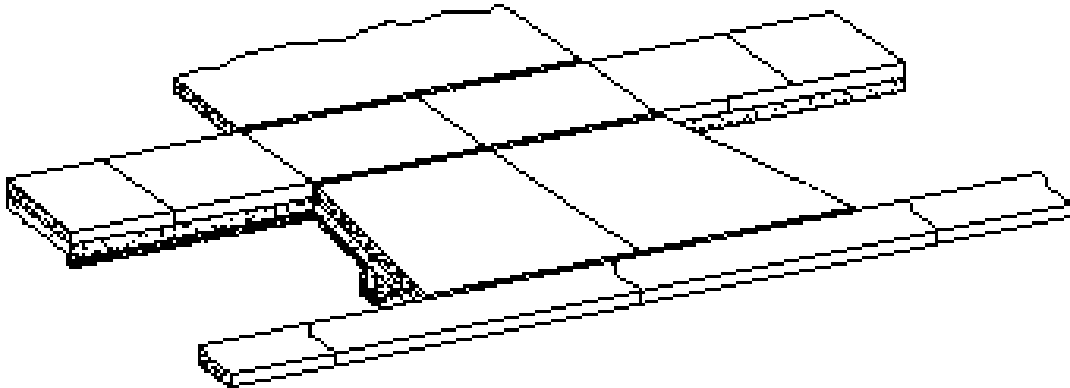




October 2013

RESIDENTIAL DRIVEWAY APPROACH SPECIFICATIONS

CITY OF OAK CREEK
ENGINEERING DEPARTMENT



Driveway Approach Specifications Summary

GENERAL

- 4" base of compacted 1½" crushed stone (TB - traffic bond) from street pavement to property line
- 5" of concrete paving
- 3" of asphalt paving
- No wire or rod reinforcing
- Fiber mesh admixture to concrete is allowed

URBAN STREETS (SEE DETAILS RO-5 AND RO-9)

- ◆ Concrete paving only
- ◆ Approach slope of 3.5%, 4.0% or 4.2% (See RO-5)
- ◆ Sidewalk slope of ¼" per foot (2%)
- ◆ 3' straight flare on each side of approach from curb to sidewalk section
- ◆ Full depth felt joint at curb and both edges of sidewalk

RURAL "B" STREETS (SEE DETAIL RO-12)

- Concrete or asphalt paving is allowed
- Slope on approach varies from minimum of 2% to maximum of 10%
- 3' straight flare on each side of approach from curb to 8' back of curb
- Full depth felt joint at curb required for concrete approach

RURAL "A" STREETS (SEE DETAILS RO-10, RO-11 AND RO-13)

- Concrete or asphalt paving is allowed
- 4" base of compacted 1½" crushed stone (TB - traffic bond) from edge of street pavement to property line
- 3' straight flare on each side of approach from curb to centerline of culvert
- Slope for first 3' of approach to match cross-slope of the street pavement (See RO-13)

RURAL "A" STREETS WITH ONLY THE BINDER COURSE OF ASPHALT IN PLACE

- ❖ Same as above except first 3' of approach for a concrete driveway
- ❖ Approach will end 3' short of edge of street pavement
- ❖ End of approach will be set level with the existing edge of street pavement

GENERAL PROVISION HIGHLIGHTS

- (4) Permits – Required for all new installations, replacements, and repair of driveways and sidewalks
- (15) Minimum Clearances -

To side property line	5'
Fire hydrant, mailbox, light pole	5'
Street Intersection	40'
- (19) Culverts – Installed and extended by City Street Department only (768-6553)
- (20) Culvert Headwalls and Curb on Driveway Approach – Allowed on rural streets
- (22) Depressed Curb
 - Required for apartments and all other commercial approaches
 - Allowed for residential driveways
 - Creation of a depressed curb through the sawing off of the existing curb head may be allowed. A *Curb Cutting Acceptance Form* must be filled out at the time of the permit application. As shown on the form, only equipment and personnel designed and qualified to perform this specific work are acceptable to the City.
- (27) 24-hour turnaround on inspection requests (24 hours from time approach is ready to be inspected)
- (41) Driveway approaches disturbed by City projects will be replaced with standard concrete or asphalt, where applicable, with no consideration for matching pre-existing color, texture or pattern.

