SPECIAL CONDITIONS FOR TRMAC PAVING

1. TESTING AND SURVEYING

The Contractor shall pay for all tests required for the placement of the asphalt, per the Standard Specifications (2012 Greenbook).

All surveying required to lay out the work and set construction stakes will be the responsibility of the Contractor.

2. UTILITIES

Any modifications, construction, or installation affecting service or supply controlled by a utility owner must be made pursuant to the direction and under the control of the affected utility owner. The Contractor shall contact the respective utility owners for additional information concerning this matter.

Underground utilities may not be shown on the plans in their entirety. The Contractor shall be responsible for exposing, verifying locations both horizontal and vertical, and maintaining all existing underground utilities, shown or not shown on the plans, marked or not marked in the field, during construction. The Contractor shall make the necessary arrangements for their removal or relocation with the respective utility owners as may be required, sufficiently in advance to prevent a delay in the Contractor's operations.

The City may grant a time extension for utility delays when, in the sole opinion of the City Engineer, the Contractor could not have avoided the delay by judicious handling of forces.

The City cannot determine the actual length of time it will take the various utility owners to remove or relocate their facilities. Therefore, the Contractor shall be totally responsible for coordinating and scheduling required utility work on the project, shall assume the risk for any and all potential utility delays, and will not be entitled to damages or additional compensation due to such delays.

3A. LAWS TO BE OBSERVED

Contractor shall comply with Chapter 9.72, "Littering Ordinance", and Chapter 13.10, "Stormwater Management and Discharge Control", of the Municipal Code of the City of El Cajon, including Chapter 13.10.030, as amended.

3B. STORMWATER MANAGEMENT AND DISCHARGE CONTROL

Chapter 13.10 (Stormwater Management and Discharge Control) of the Municipal Code requires the control of non-stormwater discharge and reduction of pollutant discharge to the maximum extent practicable. Pollutant is defined as solid waste, sewage, garbage, medical waste, wrecked or discarded equipment, radioactive materials, dredged spoil, rock, sand, sediment, industrial waste and any organic or inorganic contaminant whose presence degrades the quality of the receiving waters.

To be in compliance, all pollutants, including sand and sediment must be controlled. When any construction activity is taking place and there is any disturbance of the soil or site excavation, a Best Management Practices Plan (BMP Plan) is required to reduce the discharge of pollutants to the maximum extent practicable.

The Contractor shall be responsible to implement the BMP Plan to eliminate pollutant discharge to the public storm drain system prior to any construction activity, soil disturbance, grading, clearing of vegetative matter and/or construction on the site.

The Plan shall provide that no sand, silt, or debris shall be allowed to enter the storm drain system including public streets.

The Contractor shall implement the plan and take remedial and preventive action immediately when pollutant discharge occurs and/or the City Engineer directs.

4. CONSTRUCTION DETAILS

4-1 TRAFFIC CONTROL AND PUBLIC CONVENIENCE

Traffic control and accident prevention measures shall conform to Section 7-10, "Public Convenience and Safety" of the Standard Specifications, the California Manual on Uniform Traffic Control Devices (MUTCD) and these Special Provisions.

The Contractor shall take all necessary measures to maintain traffic and avoid excessive dust or any unnecessary inconvenience to the public.

Seventy-two (72) hours prior to the start of any construction in the public right-of-way that affects vehicular traffic and/or parking or pedestrian routes, the Contractor shall give written notification of the impending disruption to nearby homeowners and businesses.

The notification shall be hand delivered and shall state the date and time the work will begin and its anticipated duration. The notification shall list two telephone numbers that may be called to obtain additional information. One number shall be the Contractor's permanent office or field office and the other number shall be a 24-hour number answered by someone who is knowledgeable about the project. An answering machine shall not be connected to either number. The notification shall also give a brief description of the work and simple instructions to the home or business owner on what they need to do to facilitate the construction. The Contractor shall submit the contents of the notification to the City Engineer for approval. Notices shall not be distributed until approved by the City Engineer.

The notification shall be pre-cut in a manner that enables it to be affixed to a doorknob without adhesives. It shall be a minimum size of 3-1/2 inches by 8-1/2 inches and shall be brightly colored with contrasting printing. The material shall be equivalent in strength and durability to 65 lb. card stock. The printing on the notice shall be no smaller than 12 point. An example of such notice is provided in Appendix "A".

Work on all streets shall be performed between the hours of 7:00 a.m. and 4:00 p.m. Night work may be required when work affects traffic in Caltrans' right-of-way and a Caltrans permit may be required.

