

WOODLAND TRANSPORTATION STANDARDS
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TRANSPORTATION STANDARDS – SHEET INDEX

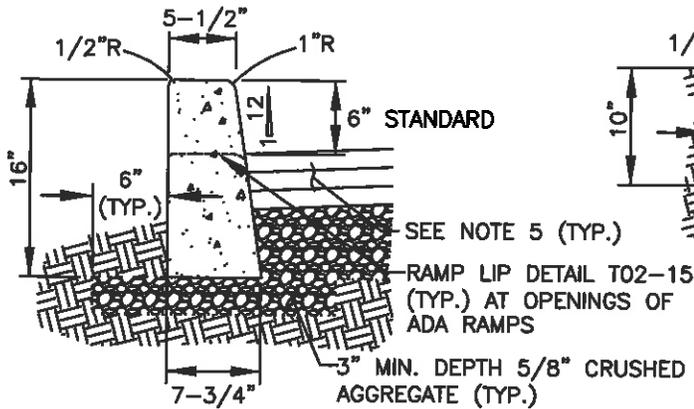
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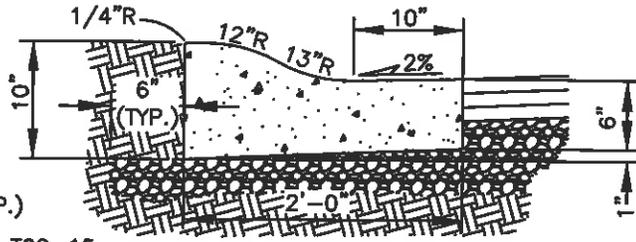
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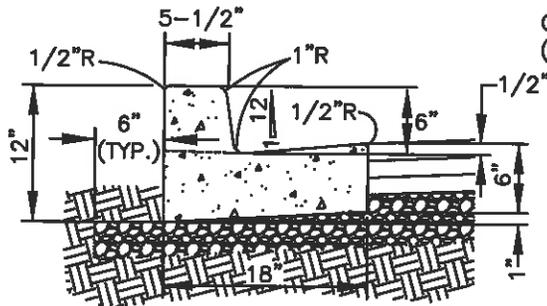


TYPE E-1 CURB

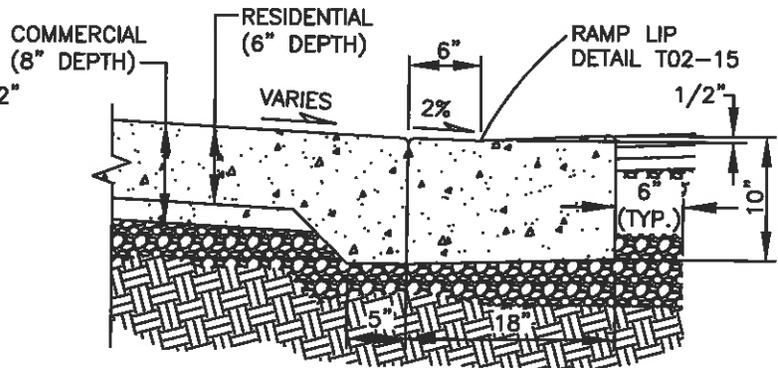


ROLLED CURB AND GUTTER

USE OF ROLLED CURB AND GUTTER PERMITTED ONLY WHEN APPROVED BY PUBLIC WORKS DIRECTOR.



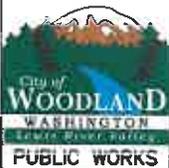
TYPE A-1 CURB AND GUTTER



TYPE A-1 CURB AND GUTTER AT DRIVEWAY DROP

NOTES:

1. CONCRETE SHALL BE 3000 PSI MIN. (CL 3000), 3-1/2" SLUMP (MAX.).
2. CURBS ADJACENT TO PAVEMENT OR SIDEWALK SHALL HAVE CONSTRUCTION JOINTS TO MATCH EXISTING PATTERNS. 3/8" EXPANSION JOINTS SHALL BE PLACED ON BOTH SIDES OF CATCH BASINS, AT TOPS OF DRIVEWAYS, ALL CHANGES IN DIRECTION, AND AS DIRECTED BY THE INSPECTOR. CONTRACTION JOINTS TO BE PLACED AT 15' MAXIMUM SPACING.
3. FOR CURB DROPS AT ADA RAMPS, SEE RAMP LIP DETAIL T-21.
4. COMPACT SUBGRADE AND AGGREGATE TO 95% MAXIMUM DRY DENSITY (3" MIN. DEPTH).
5. SEE PAVEMENT RESTORATION/WIDENING AT CURBS DETAIL T-30.
6. CURB TO BE MEDIUM BROOM FINISHED, PARALLEL TO GUTTER LINE.
7. WHERE MATCHING EXISTING CURBS, ALL EXISTING EDGES SHALL BE SAWCUT.
8. WHEN ATTACHED SIDEWALKS ARE USED WITH ROLLED CURB AND GUTTER, THICKENED SIDEWALKS (6" MIN.) SHALL BE CONSTRUCTED UNDER THE SAME CONSTRUCTION CONTRACT.



CONCRETE CURBS

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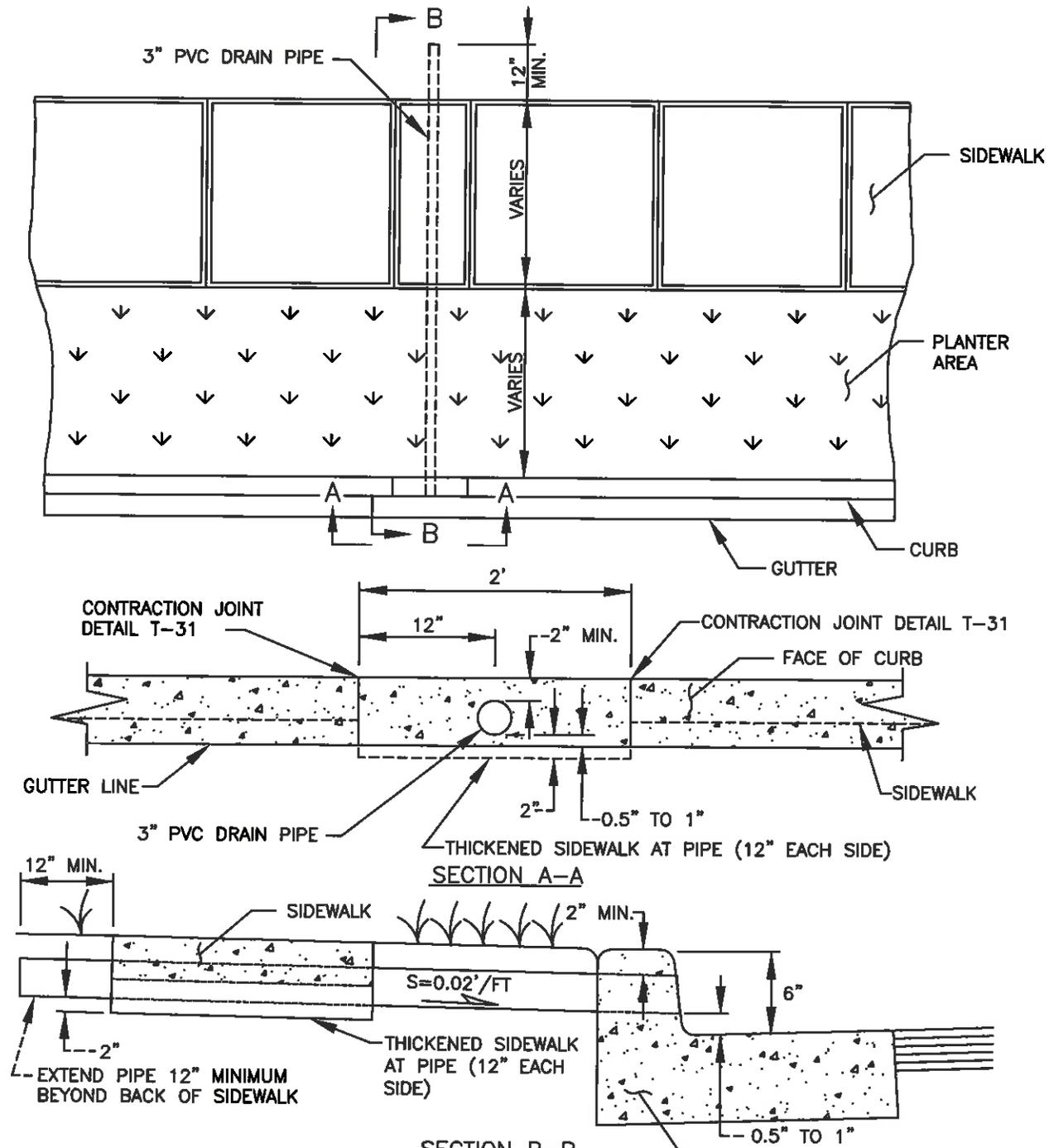
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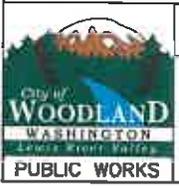
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NOTE:

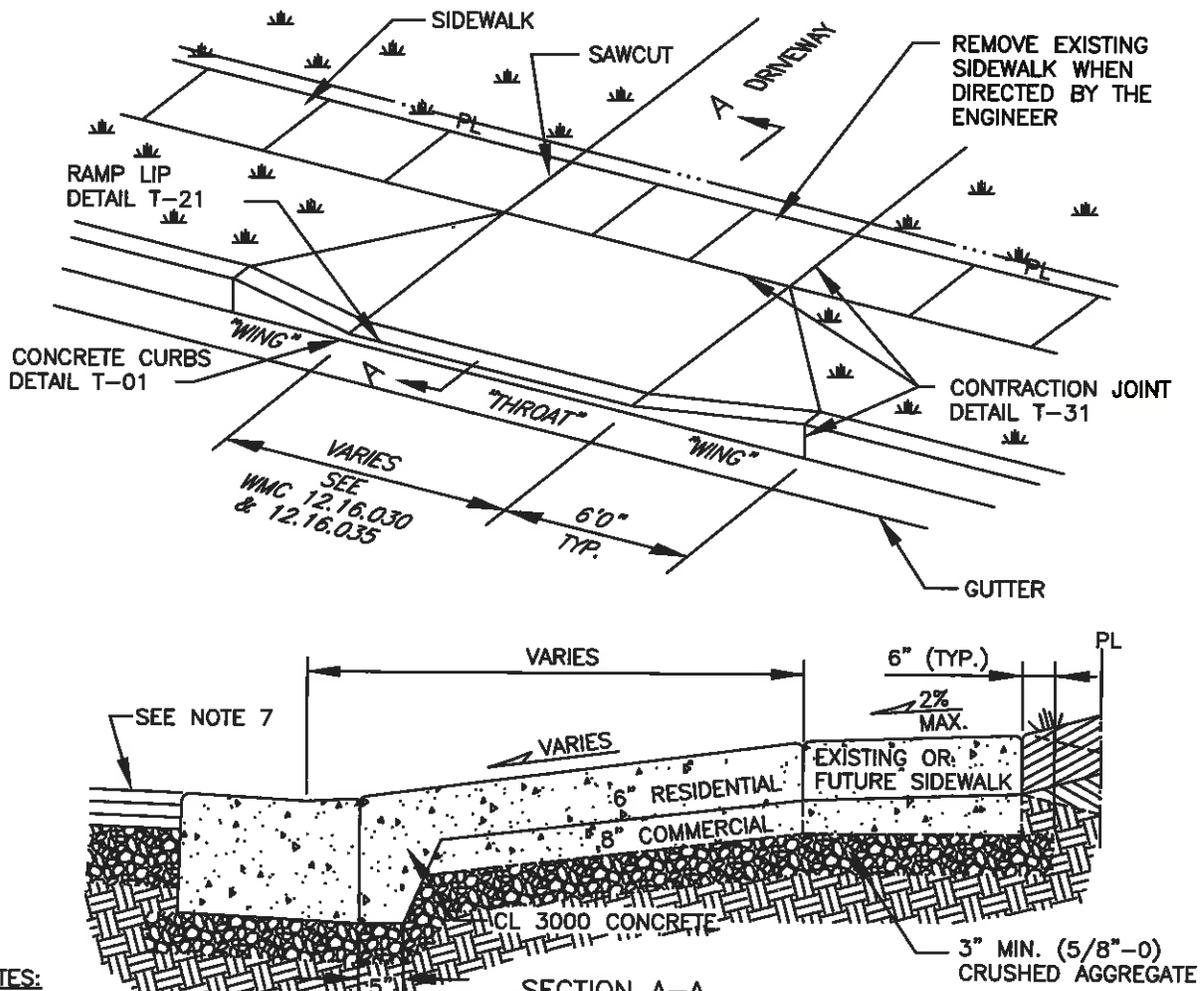
1. WHEN CURB DRAINS ARE USED, DRAINAGE FACILITIES MUST BE SIZED FOR BOTH QUANTITY AND QUALITY STORM WATER TREATMENT.
2. DETACHED SIDEWALK SHOWN. ATTACHED SIDEWALK SIMILAR.
3. FINISH PIPE END FLUSH WITH FACE OF CURB.
4. GROUT ANY VOIDS IN CONCRETE SURROUNDING PIPE.
5. SHOW LOCATION ON PLAN TO AVOID CONFLICTS WITH STREET LIGHTS, WATER METERS AND OTHER UTILITIES.
6. CURB DRAINS NOT ALLOWED IN ROLLED CURBS.



CURB DRAIN

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NOTES:

1. CONCRETE SHALL BE 3000 PSI MIN. (CL 3000), 3-1/2" SLUMP (MAX.), MEDIUM BROOM FINISH PARALLEL TO DRIVEWAY CENTERLINE.
2. TO BE USED WHERE CURB AND SIDEWALK ARE SEPARATED BY A PLANTER STRIP.
3. COMMERCIAL DRIVEWAYS REQUIRE 8" CONCRETE WITH REINFORCING STEEL (6x6 - W2.9xW2.9 WWF, MIN.), 1 1/2" COVER FROM BOTTOM OF SLAB. RESIDENTIAL DRIVEWAYS REQUIRE 6" CONCRETE.
4. COMPACT SUBGRADE AND AGGREGATE TO 95% OF MAXIMUM DRY DENSITY (3" MIN. DEPTH).
5. DRIVEWAYS EXCEEDING 15' IN TOTAL WIDTH SHALL HAVE ADDITIONAL LONGITUDINAL JOINTS AS DIRECTED. JOINT SPACING SHALL NOT EXCEED 15'. SEE CONCRETE JOINTS DETAIL T-31.
6. EXISTING CURB SHALL BE REMOVED TO EXISTING JOINT OR SAWCUT SUCH THAT 3' MIN. OF NEW CURB IS CONSTRUCTED ADJACENT TO NEW DRIVEWAY. HORIZONTAL CUTTING OF EXISTING CONCRETE ALLOWED SUBJECT TO PUBLIC WORKS DIRECTOR APPROVAL.
7. SEE PAVEMENT RESTORATION/WIDENING AT CURB DETAIL T-30 WHEN CUTTING EXISTING CURB.
8. ALL EXISTING EDGES SHALL BE SAWCUT.
9. STRUCTURAL SECTION OF DRIVEWAY TO BE EXTENDED THROUGH SIDEWALK AREA.
10. 3' WING MIN. FOR RESIDENTIAL STREET.
11. 45° ANGLE FOR WINGS ON ARTERIAL STREETS.
12. NO WATER METERS IN DRIVEWAY APPROACH OR WING.

DRIVEWAY WITH DETACHED SIDEWALK

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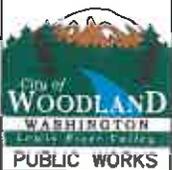
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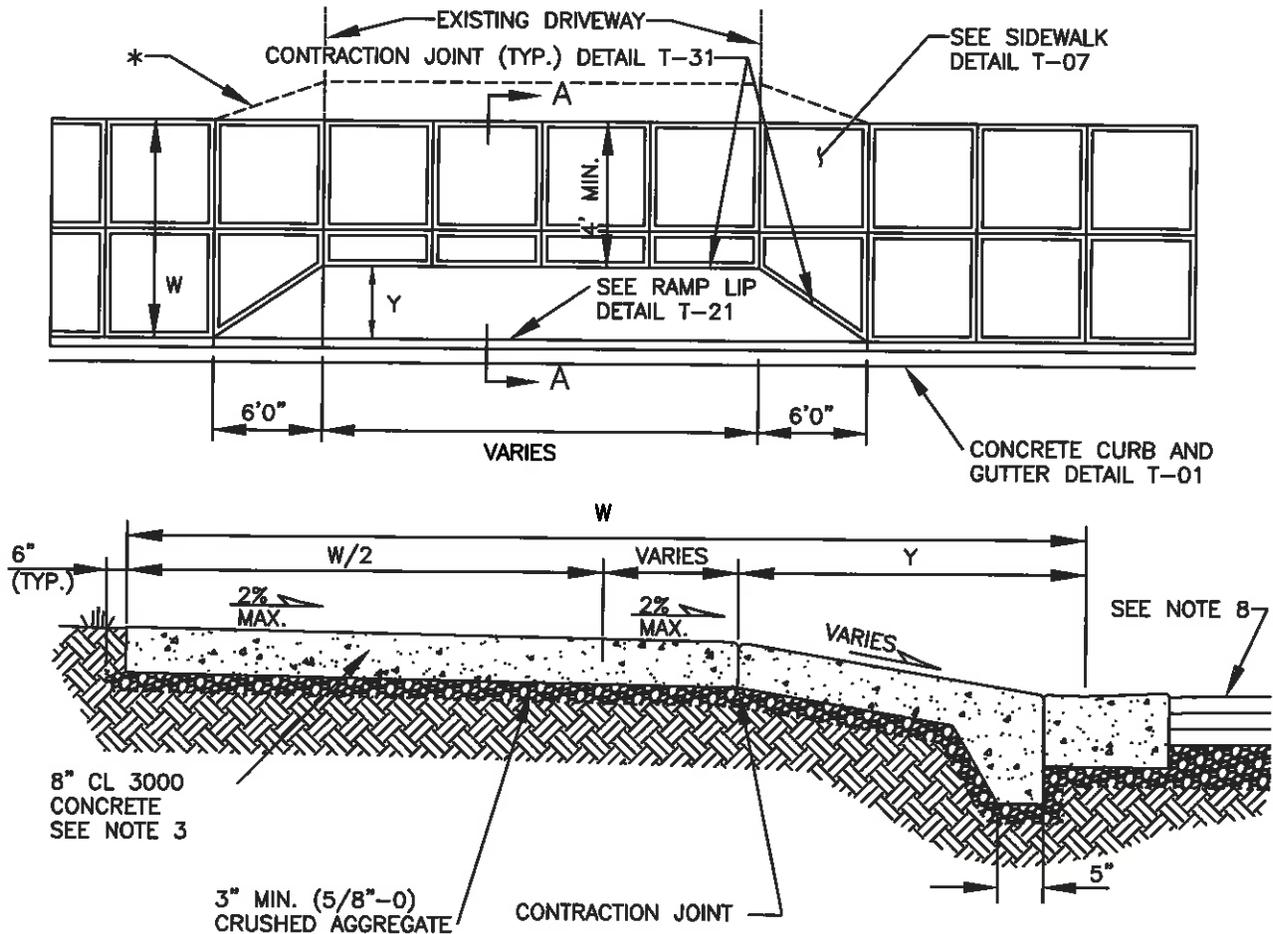
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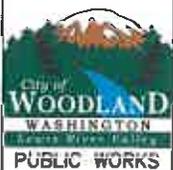




NOTES:

SECTION A-A

1. IF W IS LESS THAN 8' IN WIDTH, THEN Y=2' (IF W<6', THEN PUSH OUT SIDEWALK BEHIND DRIVEWAY TO MAINTAIN 4' MIN. PATH*).
IF W IS MORE THAN 8' AND LESS THAN 12' IN WIDTH, THEN Y=W/2
IF W IS GREATER THAN OR EQUAL TO 12' IN WIDTH, THEN Y=4'
2. CONCRETE SHALL BE 3000 PSI MIN. (CL 3000), 3½" SLUMP (MAX.), MEDIUM BROOM FINISH PARALLEL TO DRIVEWAY CENTERLINE.
3. REINFORCING STEEL REQUIRED (6x6 - W2.9xW2.9 WWF, MIN.), MIN. 1½" COVER FROM BOTTOM OF SLAB.
4. COMPACT SUBGRADE AND AGGREGATE TO 95% OF MAXIMUM DRY DENSITY (3" MIN. DEPTH).
5. DRIVEWAYS EXCEEDING 15' IN TOTAL WIDTH SHALL HAVE ADDITIONAL LONGITUDINAL JOINTS AS DIRECTED BY THE PUBLIC WORKS DEPARTMENT. JOINT SPACING SHALL NOT EXCEED 15'. SEE CONCRETE JOINTS DETAIL T-31.
6. PARALLEL JOINTS SHALL BE SEPARATED BY A MINIMUM OF 2'.
7. SEE PAVEMENT RESTORATION/WIDENING AT CURB DETAIL T-30 WHEN CUTTING EXISTING CURB.
8. ALL EXISTING EDGES SHALL BE SAWCUT.
9. EXISTING CURB SHALL BE REMOVED TO EXISTING JOINT OR SAWCUT SUCH THAT 3' MIN. OF NEW CURB IS CONSTRUCTED ADJACENT TO NEW DRIVEWAY.
10. NO WATER METERS IN DRIVEWAY APPROACH OR WINGS.



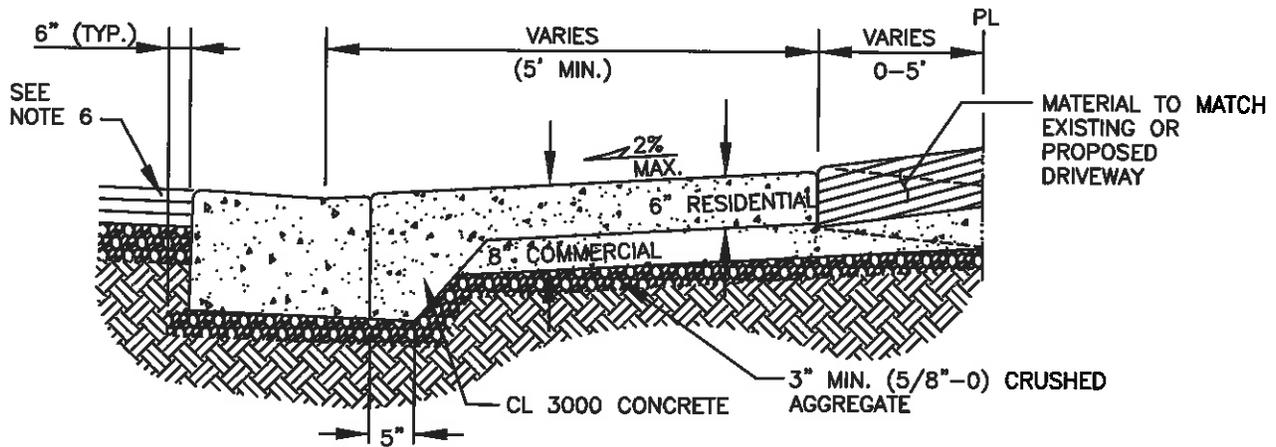
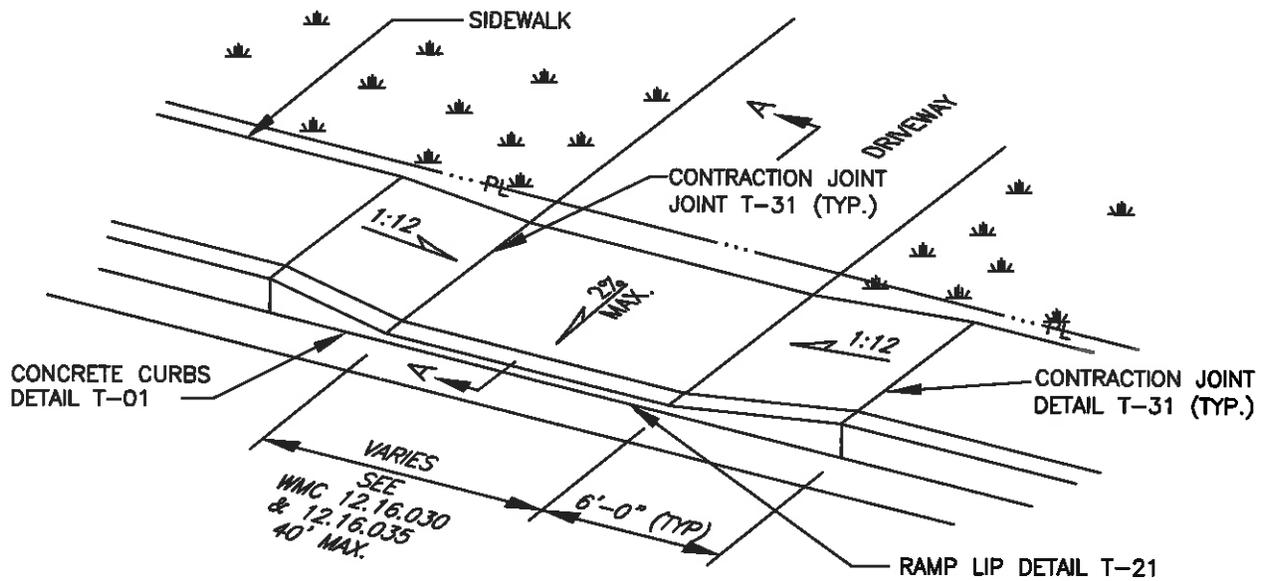
DRIVEWAY WITH ATTACHED SIDEWALK – OPTION A

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NOTES:

1. CONCRETE SHALL BE 3000 PSI MIN. (CL 3000), 3-1/2" SLUMP (MAX.), MEDIUM BROOM FINISH PARALLEL TO DRIVEWAY CENTERLINE.
2. COMMERCIAL DRIVEWAYS REQUIRE REINFORCING STEEL (6x6 - W2.9xW2.9 WWF, MIN.), MIN. 1 1/2" COVER FROM BOTTOM OF SLAB.
3. COMPACT SUBGRADE AND AGGREGATE TO 95% OF MAXIMUM DRY DENSITY (3" MIN. DEPTH).
4. DRIVEWAYS EXCEEDING 15' IN TOTAL WIDTH SHALL HAVE ADDITIONAL LONGITUDINAL JOINTS AS DIRECTED. JOINT SPACING SHALL NOT EXCEED 15'. SEE CONCRETE JOINTS DETAIL T-31.
5. EXISTING CURB SHALL BE REMOVED TO EXISTING JOINT OR SAWCUT SUCH THAT 3' MIN. OF NEW CURB IS CONSTRUCTED ADJACENT TO NEW DRIVEWAY.
6. SEE PAVEMENT RESTORATION/WIDENING AT CURBS DETAIL T-30 WHEN CUTTING EXISTING CURB.
7. ALL EXISTING EDGES SHALL BE SAWCUT.
8. SET ALL POLES AND SIGNS BEHIND SIDEWALK.
9. NO WATER METERS IN DRIVEWAY APPROACH OR WINGS.