GENERAL PROVISIONS

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- 3 - Financial Responsibility
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DEFINITION OF TERMS

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Appendix "B"

GENERAL PROVISIONS

1. SCOPE OF WORK

These specifications control the repair, removal, installation, and replacement of residential driveway approaches and sidewalks constructed within the right-of-way of public streets in the City of Oak Creek.

2. DEFINITION OF PUBLIC RIGHT-OF-WAY

The area designated for public streets, sidewalks and utilities measured between opposing property lines. This is commonly 60' or 66', but may be greater. The distance from the center of pavement to the right-of-way will generally be 30' or 33'. Facilities typically included within the public right-of-way are street pavement, curb & gutter or road shoulder, ditches, driveway culverts, driveway approaches, terrace areas, and sidewalks.

Public utilities and facilities located in the right-of-way are sanitary sewer, storm sewer, water main, street lighting, and street trees. Private utilities include natural gas, electric, telephone, cable TV, and fiber optic lines.

3. FINANCIAL RESPONSIBILITY

All private residential paving improvements shall be constructed and financed entirely by the property owner. All necessary cleanup and restoration shall be performed and paid for by the property owner or his hired contractor. All barricades, signs, lights, and other necessary warning devices shall be installed, maintained, and paid for by the property owner or his hired contractor.

4. PERMIT TO CONSTRUCT IN PUBLIC RIGHT-OF-WAY

A permit is required to repair, remove, install, or replace a driveway approach or sidewalk. The permit shall be obtained from the City of Oak Creek Engineering Department before the start of any construction activities. Starting work before the issuance of a permit shall result in the issuance of a stop work order.

5. DRIVEWAY APPROACH ALONG AN INTERIM STREET SECTION

Any driveway approach to be installed on a street with an interim cross-section is subject to the special stipulation that the property owner shall be held financially responsible for the repair or replacement of the approach should it become necessary due to any future City-generated construction project within the street right-of-way.

6. VARIANCES

Variations shall be requested in writing, addressed and submitted to the City Engineer. At his discretion, the City Engineer may approve the requested variance.

7. DEFICIENCIES

Any work performed in violation of these specifications, City ordinances, or orders of a City of Oak Creek officer, may be ordered removed. Any work not in compliance with the City standards may be ordered to be removed or replaced.

8. WORKMANSHIP

Defects due to poor workmanship or materials shall be cause to order work to be removed or replaced. Spalling, poor surface finish, damage caused by equipment or neglect, and cracking of materials, are examples of cause.

9. STOP PERMIT ORDER

Flagrant violation of rules, specifications, or requirements shall invoke possible application of a stop permit order on the contractor. The application of this order will allow the contractor to complete work on permits previously issued, but shall bar the contractor from acquiring new permits or starting new work from the date and time of the stop permit order. The order shall be issued to, and served upon, the contractor by U.S. Mail or delivery in person. The contractor must formally resolve the violation with the City Engineer in order to request the lifting of the stop permit order. At his discretion, the City Engineer will decide the appropriate course of action.

10. STOP WORK ORDER

A property which is posted with a stop work order will have no further work performed, on or adjacent to it, until such time as the stop work order is lifted by a City officer.

11. REVOCACTION OF PERMIT

The City Engineer may revoke a permit for cause.

12. DIGGERS HOTLINE LOCATE

The contractor shall be responsible for having utilities located before beginning any construction-related activities.

13. CLEANING OF PAVEMENT AND RIGHT-OF-WAY

The contractor shall be responsible for removing all equipment and debris and for sweeping all affected pavement within the public right-of-way. The contractor shall perform this cleanup prior to leaving the site for the day. If contractor does not fulfill this requirement and City forces are ordered to perform this work, the contractor shall be billed for the associated costs.

14. CLEARING AND GRUBBING

The contractor shall remove and dispose of trees, stumps, roots, vegetation, topsoil, rubbish, or other refuse found within the public right-of-way portion of the work zone. Rocks and boulders in this area shall be removed as well. Tree stumps 3" and greater in diameter shall be removed to a depth of not less than 1' foot below the pavement subgrade.