Access shall be provided at all times for residents and businesses in the affected areas. The Contractor shall be responsible for the maintenance of necessary barricades, signs, etc. at all times, including Saturdays, Sundays, holidays and other normal non-working hours.

A minimum of one (1) twelve-foot (12') traffic lane shall be kept open for traffic in each direction, at all times. All traffic lane(s) shall be kept open for traffic in each direction at the end of each working day.

Posting No Parking - Where a parking prohibition is required to complete the work, the Contractor shall post signs forty-eight (48) hours in advance of scheduled construction. The signs shall indicate the days (Mon., Tues., Wed., etc.) when work will be underway and enforcement will be requested. The signs must indicate the time when parking will be prohibited, (e.g. 8:30 a.m. to 3:30 p.m.). Time shall not be during hours when work is prohibited by other provisions of these Specifications. The signs shall further indicate that enforcement may result in

towing. The signs shall be posted at intervals along the street of not more than fifty (50) feet, and at a position at the edge of pavement or immediately behind the curb. Additional signs shall be installed when required by the City Engineer to assure adequacy of the notice.

Upon posting no parking, the Contractor shall advise the City Engineer who must inspect and certify that posting was completed in accordance with these specifications. Said certification must be at least forty-eight (48) hours prior to required enforcement.

To request towing, the Contractor may contact the Police Department, Traffic Division, (phone 579-3356). Towing will not normally be performed before 7:00 a.m. or after 4:00 p.m. If towing outside these hours is required, it shall be by prior arrangement with the Police Department Traffic Division Commander, and subject to availability of officers.

Following posting no parking, the Contractor shall maintain the signs no less than twice per day and additionally, as directed by the City Engineer, to assure maintenance of the notice.

The Contractor shall make every effort to schedule work so that any posted "No Parking" zone will be used on the days posted. In the event the Contractor is unable to maintain the planned schedule, the days posted (Mon., Tues., etc.) shall be revised in advance to reduce the impact of the parking restrictions for days when no work will be done. If additional days are added, the Contractor shall again notify the City Engineer who will recertify the posting.

The Contractor shall submit a Traffic Control Plan at least five working days prior to the start of construction. This Plan shall incorporate requirements of adjacent public agencies affected by the work and shall include all necessary traffic control devices and shall be approved in writing by the City Engineer prior to commencing work. The Contractor is required to contact the adjacent public agencies affected to confirm requirements prior to submittal of the bid.

The Contractor is responsible for providing and maintaining proper traffic delineation during the life of the contract.

Sequential Arrow Boards may be required.

Personal vehicles of the Contractor's employees shall not be parked on the traveled way at any time, including any section closed to public traffic.

When entering or leaving roadways carrying public traffic, the Contractor's equipment, whether empty or loaded, shall in all cases yield to public traffic.

The provisions in this section may be modified or altered by the City Engineer if, in his opinion, public traffic will be better served and work expedited. Any proposed modifications shall be approved in writing by the City Engineer.

No surplus or other material shall be placed on private property unless prior written permission, signed by the property owner, is furnished to the City Engineer.

4-2 PAVEMENT PREPARATION

The areas to receive full-width grinding or mill and pave (or) digout do not require pavement preparation. All other areas to receive Tire Rubber Modified Asphalt Concrete (TRMAC) overlay require pavement preparation.

Pavement preparation prior to placement of TRMAC overlay shall include planing of bumps and ridges at cracks, smooth and flush with the adjacent pavement, cleaning roadway, eradicating vegetation growing in cracks in the pavement and between AC and PCC joints, cleaning

(airblow) and filling cracks, and removing existing raised pavement markers, painted striping, legends and markings and AC and chip seal built up on existing PCC gutters. Any existing crack sealant that protrudes above the surrounding pavement must be made smooth and flush with adjacent pavement.

(a) All cracks in existing pavement 1/4 inch wide or over shall be filled after the grinding operations and the pavement replacement, mill and pave (or) digout operations have been completed as follows:

With a modified asphalt crack sealant consisting of a mixture of paving asphalt and ground rubber or ground rubber and polymer conforming to the following:

The gradation of the ground rubber shall be such that 100 percent will pass a 2.36-mm sieve.

Modified asphalt crack sealant shall conform to the following requirements:

Test	ASTM Designation	Requirements
Softening Point	D 36	82°C min.
Cone Penetration @ 25°C	D 5329	30dmm, min.
Resilience @ 25°C	D 3407	40 percent min.
Flow	D 3407	3 mm max.