DRIVEWAY WITH ATTACHED SIDEWALK - OPTION B

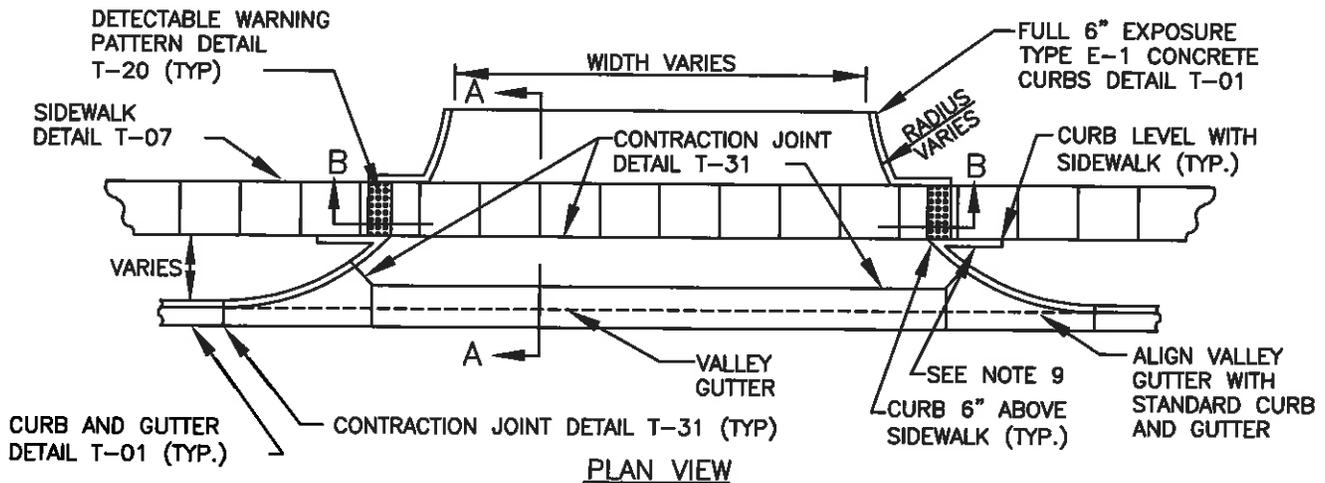
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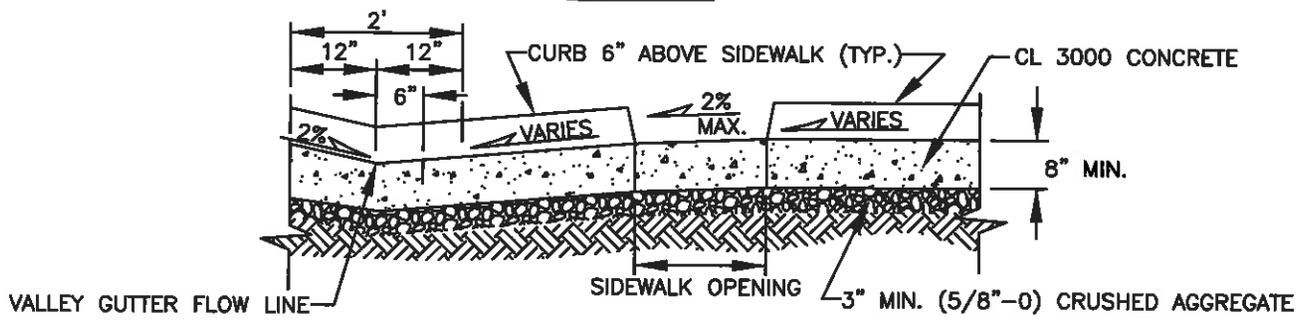
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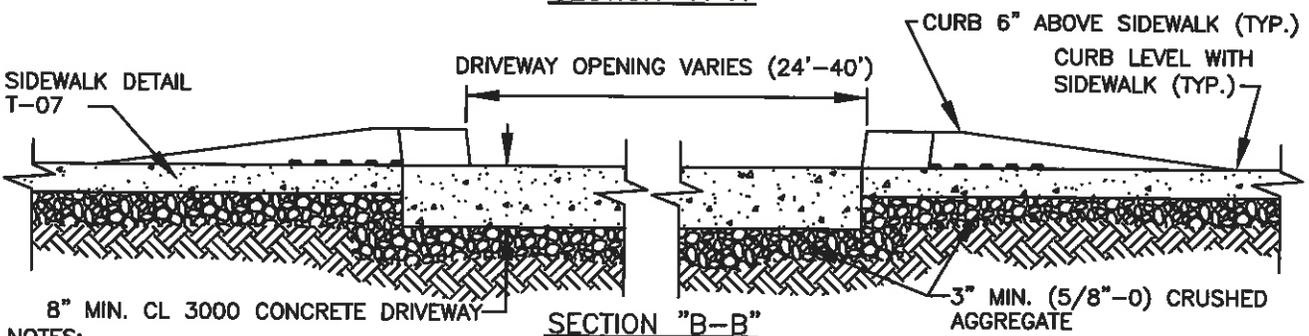




PLAN VIEW



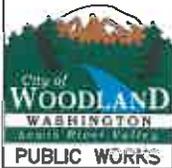
SECTION "A-A"



SECTION "B-B"

NOTES:

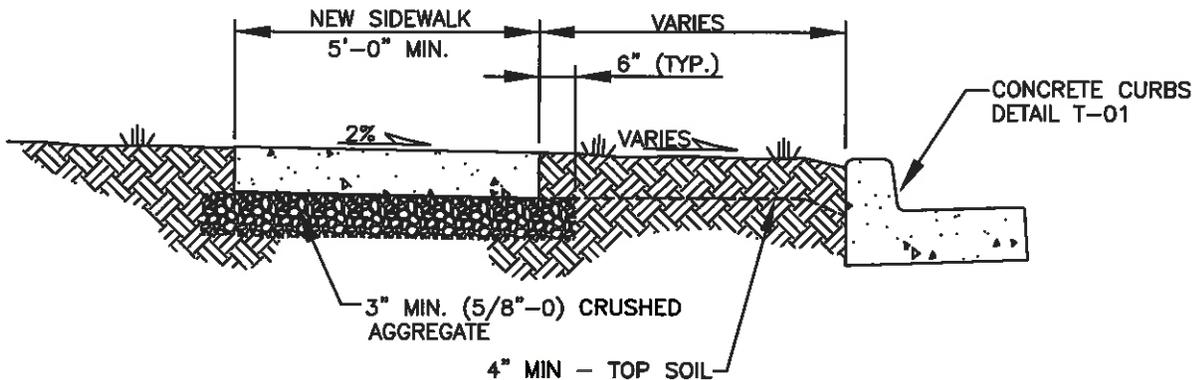
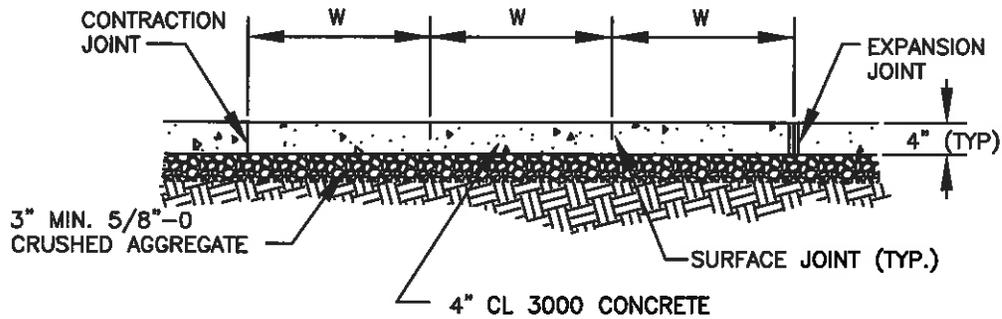
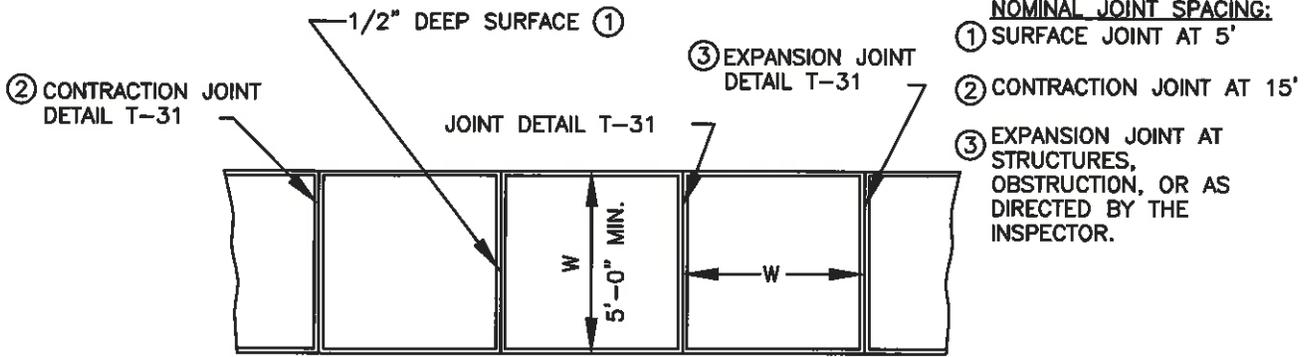
1. CONCRETE SHALL BE 3000 PSI MIN., (CL 3000) 3-1/2" SLUMP (MAX.), MEDIUM BROOM FINISH PARALLEL TO DRIVEWAY CENTERLINE.
2. DRIVEWAY SHALL BE CONSTRUCTED WITH REINFORCING STEEL (6x6 - W2.9xW2.9 WWF, MIN.), MIN. 1 1/2" COVER FROM BOTTOM OF SLAB.
3. COMPACT SUBGRADE TO 95% OF MAXIMUM DRY DENSITY.
4. DRIVEWAYS EXCEEDING 15' IN TOTAL WIDTH SHALL HAVE ADDITIONAL LONGITUDINAL JOINTS AS DIRECTED. CONTROL JOINT SPACING SHALL NOT EXCEED 15'. SEE CONCRETE JOINTS DETAIL T-31.
5. SEE PAVEMENT RESTORATION/WIDENING AT CURB DETAIL T-30 WHEN CUTTING EXISTING CURB.
6. ALL EXISTING EDGES SHALL BE SAWCUT.
7. EXISTING CURB SHALL BE REMOVED TO EXISTING JOINT OR SAWCUT SUCH THAT 3' MIN. OF NEW CURB IS CONSTRUCTED ADJACENT TO NEW DRIVEWAY.
8. MAXIMUM 2% CROSS SLOPE ACROSS PEDESTRIAN CROSSING.
9. TRANSITION CURB FROM FULL 6" EXPOSURE TO 0" OVER THE FIRST 6' FROM CORNER.
10. NO WATER METERS IN DRIVEWAY APPROACH OR ADA RAMP AREA.



MAJOR COMMERCIAL DRIVEWAY

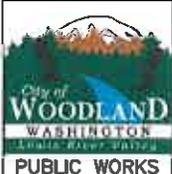
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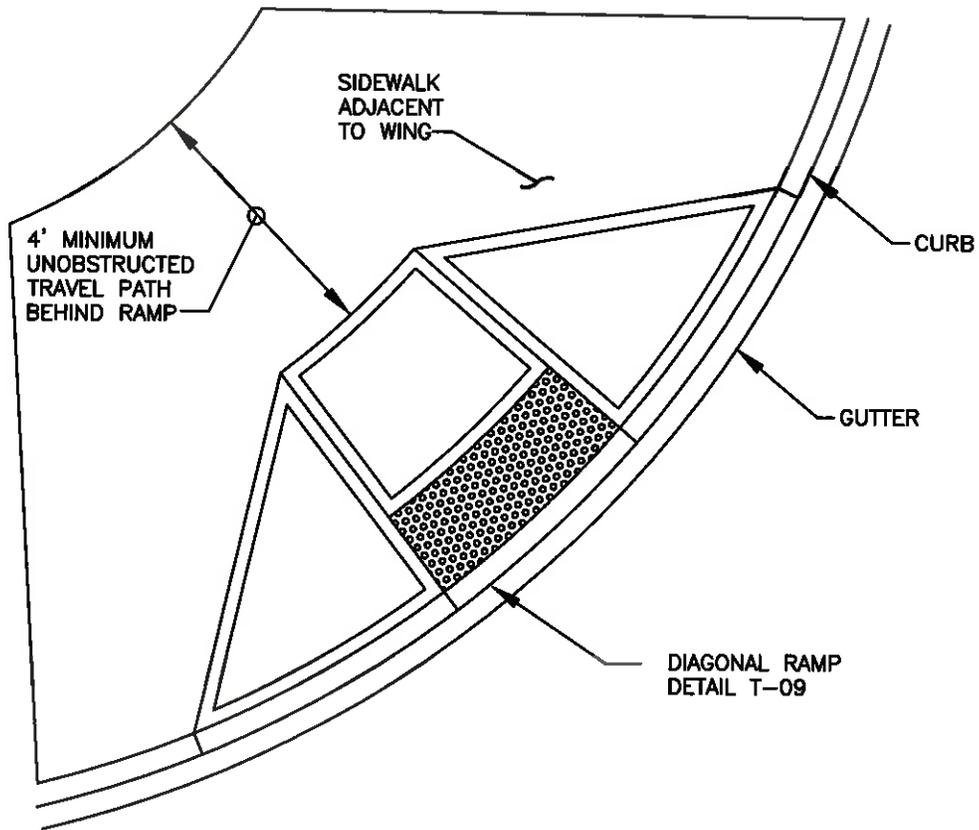
1. CONCRETE SHALL BE 3000 PSI MIN. (CL 3000), 3 1/2" SLUMP (MAX.).
2. COMPACT SUBGRADE AND AGGREGATE TO 95% OF MAXIMUM DRY DENSITY (3" MIN.).
3. FINISH SHALL BE MEDIUM BROOM PERPENDICULAR TO PEDESTRIAN TRAFFIC UNLESS OTHERWISE DIRECTED.
4. MATCH EXISTING BORDER.
5. SEE CONCRETE JOINTS DETAIL T-31 FOR SURFACE, CONTRACTION, AND EXPANSION JOINTS.
6. ALL EXISTING EDGES SHALL BE SAWCUT.
7. CROSS SLOPE OF PLANTER STRIP SHALL BE 2% (TYP.) AND 4:1 (MAX.).



SIDEWALK DETAIL

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NOTES:

1. RAMPS TO BE CENTERED IN CROSSWALKS.
2. RAMPS TO BE CONSTRUCTED SEPARATELY FROM SIDEWALK AND ISOLATED BY EXPANSION JOINT MATERIAL.
3. RAMP WING MAY BE REPLACED WITH TYPE E-1 CURB SIMILAR TO CURB RAMP DETAIL T-01 IF OBSTRUCTION OR PLANTER PREVENTS PEDESTRIAN TRAFFIC IN WING AREA.
4. SURROUNDING SIDEWALK CROSS SLOPE TO BE 2% MAX. RADIALLY AROUND CORNER SECTION.
5. IF A SINGLE DIAGONAL CURB RAMP IS PERMITTED, 48" MIN. CLEAR SPACE SHALL BE PROVIDED FOR MANEUVERING ROOM IN CROSSWALK.

SINGLE DIAGONAL RAMP PLACEMENT

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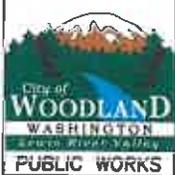
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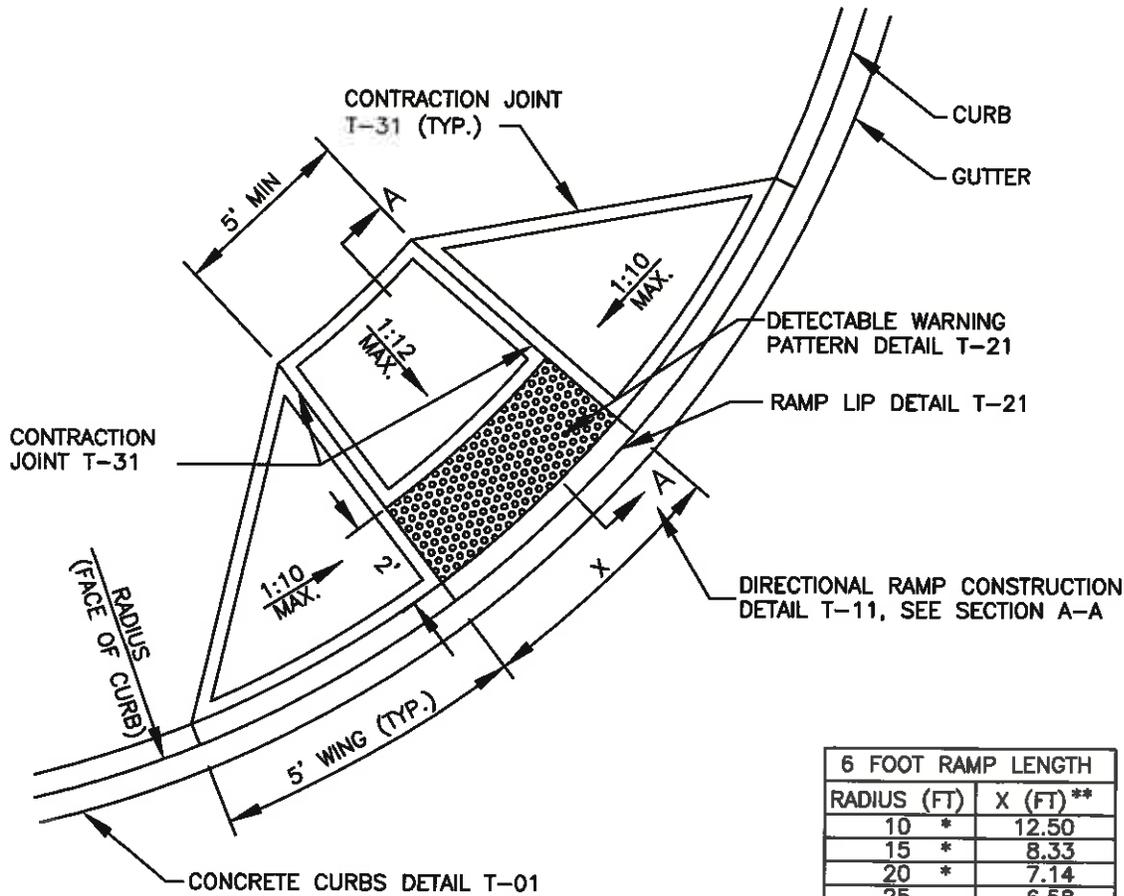
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David Stapp 5/8/13
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6 FOOT RAMP LENGTH	
RADIUS (FT)	X (FT)**
10 *	12.50
15 *	8.33
20 *	7.14
25	6.58
30	6.25
35	6.03
40	5.88
45	5.77
∞	5.68

* DOUBLE ATTACHED RAMPS NOT ALLOWED

** ASSUMED 5' TOP OF RAMP WIDTH

NOTES:

- EXISTING CURB AND SIDEWALK TO BE SAWCUT AND REMOVED FOR INSTALLATION OF NEW RAMP.
- RAMP MAY BE USED MID-BLOCK OR ON INTERSECTION RADII.
- RAMP TO BE CONSTRUCTED SEPARATELY FROM SIDEWALK.
- RAMP WINGS MAY BE REPLACED WITH TYPE E-1 CURB SIMILAR TO CURB RAMP DETAIL T-01 IF OBSTRUCTION OR PLANTER PREVENTS PEDESTRIAN TRAFFIC IN WING AREA.
- SEE STANDARD LANDING CROSS SECTIONS - SEE SECTION A-A DETAIL T-19.
- WING DIMENSIONS MAY VARY TO MEET REQUIRED SLOPE.
- IF THE MAXIMUM SLOPE OF 1:12 CANNOT BE ACHIEVED DUE TO THE SLOPE OF THE EXISTING SIDEWALK, A DIAGONAL RAMP IS NOT ALLOWED. A DIFFERENT TYPE OF RAMP MUST BE USED.

DIAGONAL RAMP CONSTRUCTION

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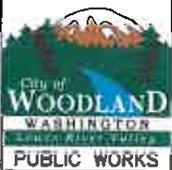
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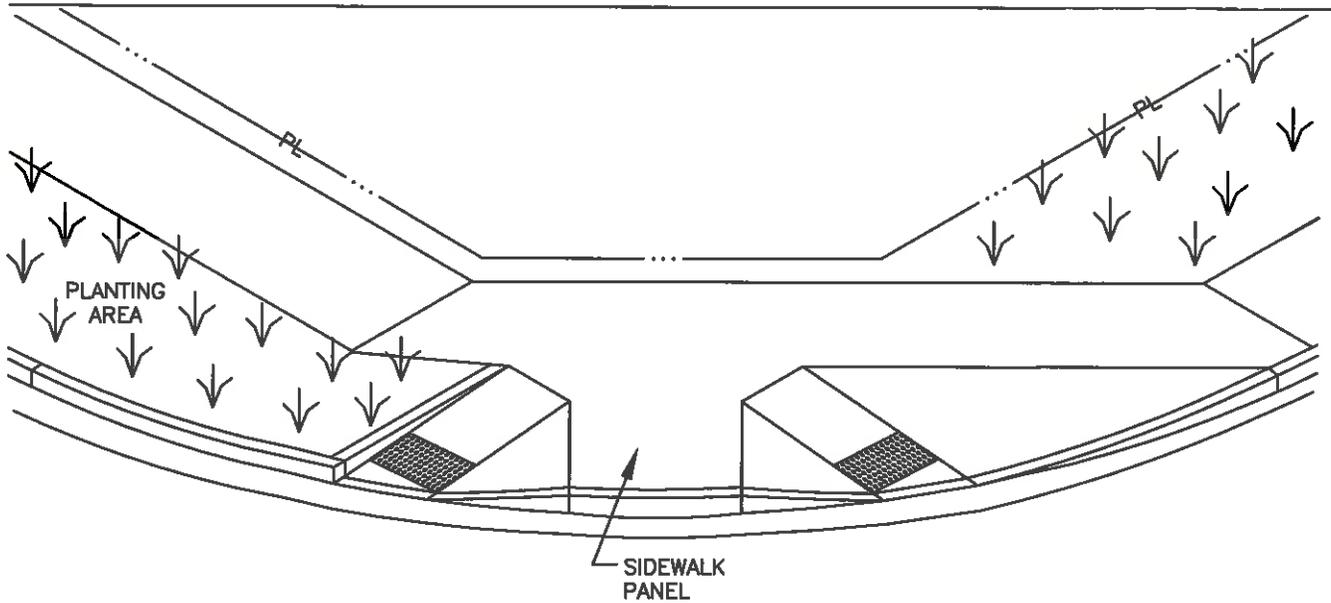
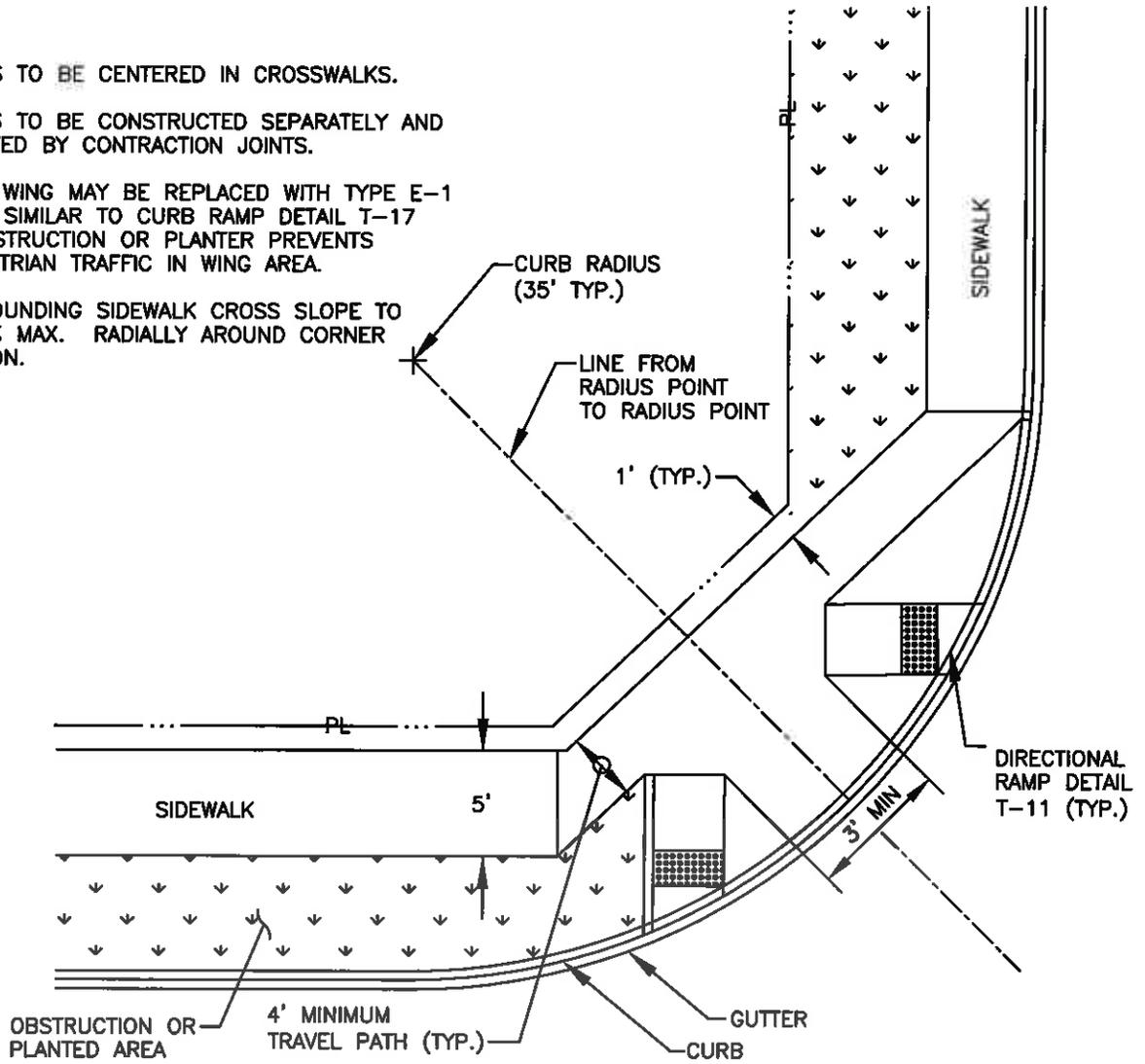
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NOTES:

1. RAMPS TO BE CENTERED IN CROSSWALKS.
2. RAMPS TO BE CONSTRUCTED SEPARATELY AND ISOLATED BY CONTRACTION JOINTS.
3. RAMP WING MAY BE REPLACED WITH TYPE E-1 CURB SIMILAR TO CURB RAMP DETAIL T-17 IF OBSTRUCTION OR PLANTER PREVENTS PEDESTRIAN TRAFFIC IN WING AREA.
4. SURROUNDING SIDEWALK CROSS SLOPE TO BE 2% MAX. RADIALLY AROUND CORNER SECTION.



DOUBLE DIRECTIONAL RAMP PLACEMENT

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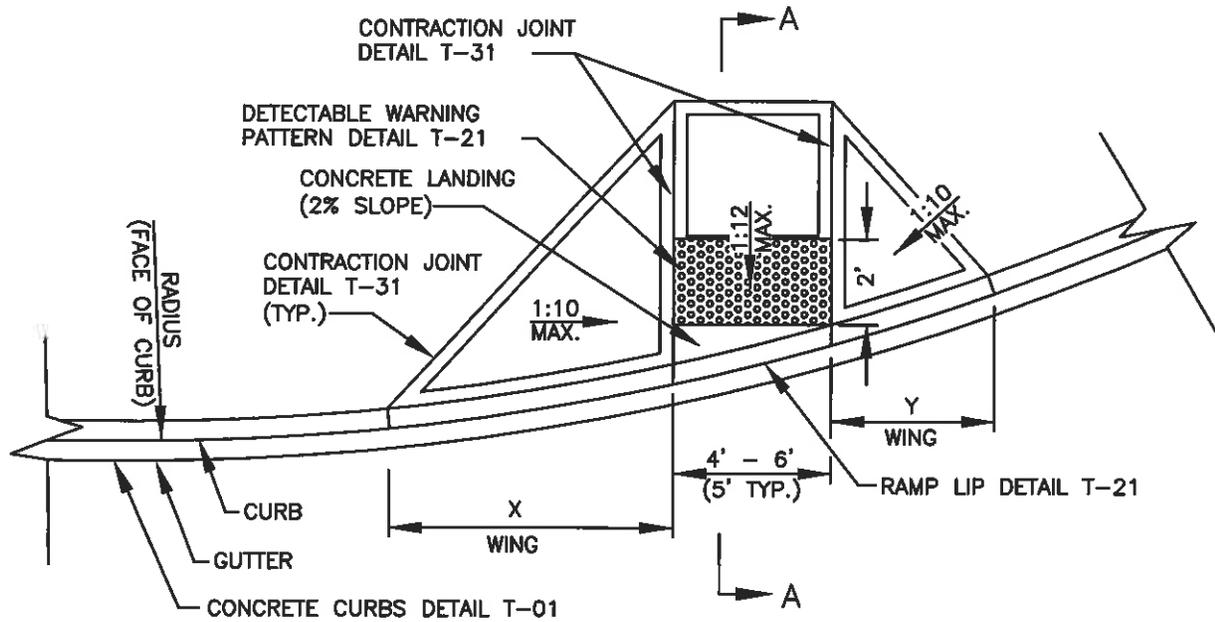
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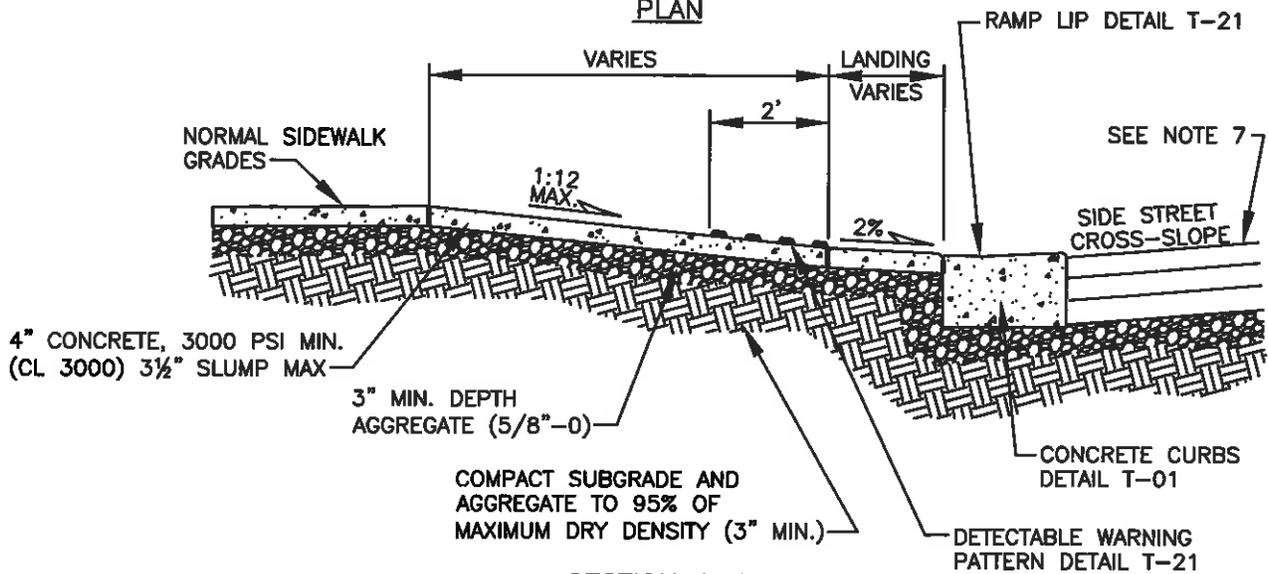


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PLAN



SECTION A-A

NOTES:

1. DIMENSIONS X & Y VARY DEPENDING UPON RADIUS AND PLACEMENT OF RAMP TO MAINTAIN 1:10 MAXIMUM SLOPE.
2. EXISTING CURB AND SIDEWALK TO BE SAWCUT AND REMOVED FOR INSTALLATION OF NEW RAMP.
3. RAMP TO BE CENTERED IN CROSSWALK.
4. RAMP TO BE CONSTRUCTED SEPARATELY FROM SIDEWALK.
5. RAMP WING MAY BE REPLACED WITH TYPE E-1 CURB T-01 SIMILAR TO CURB RAMP DETAIL T-29 IF OBSTRUCTION OR PLANTER PREVENTS PEDESTRIAN TRAFFIC IN WING AREA.
6. IF THE MAXIMUM SLOPE OF 1:12 CANNOT BE ACHIEVED DUE TO THE SLOPE OF THE EXISTING SIDEWALK, THE LENGTH OF THE CURB RAMP SHALL NOT BE REQUIRED TO BE LONGER THAN 15 FEET REGARDLESS OF THE RESULTING RAMP SLOPE.
7. SEE PAVEMENT RESTORATION/WIDENING AT CURB DETAIL T-29 WHEN CUTTING EXISTING CURB.

