



TOWN OF WINDSOR EARTHWORK CONSTRUCTION STANDARDS

These Earthwork Construction Standards are incorporated into the Town of Windsor Design and Construction Standards, supplanting Part II Series 300-2 Grading Standards.

Any variation(s) from these standards must be approved by the Town Engineer. All standards are to be considered minimums and may be augmented by the Town Engineer.

Earthwork Construction includes:

Earthwork preparation and construction of roadway, sidewalk, utility foundation and trenches, structural (such as footings, slab, deep and shallow foundations), park area facilities and pathways, drainage and all stormwater related features.

Plans and Permit

Prior to performing Grading or Earthwork Construction in the Town of Windsor, a Building Permit and/or an Encroachment Permit must be obtained. The Developer, Agency, Contractor, or Homeowner (applicant) shall contact the Town Public Works Department and/or the Building Department for permit application, procedure, and plan review.

All Permits and Plans must be reviewed, signed, and approved by the Town Engineer, Building Official, or their representative prior to commencing any construction activities.

Earthwork Construction shall be placed and tested in accordance with this section, unless otherwise stated by the Town Engineer, or her/his representative. These standards are to be considered the minimums and may be augmented by the Town Engineer, as necessary.

Fill (definition for these standards)

Any soil, rock, or other grading and trench material placed, or previously moved by human forces shall be defined as *fill*.

Clearing and Grubbing

Protected trees or plants, archeological areas, wetland zones, water drainages, endangered species, and any other 'areas of concern' must be properly addressed prior to commencing clearing or site work. All differing conditions or findings observed during the clearing and construction phases must be brought to the attention of the Town Engineer.

Prior to fill placement, all surface vegetation, boulders, and unacceptable buried debris (structures, tanks, etc.) shall be cleared and removed to a minimum of 5' (feet) outside of proposed fill or site improvement areas, unless otherwise noted on plans. All vegetation, and any other debris removed from within the cleared area shall be hauled off of the site, unless otherwise approved by the Town Engineer. The exposed surface shall then be prepared as described under "General Fill Placement".

Fill Density Testing

The Modified Proctor (ASTM D 1557) shall be used as the laboratory compaction reference, with the nuclear gauge (ASTM D 6938) used for field density determination (percent compaction), unless approved or otherwise stated by the Town Engineer.

Fill Placement

The applicant/contractor is responsible to construct the roadway section, pad fill, sidewalk grade, trench bottom, and all other fill areas to meet material, compaction, and other specifications.

Prior to placing fill (except for trench bottoms: refer to 'Trench Fill') the existing surface shall be prepared by scarifying to a minimum depth of 6" (inches), concurrently removing greater than 3" size material, organics, and other debris. The scarified zone shall then be moisture conditioned to between -1% and +2% of optimum moisture, and then compacted to a minimum density of 90% (per ASTM D 1557).

Native or Imported Fill shall contain no material with dimensions greater than 3" size, unless specifically approved. *Fill that contains more than 30% of the material larger than ¾" size cannot be tested using the Modified Proctor and Nuclear Gauge methods (per ASTM D 1557) and shall be placed under Full-Time Observation (refer to the 'Rock Fill' section).*

Imported soil must meet the same criteria as on-site material, unless otherwise approved by the Town Engineer.

Plastic Soil, defined herein as material having a Plasticity Index ≥ 15 (or an Expansion Index ≥ 50) shall not be placed within 12" of footing or pad foundations. Roots, wood and other debris shall be removed from fill soil. Fill shall contain **no more than 2% organic material**.

All fill shall be placed in horizontal lifts. Loose lift thickness shall be limited to 8" maximum, unless the type of compaction equipment being utilized is proven capable of compacting thicker lifts. Use of thicker fill lifts may only be approved by the Town Engineer. In all cases, the full thickness (depth) of fill must meet compaction specifications, as confirmed by density tests.

Compaction shall be achieved by using proper compaction equipment for the structure type, the soil/material type being placed, and site conditions. Should the Town Engineer have concerns regarding the compaction process, the work shall be stopped.

A small vibra-plate ***shall not*** be used to compact loose fill lift thickness more than 3".

Unstable fill bottoms must be stabilized prior to placing fill

One method to stabilize soft or overly wet material is to Over-Excavate (OX) overly wet/unstable soils; spread, mix, and dry them back—and then re-compact the material between -1% and +2% of optimum moisture to the required density.