Modified asphalt crack sealant material shall be furnished premixed in containers with an inside liner of polyethylene. Packaged material shall not exceed 30 kg in mass.

Modified asphalt crack sealant material shall be capable of being melted and applied to cracks at temperatures below 204°C. When heated, it shall readily penetrate cracks 6 mm wide or wider.

The finished crack sealant shall be bonded to the faces of the crack. There shall be no separation or opening between the sealant and the faces, and there shall be no crack, separation, or other opening in the sealant.

No sand covering over the filled cracks is required.

Cleaning of cracks shall provide a crack depth of at least twice its width. All cracks greater than 3/4-inch wide shall be filled with 3/8-inch Fine Type III-F-PG-10 asphalt concrete.

(b) The Contractor shall neatly and thoroughly remove all painted striping, pavement markers and markings from pavement surfaces by any means, which will expose the underlying pavement surface, including grinding, airblast, water blast or methods in areas to be overlaid with TRMAC pavement.

The Contractor shall take precautions, as necessary, and provide suitable devices and take appropriate actions to prevent dust, damage or injury to traffic, people, improvements or property in the course of striping removal.

The Contractor will remove all residue resulting from the striping removal operation within 24 hours immediately following the removal.

4-3 GRINDING ASPHALT CONCRETE 6' WIDE, FULL WIDTH AND DIGOUT

Grinding operations shall consist of full-width grind of 0.15'.

Asphalt concrete pavement in the outer six (6)-feet of the roadway adjacent to existing PCC gutters shall be ground to a depth of 0.13' minimum below the existing gutter lip by cold planing or other approved method. The cold planer shall traverse the entire length where PCC gutters are existing. At side street intersections where there are no PCC cross gutters and along other joint lines with existing asphalt pavement not being overlaid, six (6)-foot wide grinding shall be to at least 0.15' deep at the joints with existing pavement.

When milling areas are away from the gutter or when the "ground" area will be left unpaved over 24 hours, the Contractor shall place temporary pavement ramps at a maximum 12:1 slope along the edges of the areas to provide a safe and smooth ride for vehicles. The Contractor shall install speed reduction signs warning motorists of the "dip" and "rough pavement" ahead. All ground areas adjacent to pedestrian ramps shall be ramped at a maximum of 12:1 slope immediately after grinding. Transition ramps must be removed completely prior to paving.

Areas milled shall be resurfaced with permanent pavement within two (2) working days. In the events that there are storm drain clean-outs, manholes, and valves in those areas, the Contractor shall place temporary pavement around those structures immediately after milling.

The asphalt concrete grindings shall become the property of the Contractor and shall be removed and disposed of according to the provisions of Section 300-1 of the Standard Specifications. For a listing of commercial recycling services, or construction, demolition and yard waste sites, go the following County of San Diego web page and review the Guide:

http://www.sandiegocounty.gov/content/dam/sdc/dpw/SOLID_WASTE_PLANNING_and_RECYCLING/Files/Construction_Guide_SJ8_Pgs_1-27.pdf

Recycling information may also be obtained by calling the recycling hotline at 1-877-713-2784.

All asphalt residue shall be removed and the surface swept clean and free of residue immediately following the grinding of the asphalt concrete pavement.

4-5 TACK COAT

Tack coat consisting of quick setting emulsified asphalt shall conform to the requirements of Section 94 of the State of California Standard Specifications and be applied prior to the placement of AC overlay or successive layers of asphalt concrete. PG-64-10 is acceptable for tack coat.

4-6 TIRE RUBBER MODIFIED ASPHALT CONCRETE GAP GRADED (TRMAC-GG)

Tire Rubber Modified Asphalt Concrete GAP GRADED (TRMAC-GG) shall be constructed as shown on the plans in accordance with Sections 203, 302, and 400 of the Standard Specifications and these Special Provisions.

TRMAC overlay shall be in one lift with TRMAC-GG (1/2" max.) conforming to Table 203.11.3(A) Class C and Section 302.9 of the Standard Specifications.

TRMAC overlay shall be MAC-15TR and shall be in accordance with Section 203-14 of the Standard Specifications.

Recycled Asphalt Pavement (RAP) is not allowed.

At the time of delivery of the TRMAC-GG to the work site, the ambient air temperature shall be at least 55 degrees (F) and rising with no high wind, the pavement surface shall be dry and free of

dust, and the temperature of the mixture shall not be lower than 325 degrees (F) or higher than 350 degrees (F), the lower limit to be approached in warm weather and the higher in cold weather. The TRMAC-GG material must be used within 1.5 hours of mixing.

