



City of Willows

Office of PUBLIC WORKS • 201 N. Lassen Street
Willows, CALIFORNIA

Public Works Standards *STREET EXCAVATION RULES*

EXCAVATION WORK

The City of Willows has adopted the following regulations pertaining to work by excavators in the right of way.

Article 1 DEFINITION

Section 1 Definition:

"Public Works Agency" or "Public Works" shall mean the same as the Public Works Department. "Agency" shall mean the Public Works Department.

"Drawdown Account" shall mean a pre-paid sum of money to cover the cost of inspections for prolonged work beyond that which a single permit fee may cover. A drawdown account may be established for any entity, private or public. Statement of account will be furnished to the entity on monthly basis or as requested.

"Utility Company" shall mean any public utility company or entity authorize to work in the public right of way under franchise agreement.

"Engineer" shall mean authorized Public Works staff assigned to review and approve permit applications and plans or inspect the work.

"Days" shall mean calendar days.

"WMC" shall mean Willows Municipal Code.

"Excavator" is a utility owner or a designated contractor causing an excavation.

"Permittee" is a utility owner or a designated contractor holding a permit.

"Moratorium Street" paved or resurfaced roadways within 5-years after completion.

"Emergency Work" shall mean work maintaining facilities in public street, alley or public place for the preservation of life or property.

Article 2 PUBLIC CONVENIENCE AND SAFETY

Section 1 It is unlawful for any person to make or cause excavation to be made in or under the surface of any public street without first obtaining from Public Works Department a written permit to perform excavations. *No work is allowed in any moratorium (recently improved) street without prior written approval from PWA.*

Section 2 Permit and preconstruction notifications. At least two working days before the work starts, Permittee shall give written notice of the time of

commencement of the work to the Director of Public Works (for Utility Company, this notification may be reduced to twenty-four (24) hours). Similar written notice shall be given to Police Department and/or Fire Department, if requested on permit or a proposed temporary street closure. Permittee shall provide written notices to each property owner or business affected by the Permittee's work as follows:

- 72-hr prior notice for work 5 days in duration or less in all locations.
- 10-day prior notice for work 6 days or more in duration in all locations.

In addition to the notifications stated above, the Permittee shall post and maintain proper work signage 72 hours prior to starting work and during work to indicate type of work, hours of work, dates of start and finish, contractor's name, contact information, and a phone number. Signage shall be posted at least every 100 feet along any block or as directed.

For emergency excavation, Permittee shall post and maintain notice at the site of the excavation during the construction period. The notice shall include the name, telephone number, and address of the owner, Permittee, applicant, and its agent, a description of the excavation to be performed, and the duration of the excavation. Utility Company with marked-vehicle and a foreman present at the site are exempt from posting notifications during emergencies. Permittee shall keep a copy of the permit to excavate at the work site while work is in progress and shall, on demand, exhibit the same to the Engineer.

For new utilities, Permittee shall provide advance written notices and follow the following for public outreach and notification if required.

- *Public relations and Community Outreach.*

Utility Company must maintain a policy for community notification and outreach for planning and design of all new utility. For new utility installations that may take longer than one month to complete or extends more than 600 feet or two cityblocks or may have significant impact on traffic, parking, access to homes and businesses, Director of Public Works may require that the Utility Company conduct community outreach and public relation efforts addressing detours, traffic control, and other concerns. Utility Company shall be prepared to show purpose and nature of the project, discuss alternative solutions, proposed route and scope,

duration, short and long-term impact on the community and traffic, and project benefits. Utility Company shall work closely with City Council staff and the community for conditions of approval and seek consensus prior to finalizing the plans for permit application.

- Section 3 Trenching/excavation restrictions-moratorium streets. **No trenching or excavation shall be permitted in any street that has been constructed or resurfaced within five years after completion without express written permission from the Director of Public Works.** Emergency work is exempt; however more extensive paving will most likely be required. At a minimum, replacement of trench paving shall match or exceed the most recent resurfacing pavement section depth and material or as directed by the Engineer for traffic index in accordance with the latest City of Willows Standard Details.

At a minimum, if approved by the Director of Public works, work in moratorium streets may include: (i) Relocation of utilities mandated by the State, County, or Federal agencies; (ii) Services for buildings or parcels where no other reasonable means of providing service exists. In such case, Permittee or the applicant shall demonstrate the reasons for causing excavation in a moratorium street to Director of Public Works for consideration.

- Section 4 Trenching/excavation in Holiday Restricted Streets. No trenching or excavation shall be permitted in any Holiday Restricted Street without express permission of the Director of Public Works. Emergency work is exempt.
- Section 5 Emergency work. Nothing in this title relative to excavations shall be construed to prevent emergency work maintaining facilities in public street, alley or public place for the preservation of life or property. The applicant for emergency permit shall submit a written statement describing basis for the emergency action and describe the excavation performed and any work remaining to be performed on the next business day.
- Section 6 Limited operations areas & limit of work. Excavation work performed by the Permittee in a LIMITED OPERATIONS AREA if indicated on the Permit to Excavate, shall comply with the following:
- No work that will interfere with traffic shall be performed in any public street or roadway during the hours of 7am to 9am and 4pm to 6pm (except Sundays and Holidays) and no equipment, construction materials or excavated material may interfere with traffic flow. Permittee and its agent shall cover open excavations with steel plates ramped to the elevation of the street, pavement, or other public right-of-way, or otherwise protected. Sections of work shall be completed or temporarily paved and open to traffic in no more than five (5) days after commencing work unless otherwise permitted in writing by the Director of Public Works. Nothing herein specified shall prohibit emergency work and/or repair necessary to insure public health and safety.
- Section 7 Limit of trenching. Trench excavations shall not exceed one hundred (100) feet contiguously or one City block, whichever is less without written approval. Excavated material shall be properly removed from the work site and shall not be stored in any public street or thoroughfares.

Section 8 Responsibilities for accidents. Permittee shall be responsible for all claims and liabilities arising out of work performed under the permit or arising out of permittee's failure to perform the obligations with respect to street excavation or restoration and shall agree to, defend, indemnify, save and hold harmless the City, its officers and employees.

Section 9 Right of access. Safe right of access to the public shall be top priority. Full attention must be given to emergency vehicles and personnel, hydrant access and fire prevention devices, pedestrian zones, vehicles and bus access, transportation stations, driveways, mailboxes, manholes and utility structures, and all public service structures.

Permittee excavating or otherwise obstructing public sidewalk shall maintain a minimum five (5) foot wide walkway with required railing as approved by the Engineer to accommodate all sidewalk users including those with disabilities. Upon completion of the work, Permittee shall immediately remove all temporary signs and warning devices and deliver the area in a safe and neat condition. Refer to the Americans with Disabilities Act in Work Zones

Section 10 Traffic and safety plan. For lane closures or parking space occupation, Permittee shall secure the approval of the Engineer with a submittal (three sets of drawings) at least twenty-one (21) days prior to the closure or occupation. Unless otherwise authorized, work shall be performed in one vehicle lane at a time with the remainder of the roadway open and unobstructed. If additional parking spaces or lane closers are needed, plans shall be re-submitted for the Engineer's review and approval. Permittee shall properly maintain existing traffic signs and shall not remove them without prior Engineer's approval. Temporary signs, lights, and related traffic control devices shall comply with the current edition of the "Manual on Uniform Traffic Control Devices (MUTCD)", or as modified by the Engineer.

Section 11 Protection of existing facilities. Public and private structures such as, but not limited to street signs, mailboxes, bus benches, trash cans, etc. shall not be removed or relocated by Permittee without a written approval of the agency in-charge of their maintenance. Stop signs, directional signs, parking meters, and other facilities are not to be removed or relocated by the Permittee without prior written approval. Temporary or permanent relocation of any existing sign or facility is prohibited without a formal submittal and the approval of the agency in-charge.

