roadway.
- 4) Signal control where all legs of the intersecting roadways are required to stop by either a stop sign or where the intersection is controlled by traffic signals.

Section 5. PWCC Section 203.2.04 is deleted and replaced to read as follows:

203.2.04 Superelevation

Where superelevation is required as indicated by AASHTO guidelines, street curves should be designed for a maximum superelevation of 0.06 with appropriate transitions per AASHTO standards. Wherever possible, street design must conform to the standard street cross section.

Where superelevations coincide with crosswalks or pedestrian crossings, limit roadway cross section to 5% max counter slope for 4 feet approaching curb ramp.

Section 6. PWCC Section 203.2.08 is deleted and replaced to read as follows:

203.2.08 Intersections

The following are the minimum requirements for intersections:

- A. The interior angle at intersecting streets must be kept as near to ninety (90)

degrees as possible and in no case will it be less than seventy-five (75) degrees.

- B. Minimum intersection spacing must be at least 100 ft., measured centerline to centerline.
- C. Curb ramps must be provided at all corners of all intersections, regardless of curb type, and must conform to the Standard Drawings and Section 203.2.15.
- D. Curb radii at intersections must be as shown in Table 203-1 for the various function classifications. The right-of-way radii at intersections must be sufficient to maintain at least the same right-of-way to curb spacing as the lower classified street.

Section 7. PWCC Section 203.2.11C is deleted and replaced to read as follows:

203.2.11C Accessways

The following standards must be used when designing and constructing public accessways:

- 1. Public accessways must be designed and constructed in accordance with the Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG)
- 2. Public accessways must be designed to comply with the TDC.
- 3. Accessways must be constructed of Portland Cement Concrete.
- 4. Materials and workmanship in the construction of accessways must conform to the standards used in construction of public sidewalks.
- 5. An accessway must be 8-feet in width inside an 8-foot wide tract dedicated to the City.

Section 8. PWCC Section 203.2.14 is deleted and replaced to read as follows:

203.2.14 Sidewalks

The following specifies the requirements for sidewalks:

- A. Sidewalks must be designed and constructed in accordance with the Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG)

- B. The location and width of the sidewalks must conform to the requirements of City's Transportation System Plan Street Design Standards in Table 3 and Figure 2 (pages 17 through 24), or as otherwise provided by the City Engineer. Location and width are relative to the centerline.
- C. Where existing clustered mailboxes, utility poles, fire hydrants, or other objects are within a sidewalk, the sidewalk must be widened or meandered to provide clearance equal to the required sidewalk width. Easements in the name of the City are required for sidewalks outside of the right-of-way.
- D. Where it is required to install sidewalks and a permanent sidewalk cannot be constructed, a temporary walkway may be constructed. The temporary walkway may consist of an asphaltic concrete or Portland Cement concrete to a width, location and structure approved by the City Engineer and meeting requirements of the Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG).
- E. In the Town Center, the sidewalks must be 10-feet wide and, rather than a planter strip, must have tree wells. These wells must have a grate per Standard Drawing 514. These grates must be installed per manufacturers recommended specifications and additional details as identified by the Project Engineer.

Section 9. PWCC Section 203.2.15 is deleted and replaced to read as follows:

203.2.15 Curb Ramps

Curb ramps must be designed and constructed in accordance with Standard Drawings 460-464. Design and construct curb ramps in accordance with the Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG). The City Engineer may approve engineered curb ramp designs provided they meet all requirements of the Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG) may be used.

Section 10. PWCC Section 203.2.24A is deleted and replaced to read as follows:

203.2.24A Design and Installation Requirements

Traffic signal installation must conform to the most current edition of the MUTCD.

Section 11. PWCC Section 203.2.25 is deleted and replaced to read as follows:

203.2.25 Traffic Signs

Traffic signs must be furnished and erected in conformance with the most current edition of the MUTCD and the Standard Specifications supplemented by the State of Oregon and/or modified as follows:

Category A

Regulatory signs are classified in the following groups:

1. Right-of-way series
2. Speed series
3. Movement series
4. Pedestrian series
5. Miscellaneous series

Category B

Warning signs that may warrant the use due to hazards and typical locations are:

1. Changes in horizontal alignment
2. Intersections
3. Advance warning of control devices
4. Converging traffic lanes
5. Narrow roadways
6. Changes in highway design
7. Grades Roadway surface conditions
8. Railroad crossings
9. Entrances and crossings
10. Miscellaneous

Category C

School Areas:

1. School advance sign
2. School crossing sign
3. School bus stop ahead sign
4. School speed limit signs

Category D

Guide signs and street name signs

Section 12. PWCC Section 203.2.27 is deleted and replaced to read as follows:

203.2.27 Traffic Marking

Traffic marking must be designed and installed in accordance with the most current edition of the MUTCD.

Paint is allowed for line striping only. All other pavement markings, including arrows, stop bars, bike lane symbols, railroad crossing legends, and word legends, must be pre-formed thermoplastic material.

Section 13. PWCC Section 311.3.05 is deleted and replaced to read as follows:

311.3.05 Control Joints

Place control joints in curbs, at intervals not exceeding 15 feet. Control joints must be of the open joint type and must be provided by inserting a thin, oiled steel sheet vertically in the fresh concrete to force coarse aggregate away from the joint. The steel sheet must be inserted one-half the depth of the curb. After initial set has occurred in the concrete and prior to removing the front curb form, the steel sheet must be removed with a sawing motion.

Section 14. PWCC Section 312.3.05 is deleted and replaced to read as follows:

312.3.05 Control Joints

Scoring of sidewalk control joints must be traverse to the centerline of the sidewalk at a spacing of 5.0 foot on center. All control joints must be straight, 1/4-inch in depth, and finished with a 1/4-inch radius edge.

Section 15. PWCC Section 312.3.07 is deleted and replaced to read as follows:

312.3.07 Finish

Construct concrete walks so longitudinal slope, cross slope, surface, and other features do not exceed maximum allowable slope according to the Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG).

After the concrete has been thoroughly consolidated and leveled, it must be floated with a wood or magnesium float and finished at the proper time with a steel float. Joints must be edged with 1/4-inch radius edger. The surface must be light broomed in a transverse direction to the centerline of the sidewalk with a fiber hair brush approved by the City Engineer.

The finished surface must be free of humps, sags or other irregularities and must be constructed within 0.02 feet of the specified line, grade, cross section, slope, and thickness.

Section 16. Standard Drawings 460, 461, 462, and 463 are deleted and replaced as set forth in Exhibit A, which attached and incorporated by reference.

Section 17. Standard Drawings 464 is added, as set forth in Exhibit A, which is attached and incorporated by reference.

Section 18. Standard Drawings 475 is deleted and replaced, as set forth in Exhibit B, which is attached and incorporated by reference.

Section 19. Standard Drawings 516 is deleted and replaced, as set forth in Exhibit C, which is attached and incorporated by reference.

Section 20. Standard Drawing 517 is added, as set forth in Exhibit C, which is attached and incorporated by reference.

Section 20. To the extent this resolution conflicts with a prior resolution involving the PWCC, the provisions of this resolution control.

Section 21. This resolution is effective upon adoption.

INTRODUCED AND ADOPTED this 12th day of December, 2016.

CITY OF TUALATIN OREGON

BY 

Mayor

APPROVED AS TO LEGAL FORM

BY 

City Attorney

ATTEST

BY 

City Recorder



PUBLIC WORKS CONSTRUCTION CODE

CITY OF TUALATIN

ENGINEERING DIVISION

18880 S.W. MARTINAZZI AVENUE
TUALATIN, OR 97062-7092

NOVEMBER 2001

LATEST REVISION: DECEMBER 12, 2016

The selection and use of the enclosed specifications and standards, while in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a registered professional engineer.

