

SECTION 011100

SUMMARY OF WORK

1.01 ORDER OF THE WORK

- A. In order to expedite the work and to avoid irreparable damage to, or deterioration of the quality of any portion of the public works improvements, it shall be the responsibility of the DEVELOPER to schedule the major items of construction in the following order:
1. Street excavation and rough grading
 2. Storm and sanitary sewers
 3. Water facilities, and their services
 4. Underground gas, electric, telephone, cable TV
 5. Curb, gutter, sidewalk, driveways, and access ramps
 6. Street sub-base (if required)
 7. Base rock
 8. Paving

1.02 NOTIFICATIONS

- A. For all developments the DEVELOPER shall notify owners of adjacent property and affected utilities when prosecution of the work may affect them. Said notification shall consist of erection of a sign at the main construction site entrance and notices to the adjacent property owners. Guidelines on who to notify, and a sample of approved notification form are available from the Development Section. The sign and notices shall include the name, address, and (local) phone number of the DEVELOPER.
- B. When work is required in any existing street, the CONTRACTOR shall notify all residents 72 hours in advance of all operations. When parked vehicles interfere with the CONTRACTOR'S operations, the CONTRACTOR shall post temporary "NO PARKING" signs maximum 100 feet apart on each side of the street 72 hours prior to the scheduled work day. "No parking" signs shall include the following information: Time(s), day(s), date(s), purpose and the following statement: "Violators will be towed at owner's expense. CVC 22651. For information on towed vehicles phone: 371-4900."
- C. If the work has not commenced during this period, the work shall be rescheduled with five (5) working days advance notice. If the work is not completed by the end of the period covered in the initial notification of the CONTRACTOR shall re-notify all residents of the construction schedule extension. The CONTRACTOR will perform all re-posting of no parking signs and re-notification occasioned by his failure to meet the posted schedule.

1.03 PRE-CONSTRUCTION MEETING

- A. Except for work covered by an Encroachment Permit, a pre-construction meeting is required prior to commencement of any work. The meeting will be held at a mutually agreed time and place which shall be attended by the CITY, the DEVELOPER/DEVELOPERS' ENGINEER or Representative, CONTRACTOR'S Construction Superintendent, Subcontractors (as appropriate), and other governmental or agency representatives as appropriate.
- B. The CONTRACTOR shall bring to the preconstruction meeting 6 copies of each of the following:
1. Tentative construction schedule
 2. Shop drawing/sample/substitute or "or equal" submittal schedule

- C. The purpose of the preconstruction meeting is to designate responsible personnel and establish a working relationship. Matters requiring coordination will be discussed and procedures for handling such matters established.

1.04 MAINTAINING TRAFFIC IN PUBLIC STREETS

- A. The CONTRACTOR'S attention is directed to Sections 7-1.08, 7-1.09, and Section 12 of the CalTrans Standard Specifications. Nothing in these Contract Documents shall be construed as relieving the CONTRACTOR from his responsibility to comply with Sections 7-1.08, 7-1.09 and Section 12 of the Caltrans Standard Specifications.
- B. The CONTRACTOR shall be responsible for providing all flagmen and traffic control in conformance with the current edition of the Caltrans Traffic Manual, and the "Uniform Sign Chart," issued by the Department of Public Works, Division of Highways, and shall furnish, erect, maintain, and remove all necessary signs and devices during the length of the construction. Modifications to the approved traffic control plan, dictated by the field traffic conditions, shall be made immediately by the CONTRACTOR as required by the ENGINEER.
- C. Personal vehicles of the CONTRACTOR'S employees shall not be parked on the traveled way or shoulders within any section closed to the public traffic.
- D. A minimum of one paved traffic lane, not less than 12 feet wide shall be open for use by public traffic in each direction of travel, except that single paved 12 foot wide traffic lane may be used with flagmen for short lengths and short periods of time when specifically allowed by the ENGINEER.
- E. The full width of the traveled way shall be open for use by public traffic as follows unless otherwise approved by the Engineer:
 - 1. On all designated major streets before 9:00 am and after 3:30 pm, Monday through Friday;
 - 2. On all other streets before 7:00 am and after 5:00 pm, Monday through Friday;
 - 3. On all streets regardless of designation all day on Saturday, Sunday, and designated legal holidays; and after 3:30 pm on the day preceding a City designated legal holiday.