Section 12 Coordination of work. The Permittee shall cooperate with agencies involved in providing service to the public, such as delivery of mail, collection and removal of trash, and other public service providers. Excavation work shall be coordinated with agencies working in the area for minimum interference.

Section 13 Storm water provisions. All gutters, drains, conduits, culverts, catch basins, and storm water facilities shall be kept open and clean so as to permit free and unobstructed flow of storm water. Adequate storm water protection shall be in-place to prevent sediment, construction materials, potable water, and other materials or fluids from reaching the storm drain system in accordance with the

latest federal and state agency regulation prohibiting storm water pollution from construction sites. The City's storm drain system discharging directly into creeks and waterways without treatment.

- Section 14 Survey monuments. The Permittee shall not disturb or remove monuments of concrete, steel, or other lasting material established with precise reference point for the purpose of locating or preserving the public right-of-way without first obtaining permission to do so in writing from the Engineer. The Permittee shall further comply with the following state regulations whenever his operations endanger any such monument:

Business & Professions Code §8771
Streets & Highways §732 & §732.5, §1492.5, §1810.5
Penal Code §605

- Section 15 Pavement marking. Restoration of permanent paving striping and markings shall conform to the following:

Existing Materials

Paint
Thermo or pre-cut plastic
Raised ceramic or reflective materials

Replacement Materials

Paint or permanent pre-cut plastic
Permanent type pre-cut plastic
Replace in kind

Graffiti. Permittee shall remove and maintain at all times a site and equipment free of graffiti. Any and all graffiti markings at the sites, on equipment and barricades and facilities shall be removed immediately by the Permittee or its contractor. Permittee shall visually record or video the construction site for any pre-existing condition.

Article 3 EXCAVATION

- Section 1 Notification and traffic safety. Forty-eight (48) hours in advance of any cutting or excavation, Permittee shall call the Underground Service Alert (USA North, 811) to have subsurface facilities marked.
- Section 2 Sheet piling and shoring. In accordance with the order of the Division of Industrial Safety (Cal/OSHA) and prior to commencing excavation of trenches five (5) feet or deeper, Permittee shall first obtain a permit from the Engineer with a complete submittal prepared by a state of California registered and experienced professional engineer in ground support system. If at the end of the workday backfilling operations have not been completed, steel bridging shall be placed over trenches so as to make the entire roadway accessible to vehicular traffic. Steel plating shall be ramped for vehicle traffic and secured against the movement in all directions. Ramps shall be constructed of asphalt cutback and shall have a maximum slope of 1:12.
- Section 3 Methods of excavation. Excavation for conduit shall be performed by open trench operation. Tunneling or jacking of conduit will not be permitted unless

specifically authorized by the Engineer. Rockwheel concrete cutter method of trench excavation will not be permitted unless specifically authorized by the Engineer in writing.

- Section 4 Depth of installation. Unless otherwise authorized by the Engineer, minimum cover for underground pipes and conduits shall be thirty-six (36) inches in public street and twenty-four inches in public sidewalks.
- Section 5 Saw cutting. Prior to the start of excavation, pavement shall be cut with power driven saw to a depth of six (6) inches in asphalt or concrete pavement. Saw cutting of existing pavement shall be performed in neat and straight lines. The Permittee shall not allow silt-water to reach into public storm drainage system or be deposited onto public right-of-way. Use of a mobile power-driven pavement breaker will not be permitted.
- Section 6 Pavement removal. When trench excavations fall within three (3) feet of a construction joint, cold joint, or expansion joint, Permittee shall remove the existing paving material from joint to joint. If the entire width of the concrete sidewalks and driveways are less than six (6) feet, the entire sidewalk or driveway shall be removed and replaced.
- Section 7 Protection of trees. Permit to excavate does not authorize tree trimming or tree removal. Permittee shall request and schedule a site visit with the City arborist if tree trimming or tree removal is expected to be necessary. Street tree roots two (2) inches in diameter or greater shall not be cut by the Permittee and excavated material shall be removed from root system so to avoid damage thereto. Roots shall be protected with burlap wrapping if exposed.

Article 4 BEDDING AND BACKFILL

- Section 1 Bedding and backfill. Bedding and backfill shall be per City Standard 502. Controlled Density Fill (CDF)/Controlled Low Strength Material (CLSM) for trenches or backfill as specified in the City Standards is required. If CDF or CLSM is used, Permittee shall submit the slurry mix design to the Engineer for review and approval.

Permittee shall hire a soils engineer to test for compaction in all trenches. Trench compaction reports shall be provided to the City showing tests conducted on all trenches at a frequency of every 100 ft. of trench excavated. Any failing compaction tests shall be addressed and repaired until compaction meeting City Standards. Compaction requirement for the upper three feet of trench backfill shall be ninety five percent (95%) minimum relative compaction for roadways and ninety percent for areas outside of the roadway.

- Section 2 Mechanical compaction. Unless otherwise authorized by the Engineer, backfill shall be mechanically compacted as specified in the Standard Specifications.
- Section 3 Water Densification. Water-densification is not permitted unless approved by the Engineer and only in areas authorized by the Engineer.

- Section 4 Provisions for undermined trenches. Trench areas under pavement sections that are undermined by Permittee's operations shall be removed and compacted to allow adequate compaction of the material to the satisfaction of the Engineer.
- Section 5 Compaction testing. Relative compaction shall be determined by California Test Number 216 (Nuclear Gage) or approved equal. Test for relative compaction may be performed by the contractor's certified testing laboratory.
- Section 6 Temporary paving. Permittee may install temporary pavement in lieu of trench plates over trenches by installing hot mix asphalt surfacing over compacted backfill material. Unless otherwise noted, minimum section of temporary pavement is two (2) inches in travel lanes and one (1) inch in sidewalk.

Asphalt surfacing shall be mechanically compacted in-place to a uniform, even surface, and shall be true to grade and cross section. The Permittee shall regularly inspect and maintain temporary bituminous surfacing and maintain level and true grade. Controlled low density fill material, if approved by the Engineer for trench backfill for narrow trenches, may be accepted as temporary pavement if it exceeds the stability of the temporary pavement.

Article 5 PAVING OPERATIONS

- Section 1 General requirements. The extent of pavement restoration shall be determined by the Engineer at the site as shown in Pavement Restoration Requirements and described herein as:
- i. Continuous and contiguous resurfacing a constant width equal to the widest part of the excavation but not narrower than the width of the affected lane (approximately 13 feet wide); and
 - ii. Continuous and contiguous resurfacing of lane(s) over scattered excavations may be limited to 50 feet in length along the affected lane if the excavations are no more than 50 feet apart. But shall include the entire block if scattered excavations are longer than 50 feet apart and if the total number of isolated excavations are eight or more; and
 - iii. Continuous and contiguous resurfacing of a lane one-half of the block if the total longitudinal length of excavation along a lane is shorter than 50% of the length of that block; and
 - iv. Continuous and contiguous resurfacing of the entire lane along the block if the total longitudinal length of excavation exceeds 50% of the length of that block; and
 - v. Continuous and contiguous resurfacing of the intersections on a lane by lane basis and any affected quadrant over which a trench crosses the intersection.

- Section 2 Timeline to install permanent pavement (72 hours). Unless specifically permitted in writing by the Engineer excavation shall be backfilled and compacted within 72 hours from the start of work. Placement of pavement base material shall be completed within 72 hours after the excavation has been backfilled. Unless otherwise approved by the Director of Public Works, the final trench paving shall be completed no later than 72 hours after the installation of the pavement base material.
- Section 3 Pavement restoration (asphalt). Asphalt concrete pavement shall match existing asphalt pavement thickness but no less than two (2) inches in depth. Placement of pavement courses shall not exceed two (2) inches unless otherwise authorized by the Engineer. Placement of final course shall be performed when preceding course has cooled to the extent that it does not displace under the Permittee's equipment.
- Section 4 Pavement restoration (concrete). Replacement of Portland cement concrete pavement requires an approved submittal to assure continuity and lateral support where the new pavement meets existing. Concrete pavement in roadways shall match existing but no less than twelve (12) inches deep and early high strength conforming to State Standards or as specified by the Engineer. Modifications (compressive strength of 3,250 when open to traffic). Admixtures for early strength may be used as approved by the Engineer. Unless specifically authorized by the Engineer concrete base shall be allowed to cure a minimum of twenty-four (24) hours before placement of asphalt concrete pavement section. Restoration of concrete pavements would require replacement of the entire panel when saw cut line is closer than three feet from a joint.
- Section 5 Compensating for loss of pavement longevity (PCI index). Grind and overlay or slurry seal of asphalt pavement are required to compensate for the reduced life of pavement. Loss of pavement longevity is the result of cutting and trenching in pavement sections.