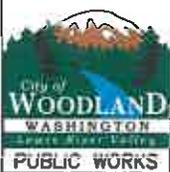
DIRECTIONAL RAMP CONSTRUCTION

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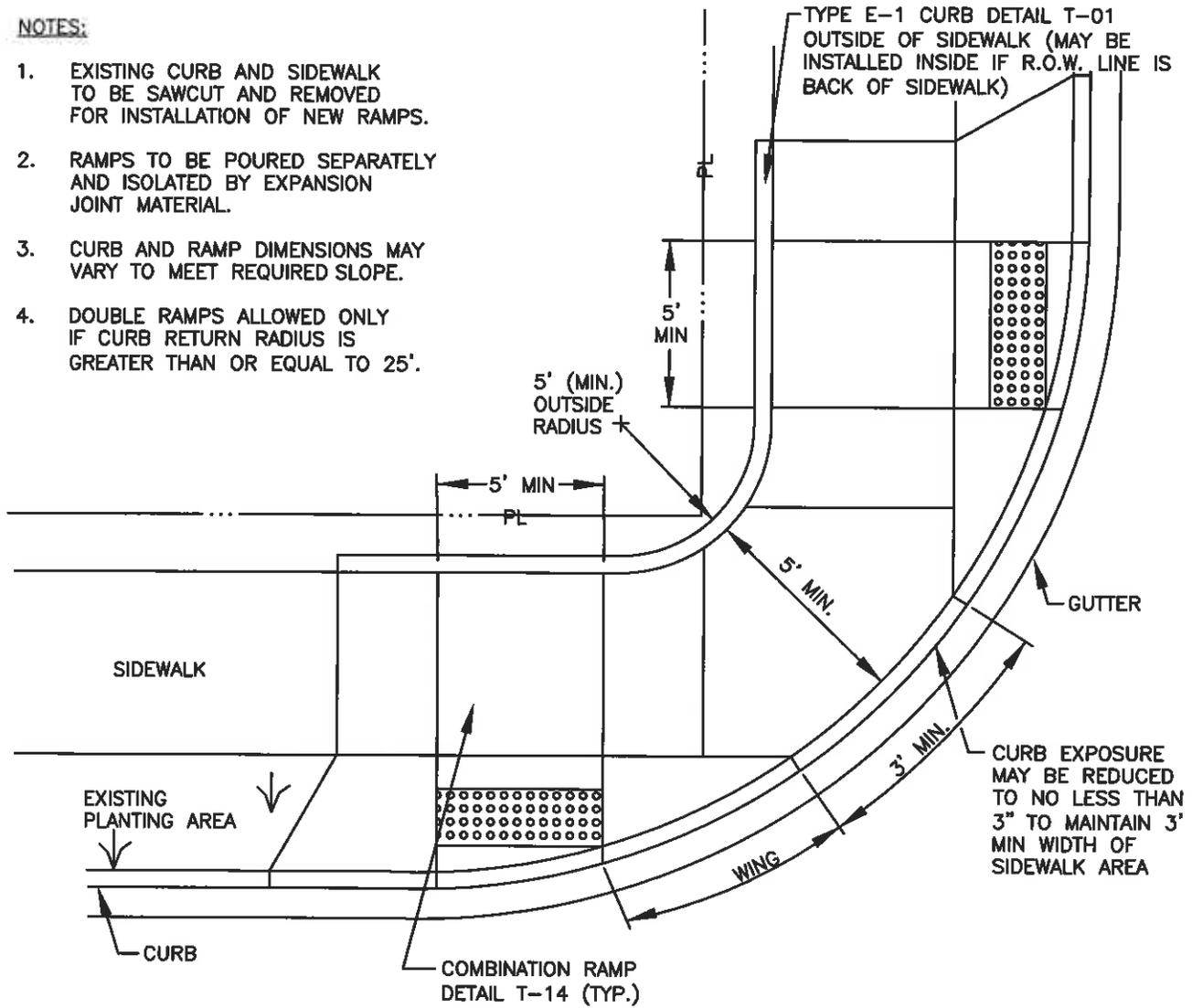
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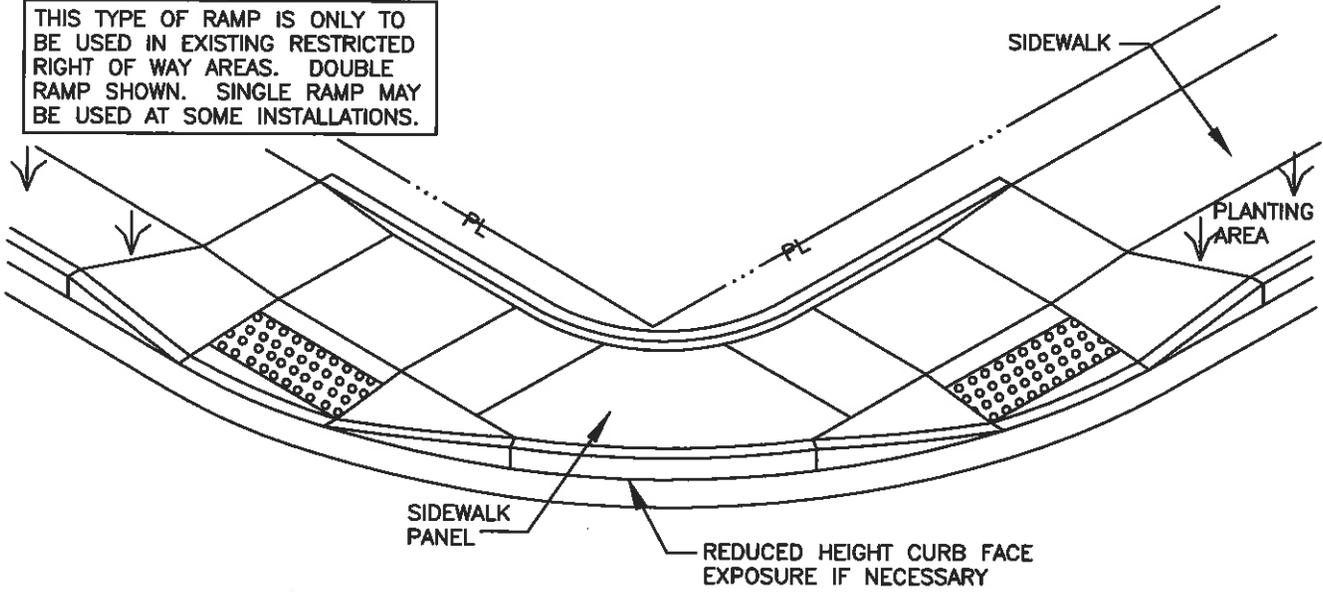


NOTES:

1. EXISTING CURB AND SIDEWALK TO BE SAWCUT AND REMOVED FOR INSTALLATION OF NEW RAMPS.
2. RAMPS TO BE POURED SEPARATELY AND ISOLATED BY EXPANSION JOINT MATERIAL.
3. CURB AND RAMP DIMENSIONS MAY VARY TO MEET REQUIRED SLOPE.
4. DOUBLE RAMPS ALLOWED ONLY IF CURB RETURN RADIUS IS GREATER THAN OR EQUAL TO 25'.



THIS TYPE OF RAMP IS ONLY TO BE USED IN EXISTING RESTRICTED RIGHT OF WAY AREAS. DOUBLE RAMP SHOWN. SINGLE RAMP MAY BE USED AT SOME INSTALLATIONS.



DOUBLE COMBINATION RAMP PLACEMENT - A

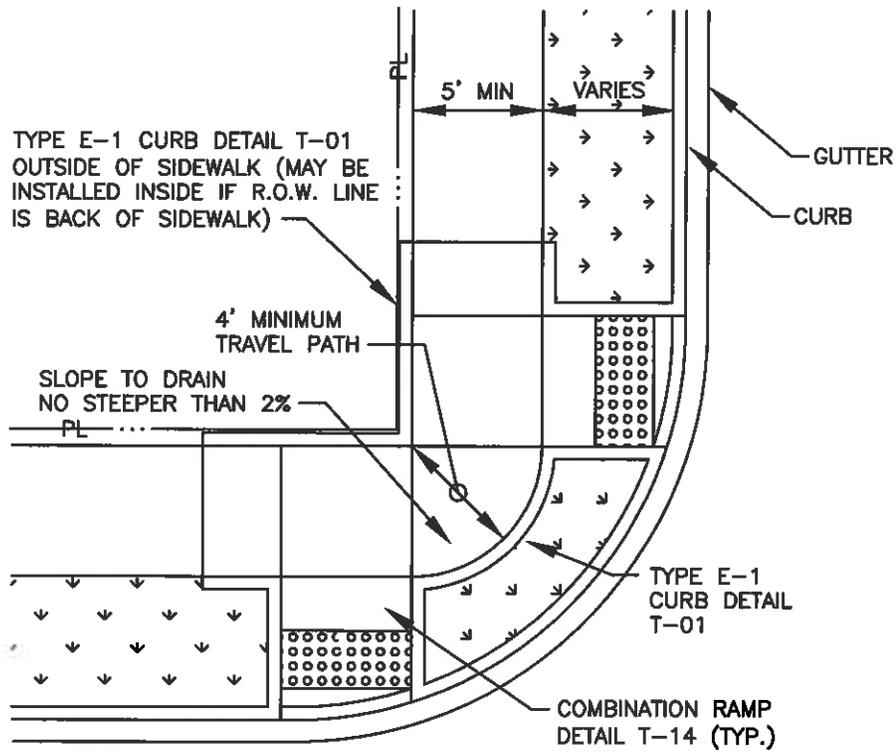
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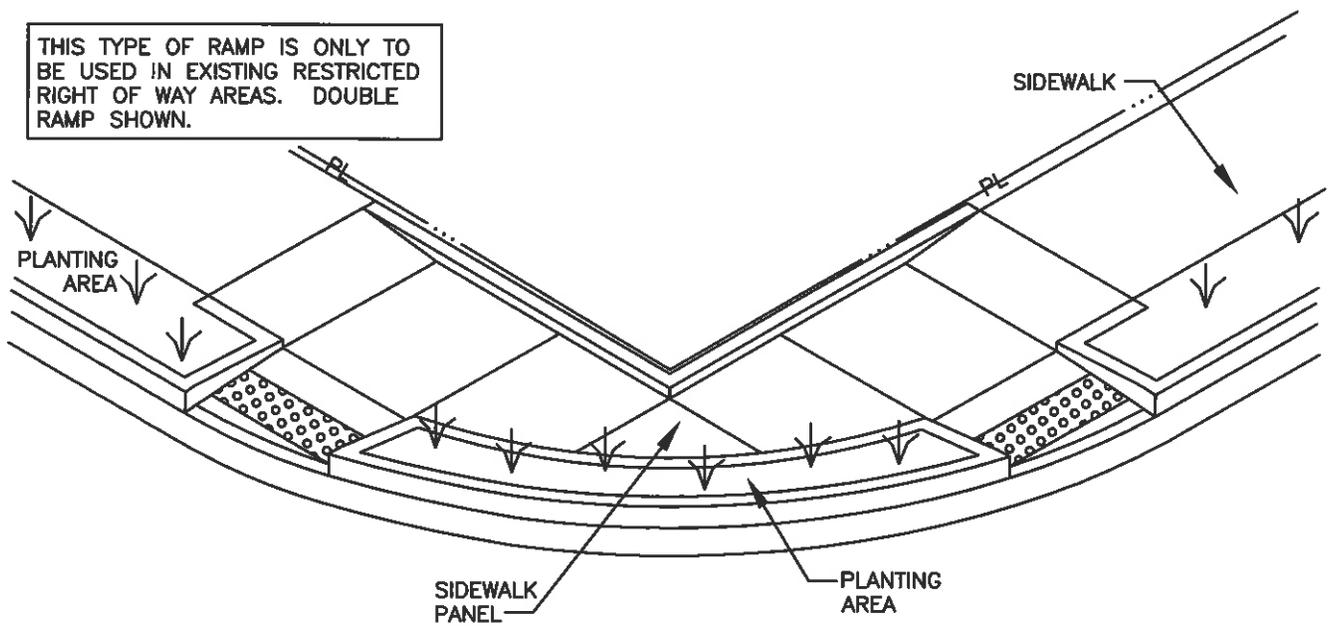
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NOTES:

1. RAMPS TO BE CENTERED IN CROSSWALKS.
2. RAMPS TO BE CONSTRUCTED SEPARATELY.



DOUBLE COMBINATION RAMP PLACEMENT - B

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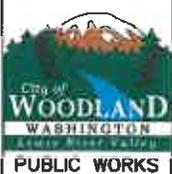
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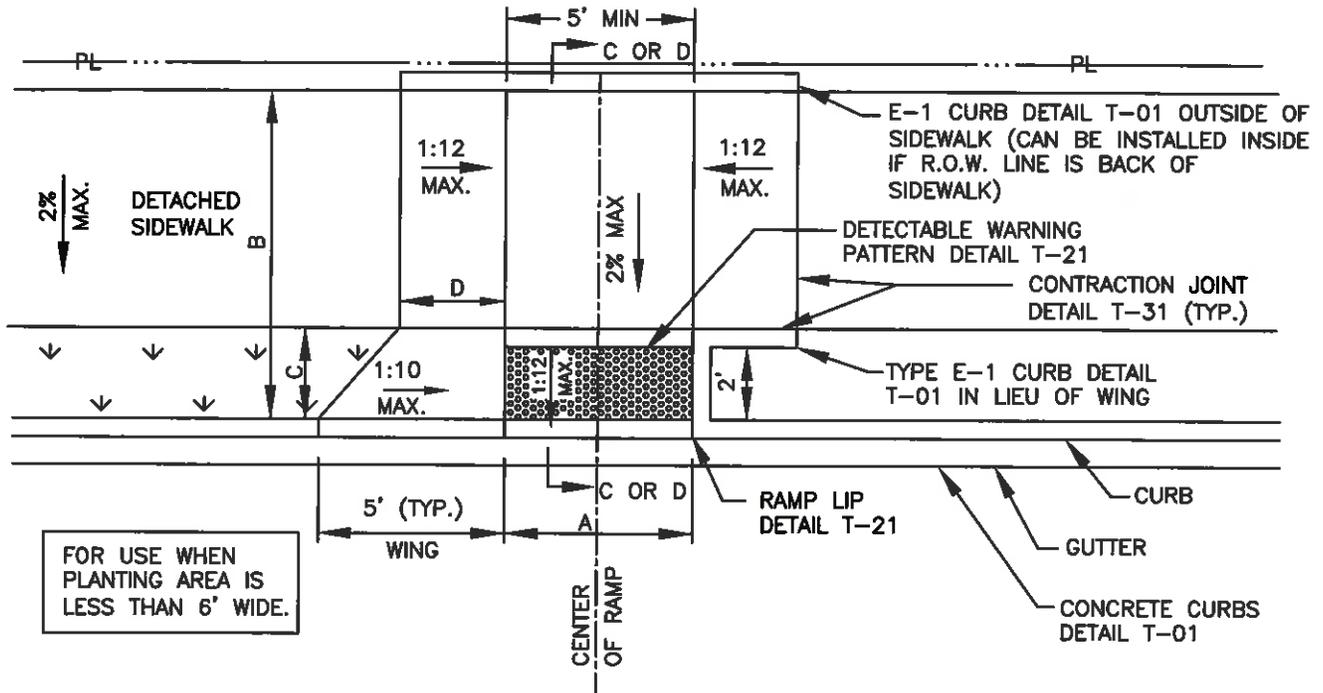
DATE

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DESIGNED

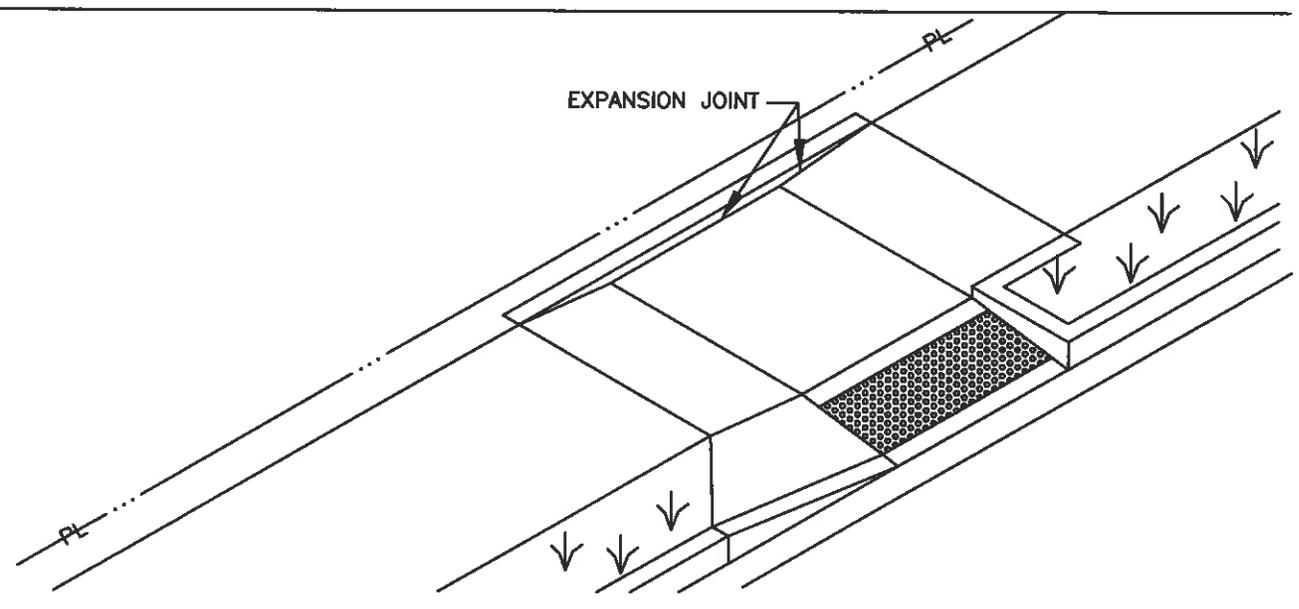
T-13





NOTES:

1. EXISTING CURB AND SIDEWALK TO BE SAWCUT AND REMOVED FOR INSTALLATION OF NEW RAMP.
2. RAMP MAY BE USED MID BLOCK OR ON INTERSECTION RADIUS.
3. RAMP TO BE CENTERED IN CROSSWALK.
4. RAMPS TO BE CONSTRUCTED SEPARATELY FROM SIDEWALK.
5. WING DIMENSIONS MAY VARY TO MEET REQUIRED SLOPE.
6. DIMENSION 'C' VARIES.
7. DIMENSION 'A' VARIES DEPENDING UPON RAMP WIDTH, 5' MIN.
8. DIMENSION 'D' VARIES DEPENDING UPON THE SLOPE OF THE SIDEWALK, 2' MIN TO 15' MAX.
9. SEE STANDARD LANDING CROSS SECTIONS DETAIL T-20 FOR SECTIONS C-C AND D-D.



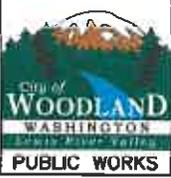
COMBINATION RAMP CONSTRUCTION

APPROVED

Barry Stupp 5/8/13
PUBLIC WORKS DIRECTOR DATE

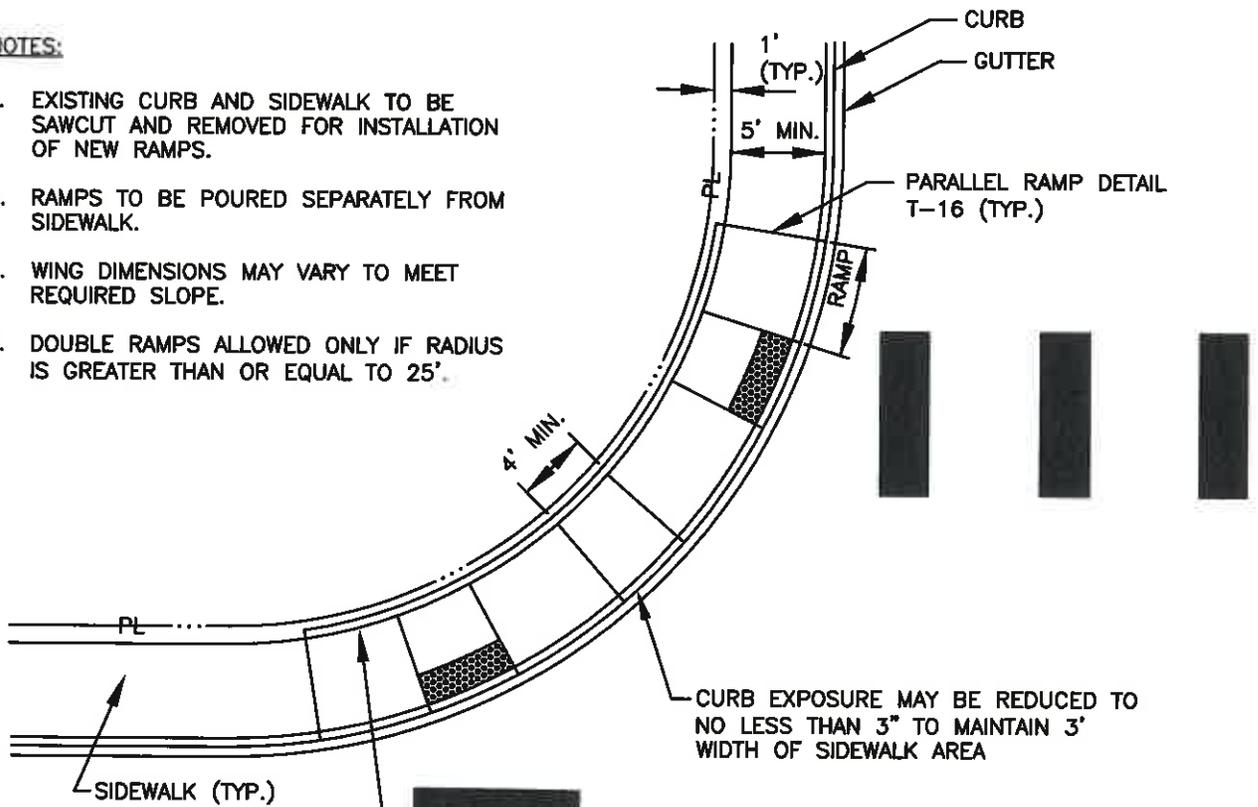
REVISIONS	DATE	DRAWN	DESIGNED

T-14



NOTES:

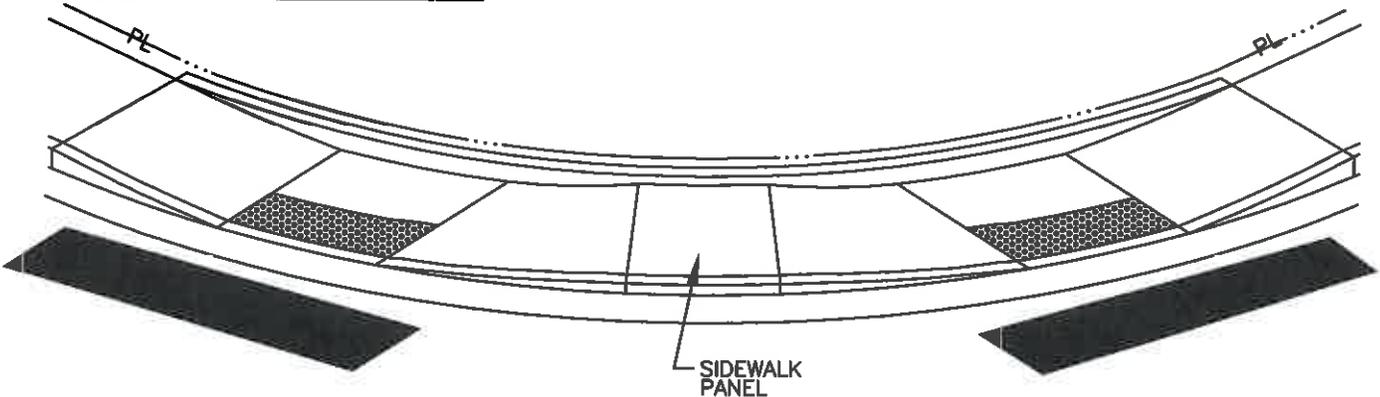
1. EXISTING CURB AND SIDEWALK TO BE SAWCUT AND REMOVED FOR INSTALLATION OF NEW RAMPS.
2. RAMPS TO BE POURED SEPARATELY FROM SIDEWALK.
3. WING DIMENSIONS MAY VARY TO MEET REQUIRED SLOPE.
4. DOUBLE RAMPS ALLOWED ONLY IF RADIUS IS GREATER THAN OR EQUAL TO 25'.



TYPE E-1 CURB DETAIL T-01
 OUTSIDE OF SIDEWALK (MAY BE
 INSTALLED INSIDE IF R.O.W. LINE
 IS BACK OF SIDEWALK)

IF THE MAXIMUM SLOPE OF 1:12 CANNOT BE ACHIEVED
 DUE TO THE SLOPE OF THE EXISTING SIDEWALK, THE
 LENGTH OF THE CURB RAMP SHALL NOT BE REQUIRED
 TO BE LONGER THAN 15 FEET REGARDLESS OF THE
 RESULTING RAMP SLOPE.

THIS TYPE OF RAMP IS ONLY TO
 BE USED IN EXISTING RESTRICTED
 RIGHT OF WAY AREAS, DOUBLE
 RAMP SHOWN. SINGLE RAMP MAY
 BE USED AT SOME INSTALLATIONS.



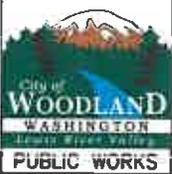
DOUBLE PARALLEL RAMP REPLACEMENT

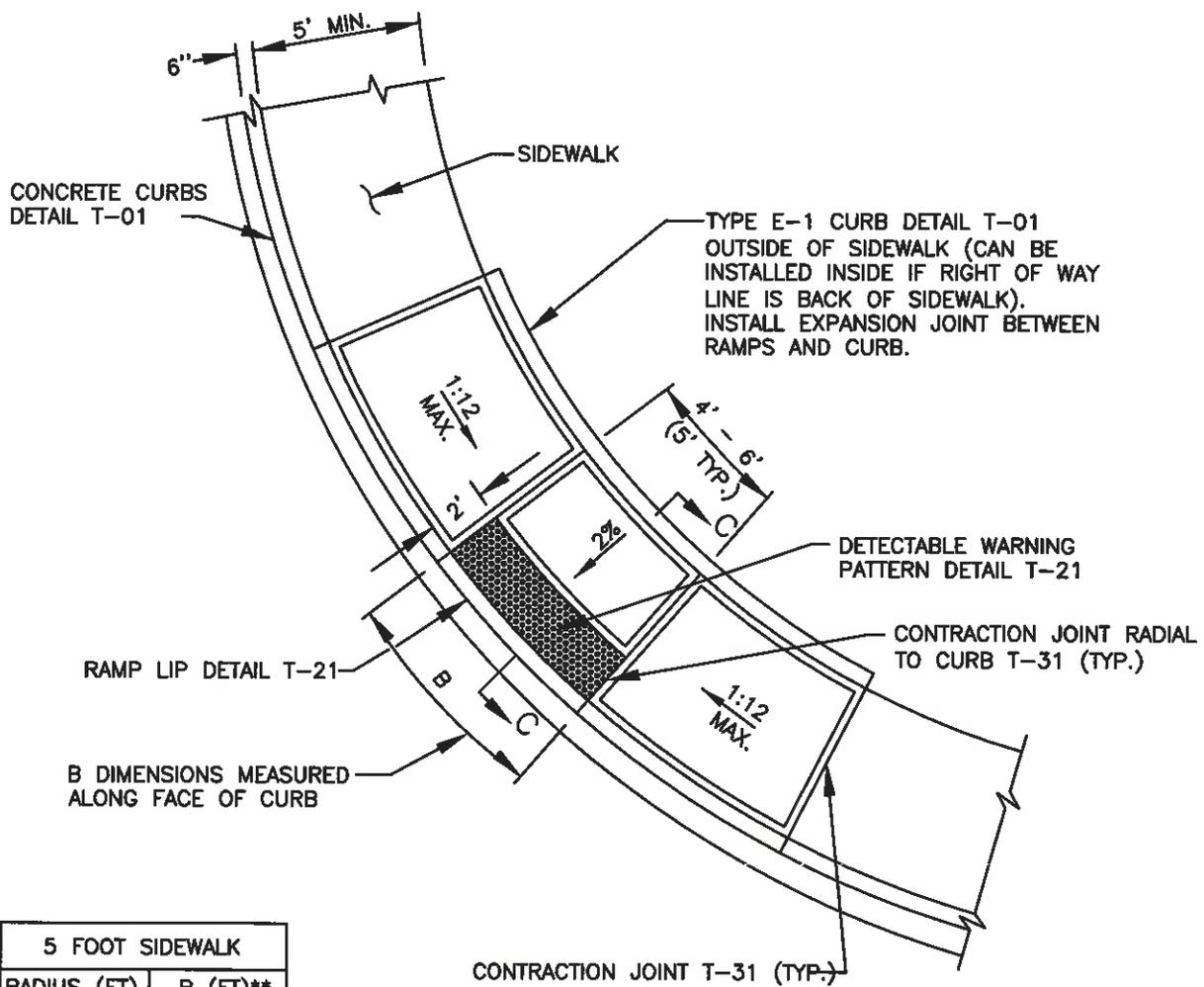
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Bart Stupp 5/8/13
 PUBLIC WORKS DIRECTOR DATE

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T-15



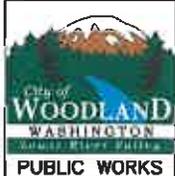


5 FOOT SIDEWALK	
RADIUS (FT)	B (FT)**
10 *	11.11
15 *	7.89
20 *	6.90
25	6.41
30	6.12
35	5.93
40	5.80
45	5.63
∞	5.00

* DOUBLE ATTACHED RAMPS NOT ALLOWED
 ** ASSUMED 5' TOP OF RAMP WIDTH

NOTES:

1. RAMPS SHALL HAVE A MAXIMUM 1:12 SLOPE.
2. EXISTING CURB AND SIDEWALK TO BE SAWCUT AND REMOVED FOR INSTALLATION OF NEW RAMP.
3. RAMP MAY BE USED MID-BLOCK OR ON INTERSECTION RADIUS.
4. RAMP TO BE CENTERED IN CROSSWALK.
5. RAMPS TO BE CONSTRUCTED SEPARATELY FROM SIDEWALK.
6. SEE STANDARD LANDING CROSS SECTIONS - C-C AND D-D DETAIL T-20 FOR SECTION C-C.
7. IF THE AREA BEHIND THE SIDEWALK IS VEGETATED, THE BACK CURB MAY BE REPLACED WITH A SLOPE NO STEEPER THAN 4:1.
8. IF THE MAXIMUM SLOPE OF 1:12 CANNOT BE ACHIEVED DUE TO THE SLOPE OF THE EXISTING SIDEWALK, THE LENGTH OF THE CURB RAMP SHALL NOT BE REQUIRED TO BE LONGER THAN 15 FEET REGARDLESS OF THE RESULTING RAMP SLOPE.



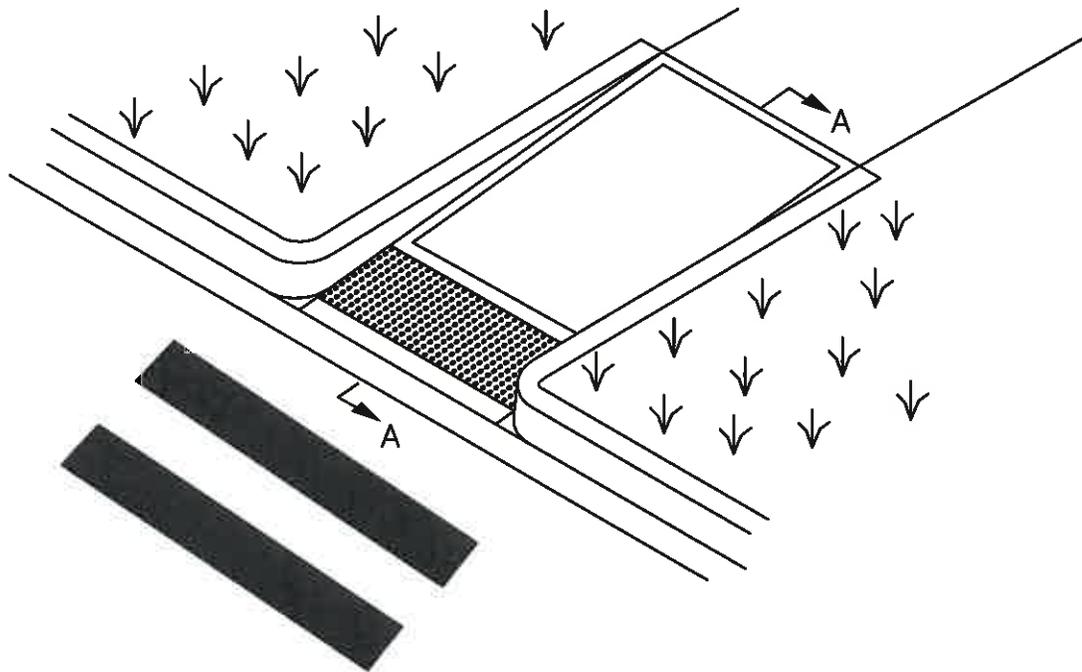
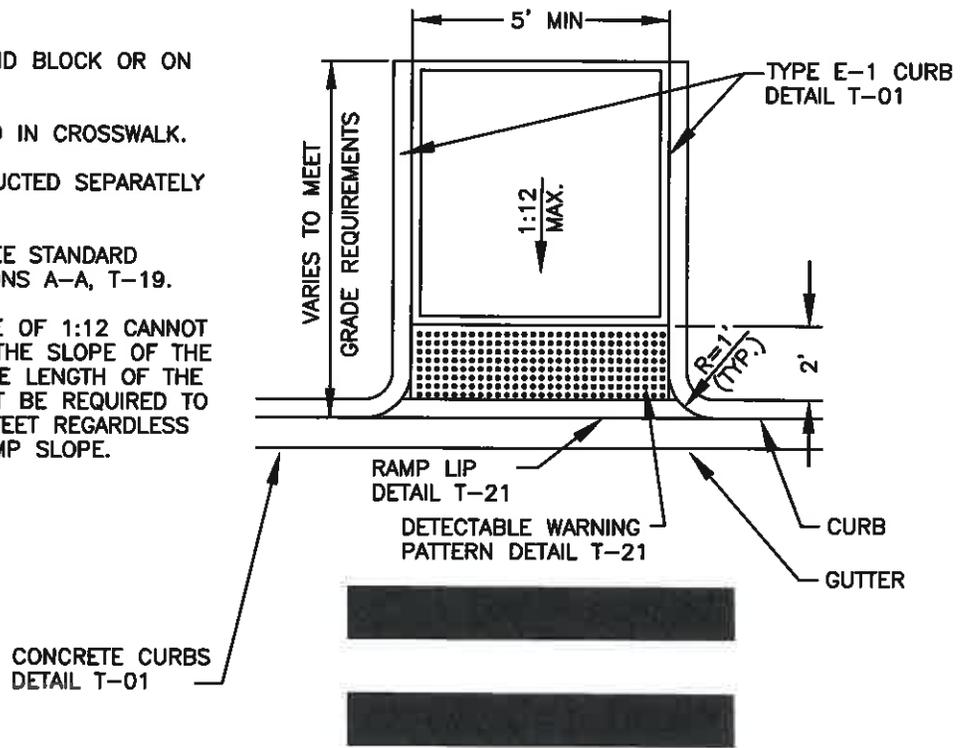
PARALLEL RAMP

APPROVED	REVISIONS	DATE	DRAWN	DESIGNED
<i>Bart Stepp</i> 5/8/13				
PUBLIC WORKS DIRECTOR		DATE		

T-16

NOTES:

1. EXISTING CURB AND SIDEWALK TO BE SAWCUT AND REMOVED FOR INSTALLATION OF NEW RAMP.
2. RAMP MAY BE USED MID BLOCK OR ON INTERSECTION RADIUS.
3. RAMP TO BE CENTERED IN CROSSWALK.
4. RAMPS TO BE CONSTRUCTED SEPARATELY FROM SIDEWALK.
5. FOR SECTIONS A-A, SEE STANDARD LANDING CROSS SECTIONS A-A, T-19.
6. IF THE MAXIMUM SLOPE OF 1:12 CANNOT BE ACHIEVED DUE TO THE SLOPE OF THE EXISTING SIDEWALK, THE LENGTH OF THE CURB RAMP SHALL NOT BE REQUIRED TO BE LONGER THAN 15 FEET REGARDLESS OF THE RESULTING RAMP SLOPE.