END OF SECTION

SECTION 013100

COORDINATION

1.01 GENERAL

- A. The CONTRACTOR shall be responsible for the coordination of all work and the coordination of the work of all subcontractors. The CONTRACTOR shall not delegate coordination to any subcontractor. Coordination, as referred to herein, shall include the establishment of on-site lines of authority and communication. The CONTRACTOR'S onsite supervisory person shall be present at all times when any work is in progress.

1.02 SCHEDULING

- A. The CONTRACTOR shall prepare construction schedules as specified in Section 013300 "Submittals", and all schedule submittals shall conform to the requirements specified therein.

1.03 REQUESTS FOR SUBSTITUTIONS

- A. The CONTRACTOR shall review subcontractor's requests for changes and for substitutions.
- B. All requests or substitutions shall conform to the requirements of Section 013300 "Submittals".

1.04 SUBMITTALS

- A. All submittals to the CITY shall be made by the DEVELOPER.

1.05 COORDINATION OF SUBCONTRACTOR RESPONSIBILITIES

- A. The CONTRACTOR shall be responsible for coordination of the work of each of its subcontractors and suppliers. Special attention is directed to the following obligations of the CONTRACTOR:
 - 1. Verify that subcontractors have obtained permits for inspections.
 - 2. Review all subcontractor shop drawings, product data, and sample submittals for compliance prior to submittal to CITY for review.
 - 3. Maintain onsite documentation and keep current record drawing set at the construction site.

END OF SECTION

SECTION 013300

SUBMITTALS

1.01 GENERAL

- A. General: Whenever submittals are required hereunder, all such submittals shall be submitted to the ENGINEER for review. A Submittal is defined as any drawing, calculation, specification, product data, samples, manuals, requests for substitutes, survey data, record drawings, or similar items.
- B. Submittals Required at the Preconstruction Meeting: At the preconstruction meeting, the CONTRACTOR shall submit the following items:
1. A schedule of work, which shall be based on the following order of work:
 - a. Rough Grading
 - b. Sanitary Sewer
 - c. Storm Drainage
 - d. Water Mains
 - e. Joint Trench
 - f. Subgrade
 - g. Aggregate Subbase
 - h. Concrete Surface Improvements
 - i. Aggregate Base
 - j. Asphalt Concrete Pavement
 - k. Striping, Markings
 - l. Signs
 - m. Monuments
 - n. Fire Hydrants
 - o. Street Lights
 - p. Landscaping
 2. A preliminary schedule of shop drawings, samples, and proposed substitutes or "or equal" submittals.
 3. A list of all permits the CONTRACTOR is required to obtain.
- C. Submittals Required After the Preconstruction Meeting: The CONTRACTOR shall submit to the ENGINEER all proposed substitutes or "or equal" products thirty (30) days prior to use on the work, for review. All such submittals shall be in conformance with the requirements of Paragraphs 1.03 and 1.04 herein.
1. The CONTRACTOR shall submit copies of all required permits prior to starting any work covered by the various permits.
 2. The CONTRACTOR hereby agrees that failure to submit alternative product requests within the stipulated time period shall act as a waiver of any future rights to offer such substitutes, and the CONTRACTOR hereby agrees to provide one of the specified products called for in the Project Specifications or on the DRAWINGS.
 3. The CONTRACTOR shall also submit a copy of the valid trench shoring permit issued by CAL OSHA, if applicable, prior to starting any trenching.

- D. All submittals shall be accompanied by a standard transmittal form or cover letter acceptable to the ENGINEER. Information shall include, but not be limited to, CONTRACTOR'S name and address, project identification, sender's name and phone number, and a summary of the purpose of the transmittal.