Restoration of asphalt roadway surfaces depends on the existing Pavement Condition Index (PCI). When PCI is sixty five (65) or less, as determined by the Engineer, the affected lane(s) shall receive mill and overlay no less than two (2) inches deep.

If in the opinion of the Engineer the PCI index is higher than 65, the affected lanes shall receive slurry seal encompassing at least five (5) feet of sealer beyond the cut lines and over the entire width of the affected lane.

- Section 6 Textured or colored pavement. Pavement constructed of a special material or color shall be replaced in kind. Prior to placing special materials or colors the Permittee shall provide a finished four (4) square foot sample of the material and/or color intended to be replaced for approval by the Engineer.

- Section 7 Access ramps, ADA accessibility. When any portion of the curb at a legal

pedestrian crosswalk or any portion of the sidewalk that is in contact with curb is removed by the Permittee's operations, the Permittee shall construct, as a part of his replacement operations, handicap access ramps shown in the latest edition of the City Standards or the State of California Department of Transportation (Caltrans) Standard Details.

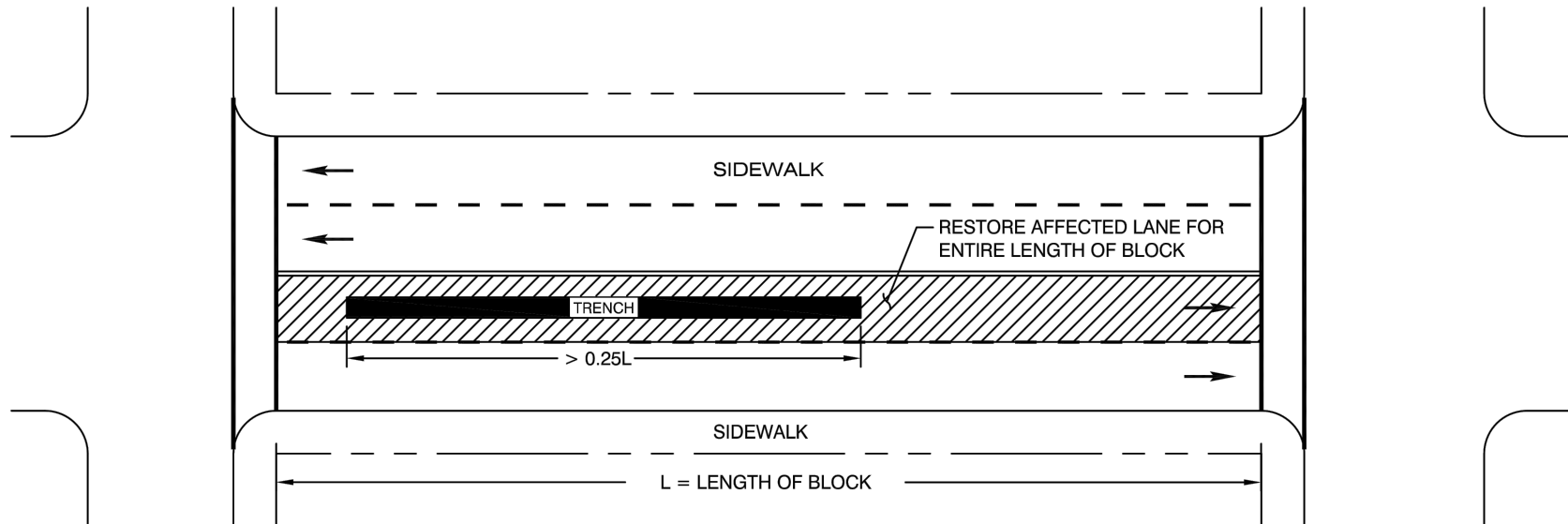
Section 8 Pavement markings. Upon completion of paving operations, Permittee shall immediately replace all pavement markings and traffic striping damaged or removed by his operations.

Section 9 Damage to property. Any private or public improvement damaged by the Permittee's operations shall be replaced to the satisfaction of the Engineer. Damage occurring to street lighting, traffic signal installations, fire alarm conduits, and traffic signal loops shall be reported immediately to the Public Works Department. Restoration of affected services shall be performed by City forces and will be limited to temporary repairs only. Permanent repairs or replacement of damaged portions of street lighting and/or traffic signal installations, resulting from the Permittee's operations, shall be the Permittee's responsibility. The Permittee shall not perform any repairs to City electrical facilities damaged by his operations, except as may be authorized by the Engineer.

Article 6 VIOLATION & PENALTIES

Section 1 Violations, administrative penalties, and costs. Willows Municipal Code prescribes penalties for violations including but not limited to work without permit, Notices to Repair that were not complied with, permit not on site, violation of traffic control requirements, street closures without permit, improper pavement and sidewalk restoration, trip hazards, work outside of designated permit hours, backfill without compactions tests, non-emergency work in moratorium streets (recently improved), and other related violations. Permittee shall also be charged for the work performed by the City for failure to comply. City shall have the right, upon due notice to Permittee and whenever possible, to perform emergency measures to insure public health and safety.

STANDARD DETAILS



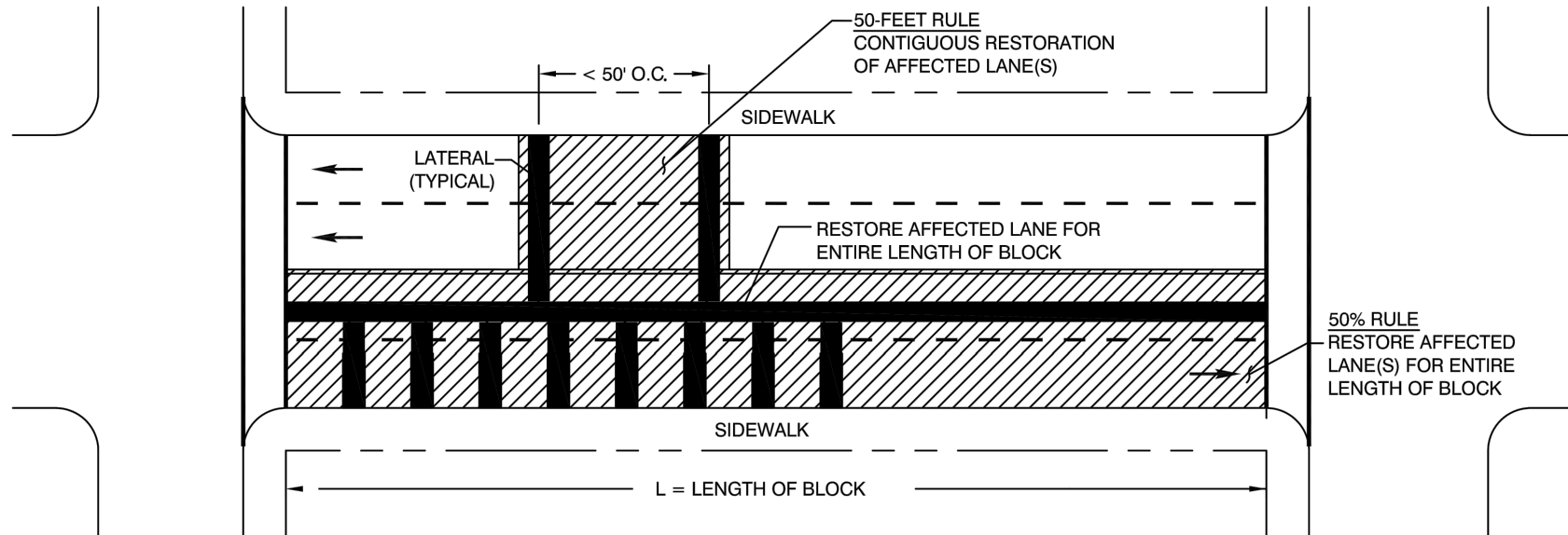
NOTE: FOR ANY TRENCH LENGTH THAT EXCEEDS 25% OF THE LENGTH OF BLOCK, RESTORATION OF ALL AFFECTED LANES SHALL BE FOR THE ENTIRE LENGTH OF THE BLOCK.