Another option is to OX the subgrade 18" below the bottom of the unstable zone, place *woven geotechnical fabric* for stabilization (Mirafi 600X or equivalent) with a minimum of 18" overlap at fabric edges. Then compact back 18" of Aggregate Base (AB) in approximate 3 lifts, with the density increasing by the 2nd or 3rd lift to the planned degree of compaction.

Other stabilization options may be considered for approval by the Town Engineer.

General Fill (90%)

All non-structural fill placed is considered ***General fill*** (unless otherwise stated in these standards) and ***shall be compacted to a minimum 90% at -1% and +2% of optimum moisture.***

Structural Fill (95%)

All structural fill shall be compacted to a minimum of 95% at -1% and +2% of optimum moisture. Material placed within 6" beneath concrete sidewalk, curb and gutter, paved pathway, foundation bottom, or any material determined necessary for structural support shall be considered structural fill, and shall consist of approved aggregate base (or other material as specified).

Prior to placing Aggregate Base, the existing Subgrade shall be scarified 6", moisture conditioned to between -1% and +2% of optimum moisture and compacted to 95% of the maximum density, unless otherwise approved by the Town Engineer.

Controlled Low Strength Material (2 sack cement-sand slurry) may be approved to be used as structural support or trench backfill.

Roadway Fill (95%)

The upper 6" of material immediately beneath the aggregate base section shall be defined as the "Subgrade" (SG) section. The surface of the subgrade after passing String Lining/GPS Surveying ($\pm 1/2"$) shall be considered the *finished subgrade (FSG)*. **Each the 6" SG and the full AB sections** shall be moisture conditioned to -1% and +2% of optimum moisture and compacted to a minimum of **95%**. Preparation and compaction shall be performed as described under *General Fill Placement*. Aggregate Base (AB) shall conform to Caltrans Class 2, 3/4" AB specifications, with gradation, R-Value, and SE as shown below.

Class 2 Aggregate Gradation

Sieve size	Percentage passing
1"	100
3/4"	90 - 100
No. 4	35 - 60
No. 30	10 - 30
No. 200 (fines)	2 - 9
R-Value = Minimum 78	
Sand Equivalent = Minimum 25	

(Recycled AB is acceptable, if specifically approved by the Town Engineer.)

Roadway Stability

All Roadway SG and AB must be stable; free of soft, segregated, nesting, or pumping areas. Stability of the subgrade and aggregate base sections shall be confirmed visually by Town Public Works Inspector, (or QA/QC) and by "proof rolling". **Proof rolling shall be performed with a fully loaded water truck.**

Should a roadway section continue to be unstable; OX of the soft/wet/unstable subgrade and/or native soils shall be performed as described herein, unless other method(s) are approved by the Town Engineer.

One method to stabilize soft or overly wet material is to Over-Excavate (OX) the overly wet/unstable soils; spread, mix, and dry them back, and then re-compact the material at -1% and +2% of optimum moisture to the required density.

Another is to OX the subgrade 18" below the bottom of the unstable zone, place *woven geotechnical fabric* for stabilization (Mirafi 600X or equivalent) with a minimum of 18" overlap at fabric edges. Then compact back 18" of Aggregate Base (AB) in approximate 3 lifts, with the density increasing by the 2nd or 3rd lift to the planned degree of compaction.

The contractor is responsible to construct the roadway section (and underlying material) to form a stable surface, meeting compaction specifications.

Asphalt Paving

No Hot Mix Asphalt (HMA) shall be placed until the surface to receive the HMA has been approved by the Town Public Works Inspector. **Contractor QC** sampling and testing of the HMA during placement shall be performed per Town of Windsor "Asphalt Placement Standards", or as determined by the Town Engineer.

Roadway Cut

All cut portions of roadway shall be scarified to a minimum of 6", with all material larger than 3" size removed. This scarified zone shall than be moisture conditioned to -1% and +2% of optimum moisture and compacted to a minimum of **95%**. The SG shall be stable—free of soft, segregated, nesting, or pumping areas.