PERPENDICULAR RAMP

APPROVED

Bart Stupp 5/8/13
PUBLIC WORKS DIRECTOR DATE

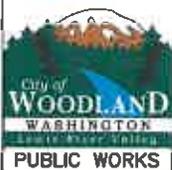
REVISIONS

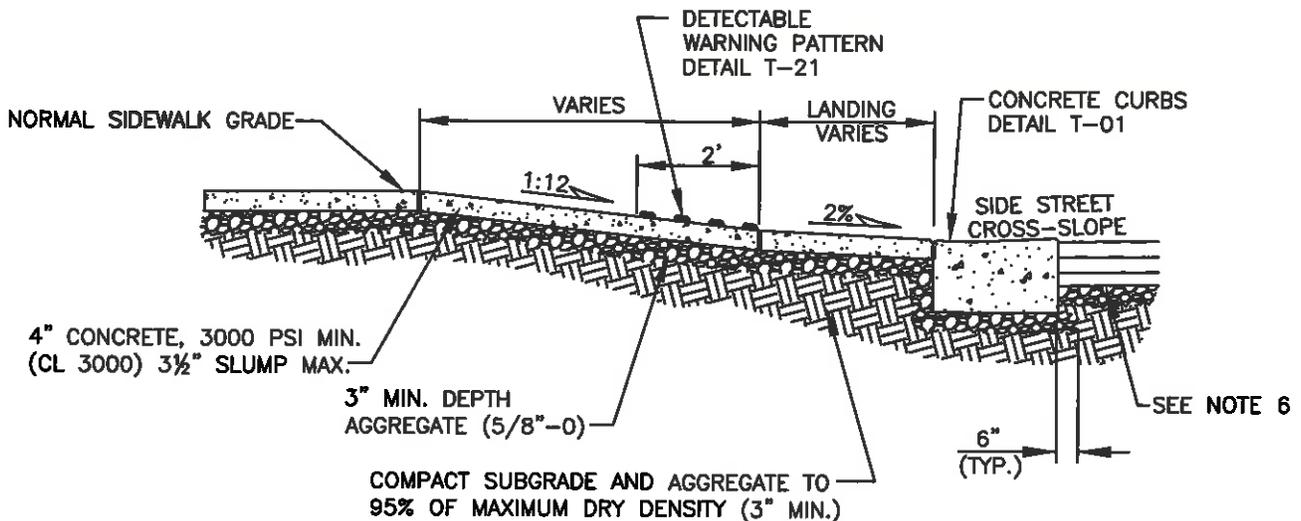
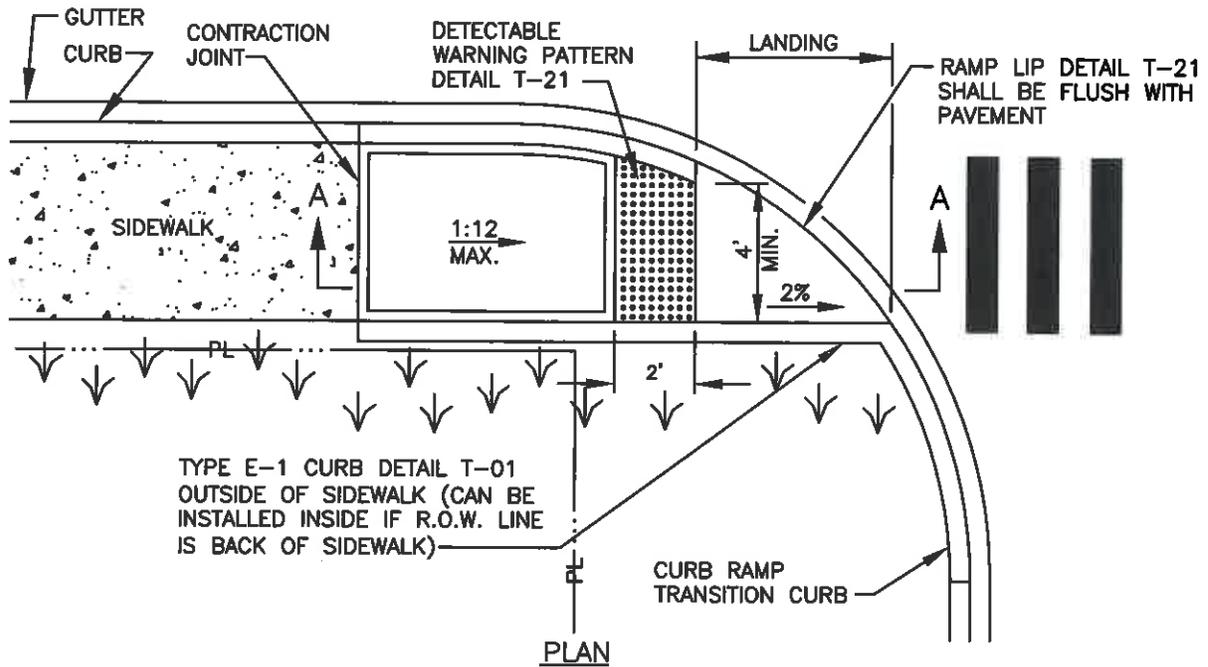
DATE

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T-17





SECTION A-A

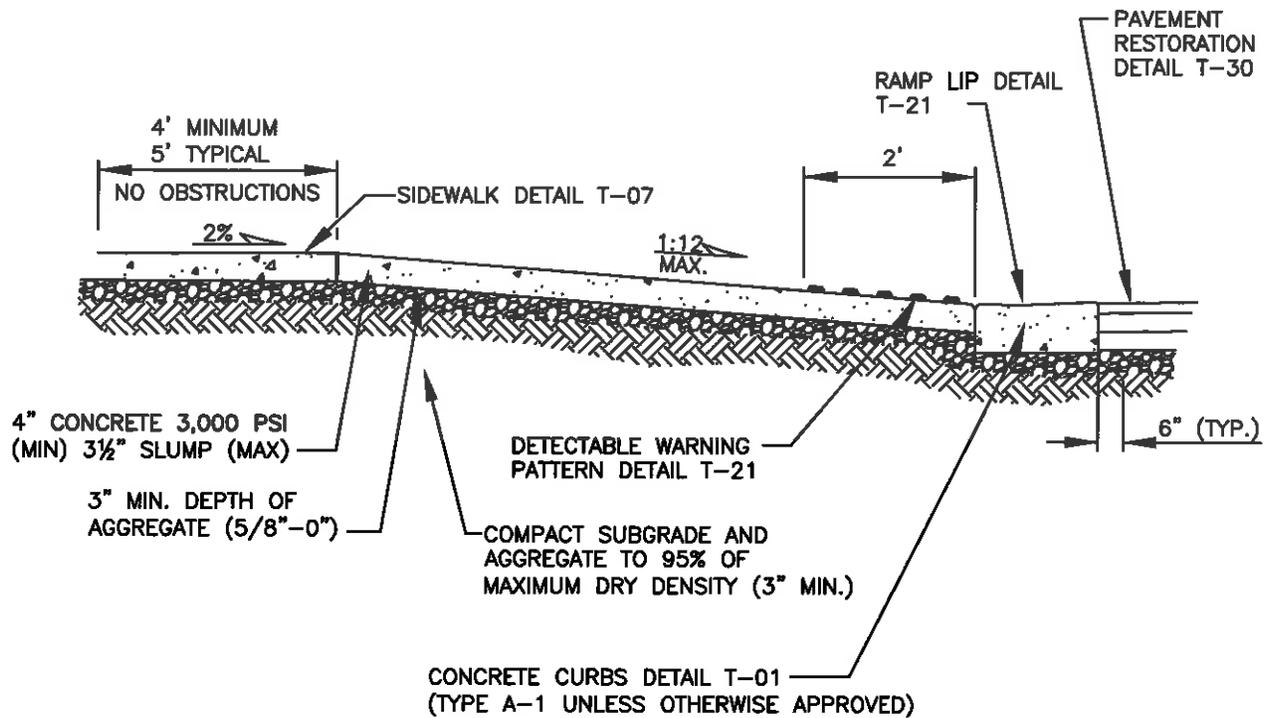
NOTES:

1. THIS DETAIL IS TO BE USED ONLY FOR RETROFIT PROJECTS WHEN RIGHT-OF-WAY IS LIMITED TO BACK OF SIDEWALK. SPECIFIC PUBLIC WORKS DIRECTOR APPROVAL IS REQUIRED FOR THE USE OF THIS DETAIL.
2. RAMP TO BE CENTERED IN CROSSWALK.
3. AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 4' SHALL BE MAINTAINED.
4. IF THE MAXIMUM SLOPE OF 1:12 CANNOT BE ACHIEVED DUE TO THE SLOPE OF THE EXISTING SIDEWALK, THE LENGTH OF THE CURB RAMP SHALL NOT BE REQUIRED TO BE LONGER THAN 15 FEET REGARDLESS OF THE RESULTING RAMP SLOPE.
5. SEE PAVEMENT RESTORATION/WIDENING AT CURB DETAIL T-30 WHEN CUTTING EXISTING CURB.



CURB RAMP FOR LIMITED R.O.W. AREAS

APPROVED	REVISIONS	DATE	DRAWN	DESIGNED
<i>Bart Stepp</i>				
PUBLIC WORKS DIRECTOR				
DATE				



SECTION A-A

SEE DIAGONAL RAMP CONSTRUCTION DETAIL T-09

STANDARD LANDING CROSS SECTIONS A-A

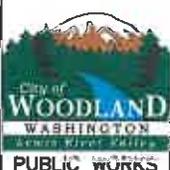
APPROVED

REVISIONS

DATE

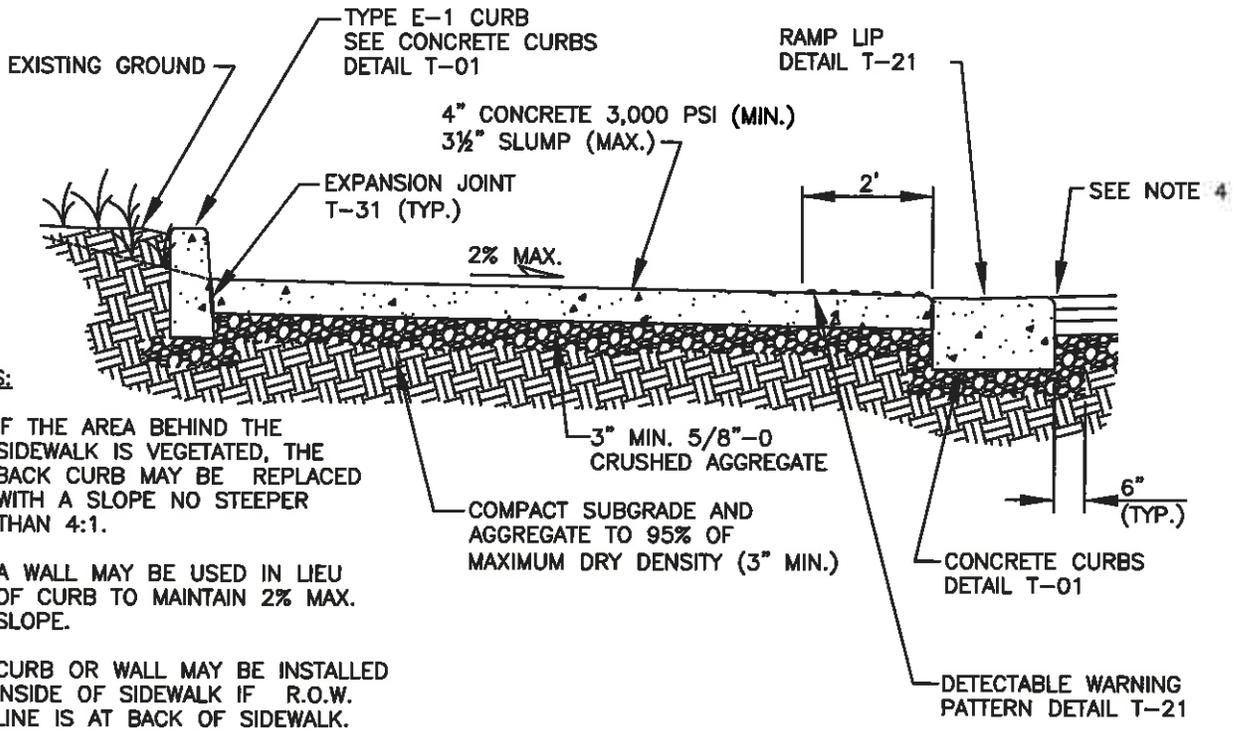
DRAWN

DESIGNED



Bert Stipp 5/8/13
 PUBLIC WORKS DIRECTOR DATE

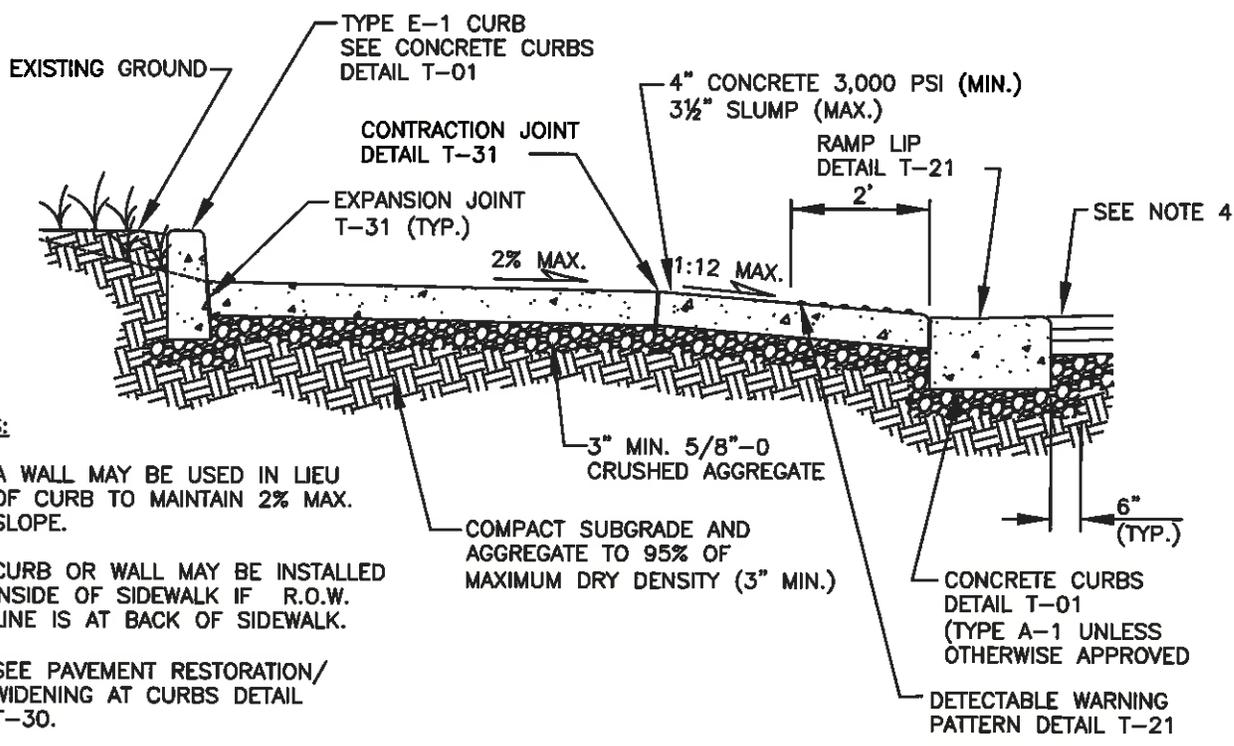
T-19



NOTES:

1. IF THE AREA BEHIND THE SIDEWALK IS VEGETATED, THE BACK CURB MAY BE REPLACED WITH A SLOPE NO STEEPER THAN 4:1.
2. A WALL MAY BE USED IN LIEU OF CURB TO MAINTAIN 2% MAX. SLOPE.
3. CURB OR WALL MAY BE INSTALLED INSIDE OF SIDEWALK IF R.O.W. LINE IS AT BACK OF SIDEWALK.
4. SEE PAVEMENT RESTORATION/WIDENING AT CURBS DETAIL T-30.

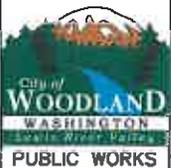
SECTION C-C SINGLE-SLOPE LANDING FOR DETAIL T-16



NOTES:

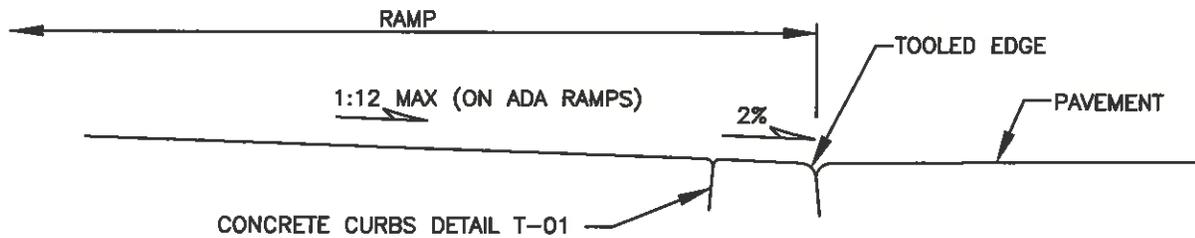
1. A WALL MAY BE USED IN LIEU OF CURB TO MAINTAIN 2% MAX. SLOPE.
2. CURB OR WALL MAY BE INSTALLED INSIDE OF SIDEWALK IF R.O.W. LINE IS AT BACK OF SIDEWALK.
3. SEE PAVEMENT RESTORATION/WIDENING AT CURBS DETAIL T-30.

SECTION D-D MULTI-SLOPED LANDING FOR DETAILS T-12, T-13, AND T-14

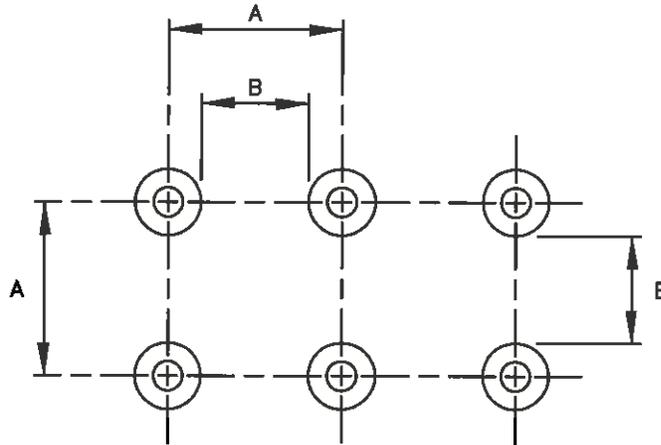


STANDARD LANDING CROSS SECTIONS C-C AND D-D

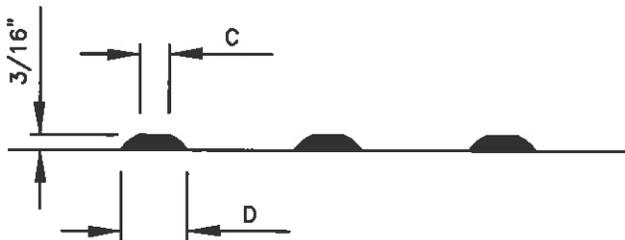
APPROVED	REVISIONS	DATE	DRAWN	DESIGNED
<i>Bart Stupp 5/8/13</i>				
PUBLIC WORKS DIRECTOR		DATE		



RAMP LIP DETAIL



PLAN



ELEVATION

	MIN.	MAX.
A	1 5/8"	2 3/8"
B	5/8"	1 1/2"
C	7/16"	3/4"
D	7/8"	1 7/16"

NOTES:

1. DETECTABLE WARNINGS SHALL BE MANUFACTURED USING THE MATERIALS SPECIFIED ON THE PLAN SHEETS WITH THE DOME DIMENSIONS AND SPACING SHOWN AND INSTALLED PER THE MANUFACTURER'S RECOMMENDED PROCEDURES.
2. DETECTABLE WARNINGS SHALL BE INSET INTO NEW CONCRETE WITH NO AIR TRAPPED UNDERNEATH. GLUED ON OR NAILED DOWN PRODUCTS ARE NOT ACCEPTABLE FOR NEW CONSTRUCTION.
3. SAFETY YELLOW TRUNCATED DOMES ARE REQUIRED UNLESS OTHERWISE APPROVED BY THE PUBLIC WORKS DIRECTOR.

DETECTABLE WARNING PATTERN DETAIL

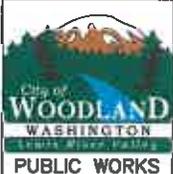
RAMP LIP AND DETECTABLE WARNING PATTERN

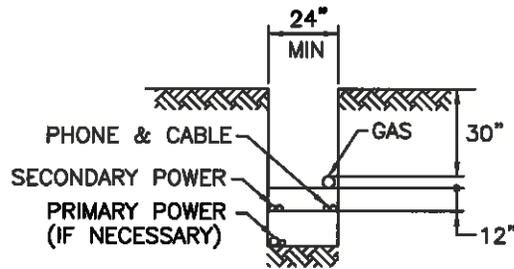
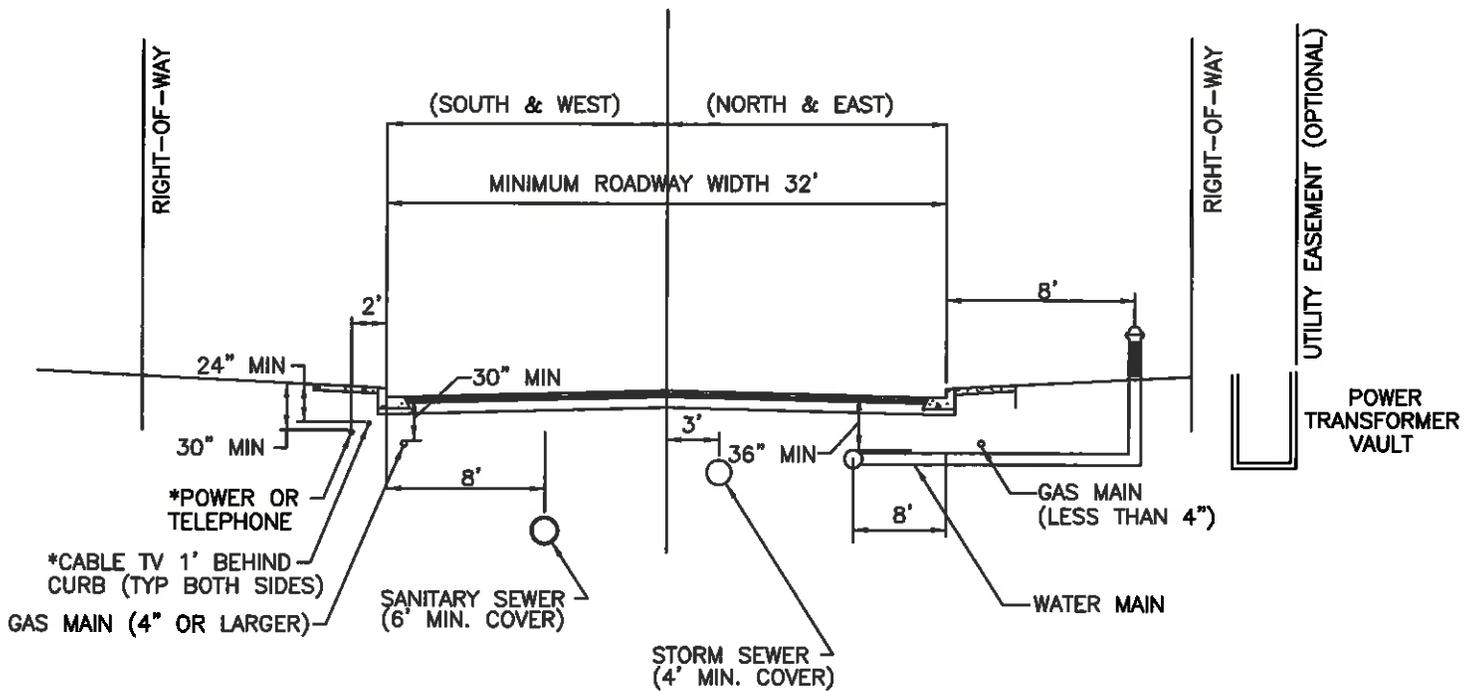
APPROVED

Bart Stipp 5/8/13
PUBLIC WORKS DIRECTOR DATE

REVISIONS	DATE	DRAWN	DESIGNED

T-21

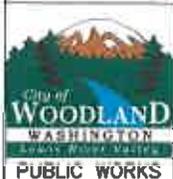




*JOINT TRENCH DETAIL (OPTIONAL)

NOTES:

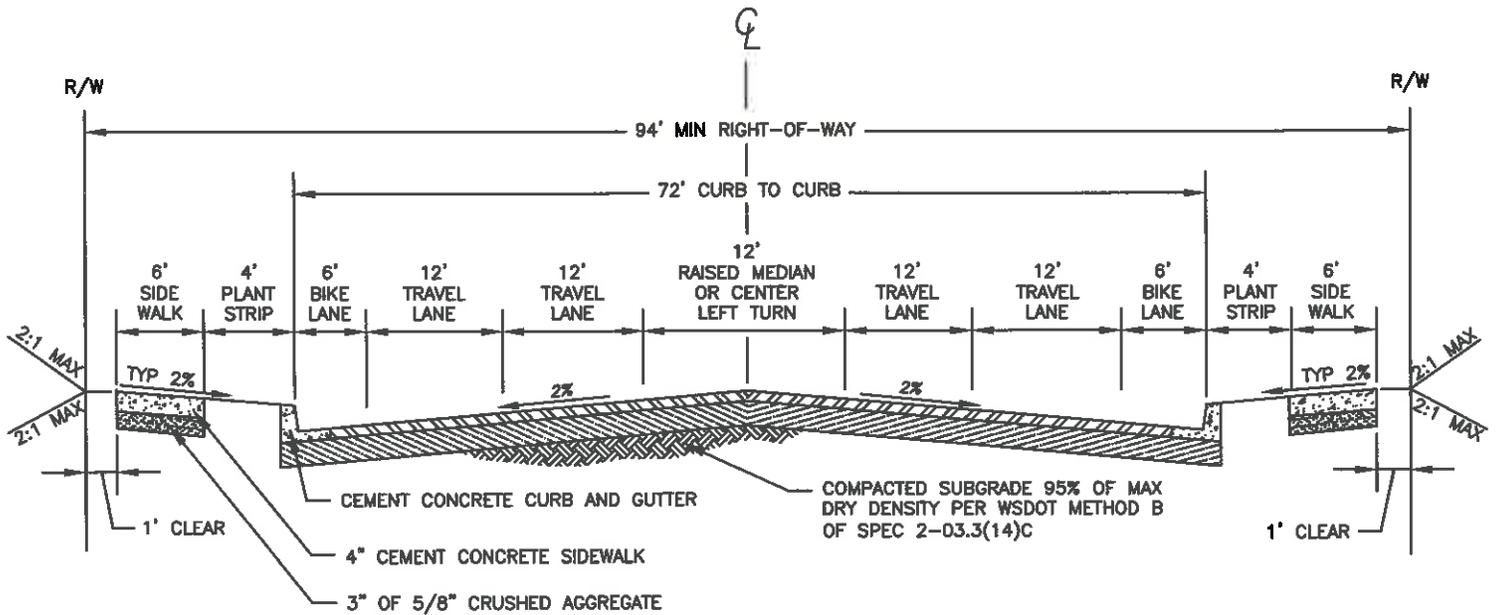
1. THE PUBLIC WORKS DIRECTOR MAY REQUIRE INSTALLATION OF SANITARY SEWER AT A DEPTH GREATER THAN 6 FEET.
2. ALTERNATE LOCATIONS CONSIDERED ONLY TO SALVAGE CORE ROADWAY, OR TO AVOID SUBSTANTIAL CONFLICT WITH EXISTING UTILITIES.
3. MANHOLES CONES TO BE ROTATED TO KEEP MANHOLE COVER LOCATED OUTSIDE OF WHEEL PATH.
4. GAS VALVES ARE TO BE LOCATED 2' MINIMUM FROM FACE OF CURB.
5. MODIFICATION TO THIS STANDARD IS SUBJECT TO THE REVIEW AND APPROVAL OF THE PUBLIC WORKS DIRECTOR.
6. PULL BOXES AND VAULTS OF PRIVATE UTILITIES WILL BE LOCATED OUTSIDE OF THE SIDEWALK.