PCI INDEX OF 65 AND LESS, MILL AND OVERLAY.
 PCI MORE THAN 65, SLURRY SEAL.
 NO WORK IS ALLOWED IN MORATORIUM STREETS.



Willows
 CALIFORNIA

PAVEMENT RESTORATION REQUIREMENTS



50-FOOT RULE: PAVEMENT RESTORATION SHALL BE CONTIGUOUS FOR ALL AFFECTED LANES WHEN LATERALS ARE LESS THAN 50 FEET APART.

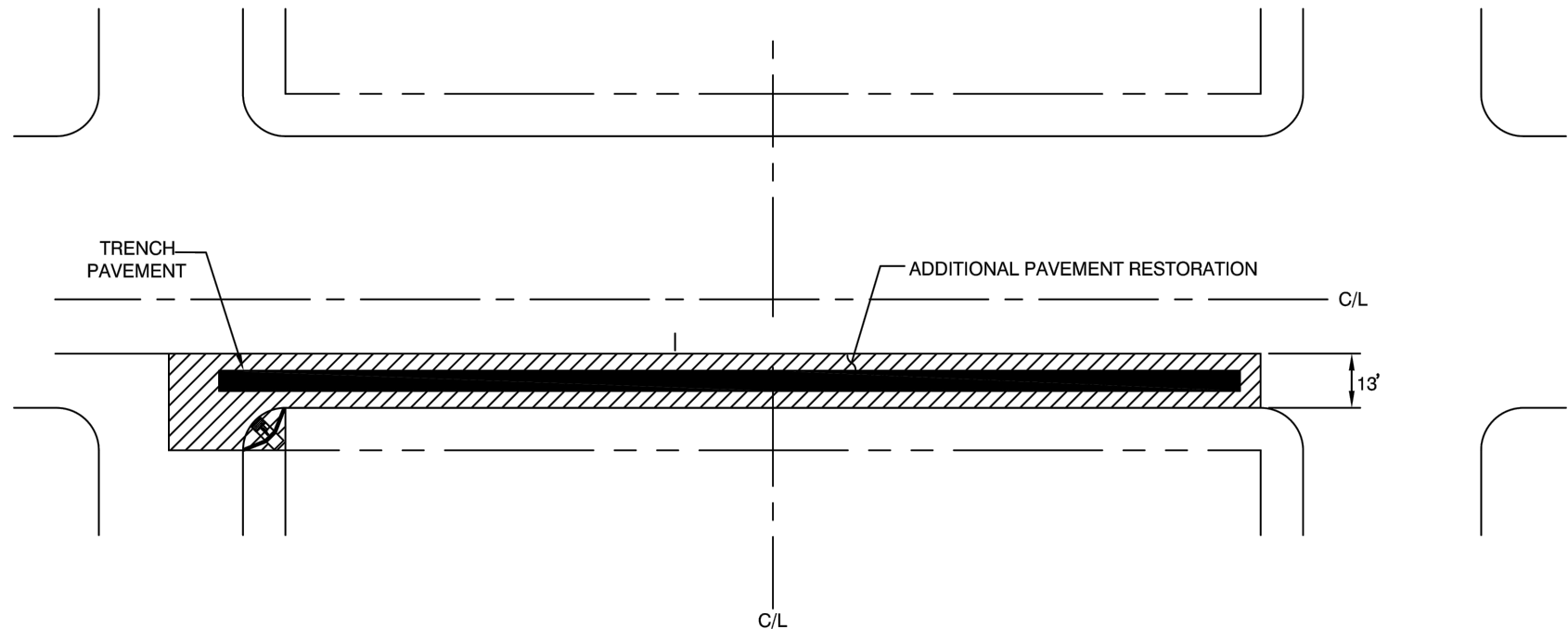
50% RULE: PAVEMENT RESTORATION SHALL BE ALL AFFECTED LANES FOR THE ENTIRE LENGTH OF BLOCK WHENEVER THERE ARE AT LEAST 8 LATERALS AND 50% OR MORE OF THE SERVICES ARE EXCAVATED.

PCI INDEX OF 65 AND LESS, MILL AND OVERLAY.
 PCI MORE THAN 65, SLURRY SEAL.
 NO WORK IS ALLOWED IN MORATORIUM STREETS.



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 CALIFORNIA

PAVEMENT RESTORATION REQUIREMENTS



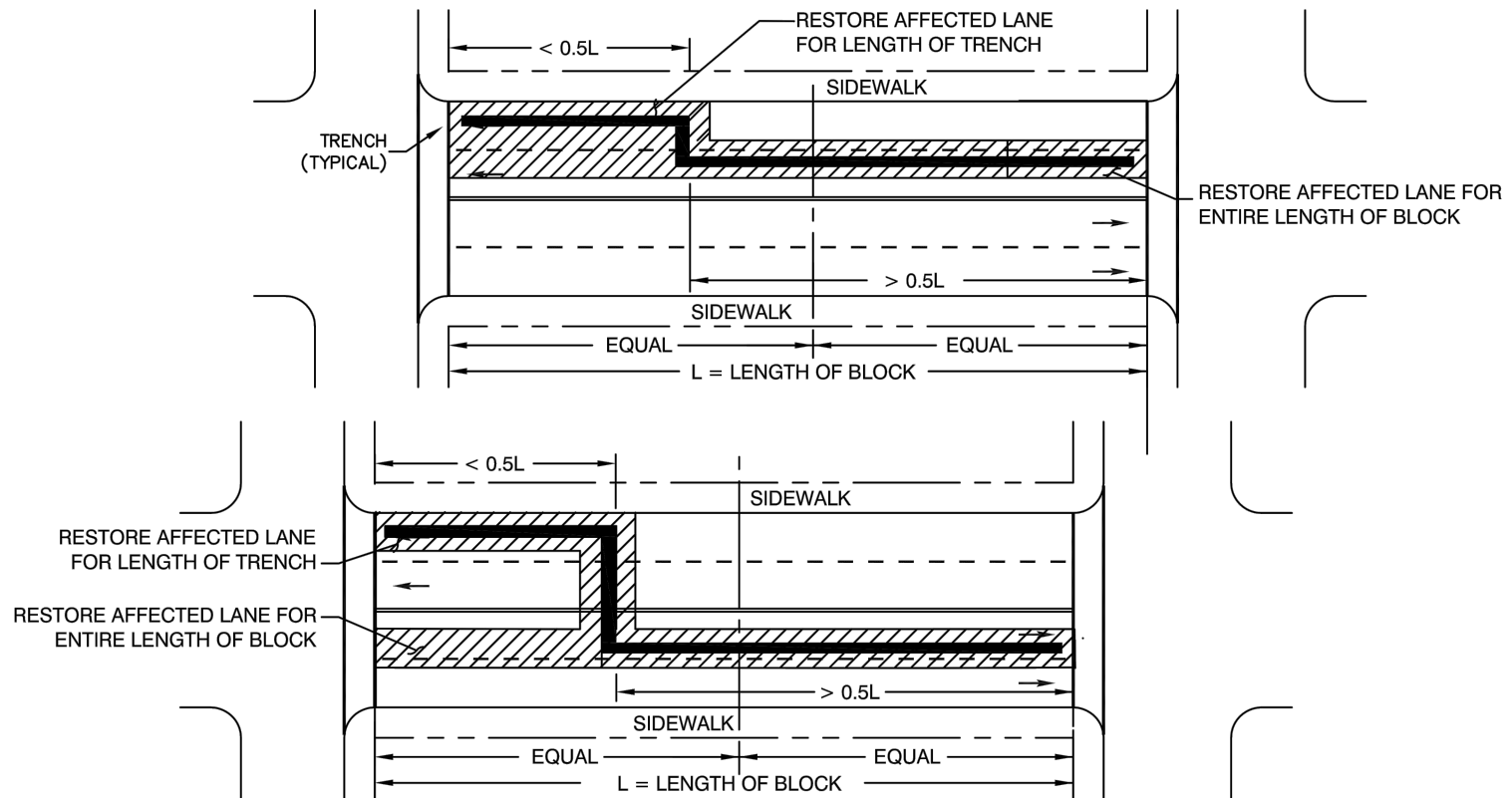
13-FEET RULE: WHEN AN EXCAVATION IS LESS THAN 13 FEET FROM OUTSIDE CURB,
 RESTORATION IS LIMITED TO 13 FEET.