1.02 CERTIFICATES OF COMPLIANCE

- A. **Certificates of Compliance:** The CONTRACTOR shall provide Certificates of Compliance for all products and materials proposed to be used. The Certificates of Compliance shall include identification of the material, material source, name of the supplier, project name, and the segment of the WORK where the material represented by the sample is to be used.

1.03 SHOP DRAWINGS

- A. Whenever called for in the DRAWINGS, or where required by the ENGINEER, the CONTRACTOR shall furnish to the ENGINEER for review, a minimum of six (6) copies of each shop drawing submittal. The term "Shop Drawings" as used herein shall be understood to include detail design calculations, shop drawings, fabrication and installation drawings, erection drawings, lists, graphs, operating instruction, catalog sheets, data sheets, and similar items. Unless otherwise required, said Shop DRAWINGS shall be submitted to the ENGINEER at a time sufficiently early to allow review of same by the ENGINEER, and to accommodate the anticipated rate of construction progress.
- B. All Shop Drawings shall be accompanied by a standard transmittal form or cover letter approved by the ENGINEER. Any submittal not accompanied by such a form, or where all applicable items on the form are not completed, will not be considered. Incomplete submittals will be returned for re-submittal only if the sender is identified on the form or cover letter.
- C. Normally, a separate transmittal form shall be used for each specific item or class of material or equipment for which a submittal is required. Transmittal of a submittal of various items using a single transmittal form will be permitted only when the items taken together constitute a manufacturer's "package" or are so functionally related that expediency indicates review of the group or package as a whole. A multiple-page submittal shall be collated into sets, and each set shall be stapled or bound, as appropriate, prior to transmittal to the ENGINEER.
- D. Except as may otherwise be provided herein, the ENGINEER will return prints of each submittal to the CONTRACTOR with its comments noted thereon, within 21 calendar days following their receipt by the ENGINEER. It is considered reasonable that the CONTRACTOR shall make a complete and acceptable submittal to the ENGINEER by the second submission of a submittal item. Anything after the initial submittal and first re-submittal for review is defined as EXCESSIVE REVIEW and all costs for EXCESSIVE REVIEW shall be charged to the DEVELOPER. Final acceptance will be withheld until all costs for EXCESSIVE REVIEW are reimbursed to the CITY.
- E. If a submittal is returned to the CONTRACTOR marked "NO EXCEPTIONS TAKEN," formal revision and resubmission of said submittal will NOT be required.
- F. If a submittal is returned to the CONTRACTOR marked "MAKE CORRECTIONS NOTED," a formal revision and resubmission of said submittal will NOT be required.
- G. If a submittal is returned to the CONTRACTOR marked "AMEND - RESUBMIT," the CONTRACTOR shall revise said submittal and shall resubmit a minimum of 6 copies of said revised submittal to the ENGINEER.
- H. If a submittal is returned to the CONTRACTOR marked "REJECTED-RESUBMIT," the

CONTRACTOR shall revise said submittal and shall resubmit a minimum of 6 copies of said revised submittal to ENGINEER.

- I. Fabrication of an item may be commenced only after the ENGINEER has reviewed the pertinent submittals and returned copies to the CONTRACTOR marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED." Corrections indicated on submittals shall be considered as changes necessary to meet the requirements of the Contract Documents.
- J. All CONTRACTOR submittals shall be carefully reviewed by the CONTRACTOR, prior to submittal to the ENGINEER. Each submittal shall be dated, signed, and certified by the CONTRACTOR as being correct and in strict conformance with the Contract Documents. In the case of shop drawings, each sheet shall be so dated, signed, and certified. No consideration for review by the ENGINEER of any CONTRACTOR submittals will be made for any items which have not been so certified by the CONTRACTOR. All non-certified submittals will be returned to the CONTRACTOR without action taken by the ENGINEER, and any delays caused thereby shall be the total responsibility of the CONTRACTOR.
- K. The ENGINEER's review of CONTRACTOR submittals shall not relieve the CONTRACTOR of the entire responsibility for the correctness of details and dimensions. The CONTRACTOR shall assume all responsibility and risk for any misfits due to any errors in CONTRACTOR submittals. The CONTRACTOR shall be responsible for the dimensions and the design of adequate connections and details.