UTILITY PLACEMENT

APPROVED	REVISIONS	DATE	DRAWN	DESIGNED
<i>Bart Stepp</i> 5/8/13				
PUBLIC WORKS DIRECTOR				
DATE				

T-22



CONVENTIONAL CONSTRUCTION		
AASHTO SOIL TYPE	ASPHALT THICKNESS	BASE ROCK THICKNESS
A-1	0.55'	0.40'
A-2	0.55'	0.55'
A-3	0.55'	0.80'
A-4	0.60'	1.00'
A-5	0.60'	1.35'
A-6	0.60'	1.80'
A-7	0.90'	1.45'
OTHER	NO SECTION	ESTIMATED

THICK ASPHALT CONSTRUCTION		
AASHTO SOIL TYPE	ASPHALT THICKNESS	BASE ROCK THICKNESS
A-1	0.60'	0.25'
A-2	0.65'	0.25'
A-3	0.72'	0.25'
A-4	0.82'	0.25'
A-5	0.92'	0.25'
A-6	1.05'	0.25'
A-7	1.25'	0.25'
OTHER	NO SECTION	ESTIMATED

NOTES:

1. WIDER SIDEWALKS MAY BE REQUIRED BY REVIEWING AUTHORITY UNDER CERTAIN CIRCUMSTANCES.
2. SUBGRADE REINFORCEMENT GEOTEXTILES SHALL BE INSTALLED OVER A-6 AND A-7 SOILS PRIOR TO CONSTRUCTING THE BASE AND SURFACING.
3. ASPHALT SURFACE FOR ALL ROADS SHALL BE HMA CLASS 1/2" PG 64-22 PER WSDOT STANDARD SPECIFICATIONS.
4. THE PAVEMENT STRUCTURE THICKNESSES IDENTIFIED FOR THESE SOIL TYPES ARE REQUIRED UNLESS A SITE SPECIFIC PAVEMENT DESIGN IS DONE. THE TOTAL PAVEMENT STRUCTURE SHALL NOT EXCEED 2.5 FEET.
5. EITHER CONVENTIONAL OR THICK ASPHALT CONSTRUCTION IS ALLOWED.
6. BASE ROCK SECTION SHALL BE TWO (2) INCHES OF 5/8"- 0" TOP COURSE, OVER REMAINING DEPTH OF BASE COURSE PER WSDOT STANDARD SPEC SECTION 9-03.9(3). TOTAL BASE ROCK SECTION THICKNESS AS INDICATED IN THE TABLES. BASE ROCK WILL BE COMPACTED TO MEET SPEC 2-03.3(14)D.

MAJOR ARTERIAL

APPROVED

Bart Stipp
PUBLIC WORKS DIRECTOR

2/24/15
DATE

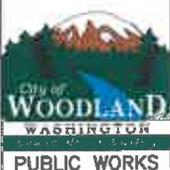
REVISIONS

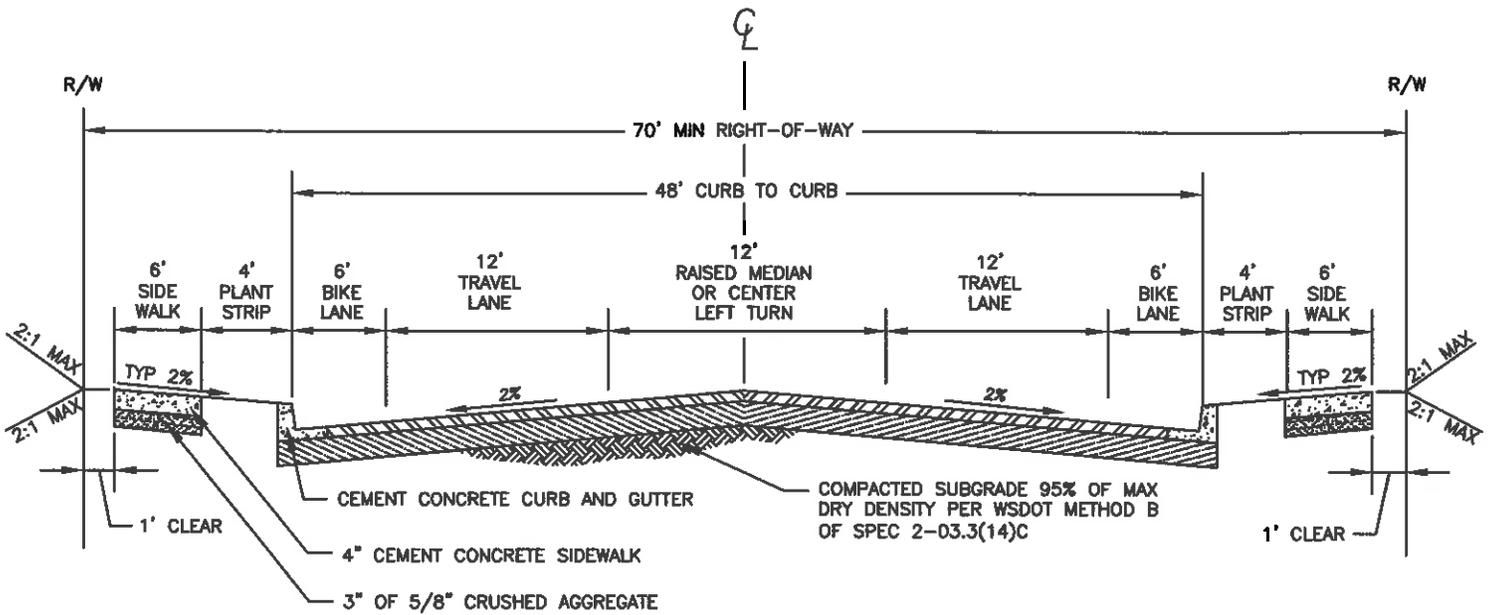
DATE

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T-23



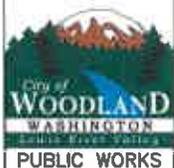


CONVENTIONAL CONSTRUCTION		
AASHTO SOIL TYPE	ASPHALT THICKNESS	BASE ROCK THICKNESS
A-1	0.50'	0.40'
A-2	0.50'	0.50'
A-3	0.50'	0.75'
A-4	0.50'	1.10'
A-5	0.50'	1.45'
A-6	0.55'	1.65'
A-7	0.75'	1.65'
OTHER	NO SECTION	ESTIMATED

THICK ASPHALT CONSTRUCTION		
AASHTO SOIL TYPE	ASPHALT THICKNESS	BASE ROCK THICKNESS
A-1	0.55'	0.25'
A-2	0.57'	0.25'
A-3	0.65'	0.25'
A-4	0.75'	0.25'
A-5	0.85'	0.25'
A-6	0.95'	0.25'
A-7	1.15'	0.25'
OTHER	NO SECTION	ESTIMATED

NOTES:

1. WIDER SIDEWALKS MAY BE REQUIRED BY REVIEWING AUTHORITY UNDER CERTAIN CIRCUMSTANCES.
2. SUBGRADE REINFORCEMENT GEOTEXTILES SHALL BE INSTALLED OVER A-6 AND A-7 SOILS PRIOR TO CONSTRUCTING THE BASE AND SURFACING.
3. ASPHALT SURFACE FOR ALL ROADS SHALL BE HMA CLASS 1/2" PG 64-22 PER WSDOT STANDARD SPECIFICATIONS.
4. THE PAVEMENT STRUCTURE THICKNESSES IDENTIFIED FOR THESE SOIL TYPES ARE REQUIRED UNLESS A SITE SPECIFIC PAVEMENT DESIGN IS DONE. THE TOTAL PAVEMENT STRUCTURE SHALL NOT EXCEED 2.5 FEET.
5. EITHER CONVENTIONAL OR THICK ASPHALT CONSTRUCTION IS ALLOWED.
6. BASE ROCK SECTION SHALL BE TWO (2) INCHES OF 5/8"- 0" TOP COURSE, OVER REMAINING DEPTH OF BASE COURSE PER WSDOT STANDARD SPEC SECTION 9-03.9(3). TOTAL BASE ROCK SECTION THICKNESS AS INDICATED IN THE TABLES. BASE ROCK WILL BE COMPACTED TO MEET SPEC 2-03.3(14)D.



MINOR ARTERIAL

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Bart Stupp
PUBLIC WORKS DIRECTOR

2/24/15
DATE

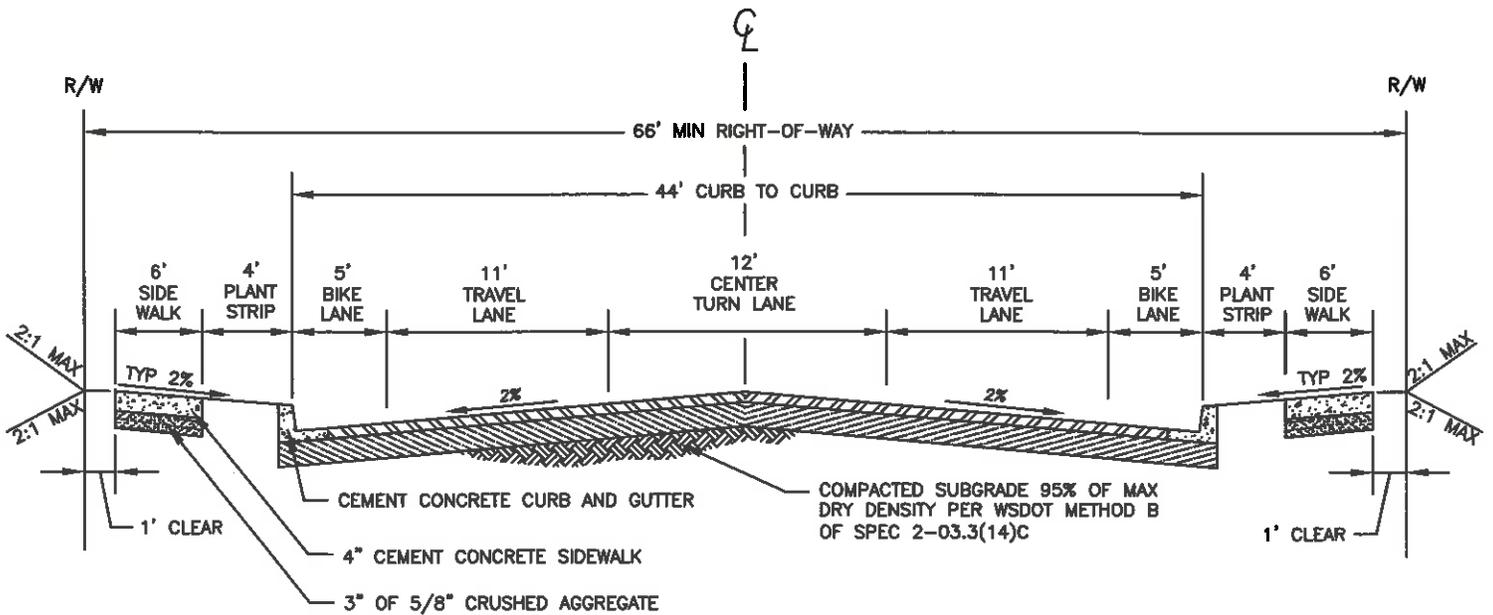
REVISIONS

DATE

DRAWN

DESIGNED

T-24



CONVENTIONAL CONSTRUCTION		
AASHTO SOIL TYPE	ASPHALT THICKNESS	BASE ROCK THICKNESS
A-1	0.45'	0.45'
A-2	0.45'	0.45'
A-3	0.45'	0.55'
A-4	0.45'	0.85'
A-5	0.45'	1.15'
A-6	0.45'	1.55'
A-7	0.50'	2.00'
OTHER	NO SECTION	ESTIMATED

THICK ASPHALT CONSTRUCTION		
AASHTO SOIL TYPE	ASPHALT THICKNESS	BASE ROCK THICKNESS
A-1	0.52'	0.25'
A-2	0.52'	0.25'
A-3	0.55'	0.25'
A-4	0.62'	0.25'
A-5	0.72'	0.25'
A-6	0.82'	0.25'
A-7	1.00'	0.25'
OTHER	NO SECTION	ESTIMATED

NOTES:

1. WIDER SIDEWALKS MAY BE REQUIRED BY REVIEWING AUTHORITY UNDER CERTAIN CIRCUMSTANCES.
2. SUBGRADE REINFORCEMENT GEOTEXTILES SHALL BE INSTALLED OVER A-6 AND A-7 SOILS PRIOR TO CONSTRUCTING THE BASE AND SURFACING.
3. ASPHALT SURFACE FOR ALL ROADS SHALL BE HMA CLASS 1/2" PG 64-22 PER WSDOT STANDARD SPECIFICATIONS.
4. THE PAVEMENT STRUCTURE THICKNESSES IDENTIFIED FOR THESE SOIL TYPES ARE REQUIRED UNLESS A SITE SPECIFIC PAVEMENT DESIGN IS DONE. THE TOTAL PAVEMENT STRUCTURE SHALL NOT EXCEED 2.5 FEET.
5. EITHER CONVENTIONAL OR THICK ASPHALT CONSTRUCTION IS ALLOWED.
6. BASE ROCK SECTION SHALL BE TWO (2) INCHES OF 5/8"- 0" TOP COURSE, OVER REMAINING DEPTH OF BASE COURSE PER WSDOT STANDARD SPEC SECTION 9-03.9(3). TOTAL BASE ROCK SECTION THICKNESS AS INDICATED IN THE TABLES. BASE ROCK WILL BE COMPACTED TO MEET SPEC 2-03.3(14)D.

COMMERCIAL/INDUSTRIAL COLLECTOR

APPROVED

Bart Stupp 2/24/15
PUBLIC WORKS DIRECTOR DATE

REVISIONS

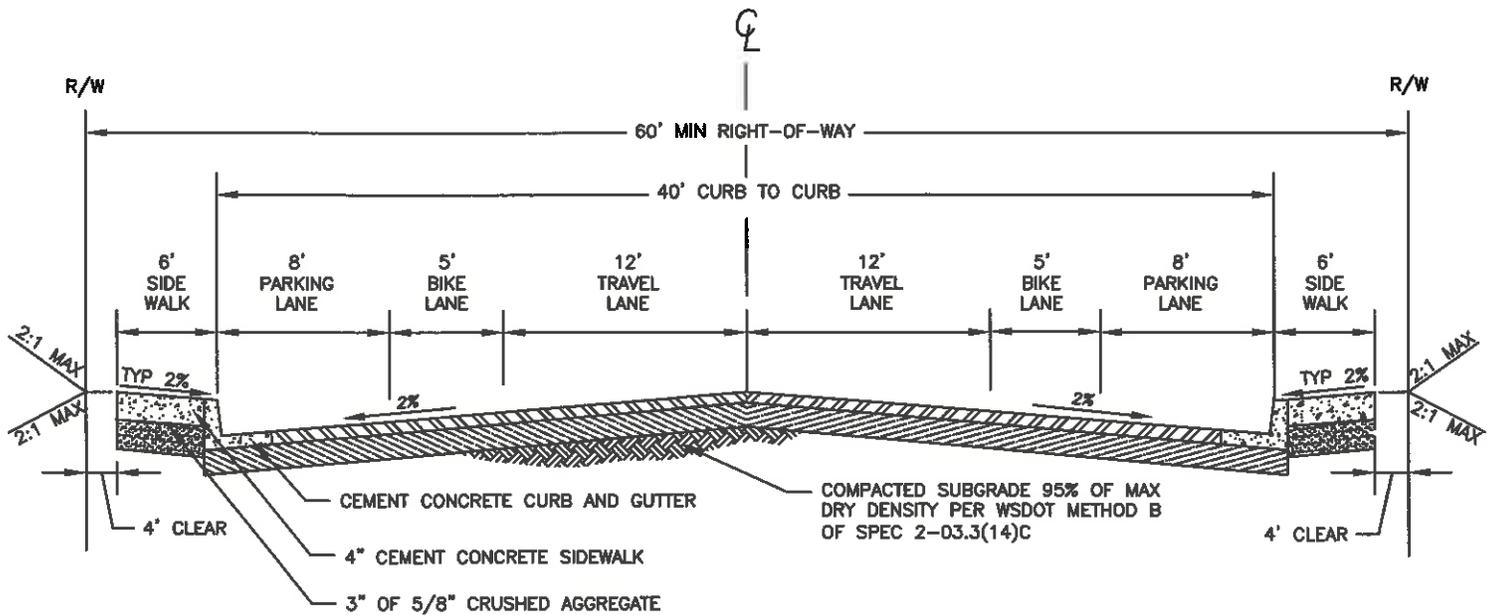
DATE

DRAWN

DESIGNED

T-25A





CONVENTIONAL CONSTRUCTION		
AASHTO SOIL TYPE	ASPHALT THICKNESS	BASE ROCK THICKNESS
A-1	0.45'	0.45'
A-2	0.45'	0.45'
A-3	0.45'	0.55'
A-4	0.45'	0.85'
A-5	0.45'	1.15'
A-6	0.45'	1.55'
A-7	0.50'	2.00'
OTHER	NO SECTION	ESTIMATED

THICK ASPHALT CONSTRUCTION		
AASHTO SOIL TYPE	ASPHALT THICKNESS	BASE ROCK THICKNESS
A-1	0.52'	0.25'
A-2	0.52'	0.25'
A-3	0.55'	0.25'
A-4	0.62'	0.25'
A-5	0.72'	0.25'
A-6	0.82'	0.25'
A-7	1.00'	0.25'
OTHER	NO SECTION	ESTIMATED

NOTES:

1. WIDER SIDEWALKS MAY BE REQUIRED BY REVIEWING AUTHORITY UNDER CERTAIN CIRCUMSTANCES.
2. SUBGRADE REINFORCEMENT GEOTEXTILES SHALL BE INSTALLED OVER A-6 AND A-7 SOILS PRIOR TO CONSTRUCTING THE BASE AND SURFACING.
3. ASPHALT SURFACE FOR ALL ROADS SHALL BE HMA CLASS 1/2" PG 64-22 PER WSDOT STANDARD SPECIFICATIONS.
4. THE PAVEMENT STRUCTURE THICKNESSES IDENTIFIED FOR THESE SOIL TYPES ARE REQUIRED UNLESS A SITE SPECIFIC PAVEMENT DESIGN IS DONE. THE TOTAL PAVEMENT STRUCTURE SHALL NOT EXCEED 2.5 FEET.
5. EITHER CONVENTIONAL OR THICK ASPHALT CONSTRUCTION IS ALLOWED.
6. BASE ROCK SECTION SHALL BE TWO (2) INCHES OF 5/8"- 0" TOP COURSE, OVER REMAINING DEPTH OF BASE COURSE PER WSDOT STANDARD SPEC SECTION 9-03.9(3). TOTAL BASE ROCK SECTION THICKNESS AS INDICATED IN THE TABLES. BASE ROCK WILL BE COMPACTED TO MEET SPEC 2-03.3(14)D.

RESIDENTIAL COLLECTOR

APPROVED

Bart Stopp
PUBLIC WORKS DIRECTOR

2/24/15
DATE

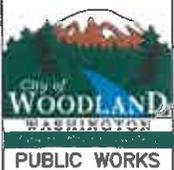
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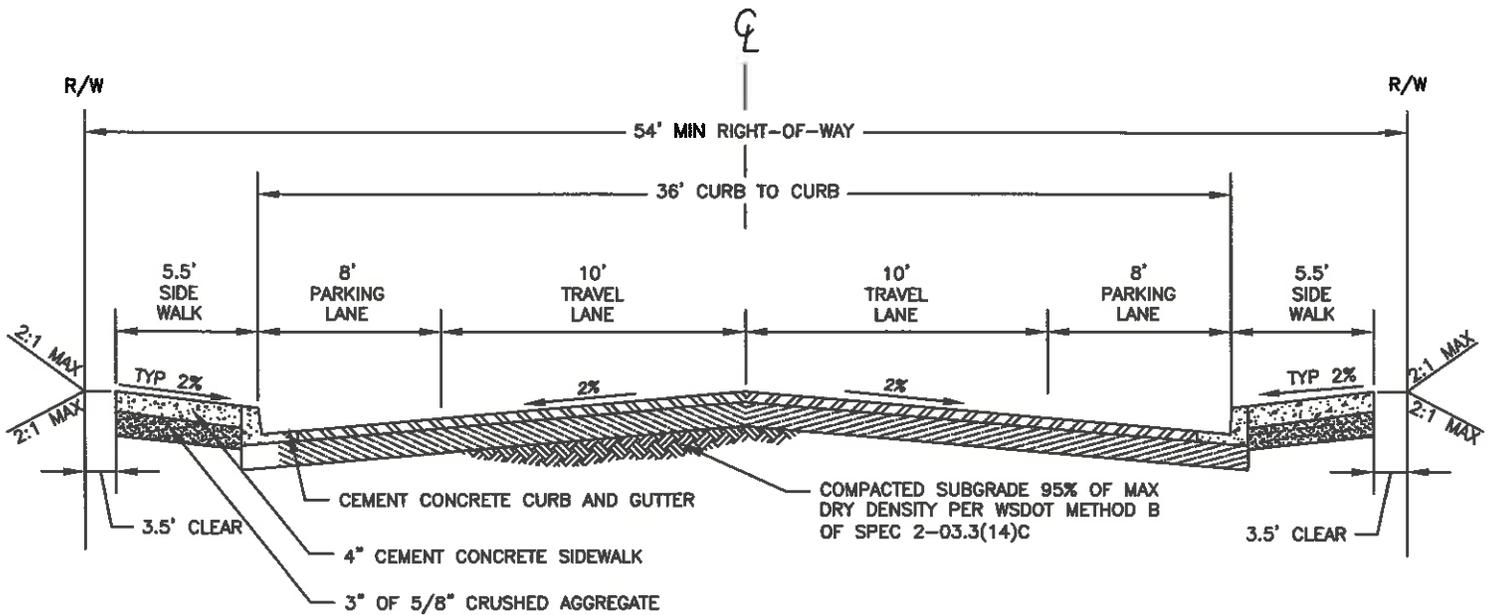
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DESIGNED

T-25B





CONVENTIONAL CONSTRUCTION		
AASHTO SOIL TYPE	ASPHALT THICKNESS	BASE ROCK THICKNESS
A-1	0.35'	0.50'
A-2	0.35'	0.50'
A-3	0.35'	0.50'
A-4	0.35'	0.60'
A-5	0.35'	0.90'
A-6	0.35'	1.20'
A-7	0.40'	1.60'
OTHER	NO SECTION	ESTIMATED

THICK ASPHALT CONSTRUCTION		
AASHTO SOIL TYPE	ASPHALT THICKNESS	BASE ROCK THICKNESS
A-1	0.42'	0.25'
A-2	0.42'	0.25'
A-3	0.42'	0.25'
A-4	0.45'	0.25'
A-5	0.55'	0.25'
A-6	0.62'	0.25'
A-7	0.80'	0.25'
OTHER	NO SECTION	ESTIMATED

NOTES:

1. WIDER SIDEWALKS MAY BE REQUIRED BY REVIEWING AUTHORITY UNDER CERTAIN CIRCUMSTANCES.
2. SUBGRADE REINFORCEMENT GEOTEXTILES SHALL BE INSTALLED OVER A-6 AND A-7 SOILS PRIOR TO CONSTRUCTING THE BASE AND SURFACING.
3. ASPHALT SURFACE FOR ALL ROADS SHALL BE HMA CLASS 1/2" PG 64-22 PER WSDOT STANDARD SPECIFICATIONS.
4. THE PAVEMENT STRUCTURE THICKNESSES IDENTIFIED FOR THESE SOIL TYPES ARE REQUIRED UNLESS A SITE SPECIFIC PAVEMENT DESIGN IS DONE. THE TOTAL PAVEMENT STRUCTURE SHALL NOT EXCEED 2.5 FEET.
5. EITHER CONVENTIONAL OR THICK ASPHALT CONSTRUCTION IS ALLOWED.
6. BASE ROCK SECTION SHALL BE TWO (2) INCHES OF 5/8" - 0" TOP COURSE, OVER REMAINING DEPTH OF BASE COURSE PER WSDOT STANDARD SPEC SECTION 9-03.9(3). TOTAL BASE ROCK SECTION THICKNESS AS INDICATED IN THE TABLES. BASE ROCK WILL BE COMPACTED TO MEET SPEC 2-03.3(14)D.

NEIGHBORHOOD ACCESS

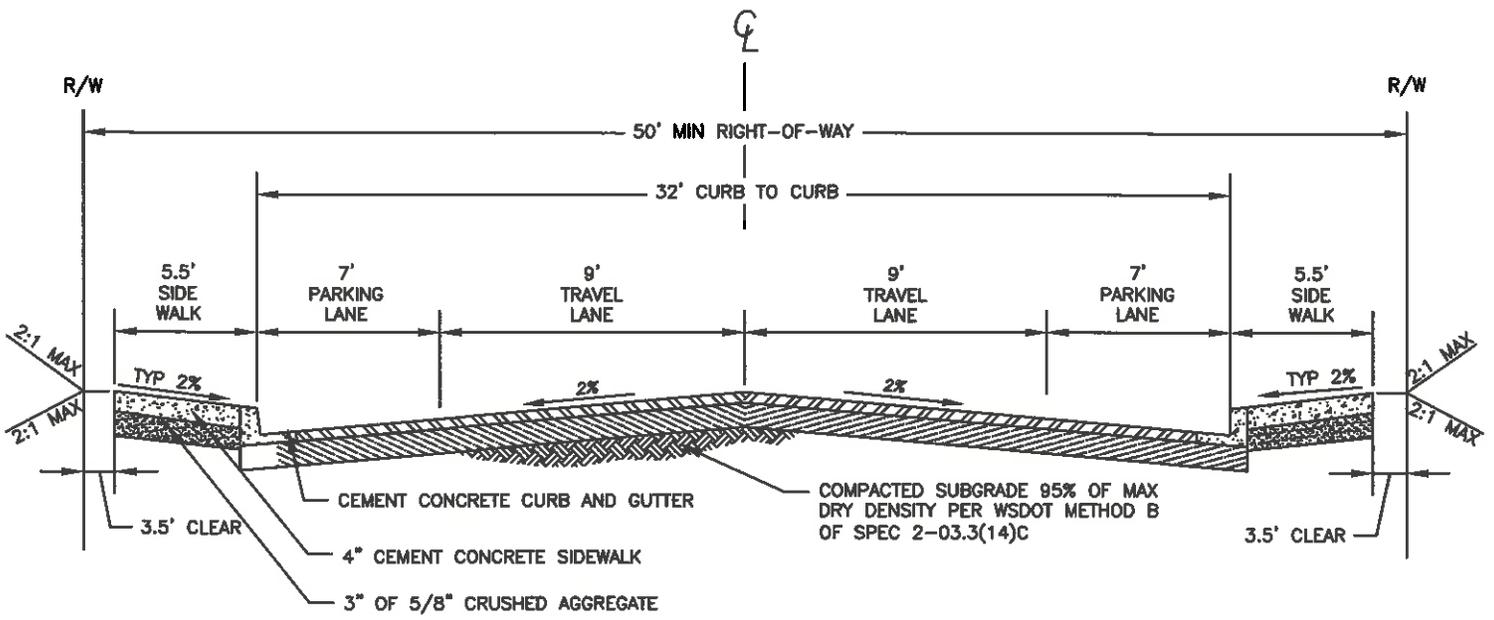
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Bart Stipp 2/24/15
PUBLIC WORKS DIRECTOR DATE

REVISIONS	DATE	DRAWN	DESIGNED

T-26





CONVENTIONAL CONSTRUCTION		
AASHTO SOIL TYPE	ASPHALT THICKNESS	BASE ROCK THICKNESS
A-1	0.35'	0.50'
A-2	0.35'	0.50'
A-3	0.35'	0.50'
A-4	0.35'	0.60'
A-5	0.35'	0.90'
A-6	0.35'	1.20'
A-7	0.40'	1.60'
OTHER	NO SECTION	ESTIMATED

THICK ASPHALT CONSTRUCTION		
AASHTO SOIL TYPE	ASPHALT THICKNESS	BASE ROCK THICKNESS
A-1	0.42'	0.25'
A-2	0.42'	0.25'
A-3	0.42'	0.25'
A-4	0.45'	0.25'
A-5	0.55'	0.25'
A-6	0.62'	0.25'
A-7	0.80'	0.25'
OTHER	NO SECTION	ESTIMATED

NOTES:

1. WIDER SIDEWALKS MAY BE REQUIRED BY REVIEWING AUTHORITY UNDER CERTAIN CIRCUMSTANCES.
2. SUBGRADE REINFORCEMENT GEOTEXTILES SHALL BE INSTALLED OVER A-6 AND A-7 SOILS PRIOR TO CONSTRUCTING THE BASE AND SURFACING.
3. ASPHALT SURFACE FOR ALL ROADS SHALL BE HMA CLASS 1/2" PG 64-22 PER WSDOT STANDARD SPECIFICATIONS.
4. THE PAVEMENT STRUCTURE THICKNESSES IDENTIFIED FOR THESE SOIL TYPES ARE REQUIRED UNLESS A SITE SPECIFIC PAVEMENT DESIGN IS DONE. THE TOTAL PAVEMENT STRUCTURE SHALL NOT EXCEED 2.5 FEET.
5. EITHER CONVENTIONAL OR THICK ASPHALT CONSTRUCTION IS ALLOWED.
6. BASE ROCK SECTION SHALL BE TWO (2) INCHES OF 5/8"- 0" TOP COURSE, OVER REMAINING DEPTH OF BASE COURSE PER WSDOT STANDARD SPEC SECTION 9-03.9(3). TOTAL BASE ROCK SECTION THICKNESS AS INDICATED IN THE TABLES. BASE ROCK WILL BE COMPACTED TO MEET SPEC 2-03.3(14)D.