PCI INDEX OF 65 AND LESS, MILL AND OVERLAY.
 PCI MORE THAN 65, SLURRY SEAL.
 NO WORK IS ALLOWED IN MORATORIUM STREETS.



Willows
 CALIFORNIA

PAVEMENT RESTORATION REQUIREMENTS



NOTE:

1. WHEN THE ALIGNMENT MOVES FROM ONE LANE TO ANOTHER LANE, ONLY THE EXCAVATED LANE SHALL BE RESTORED.

UNLESS

2. IF OVER 50% OF THE LENGTH OF THE LANE IS EXCAVATED, THE LANE FOR THE ENTIRE BLOCK SHALL BE RESTORED.

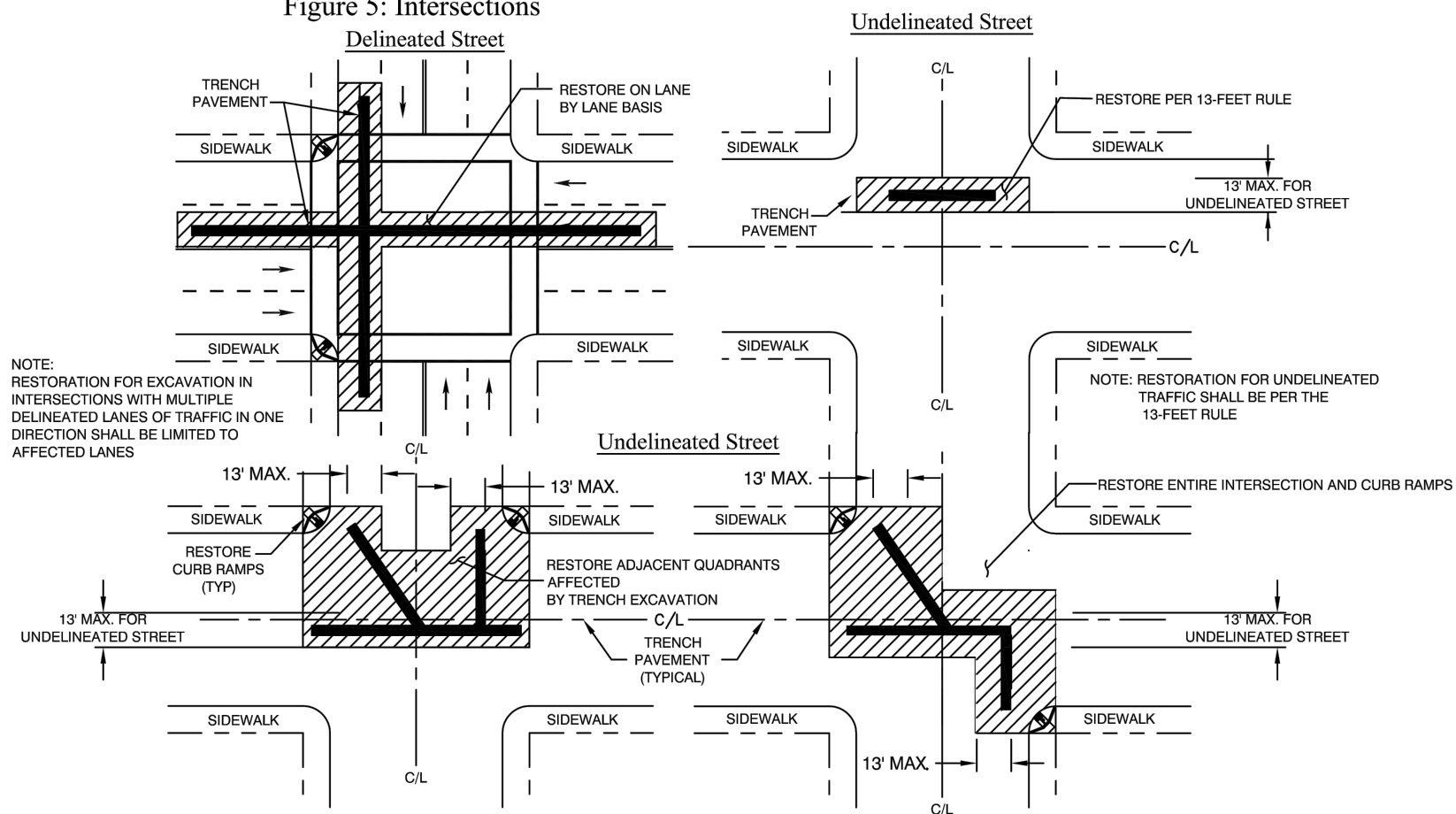
PCI INDEX OF 65 AND LESS, MILL AND OVERLAY.
 PCI MORE THAN 65, SLURRY SEAL.
 NO WORK IS ALLOWED IN MORATORIUM STREETS.



Willows
 CALIFORNIA

PAVEMENT RESTORATION REQUIREMENTS

Figure 5: Intersections



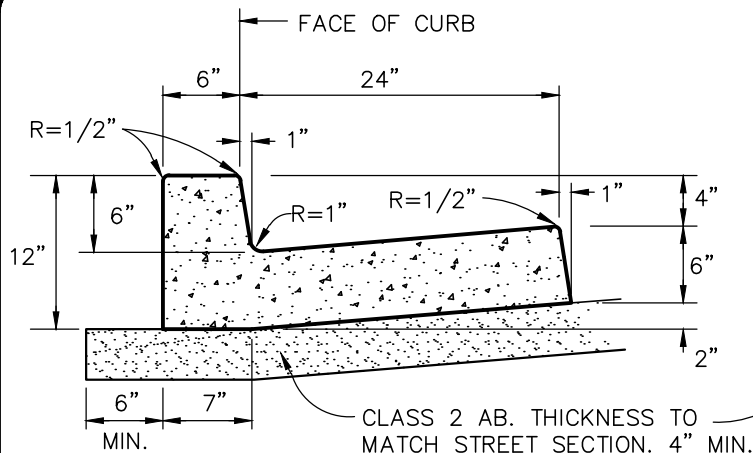
PCI INDEX OF 65 AND LESS, MILL AND OVERLAY.
PCI MORE THAN 65, SLURRY SEAL.
NO WORK IS ALLOWED IN MORATORIUM STREETS.
CURB RAMP RESTORATION PER CALTRANS
LATEST STANDARDS TO THE SATISFACTION OF
THE ENGINEER.