REVISIONS SUMMARY

December 12, 2016 Revisions (Adopted under Resolution No. 5302-16)

Revised Specification Sections:

- Section 202.1.00 "Scope"
- Section 202.2.00 "Plan View"
- Section 203.2.02 "Sight Distance"
- Section 203.2.04 "Superelevation"
- Section 203.2.08 "Intersections"
- Section 203.2.11C "Accessways"
- Section 203.2.14 "Sidewalks"
- Section 203.2.15 "Curb Ramps"
- Section 203.2.24A "Design and Installation Requirements"
- Section 203.2.25 "Traffic Signs"
- Section 203.2.27 "Traffic Marking"
- Section 311.3.05 "Control Joints"
- Section 312.3.05 "Control Joints"
- Section 312.3.07 "Finish"

Revised Standard Drawings:

- ADA Ramp – General Notes (Drawing No 460)
- ADA Ramp – Perpendicular (Drawing No 461)
- ADA Ramp – Parallel (Drawing No 462)
- ADA Ramp – Midblock (Drawing No 463)
- Concrete Sidewalk (Drawing No 475)
- Street Sign Post (Drawing No 516)

New Standard Drawings:

- ADA Ramp – Details (Drawing No 464)
- Street Name Sign (Drawing No 517)

GENERAL NOTES FOR ALL CURB RAMP DETAILS:

1. ALTERNATIVE ENGINEERED CURB RAMP DESIGNS THAT MEET ALL REQUIREMENTS OF THE UNITED STATES ACCESS BOARD PROPOSED PUBLIC RIGHTS- OF- WAY ACCESSIBILITY GUIDELINES (PROWAG) MAY BE USED IF APPROVED BY THE CITY ENGINEER.
2. MEET THE REQUIREMENTS OF PROWAG. GENERAL NOTES AND DETAILS ARE PROVIDED TO CONVEY MINIMUM REQUIREMENTS TO MEET PROWAG FOR DESIGN AND CONSTRUCTION OF ADA RAMPS. EACH PROJECT REQUIRES A DESIGN BY A STATE OF OREGON LICENSED ENGINEER.
3. SEE DWG. NO. 470 & 471 FOR CURB DETAILS. SEE DWG. NO. 475 FOR SIDEWALK DETAILS.
4. CONSTRUCT TURNING SPACE/LANDING WITH 1.5% MAX. SLOPE IN THE DIRECTION OF TRAVEL AND PERPENDICULAR TO THE DIRECTION OF TRAVEL. SLOPE TURNING/LANDING SPACE TO DRAIN TOWARDS STREET UNLESS OTHERWISE NOTED.
5. PROVIDE EDGED JOINTS AT ALL SIDEWALK RAMP SLOPE BREAK LINES.
6. FOR THE PURPOSE OF THESE DRAWINGS, A CURB RAMP IS CONSIDERED "PERPENDICULAR" IF THE ANGLE BETWEEN THE LONGITUDINAL AXIS OF THE RAMP AND A LINE TANGENT TO THE CURB AT THE RAMP CENTER IS 75 DEGREES OR GREATER.
7. SIDEWALK CURB RAMP SLOPES SHOWN ARE RELATIVE TO THE TRUE LEVEL HORIZON (ZERO BUBBLE). VERIFY ALL SLOPES USING A CALIBRATED SMART LEVEL.
8. PLACE TRUNCATED DOME DETECTABLE WARNING SURFACE IN THE LOWER 2' ADJACENT TO TRAFFIC OF THE THROAT OF THE RAMP ONLY. SEE DWG. NO. 464.
9. LOCATE THE RAMP WIDTH EXCLUDING FLARED SIDES COMPLETELY WITHIN THE LEGAL CROSSWALK LIMITS. SEE DWG. NO. 464.
10. CONSTRUCT RAMP FLARED SIDES 9.0% MAX SLOPE (10.0% MAX. FINISHED SURFACE SLOPE) MEASURED PARALLEL TO THE CURBLINE, WHEN IN THE PEDESTRIAN CIRCULATION PATH.
11. COUNTER SLOPE FOR STREETS, GUTTERS, AND TRANSITIONS, AT THE FOOT OF THE CURB RAMP IS 5.0% MAX.
12. CONSTRUCT TRANSITIONAL SEGMENTS BETWEEN NEW CONSTRUCTION AND EXISTING SIDEWALK TO THE NEAREST SIDEWALK CONTROL JOINT (MINIMUM 2' DISTANCE). TRANSITIONAL SEGMENTS ARE INTENDED TO SMOOTHLY TRANSITION BETWEEN THE NEW RAMP AND SIDEWALK CROSS SLOPE AND THE EXISTING CROSS SLOPE.
13. REFER TO PROWAG SECTION R403 - OPERABLE PARTS AND MUTCD (CHAPTER 4) FOR PEDESTRIAN SIGNAL REQUIREMENTS.
14. CONSTRUCT RAMPS WITH A RUNNING SLOPE BETWEEN 5.0% TO 7.5% MAXIMUM (8.3% FINISHED SURFACE). MEET RUNNING SLOPE REQUIREMENTS FOR UP TO 15.0'. RUNNING SLOPE FOR THAT PORTION OF RAMP LONGER THAN 15.0' MAY EXCEED 7.5% MAX. (8.3% MAX FINISHED SURFACE) TO MATCH SIDEWALK GRADE AS APPROVED BY THE CITY ENGINEER.

PLOT TIME: 9:14:30 AM

PLOT DATE: 11/22/2016

FILENAME: GENERAL NOTES.dgn



**CITY OF
TUALATIN, OR**

REVISED: 11/22/2016
EFFECTIVE: 12/31/2016

DRAFTED BY: S. ATWOOD
APPROVED BY: D. HIPPENSTIEL

ADA RAMP -
GENERAL NOTES

DRAWING NO: **460**

PLOT TIME: 9:16:45 AM

PLOT DATE: 11/22/2016

FILENAME: PERPENDICULAR CURB.dgn

NOTE: SEE DWG. NO. 460 FOR GENERAL NOTES.

CONSTRUCT TRUNCATED DOME DETECTABLE WARNING SURFACE (TYP.) THE FULL WIDTH OF THE RAMP (EXCLUDING FLARED SIDES). (SEE DWG. 464 FOR DETAILS.)

MIN. 3" CURB EXPOSURE
RAMP WIDTH (NEW CONST. 5' MIN., ALTERATIONS 4' MIN.).

GRADE BREAKS ONLY AT TOP AND BOTTOM OF RAMP AND PERPENDICULAR TO THE DIRECTION OF TRAVEL.

FLARED SIDE (TYP.) MAX. SLOPES 9.0% (10.0% FINISHED SURFACE SLOPE) (SEE GENERAL NOTE 10)

MATCH EXISTING

MIN. 3" CURB EXPOSURE

A

A

SEE GENERAL NOTE 14 (TYP.)

FULL CURB EXPOSURE (TYP.)

MATCH EXISTING

9.0% MAX.

2' (TYP.)

5.0% MIN. 7.5% MAX.

9.0% MAX.

9.0% MAX.

5.0% MIN. 7.5% MAX.

9.0% MAX.

1.5% MAX. CROSS SLOPE

1.5% MAX. CROSS SLOPE

1.5% MAX. CROSS SLOPE

1.5% MAX. CROSS SLOPE

1.5% MAX. CROSS SLOPE

1.5% MAX. CROSS SLOPE

1.5% MAX. CROSS SLOPE

1.5% MAX. CROSS SLOPE

SIDEWALK (TYP.)

1:1 TAPER NOM.

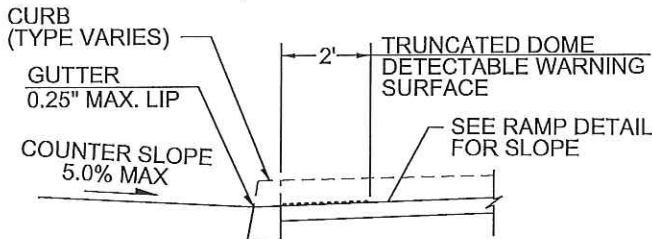
20" MIN. (TYP.)

CONSTRUCT TURNING SPACE 4' X 4' MIN. MAX. SLOPES 1.5% (2.0% FINISHED SURFACE). IF CONSTRAINED AT THE BACK OF SIDEWALK INCREASE TO 5' IN THE DIRECTION OF THE RAMP RUN (SEE TURNING SPACE DETAIL AND GENERAL NOTE 4).

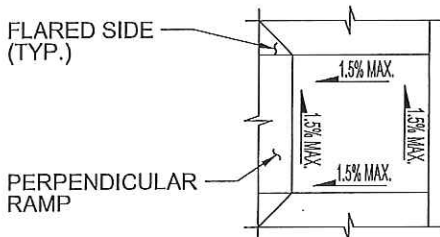
SIDEWALK WIDENING (WHEN REQ'D.)

DIRECTION OF TRAVEL (TYP.)