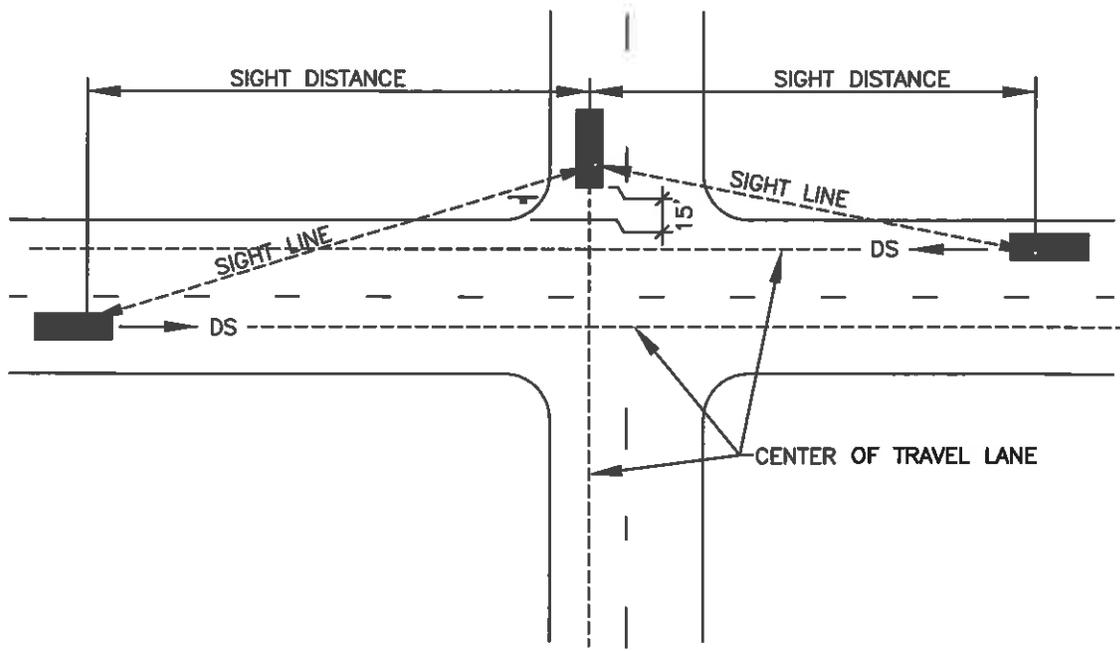


LOCAL ACCESS

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Bart Stapp 2/24/15
 PUBLIC WORKS DIRECTOR DATE

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T-27

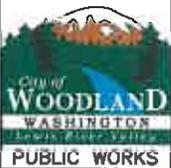


CONTROLLED INTERSECTION	
DESIGN SPEED (DS) (MPH)	SIGHT DISTANCE (FT.)
25	250
30	300
35	350
40	400
45	450
50	500

DS= DESIGN SPEED ON THE THROUGH HIGHWAY

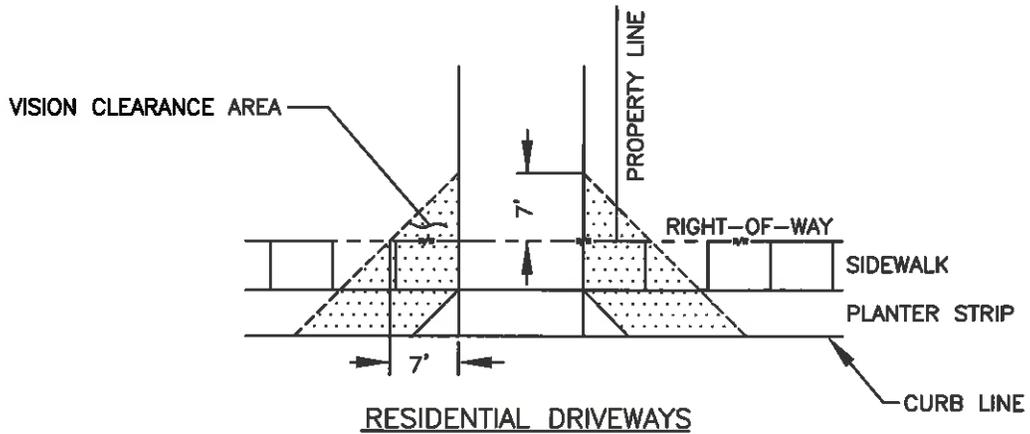
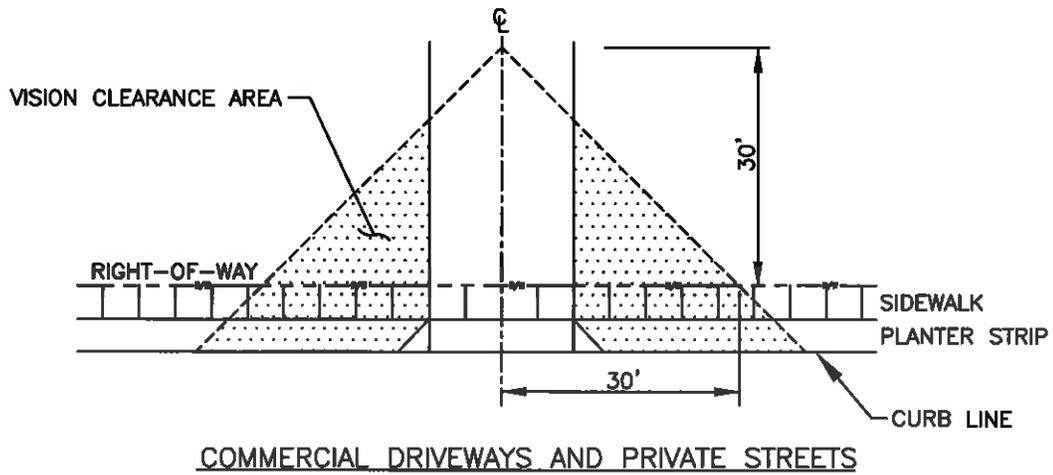
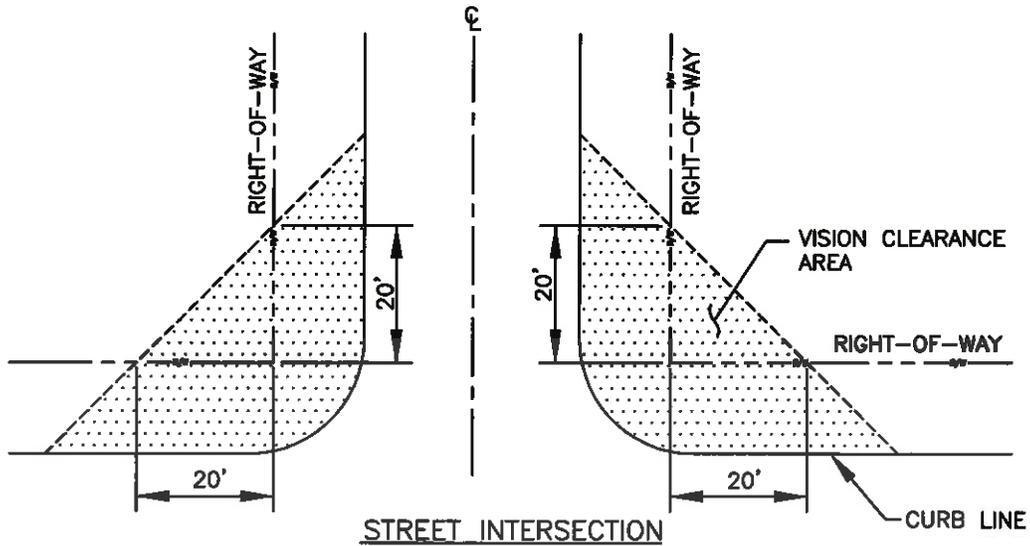
NOTES:

1. FOR CONTROLLED INTERSECTIONS, STREETS SHALL HAVE MINIMUM CORNER SIGHT DISTANCES, AS MEASURED FROM A HEIGHT OF 3.5 FEET ABOVE THE CONTROLLED STREET.
2. PUBLIC, PRIVATE STREET INTERSECTIONS AND COMMERCIAL DRIVEWAYS ON ARTERIAL STREETS SHALL HAVE AN UNOBSTRUCTED SIGHT DISTANCE TRIANGLE MEASURED IN THE SAME FASHION AS CONTROLLED INTERSECTIONS.
3. IF THE STREETS ARE NOT LEVEL, FOLLOW WSDOT DESIGN MANUAL TO CONSIDER GRADE.
4. "DESIGN SPEED" SHALL BE THE POSTED SPEED LIMIT UNLESS EVIDENCE EXISTS WHICH SHOWS THAT ACTUAL TRAFFIC SPEEDS ARE GREATER THAN THE POSTED SPEED LIMIT.



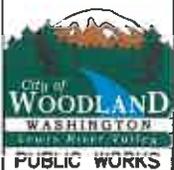
INTERSECTION SIGHT DISTANCE REQUIREMENTS

APPROVED	REVISIONS	DATE	DRAWN	DESIGNED
<i>Bart Stupp 5/2/13</i>				
PUBLIC WORKS DIRECTOR				
DATE				



NOTES:

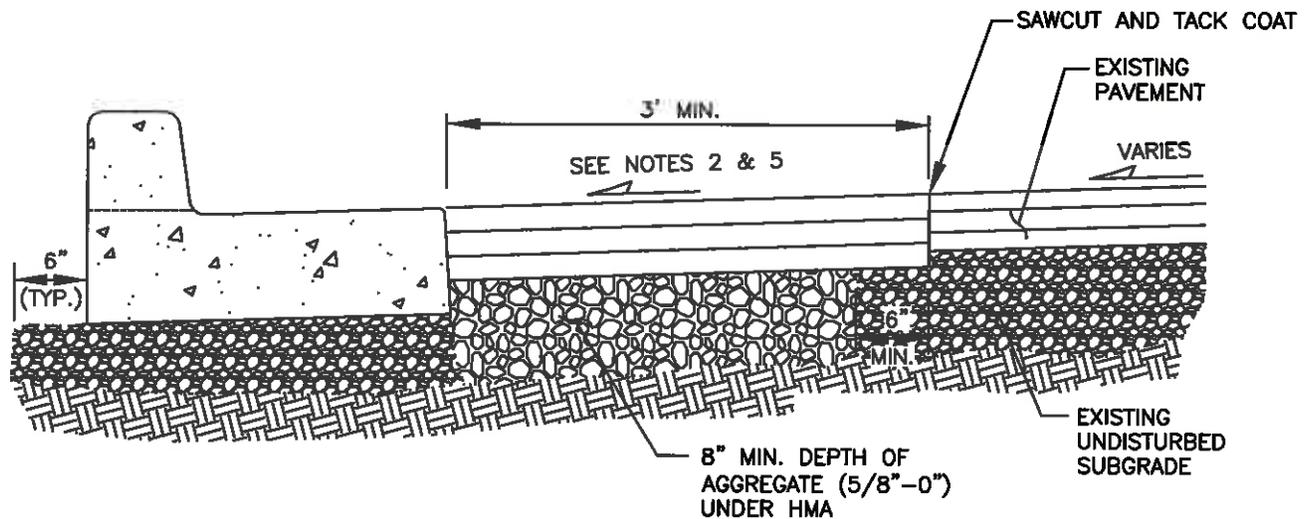
1. THERE SHALL BE NO SIGHT OBSTRUCTION WITHIN THE TRIANGULAR VISION CLEARANCE AREA BETWEEN 30-INCHES AND 10- FEET ABOVE THE STREET GRADE.
2. VISION CLEARANCE TRIANGLES AND INTERSECTION SIGHT DISTANCES SHALL APPLY ABOVE. INTERSECTION SIGHT DISTANCES CONTROL.
3. PRIVATE DRIVE VISION TRIANGLE TO BE USED FOR A SINGLE FAMILY DWELLING.



VISION CLEARANCE TRIANGLE

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Bart Stipp 5/18/13
 PUBLIC WORKS DIRECTOR DATE

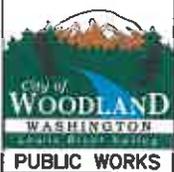
REVISIONS	DATE	DRAWN	DESIGNED



TYPE A-1 CURB AND GUTTER

NOTES:

1. SEE CONCRETE CURBS DETAIL T-01 FOR CURBS.
2. PAVEMENT SECTION SHALL BE APPROVED IN ADVANCE AND COMPLETED TO THE SATISFACTION OF THE PUBLIC WORKS DIRECTOR.
3. THE EDGES OF ALL EXISTING ASPHALT SURFACES SHALL BE CLEANED AND A TACK COAT SHALL BE APPLIED PER THE STANDARD SPECIFICATIONS. ALL JOINTS SHALL BE SEALED WITH CRS-1 AND SANDED.
4. COMPACT SUBGRADE, CRUSHED AGGREGATE AND PAVEMENT TO 95% OF MAXIMUM DRY DENSITY.
5. HOT MIX ASPHALT SHALL BE (HMA) CLASS ½" PG 64-22 3 TO 30 ESAL MIX DESIGN. MINIMUM LIFT THICKNESS IS 0.15' MAXIMUM LIFT THICKNESS IS 0.35' FOR BASE COURSE AND 0.25' FOR SURFACE COURSE.
6. MATCH EXISTING PAVEMENT SLOPE. NO STEEPER THAN 4% WITHOUT SPECIFIC CITY APPROVAL.
7. SAWCUT AND REMOVE EXISTING FAILING ASPHALT PAVEMENT.
8. SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT. MINIMUM 6" WIDTH, MAXIMUM HALF STREET WIDTH.
9. 3' MIN. PAVEMENT RESTORATION AROUND MANHOLE.

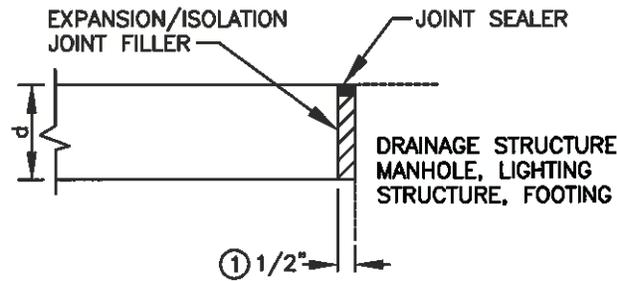
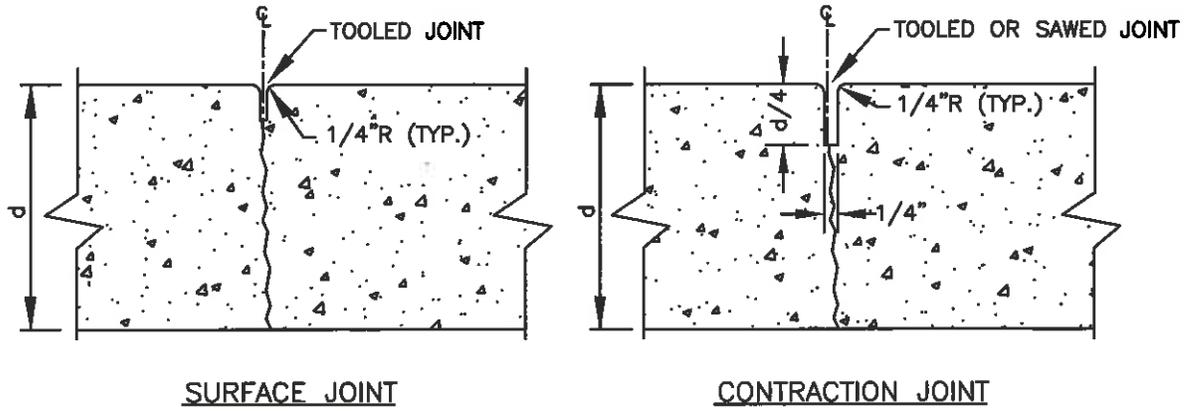


PAVEMENT RESTORATION/WIDENING AT CURBS

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Bart Stupp 5/8/13
 PUBLIC WORKS DIRECTOR DATE

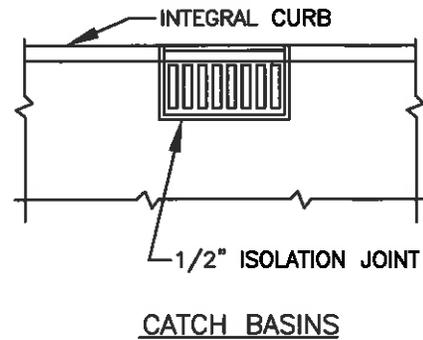
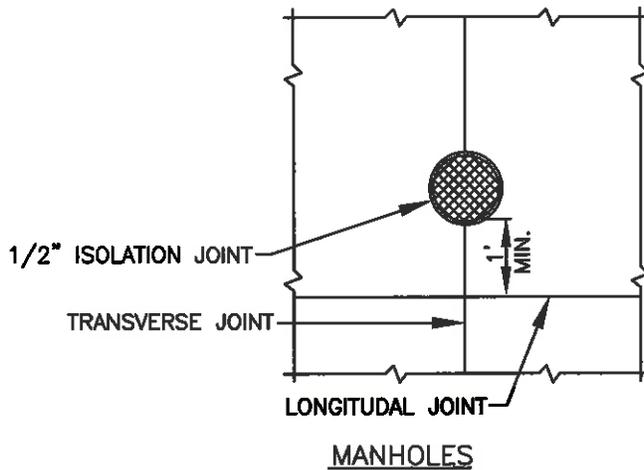
REVISIONS	DATE	DRAWN	DESIGNED

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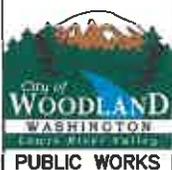
EXPANSION/ISOLATION JOINT DETAIL

① 3/8" JOINT FILLER FOR SIDEWALKS
ADA RAMPS AND DRIVEWAYS
(PER WSDOT 9-04)



NOTES:

1. CONTRACTION JOINTS MAY BE USED IN PLACE OF SURFACE JOINTS.
2. CONSTRUCTION COLD JOINTS MAY BE USED IN PLACE OF CONTRACTION JOINTS.
3. CONCRETE PAVEMENT LOAD TRANSFER REQUIREMENTS ACROSS JOINTS SHALL BE DETERMINED BY PCC PAVEMENT DESIGN.
4. PARALLEL JOINTS SHALL BE SEPARATED BY A MINIMUM OF 2'.



CONCRETE JOINTS

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<i>Bart Stepp</i> 5/8/13				
PUBLIC WORKS DIRECTOR	DATE			

GENERAL NOTES:

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, EXCEPT WHERE OTHERWISE NOTED IN THESE STANDARDS. MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION PREPARED BY THE WASHINGTON STATE CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION (APWA) AND THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) AND SHALL COMPLY WITH THE CURRENT EDITION.
2. TRENCH BACKFILL AND RESURFACING SHALL BE AS SHOWN IN THE STANDARD DETAILS, UNLESS MODIFIED BY THE RIGHT OF WAY USE PERMIT. SURFACING DEPTHS AND PAVING LIMITS SHOWN IN THE STANDARD DETAILS ARE MINIMUMS AND MAY BE INCREASED BY THE DIRECTOR TO MEET TRAFFIC LOADINGS OR SITE CONDITIONS.
3. THE DIRECTOR MAY REQUIRE MATERIALS COMPACTION AND MOISTURE TESTING. TESTING SHALL BE PERFORMED BY A LAB PRE APPROVED BY THE CITY WITH THE RESULTS BEING SUPPLIED TO THE DIRECTOR. THE TESTING IS NOT INTENDED TO RELIEVE THE CONTRACTOR FROM ANY LIABILITY FOR THE TRENCH RESTORATION. IT IS INTENDED TO SHOW THE INSPECTOR AND THE CITY THAT THE RESTORATION MEETS THIS SPECIFICATION.
4. THE FINAL PAVEMENT PATCH SHALL BE COMPLETED AS SOON AS POSSIBLE AND SHALL BE COMPLETED WITHIN THIRTY (30) DAYS AFTER FIRST OPENING THE TRENCH. THIS TIME FRAME MAY BE ADJUSTED IF DELAYS ARE DUE TO INCLEMENT WEATHER, OR OTHER ADVERSE CONDITIONS. HOWEVER, DELAYING OF FINAL PATCH OR OVERLAY WORK IS ALLOWABLE ONLY SUBJECT TO THE DIRECTOR'S APPROVAL. THE DIRECTOR MAY DEEM IT NECESSARY TO COMPLETE THE WORK WITHIN THIRTY (30) DAYS TIME FRAME AND NOT ALLOW ANY TIME EXTENSION. IF THIS OCCURS, THE CONTRACTOR SHALL PERFORM THE NECESSARY WORK AS DIRECTED. PATCHES, REPAIRS, OR OVERLAYS SHALL ONLY BE INSTALLED NEXT TO A CLEAN, NEAT SAWCUT LINE.
5. WHEN TRENCHING WITHIN THE ROADWAY SHOULDERS, THE SHOULDER SHALL BE RESTORED TO ITS ORIGINAL OR BETTER CONDITION. LONGITUDINAL TRENCH RESTORATION REQUIRING A HALF LANE WIDTH OR MORE SHALL BE REQUIRED TO RESTORE THE ENTIRE LANE TO CENTERLINE. UNDERMINED PAVEMENT SHALL BE CUT BACK, REMOVED, AND RESTORED TO LIMITS AS REQUIRED BY THE DIRECTOR TO ALLOW COMPACTION AND BACKFILL OF DISTURBED AREAS. LIMITS OF TRENCH RESTORATION SHALL BE IDENTIFIED PRIOR TO TRENCH BACKFILL.
6. ANY PATCH OR OVERLAY ON ARTERIAL STREETS OR AREAS ZONED COMMERCIAL SHALL BE PERMANENT AND COMPLETED AS SOON AS POSSIBLE.
7. IF A PAVEMENT CUT IS PROPOSED IN A STREET THAT WAS CONSTRUCTED OR RE-PAVED WITHIN THE PAST FIVE YEARS, A DISRUPTION FEE WILL BE CHARGED IN ACCORDANCE WITH WMC 12.04.060. TRENCHLESS CONSTRUCTION METHODS MUST BE EXPLORED ON ALL PAVED ROAD CROSSINGS REGARDLESS OF THE PAVEMENT CONDITION.
8. CONTROL DENSITY FILL IS REQUIRED WHEN TRENCHING IN ARTERIAL STREETS, AND STREETS LOCATED IN THE CENTRAL BUSINESS DISTRICT. FOR LONGITUDINAL TRENCHES ALTERNATIVE METHODS OF RESTORATION MAY BE CONSIDERED.
9. THE OWNER SHALL WARRANTY THE RESTORATION WORK FOR A PERIOD OF 2 YEARS ON RESIDENTIAL, LOCAL, AND UNCLASSIFIED STREETS AND 5 YEARS ON COLLECTOR AND ARTERIAL STREETS. FRANCHISE UTILITIES SHALL WARRANTY THEIR WORK FOR THE LIFE OF THE RESTORATION. THE OWNER SHALL REPAIR ANY OF THE FOLLOWING DEFICIENCIES WHICH OCCUR DURING THIS TIME PERIOD.

SETTLEMENT OR BUMP: ANY SETTLEMENT OR BUMP MORE THAN 1/4 INCH LOWER OR HIGHER THAN THE ORIGINAL PAVEMENT SHALL BE REPAIRED. REPAIR MAY INCLUDE REMOVAL AND REPLACEMENT OR SKIN PATCHING AND WILL BE DETERMINED BY THE DIRECTOR.

EDGE SEPARATION: ANY SEPARATION OF THE TRENCH FROM SURROUNDING ROADWAY GREATER THAN 1/4 INCH SHALL BE CRACK SEALED PER WSDOT STANDARD SPECIFICATIONS SECTION 5-04.

ALLIGATOR CRACKING: ANY TRENCH PAVEMENT WHICH EXHIBITS ALLIGATOR CRACKING SHALL BE REPLACED. THE REPLACEMENT SHALL BE IN CONFORMANCE WITH THE PAVEMENT REPAIR SECTION OF THE STANDARD SPECIFICATIONS.

RAVELING: RAVELING IS DEFINED AS SURFACE DETERIORATION THAT OCCURS WHEN AGGREGATE PARTICLES ARE DISLODGED OR OXIDATION CAUSES LOSS OF ASPHALT BINDER. THE ASPHALT CONCRETE PAVEMENT LOSES ITS SMOOTH SURFACE AND BEGINS TO APPEAR VERY OPEN AND ROUGH. MEDIUM SEVERITY RAVELING AS DEFINED BY THE "PAVEMENT SURFACE CONDITION FIELD RATING MANUAL FOR ASPHALT PAVEMENT" DEVELOPED BY THE NORTHWEST PAVEMENT MANAGEMENT ASSOCIATION SHALL BE PLANED AND REPAVED.

10. PAVEMENT REMOVAL SHALL ONLY BE ACCOMPLISHED BY USE OF SAWCUTTING, PLANING, OR GRINDING EQUIPMENT SPECIFICALLY DESIGNED FOR THIS PURPOSE. TO ACCOMPLISH A NEAT STRAIGHT CUT LINE. USE OF PAVEMENT RIPPERS IS PROHIBITED.
11. ALL PAVEMENT, CURB, GUTTER, OR SIDEWALK DAMAGED AS A RESULT OF CONTRACTOR ACTIVITY SHALL BE RESTORED TO ORIGINAL CONDITION. PAVEMENT SHALL BE RESTORED TO NOT LESS THAN THE ORIGINAL CROSS SECTION AND STRENGTH. WHERE PAVEMENT, CURB, GUTTER, OR SIDEWALK HAVE BEEN UNDERMINED BY TRENCHING, IT SHALL BE REMOVED. THE SUBGRADE RESTORED AND SURFACES REPLACED TO LIMITS AS APPROVED BY THE CITY.

STANDARD TRENCH RESTORATION NOTES

APPROVED

REVISIONS

DATE

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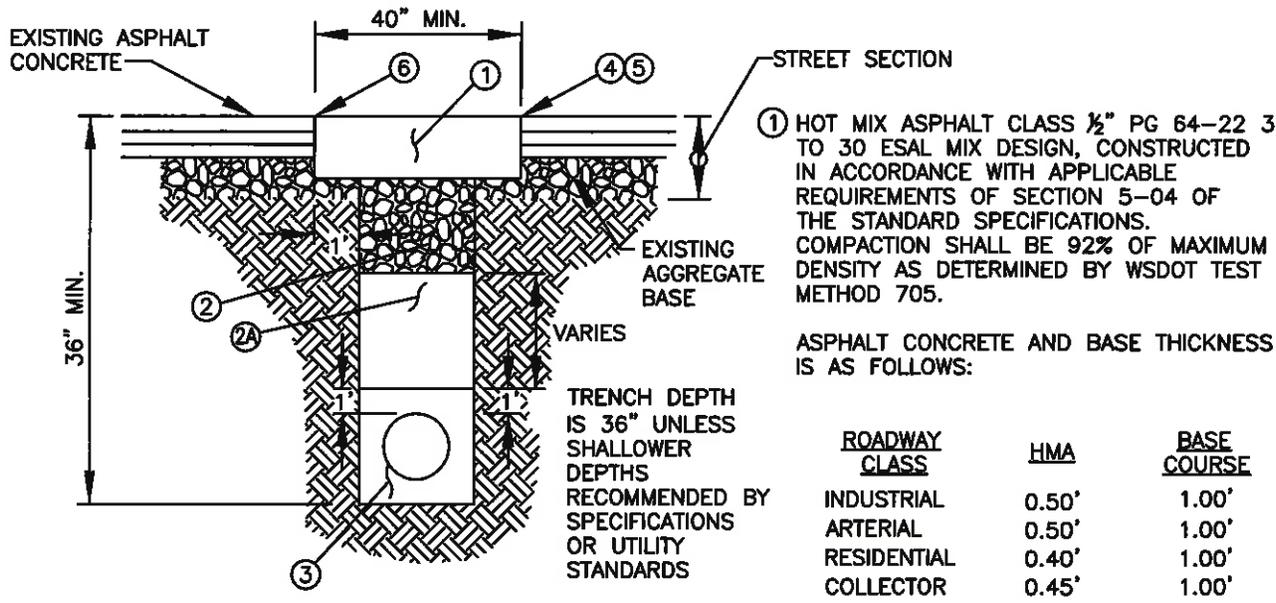
DESIGNED

Bart Stepp 5/8/13

PUBLIC WORKS DIRECTOR DATE

T-32





ASPHALT CONCRETE AND BASE THICKNESS IS AS FOLLOWS:

ROADWAY CLASS	HMA	BASE COURSE
INDUSTRIAL	0.50'	1.00'
ARTERIAL	0.50'	1.00'
RESIDENTIAL	0.40'	1.00'
COLLECTOR	0.45'	1.00'

OR 1" GREATER THAN EXISTING ASPHALT & BASE COURSE THICKNESS, MINIMUM LIFT THICKNESS IS 0.15' - MAXIMUM LIFT THICKNESS IS 0.35' FOR BASE COURSE, 0.25' FOR TOP COURSE.

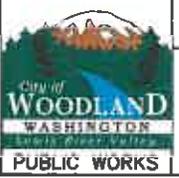
THE MIX TEMPERATURE SHALL BE 325 DEGREE MAXIMUM AT THE TIME OF PLANT DISCHARGE. AT THE TIME OF PLACEMENT, THE MIX TEMPERATURE SHALL BE 250 DEGREE MINIMUM.

- ② BASE COURSE SHALL CONSIST OF CRUSHED AGGREGATE BASE COURSE, MEETING THE REQUIREMENTS OF SECTION 4-04 OF THE STANDARD SPECIFICATIONS. COMPACTION SHALL BE TO 95% MAXIMUM DENSITY AS DESCRIBED IN SECTION 2-03 OF THE STANDARD SPECIFICATIONS. EACH LIFT SHALL NOT EXCEED 0.5'. AN EQUIVALENT DEPTH OF ASPHALT TREATED BASE (ATB) MAY BE SUBSTITUTED. ATB LIFTS SHALL NOT EXCEED 0.35'.
- ②A TRENCH ZONE - GRAVEL BACKFILL AS APPROVED BY LOCAL AGENCY OR WSDOT SPECIFICATIONS FOR GRAVEL BACKFILL (SECTION 9-03.10, AGGREGATE FOR GRAVEL BASE). COMPACTED TO 95% OF MAXIMUM DENSITY IN THE TRENCH ZONE USING METHOD C COMPACTION AS PER SECTION 2-03.3 (14). THE INSPECTOR SHALL EVALUATE THE BACKFILL BASED ON GRADATION AND MOISTURE. MATERIALS WET OF OPTIMUM MOISTURE CONTENT MAY BE REJECTED. MATERIALS DRY OF OPTIMUM MOISTURE CONTENT WILL NEED ADDITIONAL MOISTURE DURING COMPACTION.

TRENCH ZONE WIDTH -- SEE BELOW.

TRENCH ZONE WIDTH
PIPE 8 IN. OR MORE = PIPE O.D. +2 FT.
PIPE 6 IN. OR LESS = PIPE O.D. +1 FT.
OR AS DIRECTED BY THE ENGINEER

- ③ PIPE BEDDING AND PIPE ZONE BACKFILL MATERIALS SHALL BE PER UTILITY OWNERS AND/OR CITY SPECIFICATIONS. DEPTH OF COVER MAY BE ADJUSTED PER UTILITY OWNERS, AND/OR CITY SPECIFICATIONS. 90% COMPACTION PER SEC. 7-08.3(1)C
- ④ THE EXISTING ROAD SURFACE SHALL BE CUT IN A NEAT LINE PRIOR TO PAVEMENT REPLACEMENT BY SAWCUTTING OR WHEEL CUTTER OR PLANING EQUIPMENT. THIS WILL BE REQUIRED AROUND THE PERIMETER OF ALL EXCAVATIONS TO PROVIDE CLEAN, STRAIGHT, VERTICAL SIDES. THE CUT LINE SHALL BE ONE CONTINUOUS STRAIGHT LINE FROM THE OUTER EXCAVATION LIMITS OF MANHOLE, VALVE BOX, ETC. TO MANHOLE, VALVE BOX, ETC.
- ⑤ THE EDGES OF ALL EXISTING ASPHALT SURFACES SHALL BE CLEANED AND A TACK COAT SHALL BE APPLIED PER SECTION 5-04 OF THE STANDARD SPECIFICATIONS.
- ⑥ ALL JOINTS SHALL BE SEALED USING HEATED PAVING ASPHALT PG58-22 OR PG64-22, AND SANDED WITH DRY SAND.