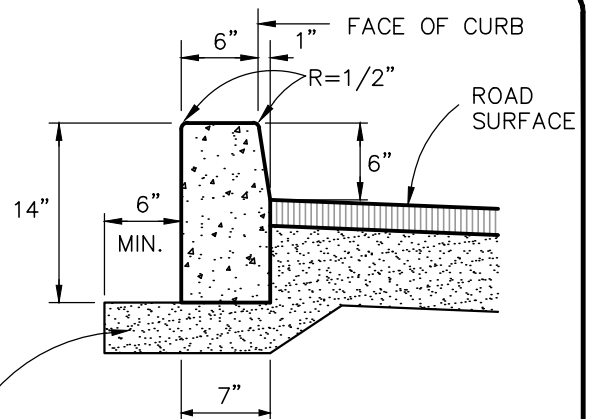
Willows
CALIFORNIA

PAVEMENT RESTORATION REQUIREMENTS

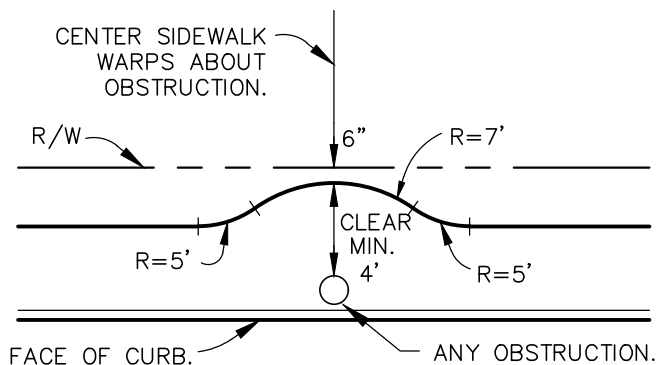
Images: Willows.jpg; Xrefs: Path: F:\BMAP-STD\Willows\Std\Streets 200-215.dwg Layout Name: 203-1 Plot Date: Feb 26, 2020 at 04:07 pm



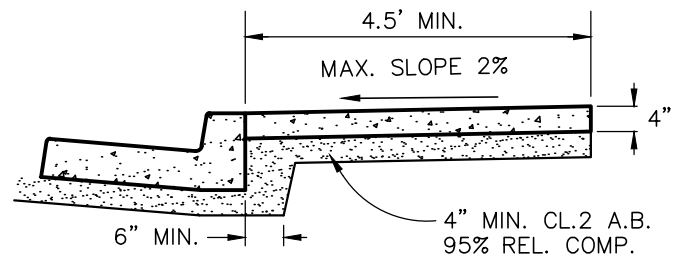
STANDARD CURB AND GUTTER



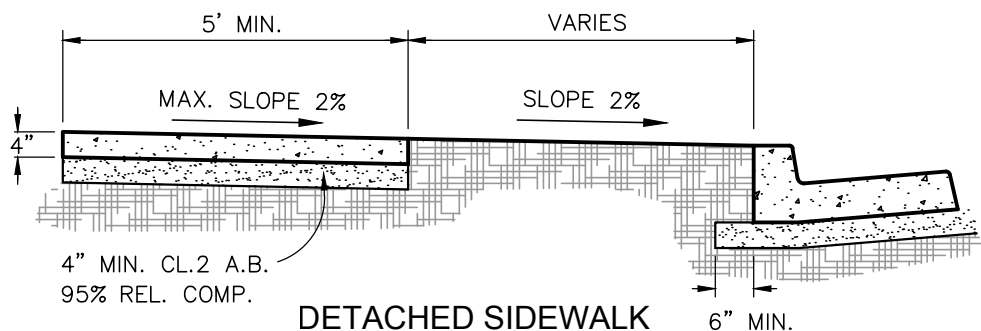
STANDARD VERTICAL CURB



SIDEWALK WARP (CONTIGUOUS SIDEWALK)



CONTIGUOUS SIDEWALK



DETACHED SIDEWALK

NOTES:

1. CONCRETE SHALL BE CLASS "2" AND SHALL CONTAIN NOT LESS THAN 6 SACKS OF CEMENT PER CUBIC YARD.
2. EXPANSION JOINTS, 1/4 INCH WIDE, SHALL BE INSTALLED AT EACH SIDE OF STRUCTURES, AT ENDS OF CURB RETURNS AND AT THE TOP OF DRIVEWAY TAPERS.
3. EXPANSION JOINTS SHALL BE INSTALLED AT 60 FOOT INTERVALS, WITH WEAKENED PLANE JOINTS EVERY 16 FEET.
4. SIDEWALKS SHALL BE SCORED INTO 4 FOOT SQUARES UNLESS SPECIFIED BY ENGINEER.
5. IF EXTRUSION MACHINE IS USED, EXPANSION JOINTS SHALL BE DEEP SCORE 1/3 THE THICKNESS.
6. BROOM FINISH SHALL BE TRANSVERSE TO THE DIRECTION OF TRAVEL.
7. WHERE CONNECTING TO EXISTING CURB AND GUTTER PROVIDE 1/2" x 24" SMOOTH DOWELING AT 12" O.C. BETWEEN EXISTING AND NEW IMPROVEMENTS.
8. ALL NEW SIDEWALK CONSTRUCTION SHALL HAVE #4 BARS AT 24" O.C. LONGITUDINALLY.



DESIGN AND CONSTRUCTION STANDARDS

CURB, GUTTER, SIDEWALK, AND SIDEWALK WARP

DATE: SEPTEMBER 2017

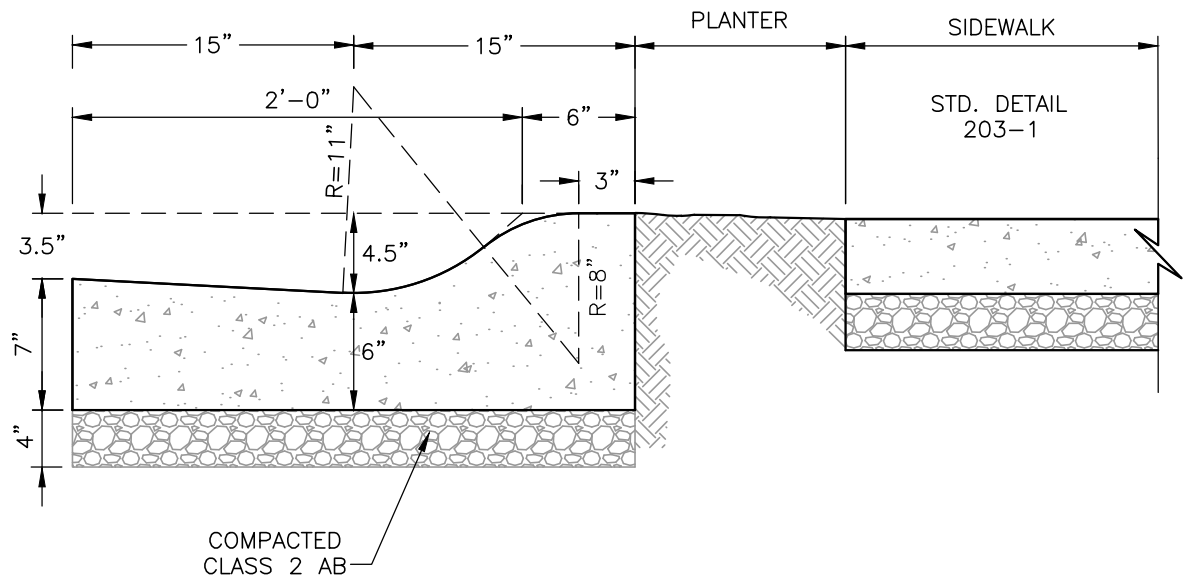
STD. NO.

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SCALE: NONE

CURB & GUTTER:
0.0574 CY/LF
2.5 SQ. FT./LF



NOTES:

1. CONSTRUCT WEAKENED PLANE JOINTS AT 20'.
2. USE OF ROLLED CURB SUBJECT TO APPROVAL BY THE COMMUNITY DEVELOPMENT SERVICES DIRECTOR.
3. WHERE SIDEWALK IS ADJACENT TO CURB, THE CURB AND SIDEWALK SHALL BE POURED MONOLITHIC AND SCORED.
4. SEE STD. DETAIL 203-1 FOR GENERAL CURB NOTES.