Trench Fill

Outside of paved or concrete areas: The bottom of all trenches shall be compacted to 90% unless otherwise approved by the Town Engineer. Utility trenches shall be “bedded” below the pipe(s) with a minimum 3” layer of sand, and then compacted to a minimum of 90%. Bedding shall be placed around pipes and conduits (haunches), then filled to a minimum of 6” over the top, and compacted to a minimum of 90%. The jetting of sand will not be allowed unless the Town Engineer specifically approves it. **Bedding sand shall be non-plastic** with no more than 12% fines and be well graded (per ASTM D 2487). *Small vibra-plates will only be accepted for compacting sand, soil, or aggregate thicknesses 3” or less.*

Trench areas shall be backfilled and compacted to a minimum of 90% with native or approved material. Trenches *may be backfilled with 2 sack cement-sand slurry if prior approval is given by the Public Works Inspector.*

Inside of paved or concrete areas:

The bottom of all trenches shall be compacted to 90% unless otherwise approved by the Town Engineer. Bedding shall be placed around pipes and conduits (haunches), minimum 3” below, then filled to a minimum of 6” over the top, and compacted to a minimum of 90%. Trenches beneath structural areas (such as paved roadways, building pads, passing under walls, etc.) shall be compacted to a minimum of 90% to within 6” of the top of the subgrade soil. The upper 6” subgrade zone, and the overlying A.B. layer (if necessary) shall be placed between -1% and +2% of optimum and compacted to a minimum of 95% density.

Unstable and/or saturated trenches shall be enveloped or underlain with either Mirafi 140N (or *non-woven filter fabric* equivalent) or Mirafi HP270 (or *woven geotextile fabric* equivalent), respectively. The non-woven fabric is typically used in potentially saturated trenches to limit fines from migrating. The woven fabric may be used for prevention of saturated fines migration and/or stabilization.

Trenches may be backfilled with 2 sack cement-sand slurry if prior approval is given by the Town Engineer.

All High Voltage Electrical Trenches shall have conduit encased a minimum of 6” beneath and horizontally, and covered over the top 18” with red colored 2 sack cement-sand slurry or concrete. The red dye shall be added during the batch mixing, not painted on or mixed in the trench.

Open Trenches and Excavations

Open or unfinished trenches (or other excavations) **shall be securely covered** when no workers are present and **enclosed by orange safety fence, or heavier secure fencing as required.**

Temporary covering for trenches in roadways shall be “non-skid” steel plate, pinned with steel stakes on all sides, and finished with compacted cut-back (cold patch) around the edges for smooth vehicle passage. It is the contractor’s responsibility to have the aforementioned trench plates in position prior to the end of each work day.

Within 10 working days of the completion of a project, trenches (bell holes, or other excavations) shall be fully restored with asphalt (HMA).

Trenches completed in paved areas shall be "T" cut 12" each side with clean saw cut. If the trench has been backfilled with 2 sack cement-sand slurry, the "T" cut may be waived. Existing AB, AC, and/or concrete sections shall be matched for thickness and material type, unless otherwise specified. SS-1 (or approved equivalent) shall be brushed or sprayed to cover all existing contact surfaces of concrete or asphalt prior to placing HMA.

Trench Safety

Excavations must comply with OSHA 29 CFR Part 1926, Subpart P

Trench inspections of excavations (per Cal/OSHA, Article 6. Excavations,3.1), including trench walls, the adjacent areas, and protective systems shall be made daily (or more often as necessary) by a **competent person**. The competent person shall inspect for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other dangerous conditions. An inspection shall be conducted by the competent person prior to the start of work and as needed throughout the shift. Inspections shall also be made after every rainstorm or other hazard increasing occurrence.

Competent Person Cal/OSHA (Definition): "One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them".

Concrete Structural Fill

A minimum **6" layer of Aggregate Base** shall be compacted to a 95% or greater immediately beneath **all** concrete structures, including; Driveways, sidewalks, curb and gutter, catch basins, and other drainage structures, unless otherwise stated in the project plans, specifications, or geotechnical report. AB shall conform to Class 2 AB as listed under 'Roadway Fill' of this Earthwork Standard. Prior to placing the AB the upper 6" of the subgrade shall be compacted to 95%.

Concrete Spec's and Testing

"Standard" concrete (sidewalk, curb & Gutter, and other non-structural supporting) shall be **3,000 psi, ¾"**, Type II/V. **"Structural"** load bearing concrete (including footings, piers, and other steel re-enforced concrete) shall meet a minimum compression strength of **4,000 psi (¾" or 1" maximum as job specified)**, Type II/V.

All concrete formed with steel must have a minimum of 2" separation from all concrete finish (including footing bottoms and side walls). Steel placement shall be inspected and approved by TOW Inspector (or approved special inspector) prior to scheduling/pouring concrete. All concrete with steel shall be vibrated during pour.