PERPENDICULAR RAMPS (FOR NARROW SIDEWALKS)



SECTION A-A



TURNING SPACE

RETURNED CURB WHERE PROTECTED FROM PEDESTRIAN CROSS TRAFFIC

MIN. 3" CURB EXPOSURE

FLARED SIDE (TYP.)

MATCH EXISTING

TURNING SPACE 4'X4' MIN. (SEE TURNING SPACE DETAIL AND GENERAL NOTE 4)

TRANSITIONAL SEGMENT (TYP.) MIN. 2' CONST. (SEE GENERAL NOTE 12)

LANDSCAPED AREA

PERPENDICULAR RAMPS (FOR WIDE SIDEWALKS/PLANTERS)

MATCH EXISTING



CITY OF TUALATIN, OR

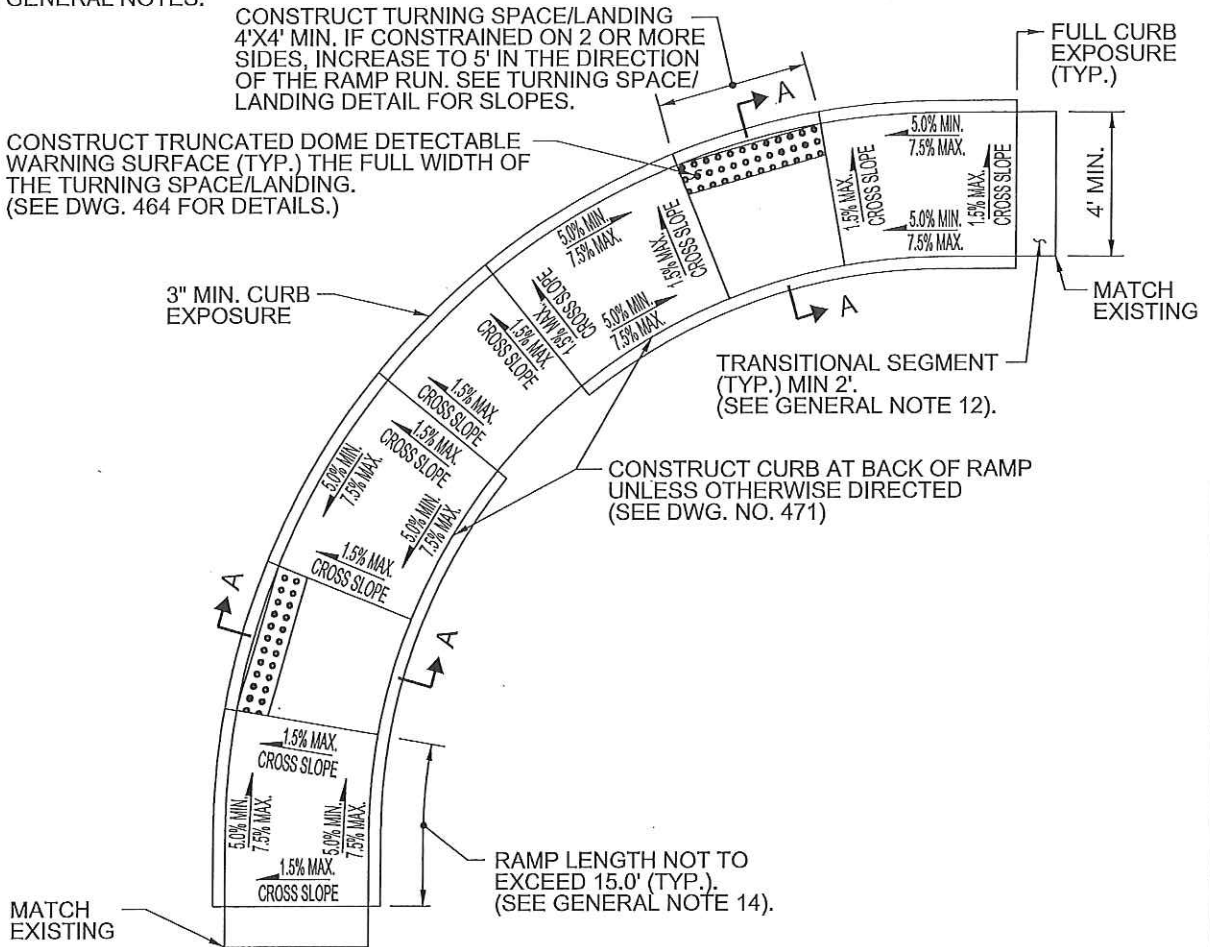
REVISED: 11/22/2016
EFFECTIVE: 12/31/2016

DRAFTED BY: S. ATWOOD
APPROVED BY: D. HIPPENSTIEL

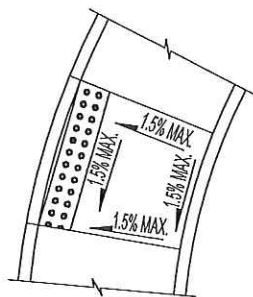
ADA RAMP - PERPENDICULAR

DRAWING NO: **461**

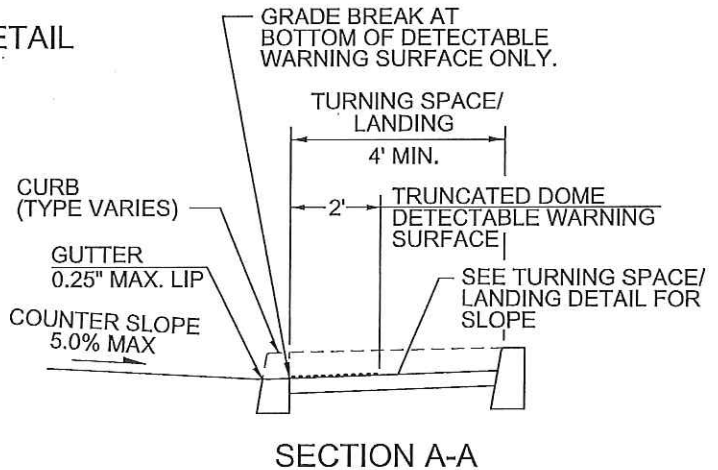
NOTE: SEE DWG. NO. 460 FOR GENERAL NOTES.



PARALLEL RAMP DETAIL



TURNING SPACE/
LANDING DETAIL



PLOT TIME: 9:17:56 AM

PLOT DATE: 11/22/2016

FILENAME: PARALLEL_CURB.dgn



**CITY OF
TUALATIN, OR**

REVISED: 11/22/2016
EFFECTIVE: 12/31/2016

DRAFTED BY: S. ATWOOD
APPROVED BY: D. HIPPENSTIEL

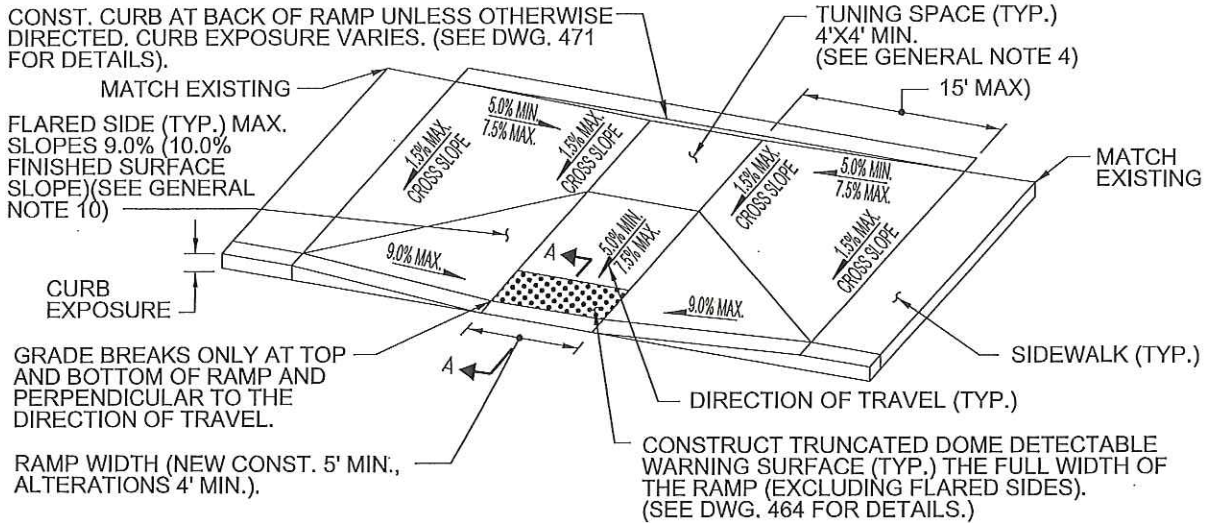
ADA - RAMP
PARALLEL

DRAWING NO: 462

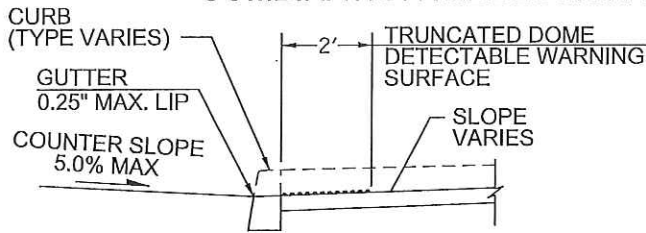
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PLOT DATE: 11/22/2016