15. MINIMUM CLEARANCES

Clearances from the driveway approach, as measured at the front property line, to other structures, shall be as follows:

To Side Property Line	5 feet ⁽¹⁾
Fire Hydrant	5 feet
Mail Box	5 feet
Street Light Pole	5 feet
Street Intersection	40 feet ⁽²⁾

⁽¹⁾Property owner shall be responsible to field locate the side property line.

⁽²⁾The 40' dimension as measured along the property line from the edge of proposed driveway approach to the property line along the frontage of the intersecting street. Property owner shall be responsible for locating the relevant property corner.

16. ADJUSTMENT OF INTERFERING APPURTENANCES

All manhole and catch basin frames, and all covers for openings of any kind encroaching into the driveway approach and sidewalk areas shall be adjusted to the appropriate line and grade. The City will adjust, at no charge to the contractor, any item that is City property. The City will make the adjustment within 72 hours of receiving the request from the property owner or contractor.

When adjustments involve a private utility, the Contractor shall contact the private utility involved. Adjustments shall be made according to the requirements of the private utility.

Fire hydrants and street lights, which are approved for relocation by the City Engineer to accommodate the driveway approach installation, shall be relocated by the City with all related costs shall being paid by the property owner.

17. PROTECTION OF STRUCTURES AND UTILITIES

The contractor shall report existing damage or other deficiencies of public and private utilities, culverts, trees, light poles, pavement, valve boxes, stop boxes, covers, curb, gutter, road shoulder, ditches, driveway approaches, terrace areas, and sidewalks, etc. The contractor shall notify the appropriate authority of the damage or deficiency.

Public utilities and facilities located in the right-of-way include sanitary sewer, storm sewer, water main, street lighting, and street trees.

Private utilities include natural gas, electric, phone, cable TV, and fiber optic lines.

The contractor shall protect all existing work from damage including underground structures, public and private utilities, culverts, trees, light poles, pavement, valve boxes, stop boxes, covers, curb, gutter, road shoulder, ditches, driveway approaches, terrace areas, and sidewalks, etc. All damaged items shall be repaired prior to the pouring of concrete or placing of asphalt. The contractor shall be charged for the repair costs for all items that he damaged and for which he is responsible.

18. CLEANING STRUCTURES AND COVERS

The contractor shall be responsible to ensure that all manholes, catch basins, valve boxes, pull-boxes (and their associated covers) in the work area are clean and operable prior to and upon completion of the work.

19. CULVERTS

The City of Oak Creek Street Department issues the permit for installation of private roadside driveway culverts. Culverts are installed by the City Street Department only. The material and installation costs of the culvert are paid for by the property owner or their home builder.

Culverts shall be a minimum of 20 feet in length and a maximum of 40 feet. Fill material over culverts shall be crushed stone T.B. (Traffic Bond) to subgrade. A minimum of 4" of 1½" crushed T.B. (traffic bond) stone material shall be placed and compacted over the stone backfill material.

20. HEADWALLS AT CULVERT ENDS

Headwalls may be constructed to protect the driveway approach from erosion and undermining at the culvert ends. Headwalls may be constructed of formed concrete or masonry laid and secured in place. Curb sections may be no closer than 6' from the edge of the street pavement. The height of the curb shall be no more than 6" above the approach paving.

21. APPROACH INSTALLED PRIOR TO COMPLETION OF ASPHALT STREET PAVING

Concrete driveway approaches that are to be installed on streets with a Rural-A cross-section (no curb & gutter) where the final course of asphalt has not yet been placed shall not be paved all the way to the street. The approach shall stop 3' short of the street pavement edge and to an elevation level with the current street pavement edge. (See Details RO-11 and RO-13)

22. DEPRESSED CURB

A depressed curb section for a driveway approach may be installed only with the prior approval of the City Engineer. With the City Engineer's approval, the existing mountable curb & gutter section may be removed to the extent approved by the on-site Inspector. In no case may a section of curb & gutter be created with a length less than 4'. Joints shall be sawed at the removal extents to the full depth of the curb & gutter prior to its removal. New curb section shall be tied to adjacent existing curb & gutter with steel tie bars. (See Detail Number RO-7)

Creation of a depressed curb through the sawing off of the existing curb head may also be allowed. A *Curb Cutting Acceptance Form* must be filled out at the time of the permit application. As shown on the form, only equipment and personnel designed and qualified to perform this specific work are acceptable to the City.