Initial rolling shall commence immediately following the placement of TRMAC-GG. Pneumatic rollers shall not be used.

Vibratory steel rollers shall be used for initial breakdown rolling. The initial breakdown rolling shall be completed before the TRMAC-GG temperature falls below 295 degrees (F) measured immediately in front of the roller. If Contractor is not rolling fast enough, the operation shall be stopped and the problem shall be corrected by having extra workers and/or breakdown rollers. Rock dust blotter in accordance with Section 302-9.6 of the Standard Specifications is required to avoid tracking.

TRMAC-GG shall be compacted to 95% relative compaction.

The Contractor shall provide a minimum of 2 (two) Breakdown rollers and 1 (one) Finish roller. Additional rollers shall be on the job site and ready to be used as necessary and as directed by the City Engineer.

4-7 TRMAC-GENERAL

Where new construction adjoins existing pavement, the surface shall be feathered out to provide a smooth transition and the cost shall be included in the contract price paid for TRMAC-GG and no additional payment will be made therefor.

Where new construction adjoins dirt, the Contractor will provide a smooth transition.

Longitudinal joints for asphalt concrete pavement shall be located in the area outside the normal vehicular wheel traffic. Deviation from these locations can only be allowed with the approval of the City Engineer.

4-8 TEMPORARY PAVEMENT DELINEATION

Temporary pavement delineation shall be furnished, placed, maintained and removed in accordance with the provisions in Section 12-3.01, “General,” of the State Specifications and these Special Provisions. Nothing in these Special Provisions shall be construed as to reduce the minimum standards specified in the Traffic Control Manual or as relieving the Contractor from his responsibility as provided in Section 7-1.09, “Public Safety,” of the State Specifications.

Whenever the work causes obliteration of pavement delineation, temporary or permanent pavement delineation shall be in place prior to opening the traveled way to public traffic. Lane lines, centerline and stop bar/limit line pavement delineation shall be provided at all times for traveled ways open to public traffic.

All work necessary to establish satisfactory lines for temporary pavement delineation shall be performed by the Contractor. Surfaces on which temporary pavement delineation is to be applied shall be cleaned of all dirt and loose material and shall be dry when the pavement delineation is applied. Temporary pavement delineation shall not be applied over existing pavement delineation or other temporary pavement delineation.

Temporary pavement delineation shall be maintained until replaced with permanent pavement delineation. Temporary pavement delineation shall be removed when, as determined by the City Engineer, the temporary pavement delineation conflicts with the permanent pavement delineation or with a new traffic pattern for the area and is no longer required for the direction of public traffic. When temporary pavement delineation is required to be removed, all lines and

marks used to establish the alignment of the temporary pavement delineation shall be removed. At any state during construction, where there are any conflicting striping or pavement markings, the conflicting portions will be removed by sandblasting.

Temporary pavement delineation shall consist of temporary reflective raised pavement markers placed on lane lines and centerlines at longitudinal intervals of not more than twenty-four (24) feet apart. Temporary reflective raised pavement markers shall be the same color as the lane line or centerline the markers replace. Temporary reflective raised pavement markers shall be, at the option of the Contractor, one of the following or equal:

Temporary Overlay Markers (Types Y and W) manufactured by Davidson Plastics Company, 18726 East Valley Highway, Kent, Washington 98032, Telephone (206) 251-8140.

Swareflex Pavement Marker (Models 3553, 3554, Cat Eyes Nos. 3002 and 3004), Manufactured by Swareco and distributed by Servtech Plastics Inc., 1711 South California Street, Monrovia, CA 91016, Telephone (818) 359-9248.

Flex-O-Lite Raised Construction Marker (RCM), manufactured by Flex-O-Lite, Lukens Company, P. O. Box 4366, St. Louis, MO 63123-0166, Telephone (800) 325-9525.

3M Scotchlite A200 Pavement Marking System (reflective raised pavement marker on reflective traffic line tape), manufactured by 3M Company, Highway Safety Products, 1010 Hurley Way, Suite 300, Sacramento, CA 95825, Telephone (916) 924-9605.

Temporary reflective raised pavement markers shall be placed in accordance with the manufacturer's instructions. Temporary reflective raised pavement markers shall be cemented to the surfacing with the adhesive recommended by the manufacturer, except epoxy adhesive shall not be used to place temporary reflective raised pavement markers in areas where removal of the markers will be required.

When the Contractor's operations are such that temporary reflective raised pavement markers will be in use on lanes opened to public traffic for longer than the fourteen (14) days, the Contractor shall provide at his or her expense, prior to the end of the fourteen (14) days, additional pavement delineation. The additional temporary pavement delineation to be provided shall be equivalent to the pattern shown for permanent pavement delineation, as determined by the City Engineer.