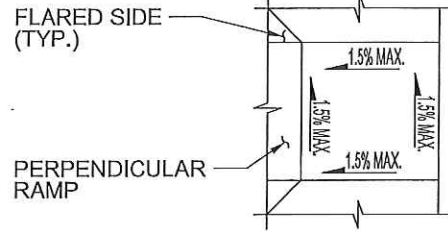
FILENAME: MIDBLOCK CURB.dgn



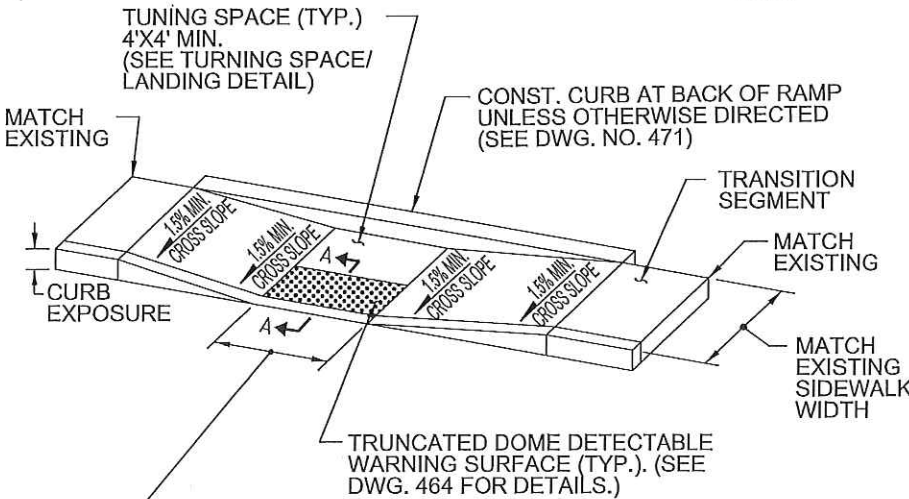
COMBINATION MIDBLOCK RAMP DETAIL



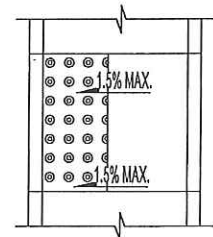
SECTION A-A



TURNING SPACE



PARALLEL MIDBLOCK RAMP DETAIL



TURNING SPACE/ LANDING DETAIL

NOTE: SEE DWG. NO. 460 FOR GENERAL NOTES.



ADA RAMP - MIDBLOCK

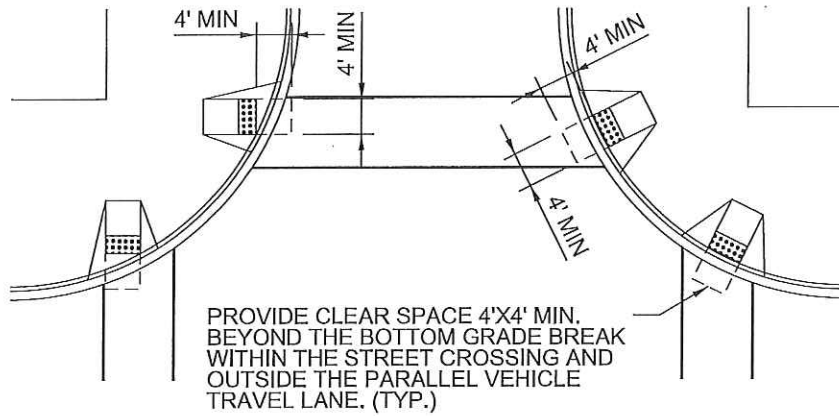
REVISED: 11/22/2016 DRAFTED BY: S. ATWOOD
EFFECTIVE: 12/31/2016 APPROVED BY: D. HIPPENSTIEL

DRAWING NO: 463

NOTE: SEE DWG. NO. 460 FOR GENERAL NOTES.

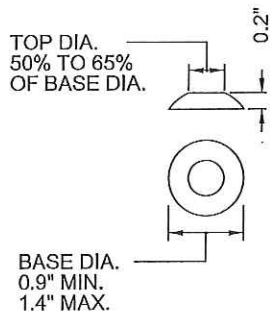
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PLOT DATE: 11/22/2016



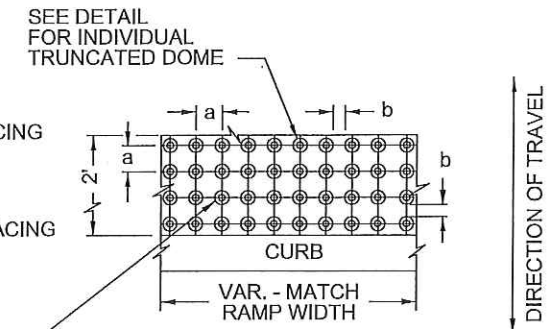
CLEAR SPACE

TRUNCATED DOME DETECTABLE WARNING SURFACE



INDIVIDUAL TRUNCATED DOME DETAIL

- a CTR. TO CTR. SPACING
1.6" MIN.
2.4" MAX.
- b BASE TO BASE SPACING
0.65" MIN.



SEE DETAIL FOR INDIVIDUAL TRUNCATED DOME

PROVIDE TRUNCATED DOME DETECTABLE WARNING SURFACE THAT CONTRASTS TO ADJACENT GUTTER, STREET OR HIGHWAY, OR PEDESTRIAN ACCESS ROUTE SURFACE, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT.

TRUNCATED DOME PATTERN

FILENAME: DUAL CURB.dgn

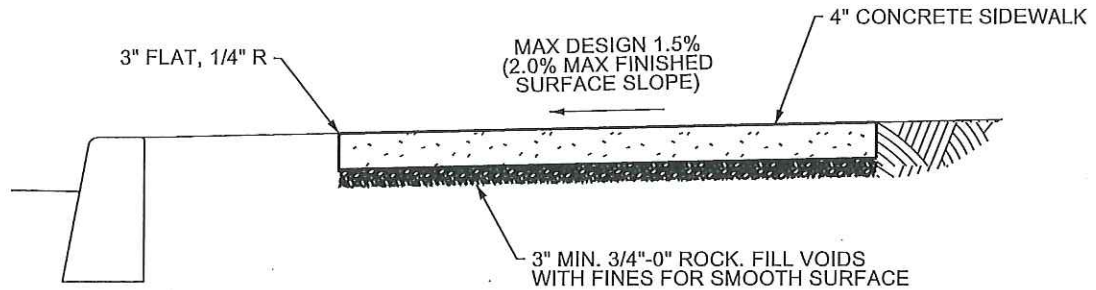


CITY OF TUALATIN, OR

REVISED: 11/22/2016 DRAFTER BY: S. ATWOOD
EFFECTIVE: 12/31/2016 APPROVED BY: D. HIPPENSTIEL

ADA RAMP - DETAILS

DRAWING NO: **464**



CROSS SECTION

NOTES:

1. EXTEND DRAINAGE WEEP HOLE PIPE WHERE PROVIDED IN THE CURB UNDER THE SIDEWALK TO THE R/W LINE WITH 3" SCHEDULE 40 PVC.
2. COMPACT THE SIDEWALK SUBGRADE AND 3/4"-0" BASE ROCK TO THE SATISFACTION OF THE ENGINEER. DO NOT COMPACT EARLIER THAN 7 DAYS AFTER CONSTRUCTING CURB OR BEFORE COMPLETING THE PLACEMENT OF PAVEMENT BASE ROCK. FILL VOIDS WITH FINES WHERE NECESSARY TO PROVIDE SMOOTH SURFACE.
3. CONCRETE, 4% - 7% AIR, COMPRESSIVE STRENGTH OF NOT LESS THAN 3,300 PSI AT 28 DAYS.
4. TRANSVERSE CONTROL JOINTS SHALL BE OF THE WEAKENED PLANE TYPE, 1-1/2" CONCRETE DEPTH, AND WILL BE SPACED AT 5' INTERVALS AND AT POINTS OF TANGENCY.
5. CONTROL JOINTS SHALL BE FORMED WITH A SMOOTH FACE SQUARE TO THE SIDEWALK.
6. WHERE A STRUCTURE IS SURROUNDED BY OR IS ADJACENT TO THE SIDEWALK (EXCLUDING CURB), PROVIDE SEPARATION WITH 1/2" PREMOLDED ASPHALT IMPREGNATED, NONEXTRUDING EXPANSION JOINT MATERIAL.
7. THE SURFACE SHALL BE BROOM FINISHED TRANSVERSE TO THE LINE OF TRAFFIC.
8. FINISH ALL EDGES WITH 1/4" RADIUS EDGER WITH 3" FLAT.
9. WHERE PRACTICAL, ALIGN SIDEWALK CONTROL JOINTS WITH CURB JOINTS.



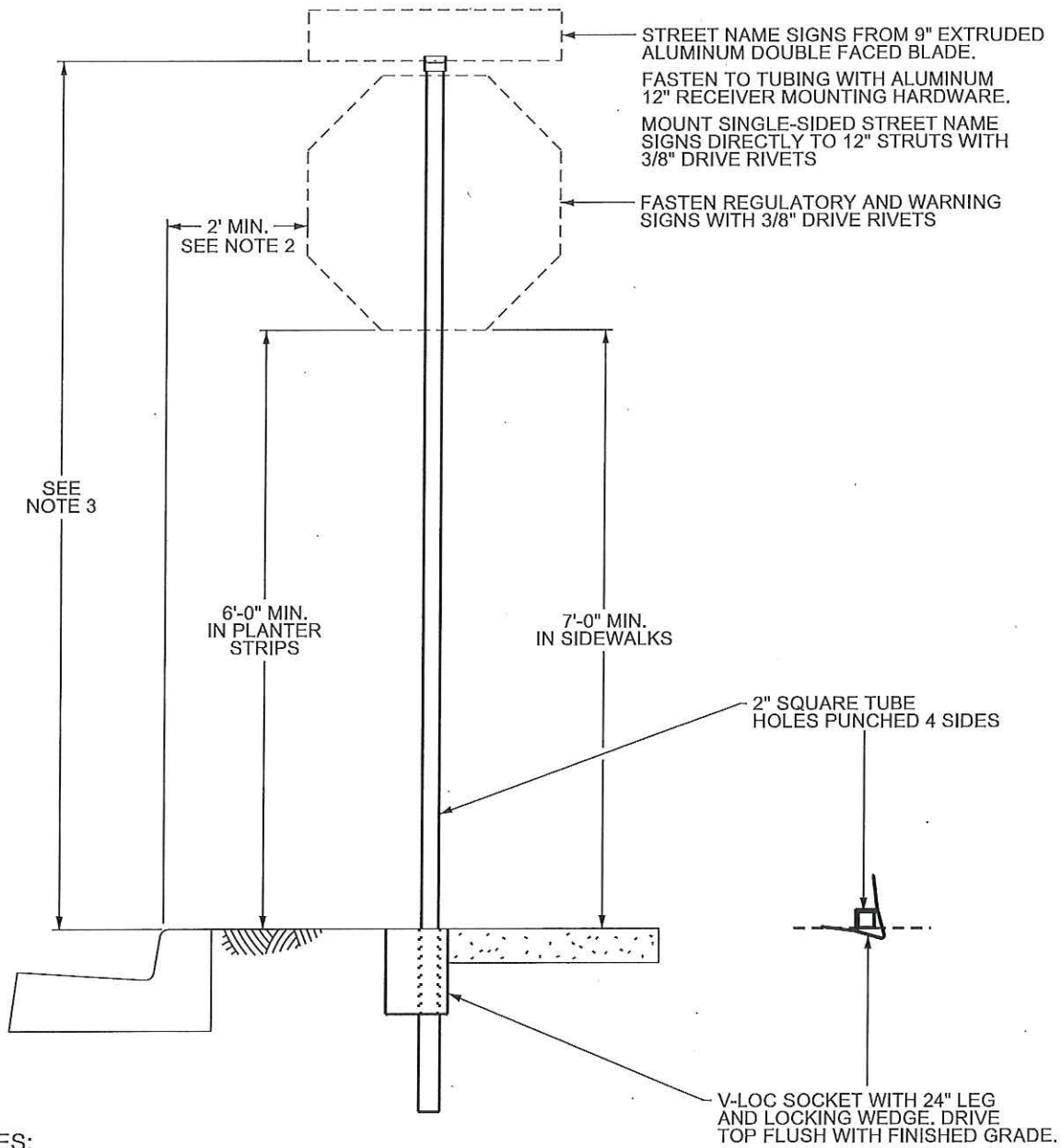
**CITY OF
TUALATIN, OR**

CONCRETE SIDEWALK

REVISED: 11/22/2016
EFFECTIVE: 12/31/2016


DRAFTED BY: M. PALMER
APPROVED BY: J. FUCHS

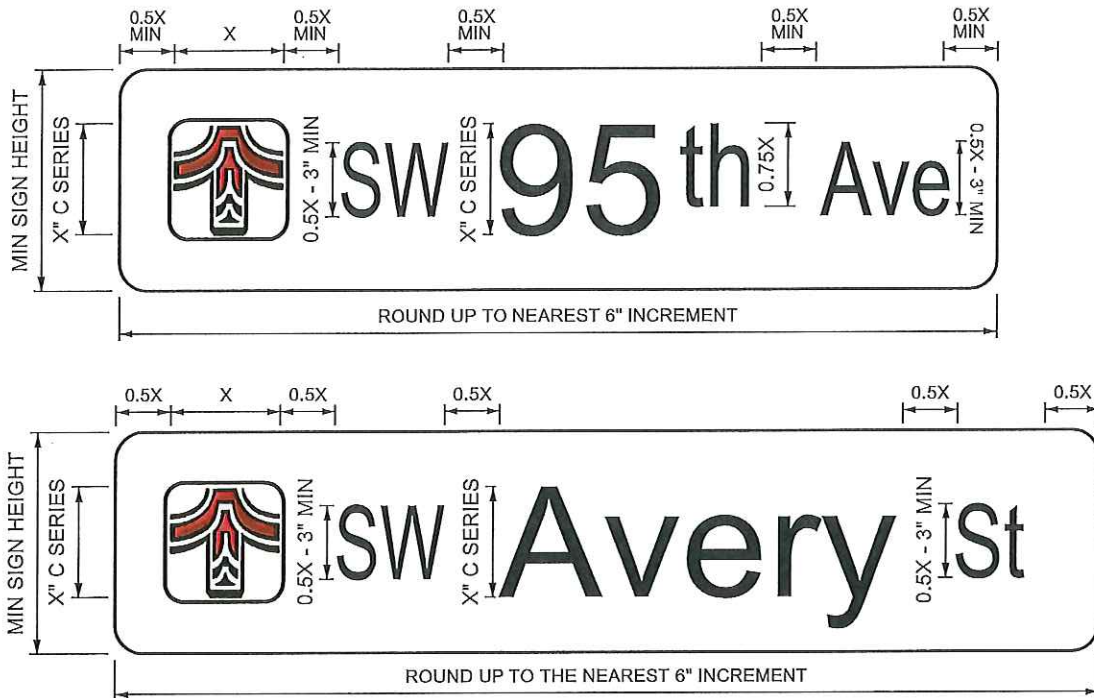
DRAWING NO: 475



NOTES:

1. MEET REQUIREMENTS OF THE MOST CURRENT VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE OREGON SUPPLEMENTS.
2. LATERAL OFFSET OF THE SIGN FROM THE FACE OF CURB CAN BE REDUCED TO 1 FOOT WHERE SIDEWALK WIDTH IS LIMITED OR WHERE EXISTING POLES ARE CLOSE TO THE CURB, AS DETERMINED BY THE CITY ENGINEER.
3. IF STREET NAME SIGN IS MOUNTED ALONE, MOUNT SIGN 9'-0" MIN. ABOVE FINISHED SURFACE.