All field concrete testing shall be performed by an ACI Certified Grade 1 Technician. Should the material delivered or being placed not meet the project and these standards, the QC, QA, or Town Inspector may reject the material. The material may

not be placed (and not re-routed back to the project), or shall be fully removed; as determined by the Town Engineer.

All concrete shall be tested per ASTM C94, ACI 301, and ACI 318 procedures, unless otherwise directed or approved by the Town Engineer. A minimum of one set of four cylinders shall be taken per each day, or each separate area of concrete poured; and 1 set per each 50 yds³ thereafter. Four cylinders shall be made for Compression tests (breaks), and shall be made at: (1) 7day, (2) 28 day, and (1) 'hold' (to be used if necessary, at a later specified time). The 28-day compression average must meet or exceed the submitted mix design. Unacceptable material shall be removed.

All concrete mix designs must be submitted to TOW Public Works per "Materials and Submittals" as described in these Earthwork Construction Standards.

Foundation Excavations

Prior to placement of steel or concrete into foundation bottoms, the foundation excavation must be observed and approved by the Town Public Works Inspector or approved Special Inspector. The foundation must be firm, free of loose material, water, debris, or any other unacceptable material.

Foundations must be excavated to the width and depth per plan or project recommendations, and must be founded into dense native soil, or compacted fill. **Foundations shall not be founded in plastic soil** (P.I. 15 or greater per ASTM D 4813), unless otherwise recommended and designed by a geotechnical engineer. Expansion Index Test(s) may be required to confirm whether the soil has expansive potential, which should then be addressed by the Town or geotechnical engineer.

Footings, slabs on grade or other foundations shall not be poured/placed on dried, cracking and/or desiccated soil. Differential support conditions are a concern where foundations span cut and fill soils, or foundations cross native rock and engineered fill. A geotechnical engineer shall be consulted to determine if overexcavation or other methods are necessary to help mitigate differential settlement.

Slope Fill and Construction

Fill constructed against existing slopes steeper than 5:1 shall have a keyway constructed at the slope toe. The keyway width shall be ½ the slope height, or a minimum of 1½ the width of the compaction equipment used. The key bottom shall be excavated sloped into the slope at a minimum of 2%. The toe of the key shall be excavated into dense soil or bedrock formation to a minimum depth of 18", or as approved by the Town Engineer or the project Geotechnical Engineer. The Key bottom shall be inspected by the Town Inspector or the Project Geotechnical Engineer prior to placing fill.

As slope fill is placed, *horizontal* Benches shall be cut into acceptable dense native soil or compacted fill. Compaction and placement shall be as described under "*Fill Placement*". No material with dimensions greater than 3" shall be placed within 1 foot of the slope face.

Oversize Material Placement

“Oversize Material Placement” shall apply when more than 30% of the material is greater than ¾” size, and therefore cannot be tested per ASTM D 1557. Rocks with diameters of 3” or more may be placed in deeper fill areas, as approved by the Town Engineer. The rock fill lift thickness will be governed by the largest acceptable size material within the fill. Due to the generally untestable nature of the rock fill material, no density testing shall be performed. However, during the placement and compaction of the rock fill, full-time observation is required.

Predominantly granular material shall be used as matrix soil in rock fills (the matrix soil shall be defined as the material finer than ¾” size). The matrix soil shall have an SE of >32 (Sand Equivalency per ASTM D2419). The rock fill shall be placed so no voids are visible between the irreducible material, and no nesting is apparent. The matrix soil within the rock fill shall be compacted at 2% to 8% above optimum moisture.

Observation trenches shall be excavated as necessary (no less than one per every other lift) to visually confirm adequate densification, and to help confirm that the rock fill is free of nested material and/or voids. Should voids, nesting, loose material, or improper moisture content be observed, the unacceptable portion of rock fill shall be remixed and recompacted.

Density Testing Frequency

Trench

Field density tests in fill shall be taken at intervals no less than every 2 vertical feet or 100 lineal feet of fill placed; for trenches shorter in length than 100’, a minimum of two density tests will be necessary. All test locations shall be chosen by the testing agency or the TOW Public Works Inspector, not by the contractor.

General Fill

Field density tests in fill shall be taken at intervals no less than every 2 vertical feet, or 100 yds³, whichever amount is placed first. No less than two density tests shall be taken on any fill area. All test locations shall be chosen by the testing agency or the TOW Public Works Inspector, not by the contractor.