DESIGN AND CONSTRUCTION STANDARDS

ROLLED CURB AND GUTTER

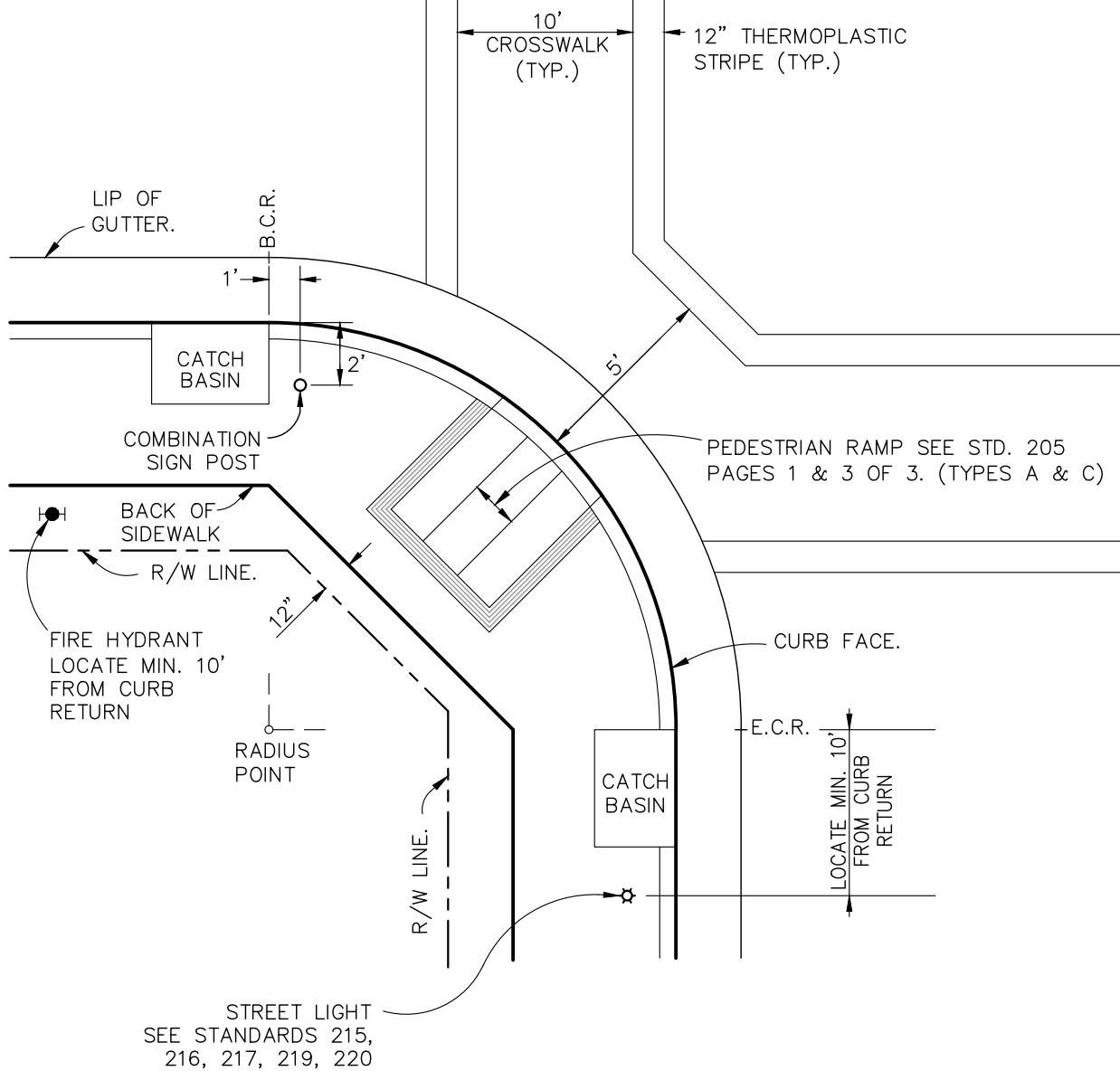
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STD. NO.

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PAGE 2 OF 2

SCALE: NONE



DESIGN AND CONSTRUCTION STANDARDS

CURB RETURN

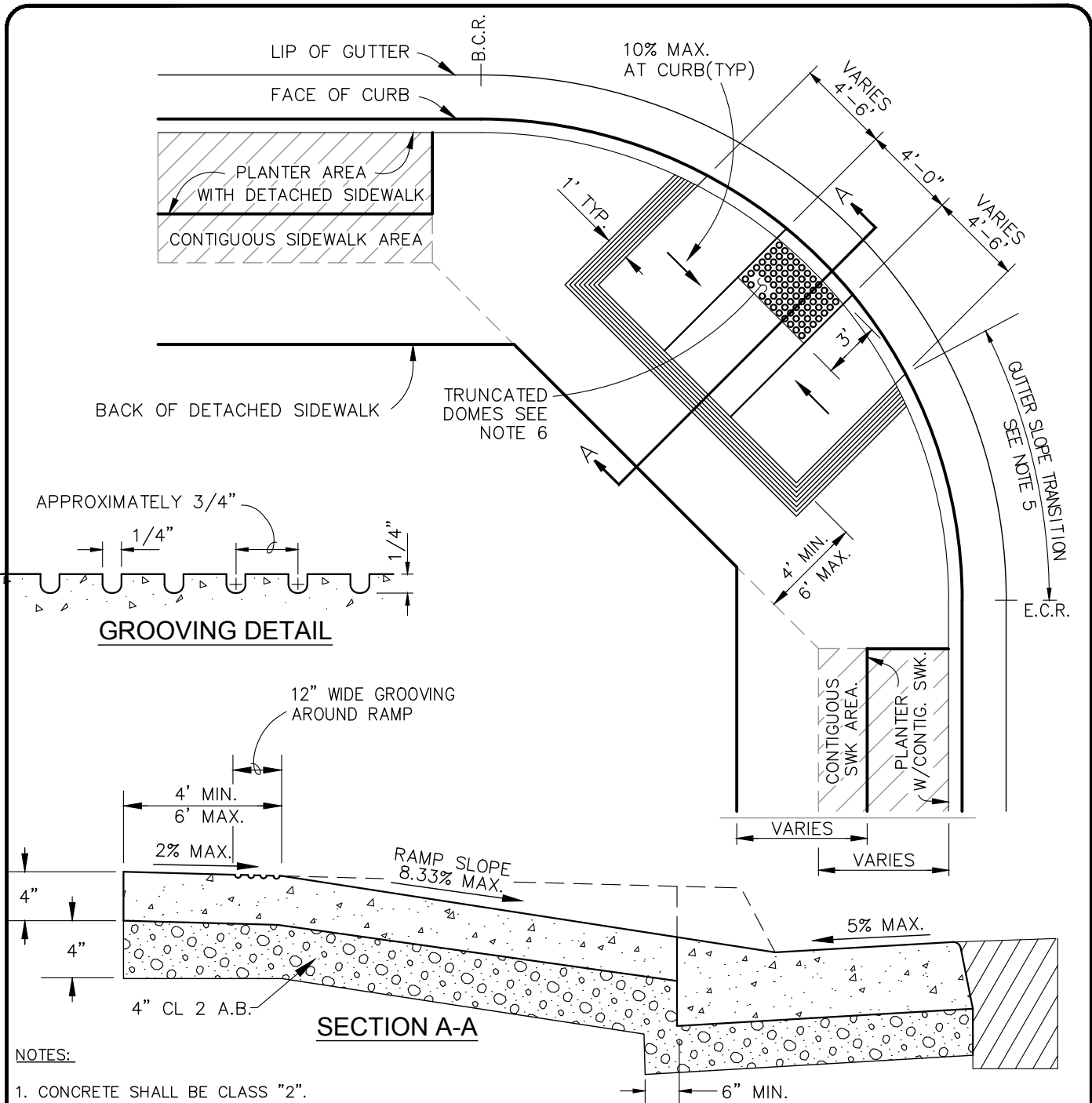
DATE: SEPTEMBER 2017

STD. NO.