 CITY OF TUALATIN, OR	STREET SIGN POST	
	REVISED: 11/22/2016 EFFECTIVE: 12/31/2016	DRAFTED BY: M. PALMER APPROVED BY: J. FUCHS




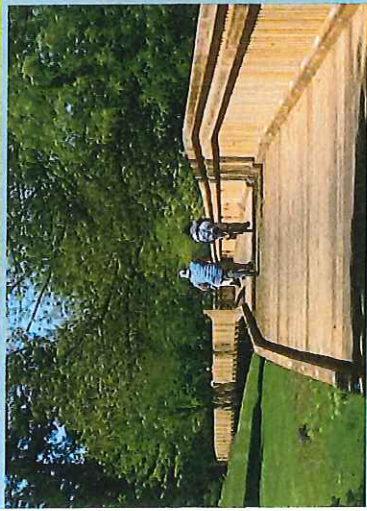
MOUNTING TYPE	ROADWAY TYPE	SPEED LIMIT	MINIMUM LETTER SIZE	MIN SIGN HEIGHT
			X - INITIAL UPPERCASE	
OVERHEAD	ALL TYPES	ALL SPEED LIMITS	12 INCH	18 INCH
POST-MOUNTED	MULTI-LANE	MORE THAN 40 MPH	8 INCH	15 INCH
POST-MOUNTED	MULTI-LANE	40 MPH OR LESS	6 INCH	12 INCH
POST-MOUNTED	2-LANE	MORE THAN 25 MPH	6 INCH	12 INCH
POST-MOUNTED	2-LANE	25 MPH OR LESS	5 INCH	9 INCH

*X IS THE INITIAL UPPERCASE LETTER HEIGHT

GENERAL NOTES:

- POST MOUNTED SIGNS SHALL HAVE ROUNDED CORNERS AND NO BORDER WHEN LARGER THAN 9 INCH HEIGHT AND A RECTANGULAR EXTRUDED BLADE WITH NO BORDER WHEN 9 INCH HEIGHT. OVERHEAD SIGNS SHALL HAVE 1.5" RADIUS ROUNDED CORNERS WITH A 1" WHITE BORDER.
- 9 INCH POST MOUNTED SIGNS SHALL BE EXTRUDED ALUMINUM WITH ODOT TYPE G, TYPE IV SHEETING PRINTED INCLUDING LOGO.
- POST MOUNTED SIGNS LARGER THAN 9 INCHES IN HEIGHT SHALL BE ALUMINUM SHEET METAL WITH A MIN 0.125" THICKNESS WITH ODOT TYPE G, TYPE IV SHEETING, SINGLE SIDED, HOLE PUNCHED.
- OVERHEAD SIGNS SHALL BE ALUMINUM SHEET METAL WITH A MIN 0.125" THICKNESS AND SHALL BE ODOT TYPE G, TYPE IV SHEETING, SINGLE SIDED, HOLE PUNCHED.
- UPPERCASE LETTERING, DIRECTION, AND STREET TYPE SHALL BE FHWA SERIES C AT FULL HEIGHT.
- LOWERCASE LETTERING, DIRECTION, AND STREET TYPE SHALL BE 2/3 LOOP HEIGHT SERIES C.
- ALL SIGNS SHALL CONFORM TO CURRENT MUTCD AND ODOT SUPPLEMENT.
- LEGEND HEIGHT FOR POST MOUNTED SIGNS AT THE INTERSECTION SHALL BE DICTATED BY THE HIGHEST SPEED ROADWAY.
- CENTER STREET NAMES AND CITY LOGO VERTICALLY ON SIGN.
- CITY LOGO INFORMATION SHALL BE PROVIDED BY CITY ENGINEER.

 CITY OF TUALATIN, OR	STREET NAME SIGN	
	REVISED: 11/22/2016 EFFECTIVE: 12/31/2016	DRAETED BY: M. PALMER APPROVED BY: J. FUCHS

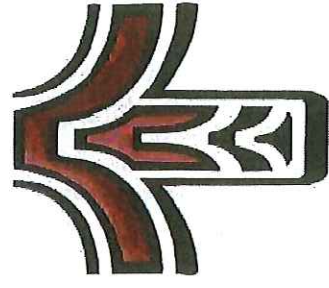


Public Works Construction Code Update

Resolution No. 5302-16

Tualatin City Council Meeting

December 12, 2016



City of Tualatin

Purpose

Update specific sections of Public Works Construction Code (PWCC)

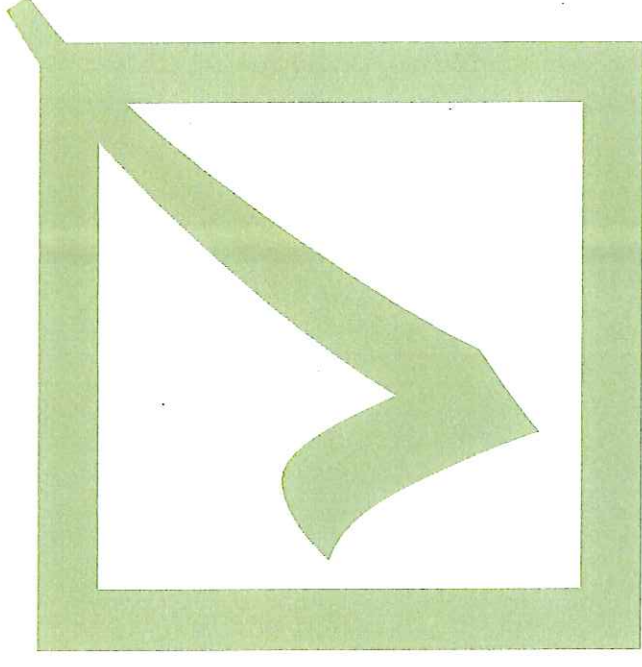
Discuss future PWCC updates

Answer questions regarding this update and future updates



Requested Council Action

Approval Resolution
No. 5302-16 that updates
specific sections of the
Public Works Construction
Code



Background

PWCC is a set of standards to ensure work is consistent

Applies to work within public right of way or on City-owned facilities - water, streets, sewer, storm, and utilities