Fill shall not be compacted over unacceptable fill, or unprepared native soil.

Materials and Submittals

All materials to be used on construction projects must be submitted for review and approval to TOW Public Works or Building Departments—prior to use. Submittals must include information on the material description, the manufacturer, product specifications, quantity, and any other product information required by the Town Engineer or Building Official.

Aggregates, geotechnical fabrics, pipes, concrete, asphalt, steel and all other project specific materials (that are not specified in this Earthwork Construction Standard) shall meet the requirements specified in the project geotechnical report, project plans, or project special provisions.

Sampling and Testing of Soil and Aggregate

All sampling procedures for soil and aggregates shall be performed in accordance with current ASTM standard test methods, unless otherwise approved by the Town Engineer. **Laboratory and field sampling, testing, inspection or observations, shall be performed by experienced technicians, or other qualified personnel, as approved by the Town Engineer.**

Quality Control (QC) and Quality Assurance (QA)

Quality Control (QC) refers to the qualified engineering field and lab personnel performing testing and inspection for the general **contractor** or their sub-contractors. **Quality Assurance (QA)** refers to the **Town of Windsor's selected engineering (or other professional) firm** that performs QC review; including sampling, material testing, inspection, and construction procedure documentation and review for the Town of Windsor Public Works and Building Departments.

The contractor shall hire an engineering laboratory to sample, test, and document earthworks operations (including backfill, grading, and all other materials inspections) required by TOW Standards and/or the project specifications. The engineering laboratory shall perform as contractor Quality Control (QC).

It is the Contractor and QC engineering firm's responsibility to understand current Town of Windsor Public Works Standards and communicate test results to the TOW Public Works in a timely manner. Stoppage of work due to delayed QC test data are the contractor's responsibility.

The contractor shall stop placing, and/or remove any unacceptable material upon notification by the QC engineering lab that the material is out of specifications. Placement shall not resume until the material is confirmed to the TOW Public Works to be back within project specs.

Any fill areas with a density test failure, or fill placed in a manner deemed unacceptable by the TOW Public Works Department, their representative, or the QC engineering firm, shall be reworked to meet these standards. **Fill shall not be placed over unacceptable fill, or unprepared native soil.**

The engineering lab (QC) shall submit all testing, sampling, and field observation documentation to the TOW Public Works Engineering Department, as specified in the subheading of this section titled "*reports*".

The TOW Public Works reserves the right to hire an engineering laboratory of their choice to perform (QA) testing and review. *The QA shall have the final determination regarding acceptability of Materials and Procedures.* TOW Public Works Department and their QA representative shall be allowed access to all work areas. The QC shall share all project test data, and related project material information with TOW Public Works or their QA. The contractor, or QC shall contact TOW Public Works or their QA to allow for concurrent testing and/or equal splitting of samples, as necessary.

Procedures not conforming to project requirements, or materials not meeting project specifications will be considered rejected and shall be corrected and/or removed immediately; unless otherwise approved by the Town Engineer.

Daily Reports

Communication of daily field or lab test data shall be communicated verbally or electronically to the PW Inspector. Depending on the project scope and size, adjustments to the daily/weekly reporting procedures may be adjusted by TOW Public Works Department.

At the request of the TOW Public Works Department, QC daily field reports, QC lab reports, or other QC inspection/testing/observation information, shall be submitted for Town Public Works Department review during the construction of a project. *Should QC information not be submitted as requested by the Town Engineer or is deemed incomplete or inaccurate; the project may be stopped by the Town Engineer until the required information is submitted.*

Final Reports

Within 30 days of completion of an earthwork project, the permittee (or their representative) must submit a PDF *report* to the TOW Public Works Department. The report shall include daily reports, lab and field data related to the project. Lesser sized reports and or test result data may be accepted dependent on project size; however, any changes to the requirements in this section must be prior approved by Town Engineer.

The final laboratory/field report shall be signed by a registered civil or geotechnical engineer, or a NICET Level IV Technician (Materials or Geotechnical), unless otherwise approved by the Town Engineer.

Final reports shall include a statement that ***“All earthwork and materials placed were completed in general accordance with Town of Windsor “Earthwork Construction Standards”.*** Any exceptions or non-compliances shall be stated in the report. **All reports shall be submitted to the TOW Public Works Department within 30 days after the completion of construction.**

ADA Ramps and Crossings, and other Details

The most current Cal Trans Details (including A88A) shall be implemented during all construction, unless otherwise approved by the Town Engineer.