23. ALIGNMENT OF APPROACHES & SIDEWALKS WITHIN ROW

Where the edge of the public street is on a straight line, the centerline of the driveway approach shall be at a 90° angle to that line. Where the edge of the public street is within a horizontal curve, the centerline of the driveway approach shall be radial to that curve.

24. PREPARATION OF SUBGRADE

All areas in the subgrades that are not firm and of proper bearing capacity shall be removed and backfilled with compacted gravel or stone. Fill materials shall be placed in layers of no more than 8" and compacted by mechanical tamping so that a firm, stable subgrade is achieved.

25. PREPARATION OF BASE

The base course for all paving shall consist of 4" of 1½" crushed T.B. (traffic bond) stone placed upon the subgrade. The base course shall be compacted by mechanical tamping. The contractor shall ensure that the base course is at the proper elevation and grade.

26. SETTING OF FORMS

The contractor shall set concrete forms to the proper line and grade. The forms shall be properly staked and braced.

27. REQUEST FOR INSPECTION

Inspections shall be requested after all preparatory work has been completed (preparation of the base course, setting of forms, etc.). The request for inspection shall be made to the Engineering Department (768-6541). No concrete or asphalt shall be placed prior to completion of the City inspection and approval. Concrete and asphalt should not be ordered prior to the Inspector's approval of the stone grade and forms.

Inspections will be performed within 24 hours from the time that all preparatory work has been completed. The 24-hour response time refers to normal workdays of City personnel (i.e. not including weekends or City holidays). Failed inspections will require a new request for inspection upon correction of the deficiencies.

28. AIR TEMPERATURE

No asphalt shall be placed when the air temperature is below 36° Fahrenheit. No concrete shall be placed when the temperature is below 40° Fahrenheit. In cold weather, all necessary insulating precautions shall be employed to prevent freezing of the concrete during the curing process.

29. ASPHALT SPECIFICATIONS

A minimum of 3" of asphalt, Type E-0.3, Gradation 12.5 mm or 9.5 mm, as specified by State of Wisconsin Specifications, shall be placed upon the prepared base course.

30. CONCRETE SPECIFICATIONS

All concrete used shall adhere to the following requirements:

AIR ENTRAINED	air content of 5% to 7% by volume
PORTLAND CEMENT	6 bags per cubic yard
COARSE AGGREGATE	maximum size of 1-½"
SLUMP	2" to 3"

The exact proportions of water, fine aggregate, and coarse aggregate, shall be designed to produce concrete of the desired plasticity, workability, strength, and durability.

31. JOINT TREATMENT

A longitudinal contraction joint shall be tooled in at the centerline of the approach. Installation of additional joints may be directed by the Inspector. For concrete sidewalk, transverse contraction joints shall be provided at 5' intervals. For concrete driveway approaches, a transverse joint shall be provided when the distance between the walk and the back of curb exceeds 12'. The transverse joint may be saw cut. Saw cut joints will only be allowed when the joint can be cut to the required depth across the entire length of the pavement section without causing damage to adjacent pavement.

All full-depth joints shall be installed using 5" deep, 1/2" thick bituminous fiber expansion joint material. Full-depth joints shall be installed at the back of curb, between the driveway approach and sidewalk, between the sidewalk and private driveway, and where a new walk abuts an existing walk, as directed by the Inspector.

32. SAWCUTTING PAVEMENT

Prior to removing existing pavement (concrete or asphalt), the limits of the removal shall be clearly indicated and approved by the Inspector. Joints shall be sawed for the full depth of the pavement at the approved locations and shall provide a clean and square edge.

33. PLACING, FINISHING AND CURING CONCRETE

The base course shall be moistened before concrete is placed. All edges shall be finished with a 1/2"radius edging tool. Contraction joints shall be tooled in cut to a depth of 1¾". The final surface finish shall be obtained by brushing lightly with a damp, soft-bristled brush. No neat cement or water shall be applied to the surface during finishing. Immediately after finishing the concrete surface, the approach shall be uniformly covered with a water-impermeable curing compound. The curing compound shall be applied as a fine spray at a coverage rate of 200 square feet per gallon.