Includes Design Standards, Specifications, and Standard Drawings

Last updated - February 2013

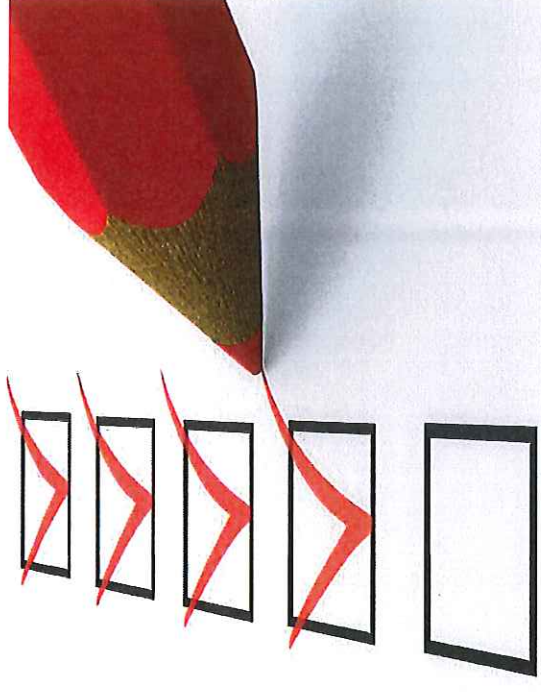
Approach

Achievable quarterly updates

Keep running list of needed updates

Coordinate with all departments

Coordinate some updates with contractors and development community



Proposed Updates

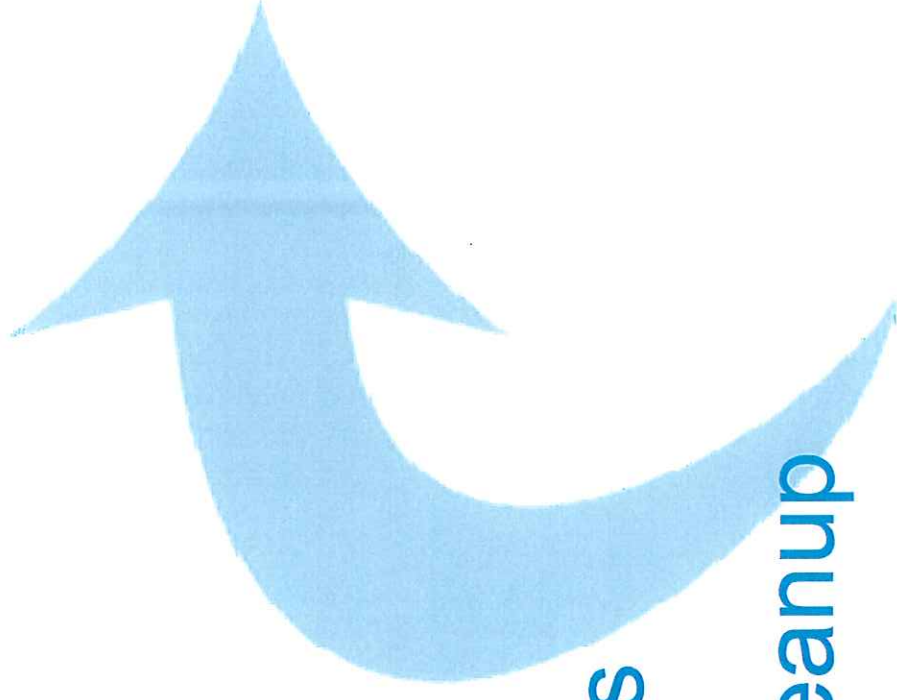
This update revises:

Curb ramps

Sidewalks

Street name signs

Miscellaneous cleanup



Reason for Updates

Make street name signs consistent with state and national standards –

Manual on Uniform Traffic Control Devices (MUTCD) 2009

American Association of State Highway and Transportation Officials (AASHTO) 2011

Make curb ramps and sidewalks consistent with federal ADA requirements –

Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG) 2011

Specific Revisions

Replace Standard Drawings 460 through 464 (curb ramps), 475 (sidewalks), 516 (street sign post), and 517 (street name sign)



Update Design Requirements (chapter 200) to refer to current version of MUTCD, PROWAG, and revised Standard Drawings

Update Technical Specifications (chapter 300) for sidewalks and curb ramps

Curb Ramps

Update general notes

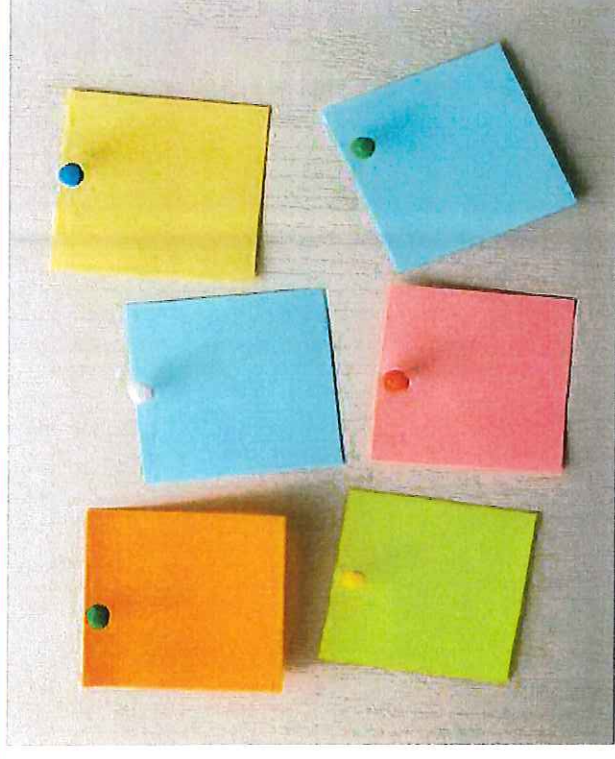
Clarify requirements

Specifically allow engineered alternatives

Require compliance with PROWAG

Add signal pushbutton requirements

Make consistent changes in Specifications



Curb Ramps

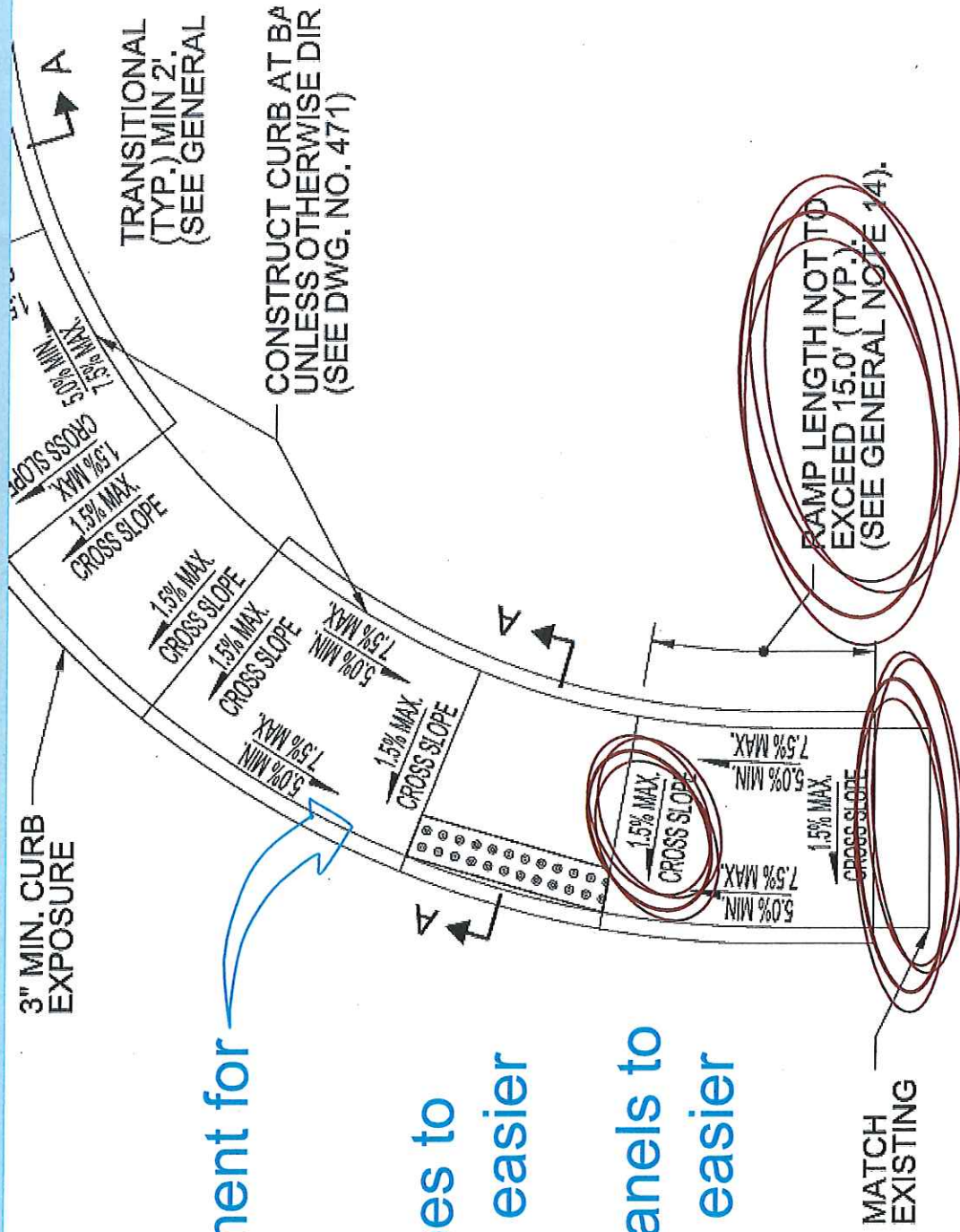
Updated drawings

Removed requirement for patterned ramps

Added design slopes to make construction easier

Added transition panels to make construction easier

Clarified 15-ft rule



Street Signs

What are we changing:

Height of signs (7-ft over sidewalks)

Lateral offset from face of curb (2-ft)