Entrance/Exit Cobble

(Refer to TC-1 in the CASQA Stormwater BMP Handbook)

3" to 6" size angular cobble stone shall be placed over a woven geotechnical fabric (Mirafi 600X or equivalent). Prior to the placement of the woven fabric, the area of placement shall be excavated to allow for a minimum of 12" thick section of cobble to be placed. This area of cobble entry shall be a minimum of 12' wide by 50' in length. *The cobble entry shall be maintained* by the contractor to remove mud/dust or other material buildup from within the 6" section.

Storm Water and Pollution Control

(Refer to current EPA and CASQA Stormwater Standards and BMP's)

Construction work within the Town of Windsor shall fully comply with all current EPA Storm Water Pollution Prevention Plan (SWPPP), the California Department of Transportation Storm Water Management Plan, The California Regional Water Quality Control Board, National Pollutant Discharge Elimination System (NPDES), and current CASQA Best Management Practices (BMP), along with all other environmental quality and monitoring necessary. This includes all LID Structures.

Health and Safety

(Refer to Federal OSHA and Cal OSHA current Standards)

At any time that the Public Works Inspector or the Town Engineer's representative deem that the materials, workmanship, are a safety concern, the job may be stopped immediately.

*During the construction process, all applicable "OSHA Standards for the Construction Industry" shall be followed, including (but not limited to) **29 CFR Part 1926, Subpart P - Excavations**. The Contractor performing the work shall supply a "**Competent Person**" per all CAL/OSHA Safety Requirements, not limited to, but including excavations.*

*All construction equipment and materials shall be safely fenced off from public access during the entirety of the project. **Knowing and following Cal OSHA Safety Standards is the contractor's responsibility.** TOW Public Works may stop construction on a project at any time until safety concerns have been corrected.*

During construction the contractor shall supply the work area (job site) with a minimum of one **porta-toilet**, and more as necessary or directed by the TOW Public Works Inspector for larger projects.

Dust Control

(Refer to: Northern Sonoma County Air Pollution Control District, "Rule 430")

Fugitive Dust and airborne particulate must be limited in all areas that a contractor is performing construction, or where equipment is driven to access the work area.

A) "The handling, transporting, or open materials in such a manner which allows or may allow unnecessary amounts of particulate matter to become airborne, shall not be permitted"

B) "Reasonable Precautions must be taken to prevent particulate matter from becoming airborne", including, but not limited to:

** 'Covering open bodied trucks...'*

** "The prompt removal of earth or other material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water, or by other means."*

The Town of Windsor Public Works may stop a project until dust and debris have been properly controlled, and an acceptable method of dust control has been established.

Traffic Control

(Reference the current CA MUTCD)

Traffic Control Plans (TCP's) must be submitted to Town of Windsor Public Works Department for review prior to beginning any work that may in anyway affect the flow or safety of either pedestrian, vehicular, or bicycle traffic. All TCP's must be specific to the location of the construction site. All TCP's must be reviewed and approved by the Town Engineer or their representative prior to receiving any related Encroachment, Building, or other affected Town permit.

To ensure that the traffic control device practitioner is designing TCP's and performing 'Work Zone Traffic Control' safely, the most current California Manual on Uniform Traffic Control Devices (CA MUTCD) shall be referenced. The most current edition of the Work Area Control Handbook (WATCH) is a good reference.

CA MUTCD, and other related information is available on the Internet at the following web link: <http://www.dot.ca.gov/camutcd>

Prior to a Contractor being approved to perform Work Zone Traffic Control, the Town Engineer may require documentation to help confirm the qualification, experience, flagger certification, and training necessary to perform the planned project. Any traffic control contractor that does not follow the approved TCP, or puts the public in danger in any way, can be removed from a project by the Town Inspector or Engineer at any time. The job will be stopped until the necessary TCP procedures and a qualified contractor is approved.

Should the Town Engineer become concerned about a change in traffic, pedestrian, weather, lighting, or any other condition that may adversely affect safety; the work may be stopped immediately. The Traffic Management Contractor shall make all corrections required by the Town Engineer, prior to re-commencing work.

TOWN OF WINDSOR **EARTHWORK CONSTRUCTION STANDARDS**



Town of Windsor, California
Public Works, Engineering Department
Phone (707) 838-5340