1.04 PROPOSED SUBSTITUTES OR "OR EQUAL" ITEMS

- A. For convenience in designation, any material, product, or equipment to be incorporated may be designated under a brand or trade name or the name of a manufacturer and its catalog information. The use of any substitute material, product, or equipment which is equal in quality and utility and possesses the required characteristics for the purpose intended will be permitted, subject to the following requirements:
 - 1. The burden of proof as to the quality and utility of any such substitute material, product, or equipment shall be upon the CONTRACTOR.
 - 2. The ENGINEER will be the sole judge as to the quality and utility of any such substitute material, product, or equipment and its decision shall be final.
- B. Whenever the name or the name and address of a manufacturer or Supplier is given for a material, product, or equipment, or if any other source of a material, product, or equipment is indicated therefore, such information is given for the convenience of the CONTRACTOR only, and no limit, restriction, or direction is indicated or intended thereby, nor is the accuracy or reliability of such information guaranteed. It shall be the responsibility of the CONTRACTOR to determine the accurate identity and location of any such manufacturer, Supplier, or other source of any material, product, or equipment called for.
- C. The CONTRACTOR may offer any material, product, or equipment which it considers equal to those specified. The CONTRACTOR, at its sole expense, shall furnish data concerning items it has offered as substitute or "or-equal" to those specified. The CONTRACTOR shall provide the data required by the ENGINEER to determine that the quality, strength, physical, chemical, or other characteristics, including durability, finish, efficiency, dimensions, service, and suitability are such that the substitute or "or-equal" item will fulfill its intended function.
- D. Approval by the ENGINEER of a substitute item proposed by the CONTRACTOR shall not relieve

CONTRACTOR of the responsibility for full compliance with the Contract Documents and for adequacy of the substituted item. The CONTRACTOR shall also be responsible for resultant changes and all additional costs which the substitution requires in its work, the work of its subcontractors and of other contractors and shall effect such changes without cost to CITY.

1.05 SAMPLES

- A. Unless otherwise specified, whenever samples are required, the CONTRACTOR shall submit not less than 3 units of each such sample item or material to the ENGINEER for approval at no cost to the CITY.
- B. Samples, as required herein, shall be submitted for approval a minimum of 14 calendar days prior to ordering such material for delivery to the job-site, and shall be submitted in an orderly sequence so that dependent materials or equipment can be assembled for review by the ENGINEER.
- C. All samples shall be individually and indelibly labeled or tagged, indicating thereon all specified physical characteristics and manufacturer's names for identification and submitted to the ENGINEER for review for compliance. Upon receiving approval of the ENGINEER, two sets of the samples will be stamped and dated by the ENGINEER and returned to the CONTRACTOR, one set will be retained by the ENGINEER.
- D. Unless otherwise specified, all colors and textures of specified items will be selected from the manufacturer's standard colors and standard materials, products, or equipment lines.

1.06 ACCEPTANCE FOR MAINTENANCE

- A. Improvements will not be accepted by the CITY for permanent maintenance until the CONTRACTOR-prepared mylar Record DRAWINGS have been delivered to the ENGINEER.

1.07 USE OF PRIVATE PROPERTY

- A. If the CONTRACTOR uses private property for access or construction the CONTRACTOR shall obtain all necessary permits/approvals from the Planning Division and private Owner and submit to the ENGINEER a copy of each agreement executed with the private property owner(s) for access or use of the private property prior to using said private property.

1.08 CUT SHEETS

- A. The CONTRACTOR shall submit to the ENGINEER cut sheets for any major grading work including trenching for dry utilities, water, sanitary sewer line installation, storm drain line installation, and curb and gutter construction, 24 hours prior to start of construction work.