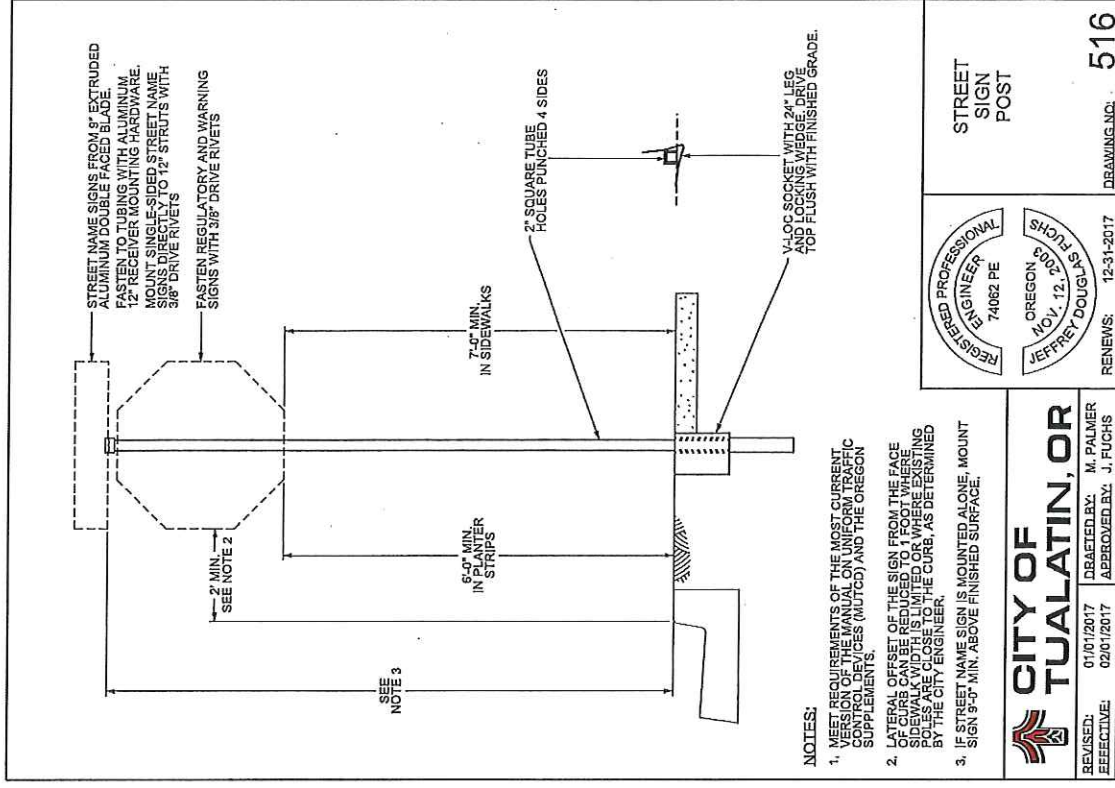
Materials and constructability

Why:

Consistent with latest traffic design manual (MUTCD 2009)

Coordinated with Public Works Dept.

12/12/2016



Public Works Construction Code Update



City of Tualatin

Street Name Sign

What are we changing:

Increasing text size

Changing border

Why:

Consistent with latest traffic design manual (MUTCD 2009)

Coordinated with Public Works

More visible, easier to read, matches regional signing

MOUNTING TYPE	ROADWAY TYPE	SPEED LIMIT	MINIMUM LETTER SIZE	MIN SIGN HEIGHT
OVERHEAD	ALL TYPES	ALL SPEED LIMITS	X - INITIAL UPPERCASE	18 INCH
POST-MOUNTED	MULTI-LANE MORE THAN 40 MPH	MORE THAN 40 MPH	12 INCH	18 INCH
POST-MOUNTED	MULTI-LANE 40 MPH OR LESS	40 MPH OR LESS	8 INCH	12 INCH
POST-MOUNTED	2-LANE MORE THAN 25 MPH	MORE THAN 25 MPH	6 INCH	12 INCH
POST-MOUNTED	2-LANE 25 MPH OR LESS	25 MPH OR LESS	5 INCH	8 INCH

*X IS THE INITIAL UPPERCASE LETTER HEIGHT

GENERAL NOTES:

- POST MOUNTED SIGNS SHALL HAVE ROUNDED CORNERS AND NO BORDER, WHEN LARGER THAN 8 INCH HEIGHT AND A RECTANGLE OR EXTRUDED ALUMINUM SIGN SHALL HAVE ROUNDED CORNERS WITH A 1" WHITE BORDER.
- 8 INCH POST MOUNTED SIGNS SHALL BE EXTRUDED ALUMINUM WITH ODOT TYPE G, TYPE IV SHEETING
- POST MOUNTED SIGNS LARGER THAN 8 INCHES IN HEIGHT SHALL BE ALUMINUM SHEET METAL WITH A MIN 0.125" THICKNESS WITH ODOT TYPE G, TYPE IV SHEETING, SINGLE SIDED, HOLE PUNCHED.
- OVERHEAD SIGNS SHALL BE ALUMINUM SHEET METAL WITH A MIN 0.125" THICKNESS AND SHALL BE ODOT TYPE G, TYPE IV SHEETING, SINGLE SIDED, HOLE PUNCHED.
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12/12/2016

Public Works Construction Code Update

CITY OF TUALATIN, OR

REGISTERED PROFESSIONAL ENGINEER
74082 PE

REGISTERED PROFESSIONAL ENGINEER
OREGON NOV. 12, 2003
JEFFREY DOUGLASS FUCHS

REVISIONS: 01/01/2017 DRAFTED BY: M. PALMER
EFFECTIVE: 02/01/2017 APPROVED BY: J. FUCHS

STREET NAME SIGN

REVISIONS: 12-31-2017 DRAWING NO.: 517



Future Updates

Driveway standards

Pavement design

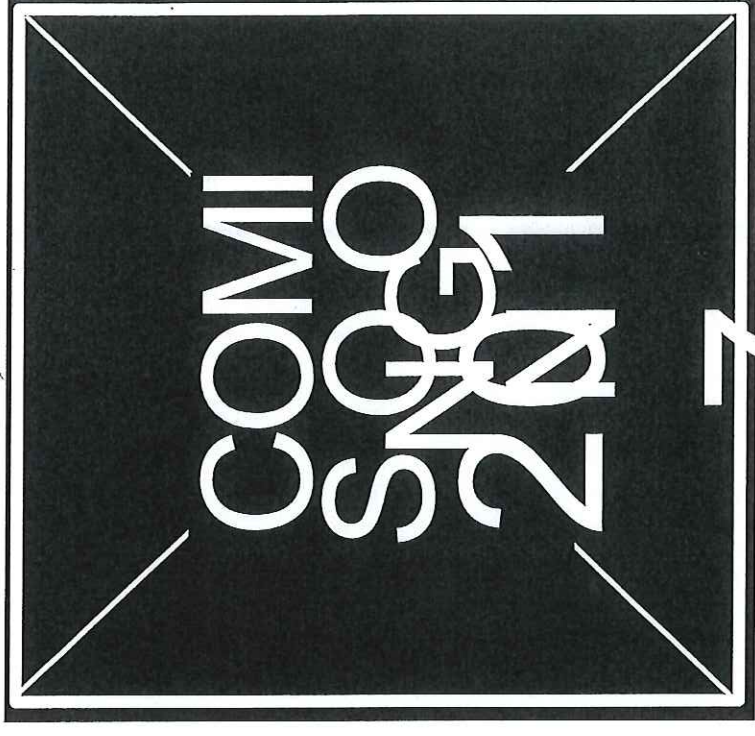
Street light standards

Asbestos pipe disposal

Stormwater standards

Sidewalk grinding/repair

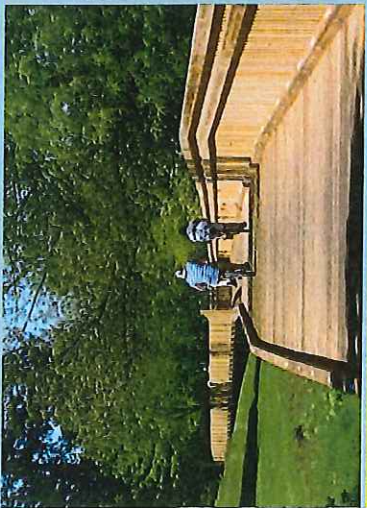
Other ADA and MUTCD updates



12/12/2016

Public Works Construction Code Update

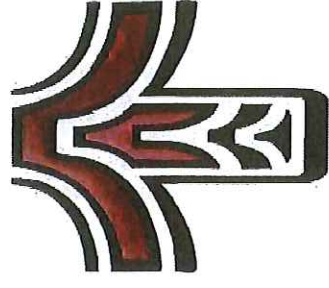




Questions?

Public Works Construction Code Update – December 2016

December 12, 2016



City of Tualatin