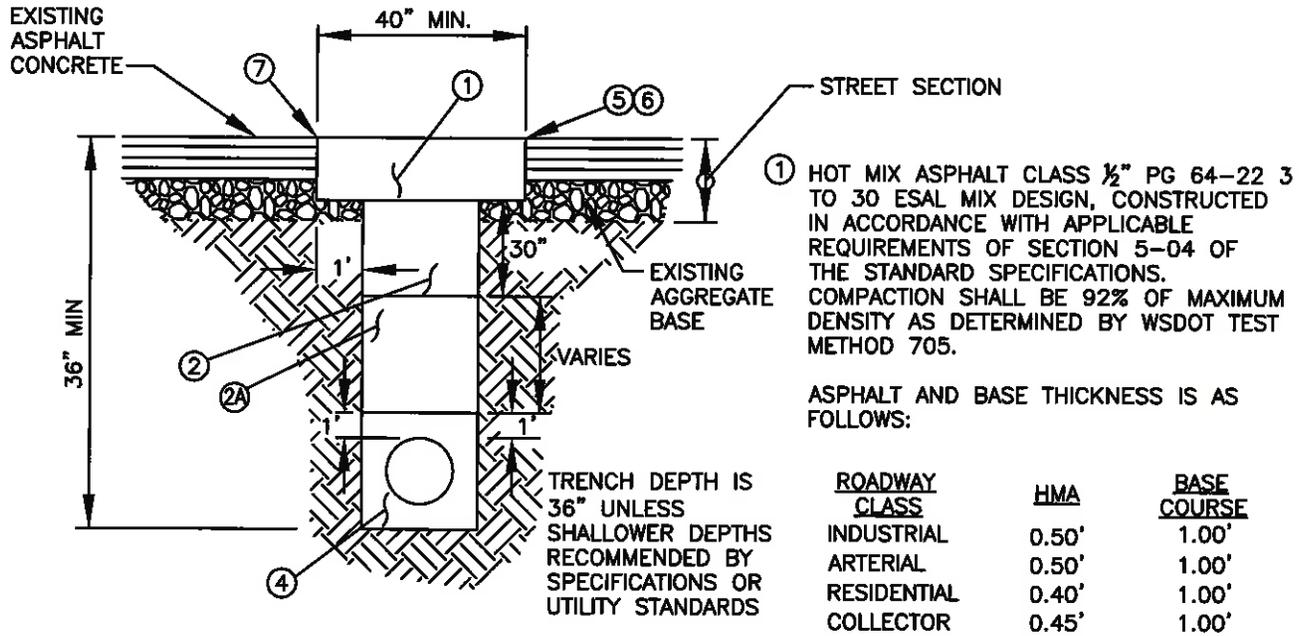


STD TRENCH RESTORATION GRANULAR BACKFILL-HMA OR BEST SURFACE

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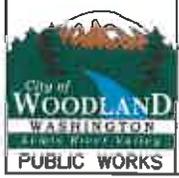


OR 1" GREATER THAN EXISTING ASPHALT THICKNESS, MINIMUM LIFT THICKNESS IS 0.15' - MAXIMUM LIFT THICKNESS IS 0.35' FOR BASE COURSE, 0.25' FOR TOP COURSE.

THE MIX TEMPERATURE SHALL BE 325 DEGREE MAXIMUM AT THE TIME OF PLANT DISCHARGE. AT THE TIME OF PLACEMENT, THE MIX TEMPERATURE SHALL BE 250 DEGREE MINIMUM.

- ② BACKFILL SHALL CONSIST OF CONTROL DENSITY FILL (CDF), A MIXTURE OF PORTLAND CEMENT, FLY ASH, AGGREGATES, WATER AND ADMIXTURES PROPORTIONED TO PROVIDE A NON-SEGREGATING, SELF-CONSOLIDATING, FREE-FLOWING MATERIAL WHICH WILL RESULT IN A HARDENED, DENSE, NON-SETTLING FILL PRODUCING UNCONFINED COMPRESSIVE 28 DAY STRENGTHS FROM 50 PSI TO A MAXIMUM OF 150 PSI.
 - a) THE CONTROLLED DENSITY FILL (CDF) MIX DESIGN SHALL BE FROM AN APPROVED SOURCE.
 - b) THE CONTRACTOR SHALL SUBMIT THE MIX DESIGN ONE WEEK MINIMUM PRIOR TO INTENDED USE FOR REVIEW AND APPROVAL. ALTERNATIVELY THE CONTRACTOR MAY PROVIDE THE SUPPLIER AND MIX NUMBER IF THE CDF MIX HAS BEEN APPROVED WITHIN THE PREVIOUS 12 MONTHS.
 - c) THE CONTRACTOR WILL PROVIDE BATCH WEIGHTS SHOWING THE AMOUNTS OF ALL INGREDIENTS IN THE MIX, BATCH TIME, AND THE TOTAL AMOUNT OF THE BATCH.
 - d) CONTROL DENSITY FILL SHALL BE PERFORMANCE BASED AND MEET THE FOLLOWING CRITERIA:
 - THE CDF MIXTURE SHALL BE FLOWABLE NON-SEGREGATING AND SELF LEVELING.
 - CAN BE PAVED ON WITHIN 48 HOURS UNLESS OTHERWISE APPROVED.
 - TYPE F FLYASH: 200 LBS MINIMUM.
 - TYPE I OR II CEMENT: 50 LBS MINIMUM.
 - SETTLING SHALL BE LESS THAN 1/8" PER FOOT DEPTH.
 - SHALL BE MACHINE DIGABLE UNLESS NOTED OTHERWISE.
 - FINE AGGREGATE (LESS THAN 3/8") SHALL BE USED UNLESS OTHERWISE APPROVED.
 - CONCRETE UNIT WEIGHT SHALL BE 100 PCF MINIMUM.

(CONTINUED ON T-35)



STD TRENCH RESTORATION CONTROL DENSITY FILL-HMA OR BEST SURFACE

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<i>Bart Stipp</i>		5/8/13		
PUBLIC WORKS DIRECTOR		DATE		

② CONTINUED

- e) CDF SHALL NOT BE PLACED ON FROZEN GROUND. CDF PATCHING, MIXING AND PLACING MAY BE STARTED IF WEATHER CONDITIONS ARE FAVORABLE, WHEN THE TEMPERATURE IS AT 34-DEGREES F AND RISING. AT THE TIME OF PLACEMENT, CDF MUST HAVE A TEMPERATURE OF AT LEAST 40-DEGREES F. MIXING AND PLACING SHALL STOP WHEN THE TEMPERATURE IS 38 DEGREES F OR LESS AND FALLING. EACH FILLING STAGE SHALL BE AS CONTINUOUS AN OPERATION AS POSSIBLE.
- f) TRENCH SECTIONS TO BE FILLED WITH CDF SHALL BE CONTAINED AT EITHER END OF THE TRENCH SECTION BY BULKHEADS OR EARTH FILL.
- g) DURING CDF CURE TIME CONTRACTOR SHALL INSTALL STEEL STREET PLATES OR OTHER PROTECTIVE DEVICES WHICH WILL ALLOW FOR THE PASSAGE AND SAFETY OF TRAFFIC WITH NO LOAD TRANSFERRED TO THE CDF.
- h) CONTRACTOR SHALL ALLOW FOR A MINIMUM 48 HOUR CURE TIME FOR CDF PRIOR TO PLACING ASPHALT.
- i) 30-INCH DEPTH OF CDF MAY BE REDUCED IF CONFLICTING WITH PIPE ZONE BACKFILL.

②A TRENCH ZONE - GRANULAR BACKFILL AS APPROVED BY LOCAL AGENCY OR WSDOT SPECIFICATIONS FOR GRANULAR BACKFILL. COMPACTED TO 95% OF MAXIMUM DENSITY IN THE TRENCH ZONE USING METHOD C COMPACTION AS PER SECTION 2-03.3 (14). CDF MAY BE USED IN LIEU OF GRANULAR BACKFILL.

TRENCH ZONE WIDTH --- SEE BELOW.

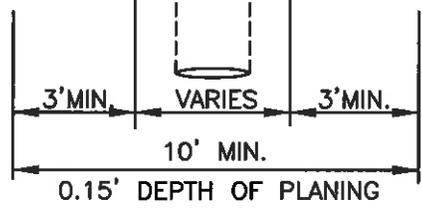
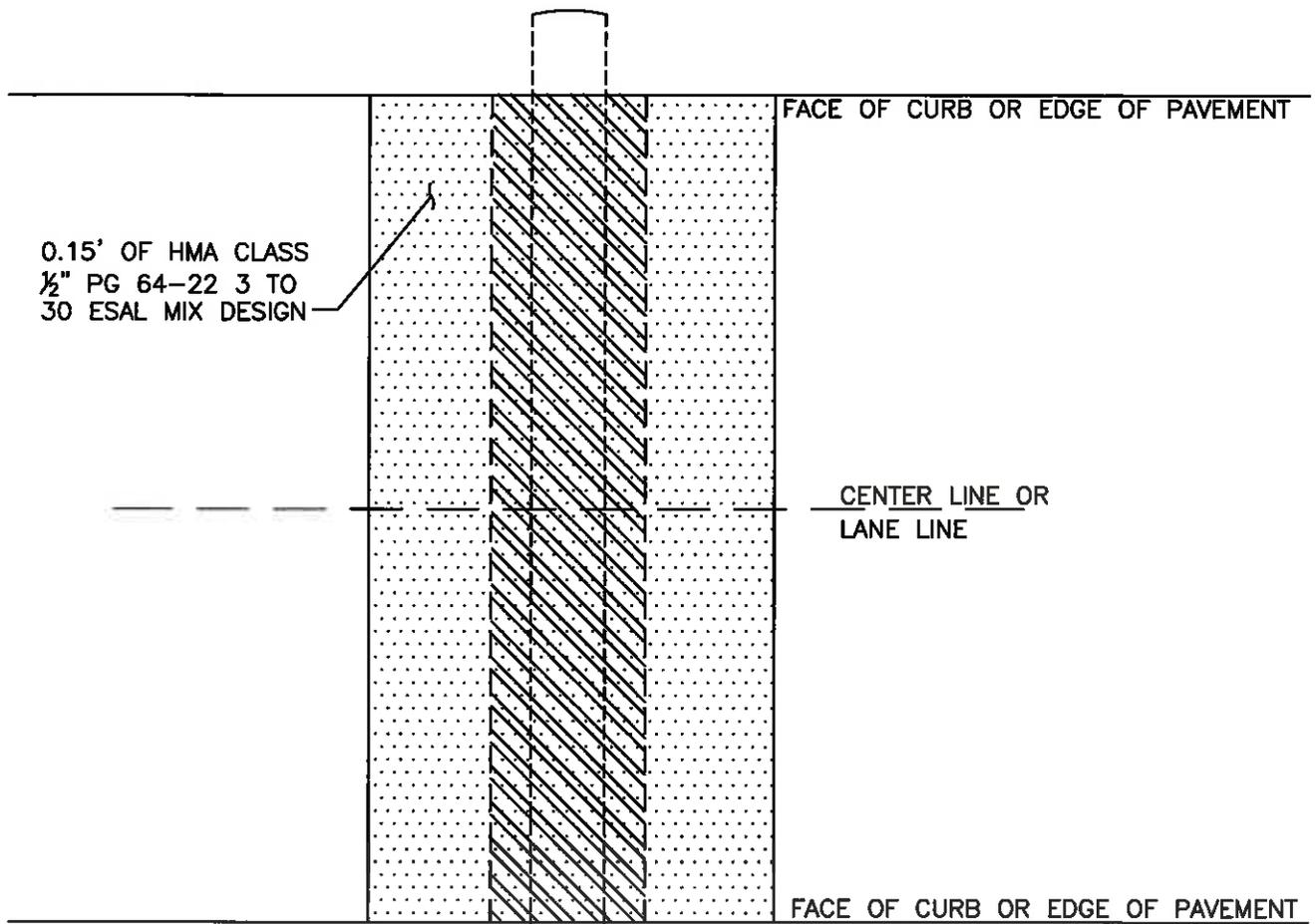
TRENCH ZONE WIDTH
PIPE 8 IN. OR MORE = PIPE O.D. +2 FT.
PIPE 6 IN. OR LESS = PIPE O.D. +1 FT.
OR AS DIRECTED BY THE ENGINEER

- ④ PIPE BEDDING AND PIPE ZONE BACKFILL MATERIALS SHALL BE PER UTILITY OWNERS AND/OR CITY SPECIFICATIONS. DEPTH OF COVER MAY BE ADJUSTED PER UTILITY OWNERS, AND/OR CITY SPECIFICATIONS. 90% COMPACTION PER SEC. 7-08.3(i)C
- ⑤ SAWCUTTING WILL BE REQUIRED AROUND THE PERIMETER OF ALL EXCAVATIONS TO PROVIDE CLEAN, STRAIGHT, VERTICAL SIDES. THE CUT LINE SHALL BE ONE CONTINUOUS STRAIGHT LINE FROM THE OUTER EXCAVATION LIMITS OF MANHOLE, VALVE BOX, ETC. TO MANHOLE, VALVE BOX, ETC.
- ⑥ THE EDGES OF ALL EXISTING ASPHALT SURFACES SHALL BE CLEANED AND A TACK COAT SHALL BE APPLIED PER SECTION 5-04 OF THE STANDARD SPECIFICATIONS.
- ⑦ ALL JOINTS SHALL BE SEALED USING HEATED PAVING ASPHALT AR4000W, AND SANDED WITH DRY SAND.

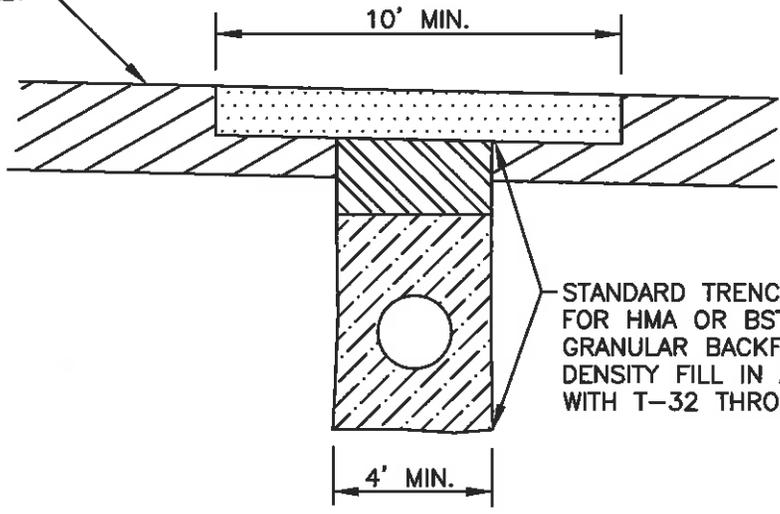


STD TRENCH RESTORATION CONTROL DENSITY FILL-HMA OR BEST SURFACE

APPROVED	REVISIONS	DATE	DRAWN	DESIGNED
<i>Bart Stapp</i>				
PUBLIC WORKS DIRECTOR				
DATE				



EXISTING HOT MIX ASPALT



STANDARD TRENCH RESTORATION FOR HMA OR BST SURFACE WITH GRANULAR BACKFILL OR CONTROL DENSITY FILL IN ACCORDANCE WITH T-32 THROUGH T-35

STANDARD TRENCH RESTORATION

APPROVED

Bart Stepp 5/8/13

PUBLIC WORKS DIRECTOR DATE

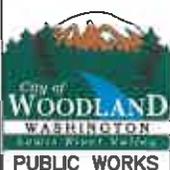
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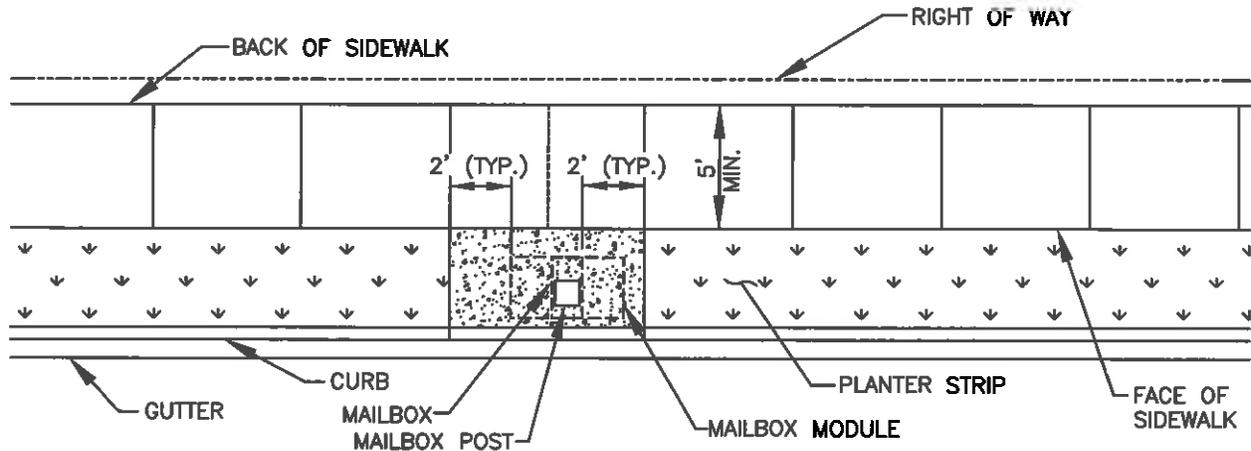
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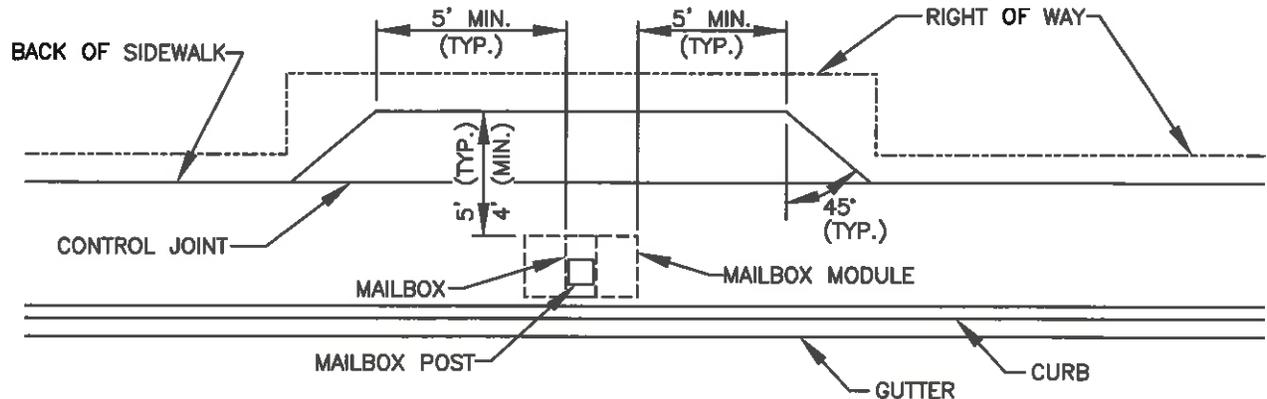
DESIGNED

T-36

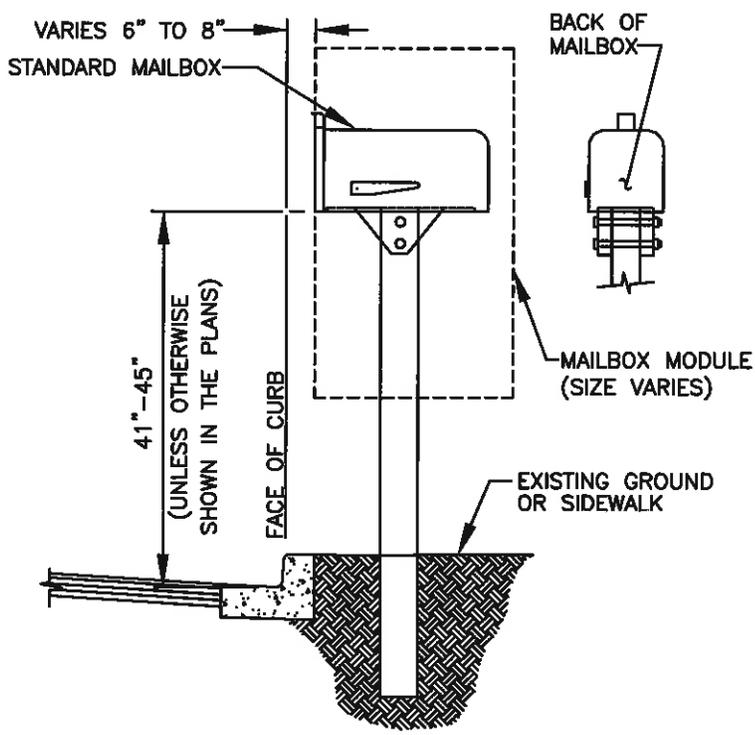




MAILBOX IN PLANTER STRIP

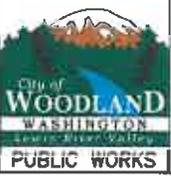


MAILBOX IN SIDEWALK



NOTES:

1. SEE WSDOT STANDARD DETAIL H-70 FOR MAILBOX, POST, BRACKET AND OTHER INSTALLATION DETAILS.
2. MAILBOXES MUST BE POSTMASTER APPROVED.
3. LOCATION OF MAILBOXES ARE SUBJECT TO APPROVAL BY THE PUBLIC WORKS DIRECTOR FOR ACCESS AND SIGHT DISTANCE REQUIREMENTS SEE INTERSECTION SIGHT DISTANCE REQUIREMENTS DETAIL T-28 AND VISION CLEARANCE TRIANGLE DETAIL T-29.
4. INSTALL EXPANSION JOINT MATERIAL AROUND MAILBOX POST WHEN SET IN SIDEWALK.
5. EXTEND SIDEWALK JOINTS THROUGH WIDENED SIDEWALK SECTION.
6. RESIDENTIAL ACCESS TO MODULE MAILBOX WILL BE ON SIDEWALK SIDE.



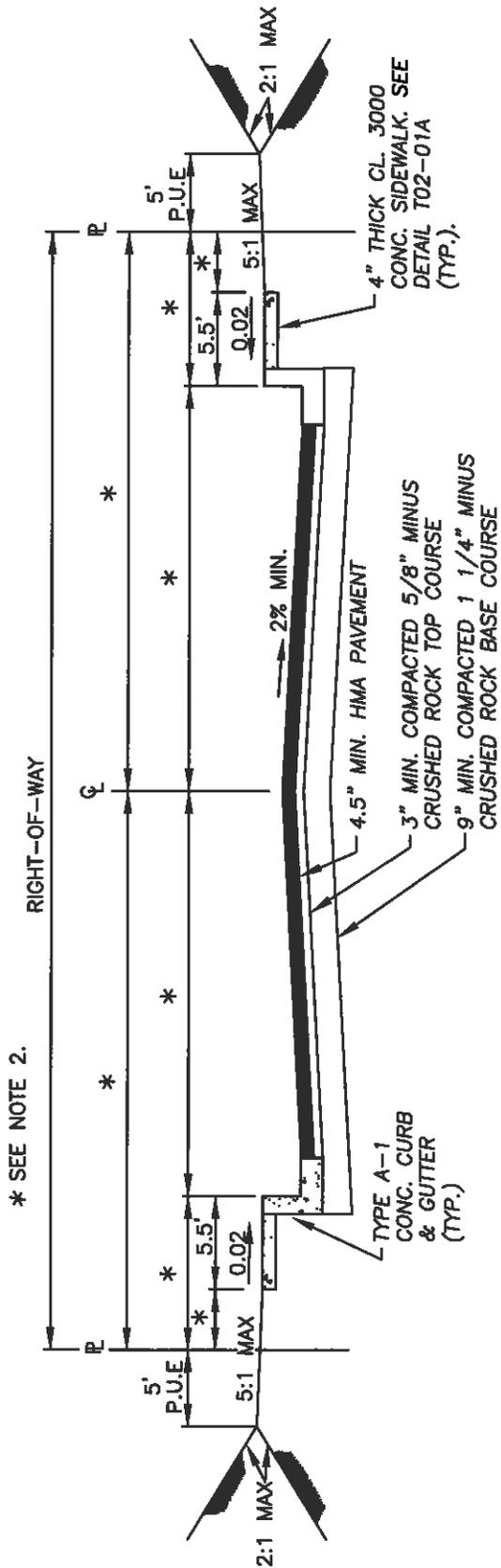
TYPICAL MAILBOX PLACEMENT

APPROVED
Bart Stepp 5/8/13
 PUBLIC WORKS DIRECTOR DATE

REVISIONS	DATE	DRAWN	DESIGNED

T-37

TYPICAL STREET SECTION DETAIL
(CROWN)
N.T.S.



NOTES:

1. ALL STREET SECTION DIMENSIONS TO BE CALCULATED BASED ON THE SITE SOIL CONDITIONS BY A LICENSED STATE OF WASHINGTON ENGINEER. MINIMUM PAVEMENT SECTION SHOWN IS FOR A RESIDENTIAL LOCAL ACCESS ROAD CLASSIFICATION.
2. STREET & RIGHT-OF-WAY DIMENSIONS SHALL BE IN ACCORDANCE WITH WMC 12.10 & AS DETERMINED BY THE PUBLIC WORKS DIRECTOR.
3. DETACHED SIDEWALKS ARE ALLOWED WHEN AUTHORIZED IN ACCORDANCE WITH WMC 12.10.



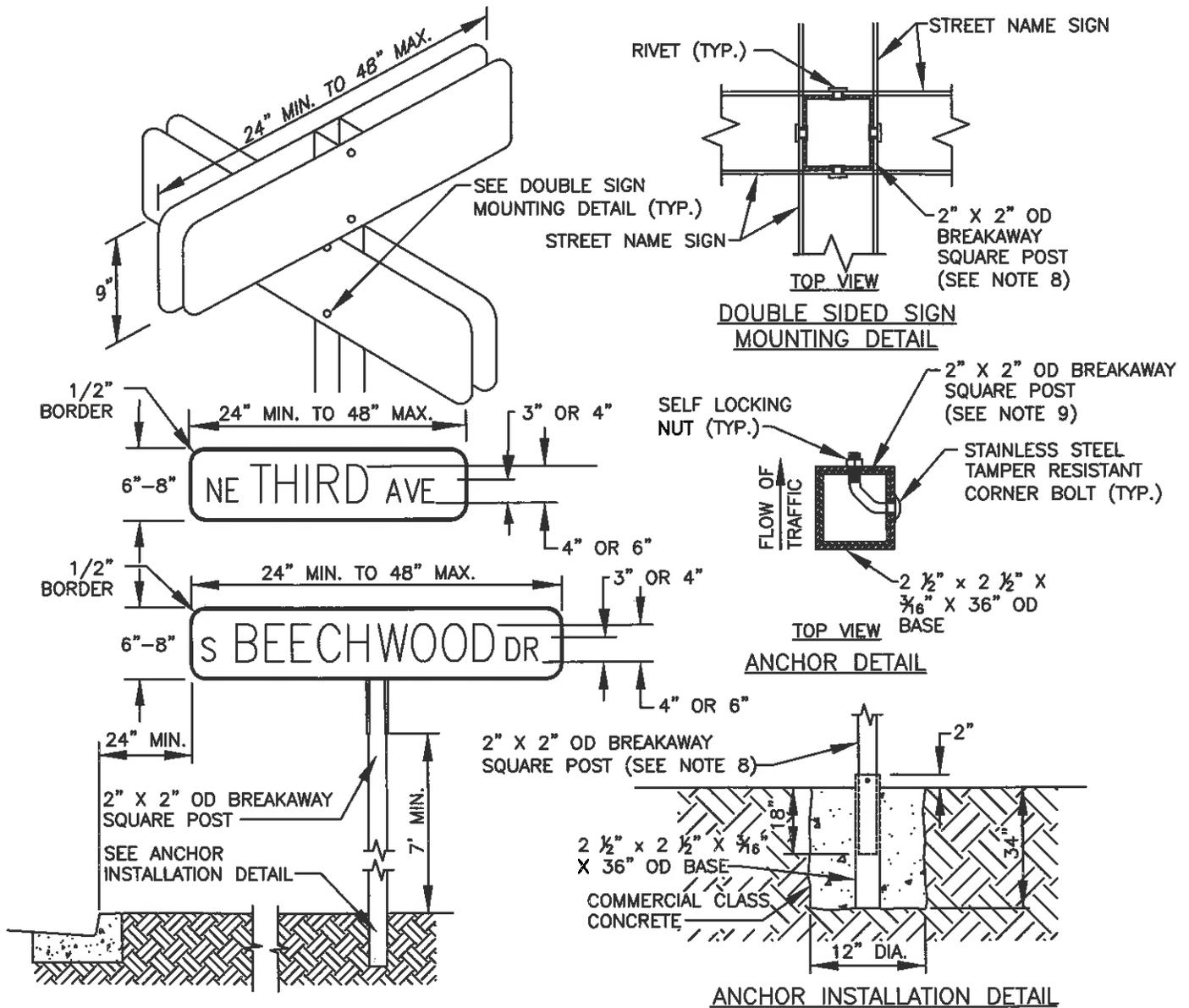
TYPICAL STREET SECTION

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Bart Stipp 5/8/13

PUBLIC WORKS DIRECTOR DATE

REVISIONS	DATE	DRAWN	DESIGNED



NOTES:

1. FOR STREETS 25-MPH AND UNDER, 4" UPPERCASE LETTERS FOR STREET NAME AND 3" UPPER CASE LETTERS FOR SUPPLEMENTARY LETTERING.
2. FOR SPEEDS OVER 25-MPH, 6" UPPERCASE LETTERS FOR STREET NAME AND 4" UPPER CASE LETTERS FOR SUPPLEMENTARY LETTERING.
3. SIGN FACE SHALL BE FABRICATED FROM CUBED CORNERED LENS (VIP, TYPE A DIAMOND GRADE) REFLECTIVE MATERIAL. FACE LEGEND AND BORDER SHALL BE WHITE ON A GREEN BACKGROUND - PRIVATE ROAD SIGNS SHALL BE WHITE ON A BROWN BACKGROUND. BORDER SHALL BE 1/2" IN WIDTH.
4. ALL SIGN MATERIALS AND ATTACHMENT HARDWARE SHALL CONFORM TO MUTCD AND WSDOT STANDARD SPECIFICATIONS.
5. WHEN SIGN REQUIRES TWO MESSAGE LINES, USE 2 SIGN BOARDS WITH AN ARROW ADDED TO THE BOARD (LEFT ARROW LEFT OF THE DIRECTION AND RIGHT ARROW ON THE RIGHT).
6. ENGINEER SHALL APPROVE FACE COPY PRIOR TO FABRICATION.
7. BREAKAWAY SIGN POSTS ARE TO BE "QUICK-PUNCH" WITH KNOCK OUTS IN PLACE.

GROUND MOUNTED STREET NAME SIGN

APPROVED

Bart Stipp 2/24/15
 PUBLIC WORKS DIRECTOR DATE

REVISIONS

DATE

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DESIGNED

T-39



CONSTRUCTION SPECIFICATIONS

GENERAL

THE FOLLOWING ARE TO BE USED IN CONJUNCTION WITH THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) AS ADOPTED BY THE CITY OF WOODLAND.

CONCRETE STREET LIGHT FOUNDATION

ALL CONCRETE FOUNDATIONS SHALL BE THE SIZE AND CONFIGURATION SHOWN ON THE PLANS, EXCEPT WHERE, IN THE JUDGMENT OF THE ENGINEER, UNSTABLE SOIL CONDITIONS REQUIRE ENLARGEMENT OF THE FOUNDATION. BEFORE PLACING THE CONCRETE, THE CONTRACTOR SHALL BLOCK OUT AROUND ANY OTHER UNDERGROUND UTILITIES THAT LIE IN THE EXCAVATED BASE SO THAT THE CONCRETE WILL NOT ADHERE TO THE UTILITY LINE. CONCRETE BASE SHALL BE CLASS 4000 AND BE TROWELED, BRUSHED, EDGED, AND FINISHED IN A WORKMANLIKE MANNER. CONCRETE SHALL BE PROMPTLY CLEANED FROM ANCHOR BOLTS AND CONDUITS AFTER PLACEMENT. ANCHOR BOLTS FOR ALL POLES SHALL BE ARRANGED SO THAT THE POLE'S BRACKET ARM IS PERPENDICULAR TO THE CENTERLINE OF THE ADJACENT ROADWAY RIGHT-OF-WAY. STREET LIGHTS MAY BE INSTALLED AFTER A COMPRESSIVE STRENGTH OF 2,400 PSI HAS BEEN ACHIEVED.