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PAGE 1 OF 1

SCALE: NONE



NOTES:

1. CONCRETE SHALL BE CLASS "2".
2. RAMP SHALL BE LOCATED AT THE MID-POINT OF THE CURB RETURN.
3. DESIGN SHALL CONFORM TO THESE REQUIREMENTS, EXCEPT AS OTHERWISE APPROVE BY THE CITY ENGINEER.
4. THE CURB RAMP SHALL BE OUTLINED, AS SHOWN, WITH A 1'-0" WIDE BORDER WITH 1/4" GROOVES APPROXIMATELY 3/4" ON CENTER. SEE GROOVING DETAIL.
5. MAXIMUM SLOPES OF THE ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP OR ACCESSIBLE ROUTE SHALL NOT EXCEED 5 PERCENT WITHIN 4'-0" OF THE TOP AND BOTTOM OF THE CURB RAMP. ADJOINING GUTTER SLOPE TRANSITIONS FROM 1" PER FOOT TO 5% AT THE RAMP (TYP.)
6. RAISED TRUNCATED DOME DETECTABLE WARNING SURFACE, SEE PAGE 3 OF 3 FOR DETAIL. THE EDGE OF THE DETECTABLE WARNING SURFACE NEAREST THE STREET SHALL BE BETWEEN 6" AND 8" FROM THE GUTTER FLOWLINE.
7. TRANSITIONS FROM RAMPS AND LANDING TO WALKS, GUTTERS, OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.
8. UTILITY PULL BOXES, MANHOLES, VAULTS AND ALL OTHER UTILITY FACILITIES WITHIN THE BOUNDARIES OF THE CURB RAMP WILL BE RELOCATED OR ADJUSTED TO GRADE BY THE OWNER PRIOR TO, OR IN CONJUNCTION WITH, CURB RAMP CONSTRUCTION.



DESIGN AND CONSTRUCTION STANDARDS

**PEDESTRIAN CURB RAMP
TYPE A**

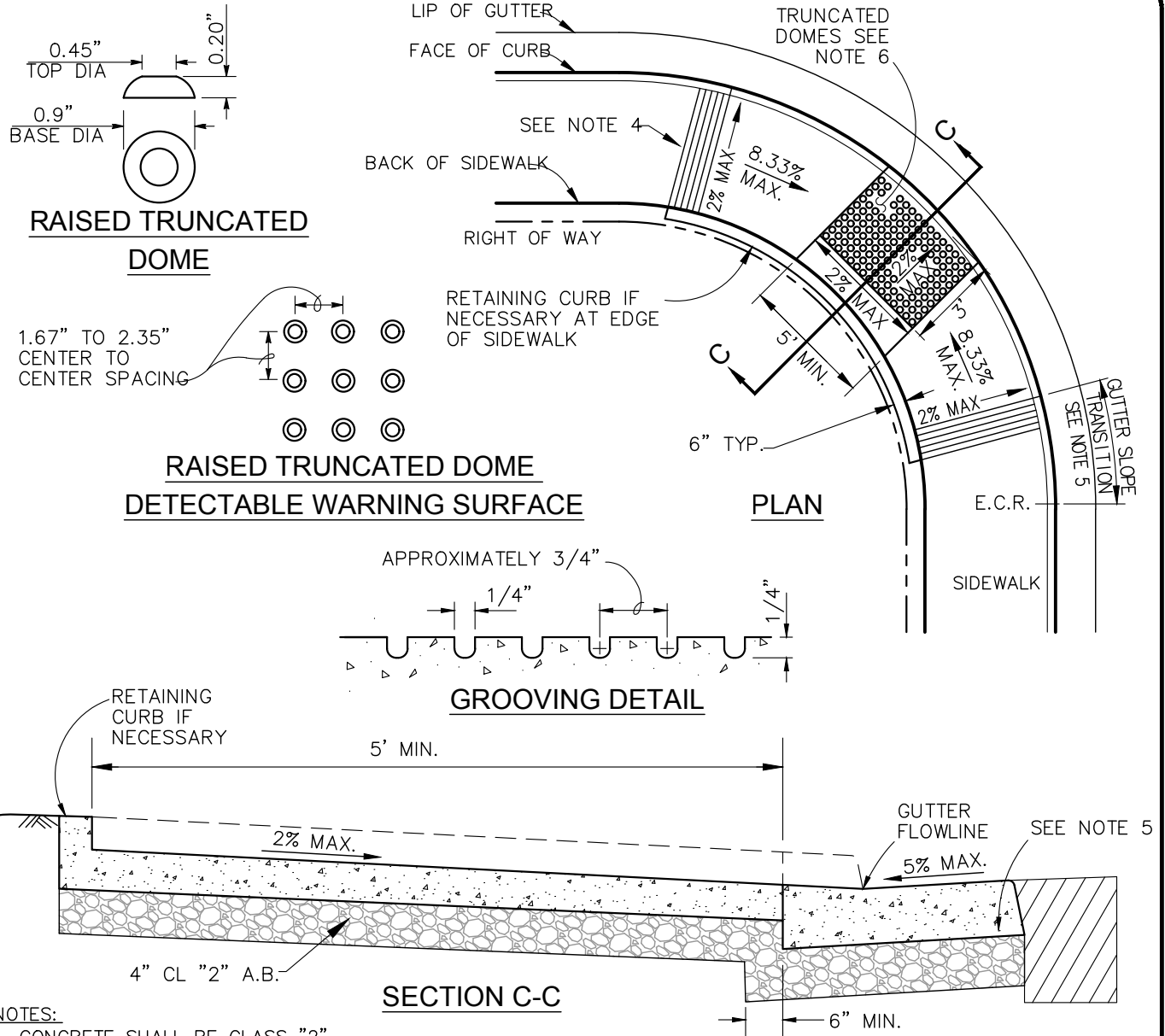
DATE: SEPTEMBER 2017

STD. NO.

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PAGE 1 OF 3

SCALE: NONE



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3. DESIGN SHALL CONFORM TO THESE REQUIREMENTS, EXCEPT AS OTHERWISE APPROVE BY THE CITY ENGINEER.
4. THE CURB RAMP SHALL BE OUTLINED, AS SHOWN, WITH A 1'-0" WIDE BORDER WITH 1/4" GROOVES APPROXIMATELY 3/4" ON CENTER. SEE GROOVING DETAIL.
5. MAXIMUM SLOPES OF THE ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP OR ACCESSIBLE ROUTE SHALL NOT EXCEED 5 PERCENT WITHIN 4'-0" OF THE TOP AND BOTTOM OF THE CURB RAMP. ADJOINING GUTTER SLOPE TRANSITIONS FROM 1" PER FOOT TO 5% AT THE RAMP (TYP.)
6. RAISED TRUNCATED DOME DETECTABLE WARNING SURFACE, DETAIL ABOVE. THE EDGE OF THE DETECTABLE WARNING SURFACE NEAREST THE STREET SHALL BE BETWEEN 6" AND 8" FROM THE GUTTER FLOWLINE.
7. TRANSITIONS FROM RAMPS AND LANDING TO WALKS, GUTTERS, OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.
8. UTILITY PULL BOXES, MANHOLES, VAULTS AND ALL OTHER UTILITY FACILITIES WITHIN THE BOUNDARIES OF THE CURB RAMP WILL BE RELOCATED OR ADJUSTED TO GRADE BY THE OWNER PRIOR TO, OR IN CONJUNCTION WITH, CURB RAMP CONSTRUCTION.



DESIGN AND CONSTRUCTION STANDARDS

**PEDESTRIAN CURB RAMP
TYPE C**

DATE: SEPTEMBER 2017

STD. NO.

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SCALE: NONE