1.09 STREET LIGHT WIRING PLAN

- A. The CONTRACTOR shall submit an acceptable street light wiring plan, indicating the wiring run, and the location of the power source, for review by the ENGINEER prior to starting installation of any street lights.

1.10 STREET TREE REMOVAL

- A. The CONTRACTOR shall give the ENGINEER 10 calendar days notice prior to removal of any street tree designated for removal on the Approved Construction DRAWINGS. Whenever it is determined by the CITY that a street tree must be removed, the ENGINEER must post the tree

under the provisions of Chapter 12.20 of the Livermore Municipal Code.

1.11 GRADING

- A. The CONTRACTOR shall notify the ENGINEER two (2) working days prior to starting ANY grading on the site.

END OF SECTION

SECTION 014200

REFERENCE STANDARDS

1.01 GENERAL

- A. Titles of Sections and Paragraphs: Captions accompanying specification sections and paragraphs are for convenience of reference only, and do not form a part of the Specifications.
- B. Applicable Publications: Whenever in these specifications references are made to published specifications, codes, standards, or other requirements, it shall be understood that wherever no date is specified, only the latest specifications, standards, or requirements of the respective issuing agencies which have been published as of the date of CITY approval of the Construction Drawings or issuance of an Encroachment Permit, shall apply; except to the extent that said standards or requirements may be in conflict with applicable laws, ordinances, or governing codes. No requirements set forth herein or shown on the Drawings shall be waived because of any provision of, or omission from, said standards or requirements.

1.02 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Without limiting the general provisions of other portions of the specifications, all work specified herein shall conform to or exceed the requirements of all applicable codes and the applicable requirements of the following documents to the extent that the provisions of such documents are not in conflict with the requirements of these Specifications nor the applicable codes.
- B. References herein to codes shall mean the following listed codes, the editions as adopted by the City of Livermore, including all addenda, modifications, amendments, or other lawful changes thereto:
 - 1. Uniform Building Code, published by the International Conference of Building Officials (ICBO).
 - 2. Uniform Plumbing Code, published by the International Association of Plumbing and Mechanical Officials (IAPMO).
 - 3. Uniform Mechanical Code, published by the International Conference of Building Officials (ICBO).
 - 4. National Electric Code, published by the National Fire Protection Association (NFPA).
 - 5. Uniform Fire Code, published by the International Conference of Building Officials (ICBO).
 - 6. California Code of Regulations; Title 8 Industrial Relations, Title 19 Public Safety, Title 24 Building Standards, and California Labor Code.
 - 7. Reference proper ADA Codes
 - 8. Livermore Municipal Code .
 - 9. Livermore Zoning Ordinance.
 - 10. Specific Plans
- C. In case of conflict between codes, reference standards, drawings and the other Contract Documents, the most stringent requirements shall govern. All conflicts shall be brought to the attention of the ENGINEER for clarification and directions prior to ordering or providing any materials or labor.

- D. References herein or on the Drawings to "State Standard Specifications" or "Standard Specifications" shall mean the Standard Specifications current edition as adopted by the State of California, Department of Transportation ("Caltrans").
- E. References herein or on the Drawings to "Livermore Standard Specifications" or "CITY Standard Specifications" shall mean the City of Livermore Standard Specifications, current edition or as specified on the Approved Construction Drawings.
- F. References herein or on the Drawings to "State Standard Plans" or "Standard Plans" shall mean the Standard Plans, current edition as adopted by the State of California, Department of Transportation ("Caltrans").
- G. References herein or on the Drawings to "Livermore Standard Details", "CITY Standard Details" or "Standard Details" shall mean the City of Livermore, Standard Details, current edition or as specified on the Approved Construction Drawings.
- H. References herein or on the Drawings to "Cal-OSHA" shall mean State of California, Department of Industrial Relations, General Industry, Electrical and Construction Safety Orders, as amended to Date, and all changes and amendments thereto which are effective as of the date of construction.
- I. References herein or on the Drawings to "OSHA Standards" shall mean Title 29, Part 1910, Occupational Safety and Health Standards, Code of Federal Regulations (OSHA), including all changes and amendments thereto.