4-9 ADJUSTMENT OF MANHOLES AND STREET SURVEY MONUMENTS

Adjustment of existing sewer and storm drain manholes and street survey monuments shall conform to Sections 301-1.6 and 302-5.8 of the Standard Specifications. Insert Type adjustment rings shall not be used. AC and TRMAC built-up on manhole lids and street survey monument covers shall be removed.

Manholes to be adjusted and which are paved over with AC or TRMAC, shall be marked in white immediately after paving and shall be adjusted within two weeks after the completion of the paving operation.

4-10 PROTECTION AND RESTORATION OF EXISTING IMPROVEMENTS

Protection and restoration of existing improvements shall be in accordance with Section 7-9 of the Standard Specifications. Private and public facilities and structures removed in conflict with construction shall be replaced in kind.

Asphalt pavement and base removed in connection with construction shall be removed in accordance with Section 300-1.3 of the Standard Specifications and replaced in accordance with Sections 201, 203, 301, 302, 303-5 and 400 of the Standard Specifications, applicable provisions of the Regional Supplement Amendments, the Standard Drawings and as indicated on the plans.

Where asphalt concrete surfacing is repaired or replaced, the contractor will install base material to the same thickness as the existing section. Base material shall be compacted to 95% relative density.

Base replacement shall be Class 2 Aggregate Base conforming to the requirements of Section 400-2.3 of the Standard Specifications and to the grading requirements for 3/4" maximum size aggregate. Tack coat shall be quick setting (see 7-5, Tack Coat, above) emulsified asphalt applied in conformance with Section 302-5.4 of the Standard Specifications. Asphalt concrete shall be Type III-B2-PG 64-10.

4-11 TRAFFIC STRIPING, LINES, PAVEMENT MARKERS

Furnishing and installing traffic striping, reflective and non-reflective pavement markers, painted lines, and pavement markings as shown on the plans shall conform to the provisions in Section 310-5.6 “Painting Traffic Striping, Pavement Markings, and Curb Markings” of the Standard Specifications and Section 84 “Traffic Stripes and Pavement Markings”, Section 85, “Pavement Markers” and Section 56-2, “Roadside Signs” of the Caltrans State Specifications and these Special Provisions.

Layout, Alignment, and Spotting: The Contractor shall furnish the necessary control points for all required pavement striping and markings prior to “turkey-tracking”. The Contractor shall establish all traffic striping between these points by string-line or other method to provide striping that will vary less than ½ inch in 50 feet (3 inches per 100 yards) from the specified alignment. The City Engineer shall approve the “turkey-tracking” prior to the placement of “drip-lines” by the Contractor. After the installation of the “drip-lines”, the Contractor shall notify the City Engineer for approval of the “drip-lines” prior to the installation of the final striping. Allow twenty-four (24) hours for the review and approval of “turkey-tracking and an additional twenty-four (24) hours for review and approval of “drip-lines,” by the City Engineer.

Legends-Markings: All stop bars and arrow legends shall be Thermoplastic and shall be installed by the Contractor in conformance with the applicable specifications listed herein, unless otherwise shown on the plans.

Reflective Pavement Markers: Two-way blue reflective fire hydrant markers shall be placed in conformance with San Diego Regional Standard Drawing Number M-19 opposite fire hydrant locations as directed by the City Engineer.

5. MATERIALS CERTIFICATIONS

The Contractor shall submit manufacturer’s data to demonstrate that the materials used for this work meets or exceeds the specifications stated herein. The Contractor shall provide submittals pursuant to Section 2-5.3 of the Standard Specifications. Submittals are required for all materials required for the completion of this project.

6. SUBMITTALS

The following submittals are due at the required time as set forth in these Specifications. Submittals are to be submitted in triplicate to the Owner’s Representative at the required time:

1. Denotes five (5) working days prior to the issuance of the Notice to Proceed.
2. Denotes within five (5) working days of the issuance of the Notice to Proceed.

3. Denotes at least five (5) working days prior to start of construction.

Submittal Description	Specification Section	Due Date
1. Preliminary Project Schedule	Special Provisions, Section 2	1
2. Final Project Schedule	Special Provisions, Section 2	2
3. BMP Plan	Special Provisions Section 8	3
4. Traffic Control Plan	Special Provisions, Section 9.2	3
5. Materials Certifications Appendix B – Materials Certification List	Special Provisions, Section 10	1