34. CONCRETE PROTECTION

In addition to protection from inclement weather, concrete paving shall be closed to pedestrian traffic for 12 hours and closed to vehicular traffic for 7 days.

35. BACKFILLING AND RESTORATION

As soon as the new pavement strength will allow and after the concrete forms have been removed, the areas adjacent to the new pavement shall be backfilled and shaped to the proper finish elevations. Seed and mulch or sod restoration shall be established. All work related debris shall be removed from the public right-of-way. All street and sidewalk areas shall be cleaned and free of hazards.

36. BARRICADES, SIGNS, AND WARNING DEVICES

The contractor shall erect and maintain all barricades, fences, lights, and signs necessary for public safety and convenience. New concrete pavement shall be closed to traffic during the construction and curing periods by the placement of sufficient barricades and/or warning devices. The City may order the placement of additional safety devices where it sees necessary. The contractor shall be liable for damage caused by failure to install and maintain adequate safety devices.

37. CLOSING OF STREET

In no event shall the contractor close the street to vehicular traffic or access of the general public throughout the construction. At least one 12' lane of pavement shall remain open to vehicular traffic throughout all construction activities.

38. MATERIAL STORAGE ON STREET

Materials delivered and stored on any street shall be neatly piled along roadway sides in such a manner as to minimize inconvenience to property owners, vehicular traffic, and the general public. Materials shall not be placed within 20' of any public hydrant. Private drives shall be kept open. Trees and other improvements shall be protected from damage. Barricades with flashing lights will be set to warn of materials stored on the street pavement. The City may order the placement of additional safety devices.

39. WATER USE PERMIT

The contractor shall not open, close, or operate any hydrant valve. Fire hydrants may be used as source of water supply only after obtaining a permit from the Oak Creek Water and Sewer Utility

located at 170 W. Drexel Avenue (570-8210). When water is required, the Utility shall be notified. The Utility shall install the necessary reducer, valve, etc., and shall open the hydrant valve.

40. MUDJACK REPAIR OF EXISTING APPROACH

Mudjacking is intended to raise, level, or bring to grade selected sidewalk and pavement slabs. Mudjacking shall include mudhole drilling, joint sawing when required, jacking, mudhole plugging, restoration and cleanup.

41. COLORS, TEXTURES, PATTERNS

Pavements constructed with non-standard colors, textures or patterns that are subject to removal/replacement due to a City project will be reconstructed only to standard concrete or asphalt.

DEFINITION OF TERMS

Barrier Curb	Curb with a vertical face height of 6" or more.
Base Course	The layer of compacted crushed stone material upon which the asphalt or concrete is constructed.
City Engineer	The City Engineer or his designated representative.
Depressed Curb	A curb section whose curb line is 1" above the gutter line (See Detail RO-7).
Driveway Approach.....	That portion of a private driveway that is located within the public right-of-way. Its sole intended purpose is to provide ingress and egress for vehicles to private property.
Flare.....	The tapered section of a driveway extending from the curb to the edge of the driveway.
Interim Street Section	A public street in which the ultimate design improvements have not yet been installed.
Line and Grade	The horizontal line or dimensions of the work as specified and approved. The grade is the elevation of the work as specified and approved.
Neat Cement.....	The raw, powdered Portland Cement as taken directly from the bag.
Residential Driveway	A pavement providing vehicle access to a private residence.
Right-of-Way	Publicly-owned land for the purpose of vehicular, pedestrian, or utility use.
Rural-A Roadway	A public street designed with gravel shoulder and roadside ditches.
Rural-B Roadway	A public street designed with curb & gutter, storm sewer and street lighting.
Side Yard Setback	The driveway will be located a minimum of 5' from a side property line.
Subgrade	The original ground material as prepared to accept the placement of the base course.
Terrace Area	The grassed area between the back of the curb and the sidewalk (or property line if there is no sidewalk installed).
Tooled Joint	A contraction joint that is worked into concrete by use of a jointing tool before the concrete has set up. This joint is created during of the concrete finishing process.
Traffic-Bond Material.....	A crushed stone material containing a significant percentage of fines.
Urban Roadway	A public street designed with curb & gutter, storm sewer, sidewalks, street lighting, and street trees.