ALL POLES SHALL BE INSTALLED ON LEVELING NUTS SECURED TO THE ANCHOR BOLTS AND WITH LOCKING NUTS ON THE TOP OF THE BASE FLANGE. THE SIDE OF THE POLE SHAFT OPPOSITE THE LOAD SHALL BE PLUMBED BY ADJUSTING THE LEVELING NUTS OR AS OTHERWISE DIRECTED BY THE ENGINEER. THE SPACE BETWEEN THE CONCRETE BASE AND THE BOTTOM OF THE POLE FLANGE SHALL BE FILLED WITH DRY PACK MORTAR TO COMPLETELY FILL THE SPACE UNDER THE FLANGE AND AROUND THE CONDUITS AND BE NEATLY TROWELED TO THE CONTOUR OF THE POLE FLANGE. A PLASTIC DRAIN HOSE (1/2" DIAMETER) SHALL BE INSERTED THROUGH THE MORTAR TO PROVIDE DRAINAGE FROM THE INTERIOR OF THE POLE BASE AND TRIMMED FLUSH WITH THE INTERIOR AND EXTERIOR SURFACE OF THE MORTAR. DRY PACK MORTAR SHALL CONSIST OF A 1:3 MIXTURE OF CEMENT AND FINE SAND WITH JUST ENOUGH WATER SO THAT THE MIXTURE WILL STICK TOGETHER ON BEING MOLDED INTO A BALL BY HAND AND WILL NOT EXUDE FREE MOISTURE WHEN SO PRESSED.

CONDUIT

ALL CONDUIT SHALL BE SCHEDULE 40 PVC, MINIMUM ONE INCH DIAMETER EXCEPT UNDER DRIVEWAYS, AND STREET CROSSINGS. THESE EXCEPTIONS SHALL BE RIGID STEEL CONDUIT AND SHALL BE A MINIMUM OF TWO INCHES IN DIAMETER. ALL ELBOWS SHALL BE RIGID STEEL.

RIGID CONDUIT TO BE PROVIDED AS SPECIFIED ON THE PLANS SHALL BE OF HOT DIPPED GALVANIZED STEEL METALLIC CONDUIT CONFORMING TO THE REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.

ALL UNDERGROUND CONDUIT SHALL BE INSTALLED A MINIMUM OF 24" BELOW GRADE. IN PAVED DRIVEWAY OR ROADWAY AREAS, ELECTRICAL CONDUIT SHOULD BE INSTALLED BY PUSHING OR BORING METHODS.

GROUNDING

ALL POLES, METAL CONDUITS AND CABINETS IN THE SAME AREA COVERED BY THE SAME POWER SERVICE SHALL BE MADE MECHANICALLY AND ELECTRICALLY SECURE FOR A CONTINUOUS GROUNDING SYSTEM IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. BONDING JUMPERS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH WSDOT STANDARD PLAN J-9A TO ALL #8 BARE METAL CONDUITS IN THE JUNCTION BOX. GROUNDING OF CONDUIT AND GROUND WIRE AT THE SERVICE POINT TO THE PUD SERVICE GROUND ON THE PUD POWER POLE SHALL BE ACCOMPLISHED AS REQUIRED UNDER THE NATIONAL ELECTRICAL CODE.

CATALOG CUTS

PRIOR TO THE BEGINNING OF CONSTRUCTION, CATALOG CUTS OF THE FOLLOWING ITEMS SHALL BE SUBMITTED AND APPROVED BY THE PUBLIC WORKS DIRECTOR. 1. STREET LIGHT STANDARDS 2. LUMINARIES 3. JUNCTION BOXES 4. WYE AND IN-LINE CONNECTORS 5. SERVICE CABINET 6. IN-LINE FUSE HOLDERS 7. CONDUIT 8. WIRE.

CRITICAL INSPECTION POINTS

THE ILLUMINATION SYSTEM WILL BE INSPECTED BY THE PUBLIC WORKS DEPARTMENT. THE TELEPHONE NUMBER IS: (360)225-7999.

THE FOLLOWING ARE THE CRITICAL INSPECTION POINTS. NO WORK SHALL BE DONE UNTIL INSPECTION IS COMPLETED.

WIRING 1. CHECK OF CONDUIT DEPTH. NO TRENCHING SHALL BE FILLED WITHOUT THE DEPTH OF CONDUIT VERIFIED. 2. SERVICE. THE SERVICE SHALL BE INSPECTED AND APPROVED BY THE INSPECTOR. 3. WIRING. THE WIRING, SPLICES, GROUNDING, AND FUSING SHALL BE INSPECTED AND APPROVED BY THE INSPECTOR.

POLES 1. POLE LOCATIONS. THE POLE LOCATIONS SHALL BE APPROVED BY THE PUBLIC WORKS DEPARTMENT PRIOR TO EXCAVATION OF THE POLE BASES. 2. POLE BASES. THE POLE BASES SHALL BE INSPECTED AND APPROVED PRIOR TO THE POURING OF THE CONCRETE.

STREET LIGHTING - CONSTRUCTION NOTES

APPROVED

REVISIONS

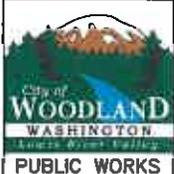
DATE

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DESIGNED

Bart Stepp 5/8/13

T-40



PUBLIC WORKS DIRECTOR DATE

DESIGN SPECIFICATIONS

1. STREET LIGHT LOCATIONS ARE TO BE PLACED ON THE PROPERTY LINE WHENEVER POSSIBLE. LIGHTING FACILITIES SHALL BE LOCATED WITHIN PUBLIC RIGHT-OF-WAY OR AN EASEMENT DEDICATED TO THE CITY OF WOODLAND.
2. THE FOLLOWING TABLE SHALL BE FOLLOWED FOR STREET LIGHT DESIGN:

ROADWAY AND AREA CLASSIFICATION		AVERAGE LUMINANCE	LUMINANCE UNIFORMITY	
			L AVG. TO L MIN.	L MAX. TO L MIN.
ARTERIAL	COMMERCIAL	1.0	3 TO 1	5 TO 1
	INTERMEDIATE	0.8	3 TO 1	5 TO 1
	RESIDENTIAL	0.6	3.5 TO 1	6 TO 1
COLLECTOR	COMMERCIAL	0.8	3 TO 1	5 TO 1
	INTERMEDIATE	0.6	3.5 TO 1	6 TO 1
	RESIDENTIAL	0.4	4 TO 1	8 TO 1
LOCAL	COMMERCIAL	0.6	5 TO 1	10 TO 1
	INTERMEDIATE	0.5	6 TO 1	10 TO 1
	RESIDENTIAL	0.3	6 TO 1	10 TO 1

3. THE PUBLIC WORKS DEPARTMENT SHALL ADJUST, ADD, OR REMOVE STREET LIGHTS WHERE NECESSARY. THE CONTRACTOR MAY SUBMIT STAMPED CALCULATIONS BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF WASHINGTON IF THE CONTRACTOR DOES NOT AGREE WITH THE MODIFIED POLE LOCATIONS.
4. WHERE THE AVERAGE RESIDENTIAL DENSITY IS IN EXCESS OF 12 UNITS PER ACRE - USE INTERMEDIATE CLASSIFICATIONS.
5. TYPICAL MOUNTING DIMENSIONS UNLESS OTHERWISE REQUIRED BY THE PUBLIC WORKS DEPARTMENT SHALL BE:

CLASSIFICATION	MOUNTING HEIGHT	WATTAGE	ARM LENGTH
ARTERIAL	35'	200 W	8'
COLLECTOR	30'	200 W	6'
LOCAL	25'	100 W	6'

ILLUMINATION SPECIFICATIONS

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Bart Stipp 5/8/13

PUBLIC WORKS DIRECTOR DATE

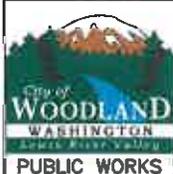
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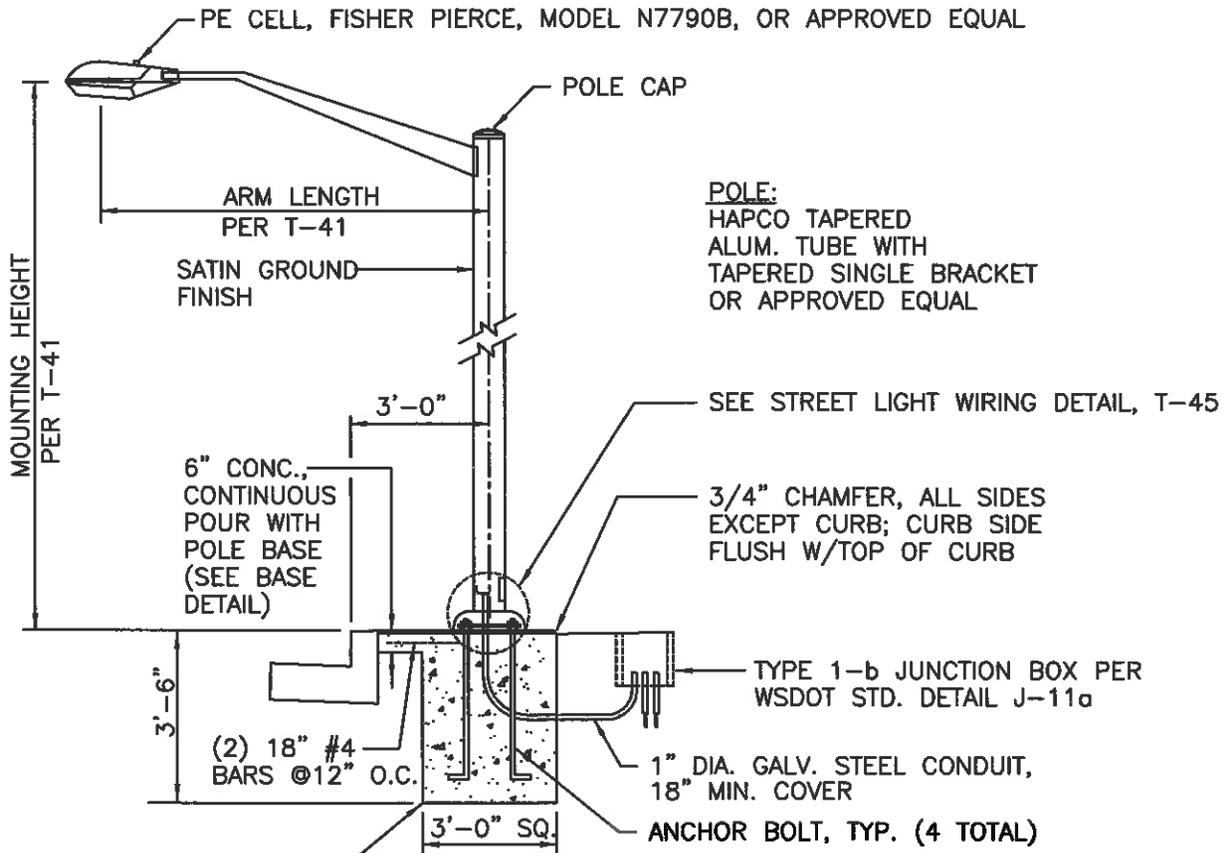
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T-41

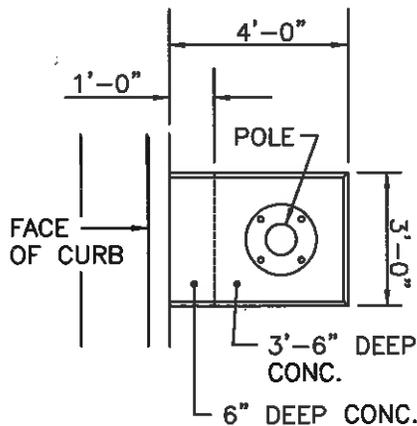




PORTLAND CEMENT CONC. LIGHT POLE BASE. ALTERNATIVE BASE DESIGN ALLOWED WITH DEPARTMENT APPROVAL

LIGHT FIXTURE:
GE LIGHTING SYSTEMS
MDCL HIGH PRESSURE SODIUM
(OR APPROVED EQUAL)

SECTION



DETAIL IS FOR INSTALLATION WITH DETACHED SIDEWALK.

FOR BASES POURED IN THE SIDEWALK SECTION, MINIMUM 5' WALK PATH REQUIRED AROUND POLE.

FOR ATTACHED SIDEWALK SET CENTER OF POLE 18" FROM BACK OF WALK.

PLAN

STREET LIGHT POLE

APPROVED

Burt Stepp
PUBLIC WORKS DIRECTOR

2/24/15
DATE

REVISIONS

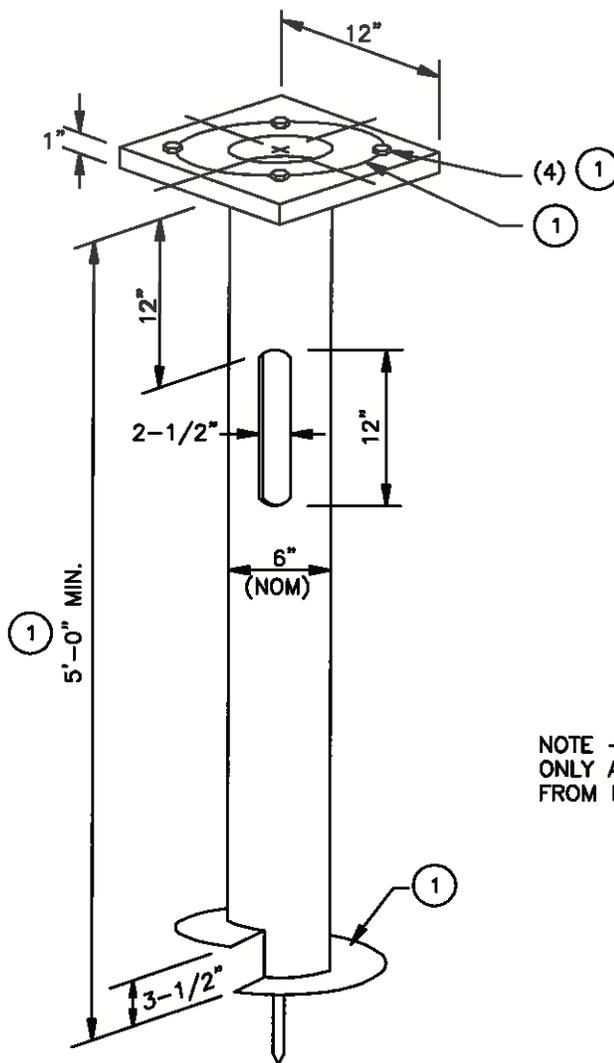
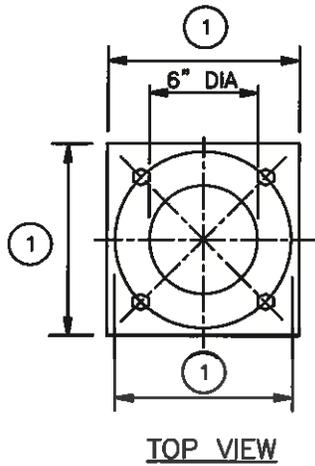
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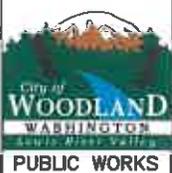




NOTE - SCREW IN FOUNDATION ONLY ALLOWED WITH PERMISSION FROM PUBLIC WORKS DIRECTOR.

NOTE:

① VARIES WITH APPLICATION



SCREW-IN FOUNDATION FOR STREET LIGHTING

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REVISIONS

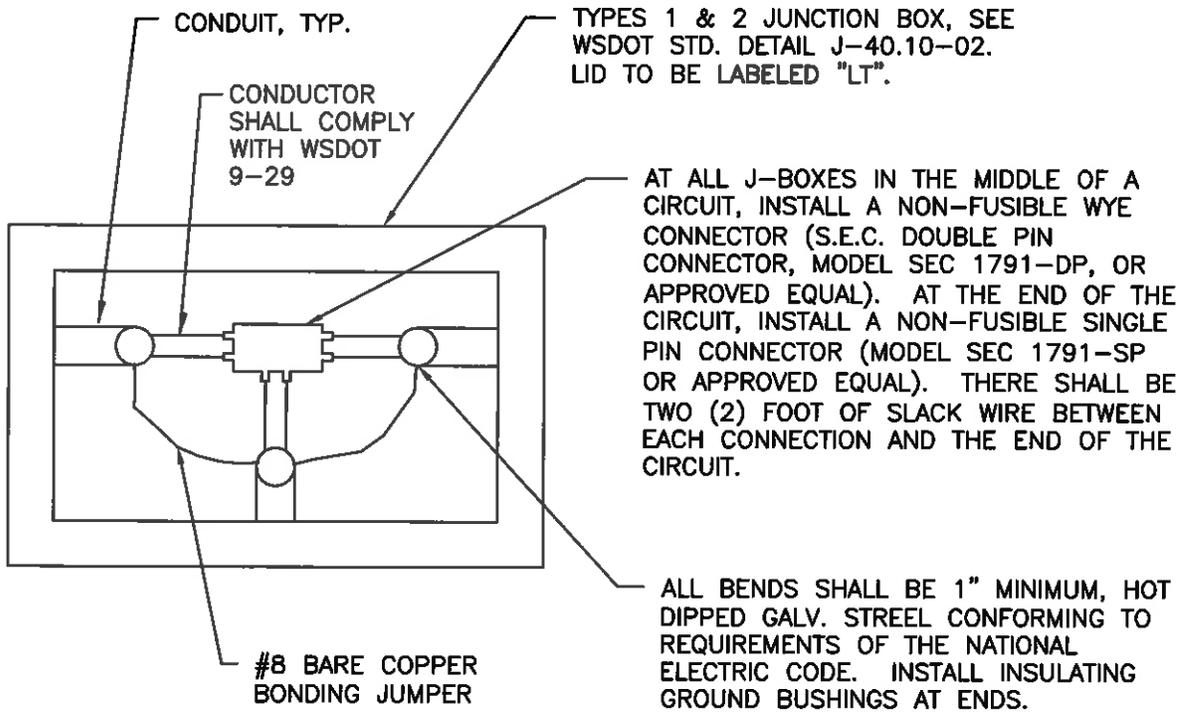
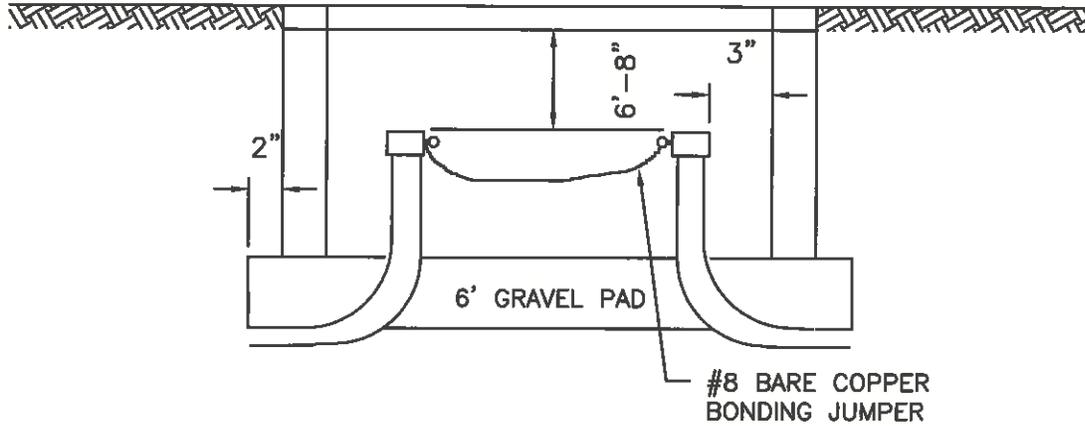
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Bart Stipp 5/8/13
PUBLIC WORKS DIRECTOR DATE

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JUNCTION BOX

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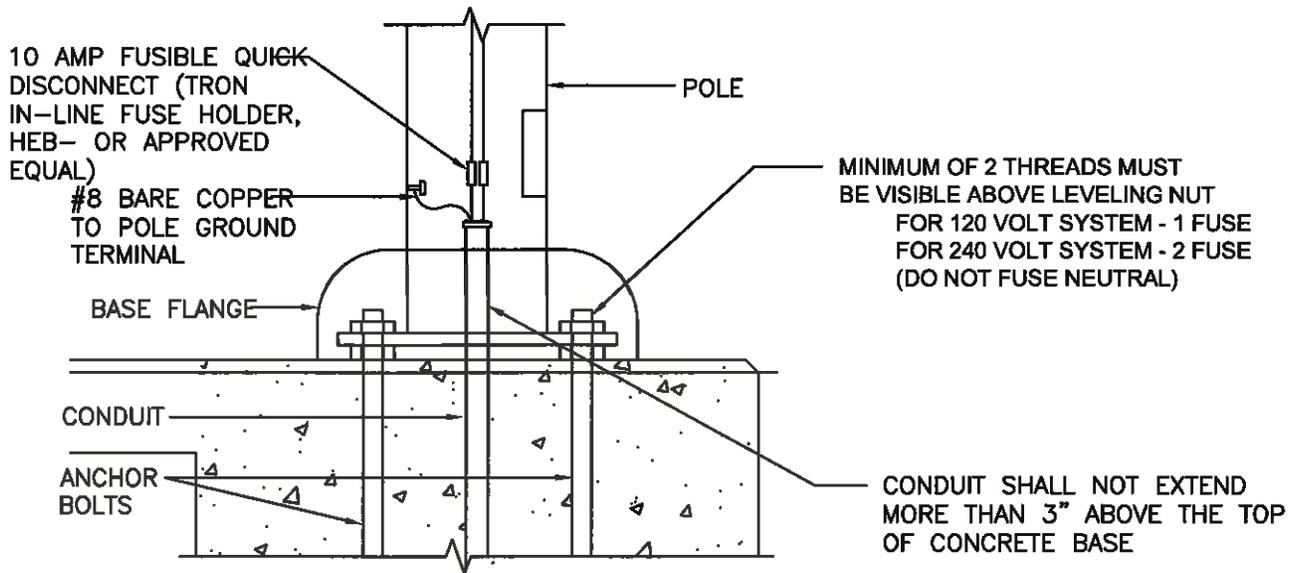
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T-44



STREET LIGHT WIRING

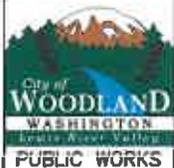
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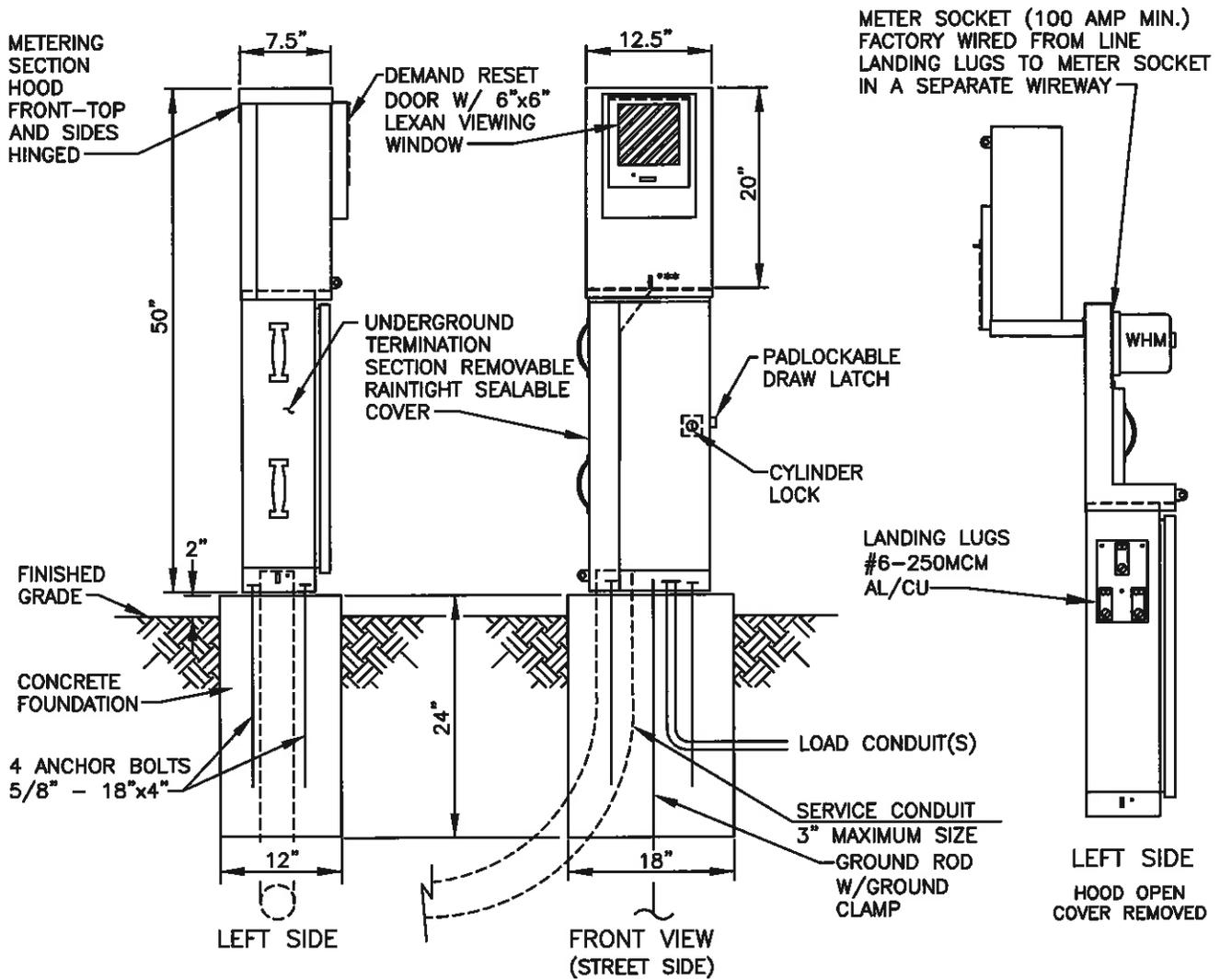
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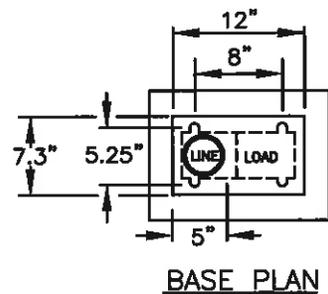


Burt Stepp 5/8/13
PUBLIC WORKS DIRECTOR DATE

T-45



SERVICE CABINET PEDESTAL DETAIL



BASE PLAN

NOTES:

1. ENCLOSURE SHALL BE TESCO CLASS 26-000 OR EQUIVALENT APPROVED BY CITY OF WOODLAND.
2. THIS IS AN EXAMPLE OF A TYPICAL CIRCUIT FOR AN ILLUMINATION SYSTEM. THE ILLUMINATION PLAN SHALL SHOW THE ACTUAL CIRCUIT AND WILL BE REVIEWED BY THE PUBLIC WORKS DEPARTMENT.

STREET LIGHT SERVICE CABINET

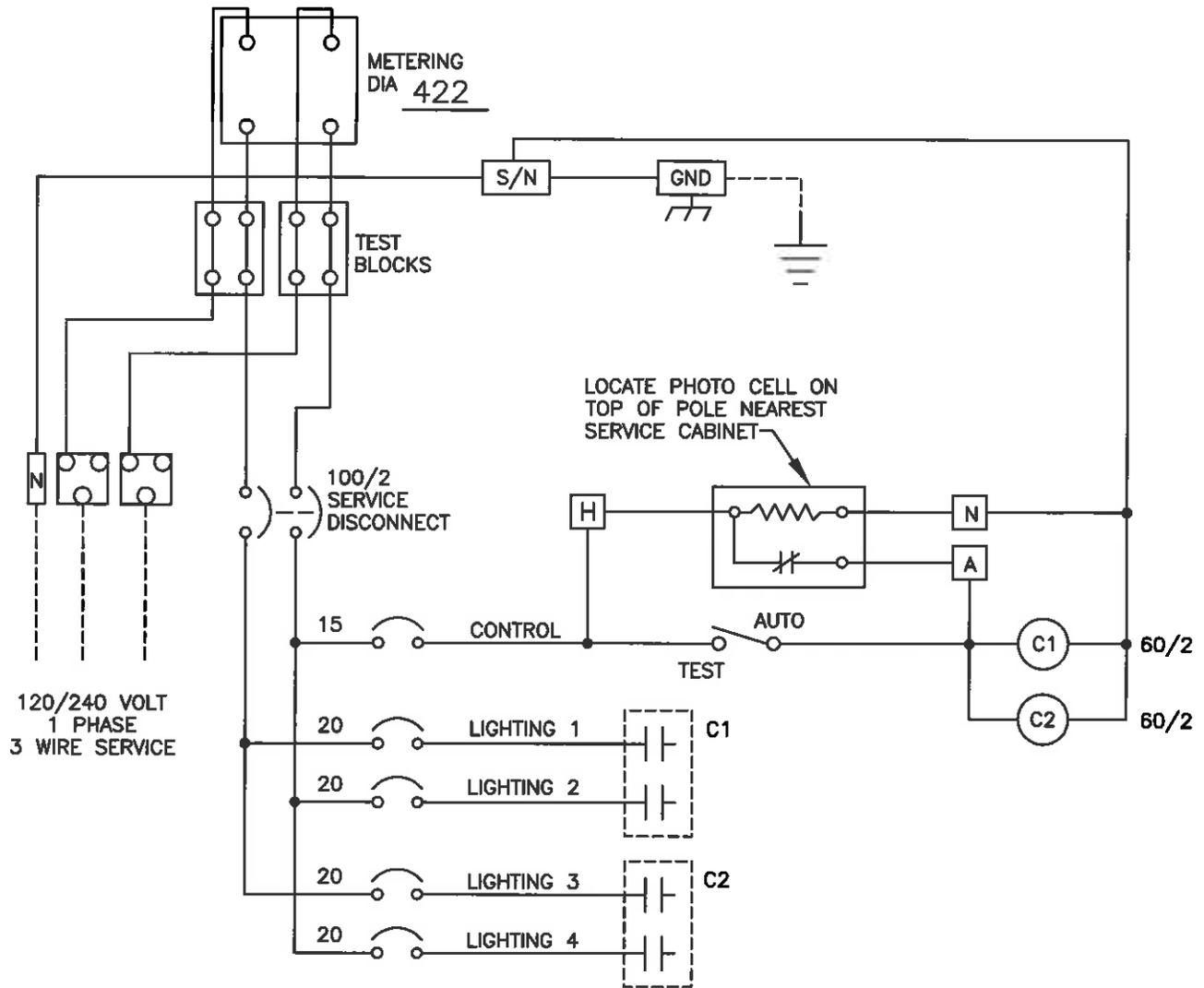
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REVISIONS	DATE	DRAWN	DESIGNED

T-46





NOTE:

SEE T-46 FOR STREET LIGHT SERVICE CABINET DETAIL.

STREET LIGHT SERVICE WIRING DIAGRAM

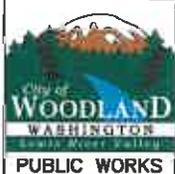
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Bart Stupp 5/12/13
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T-47