END OF SECTION

SECTION 014213

ABBREVIATIONS

1.01 GENERAL

- A. Whenever in these Specifications references are made to the standards, specifications, or other published data of the various national, regional, or local organizations, such organizations may be referred to by their acronym or abbreviation only. As a guide to the user of these specifications, the following acronyms or abbreviations which may appear in these specifications shall have the meanings indicated herein.

1.02 ABBREVIATIONS AND ACRONYMS

AAMA	Architectural Aluminum Manufacturer's Association
AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
AATCC	American Association of Textile Chemists and Colorists
ACI	American Concrete Institute
AFBMA	Anti-Friction Bearing Manufacturer's Association., Inc.
AGA	American Gas Association
AGC	Associated General Contractors
AGMA	American Gear Manufacturer's Association
AHAM	Association of Home Appliance Manufacturer's
AI	The Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
AMCA	Air Moving and Conditioning Association
ANS	American Nuclear Society
ANSI	American National Standards Institute, Inc.
APA	American Plywood Association
API	American Petroleum Institute
APWA	American Public Works Association
ASA	Acoustical Society of America
ASAE	American Society of Agriculture Engineers
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
ASLE	American Society of Lubricating Engineers
ASME	American Society of Mechanical Engineers
ASQC	American Society for Quality Control
ASSE	American Society of Sanitary Engineers
ASTM	American Society for Testing and Materials
AWPA	American Wood Preservers Association
AWPI	American Wood Preservers Institute
AWS	American Welding Society
AWWA	American Water Works Association
BBC	Basic Building Code, Building Officials and Code Administrators International
BHMA	Builders Hardware Manufacturer's Association
CALOSHA	California Occupational Safety and Health Administration
CALTRANS	State of California Department of Transportation
CBM	Certified Ballast Manufacturer's
CEMA	Conveyors Equipment Manufacturer's Association
CGA	Compressed Gas Association
CLPCA	California Lathing & Plastering Contractors Assn
CLFMI	Chain Link Fence Manufacturer's Institute

CMA	Concrete Masonry Association
CRSI	Concrete Reinforcing Steel Institute
DCDMA	Diamond Core Drill Manufacturer's Association
EIA	Electronic Industries Association
ETL	Electrical Test Laboratories
IAPMO	International Association of Plumbing and Mechanical Officials
ICBO	International Conference of Building Officials
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
IME	Institute of Makers of Explosives
IP	Institute of Petroleum (London)
IPC	Institute of Printed Circuits
IPCEA	Insulated Power Cable Engineers Association
ISA	Instrument Society of America
ISO	International Organization for Standardization
ITE	Institute of Traffic Engineers
MBMA	Metal Building Manufacturer's Association
MPTA	Mechanical Power Transmission of Association
MTI	Marine Testing Institute
NAAM	National Assn of Architectural Metal Manufacturer's
NACE	National Association of Corrosion Engineers
NBS	National Bureau of Standards
NCCLS	National Committee for Clinical Laboratory Standards
NEC	National Electrical Code
NEMA	National Electrical Manufacturer's Association
NFPA	National Fire Protection Association
NFPA	National Forest Products Association
NGLI	National Lubricating Grease Institute
NMA	National Microfilm Association
NWMA	National Woodwork Manufacturer's Association
OSHA	Occupational Safety and Health Administration (Federal)
PCA	Portland Cement Association
RIS	Redwood Inspection Service
RVIA	Recreational Vehicle Industry Association
RWMA	Resistance Welder Manufacturer's Association
SAE	Society of Automotive Engineers
SAMA	Scientific Apparatus Maker Association
SIS	Swedish Standards Association
SMA	Screen Manufacturer's Association
SMACCNA	Sheet Metal and Air Conditioning Contractors National Association
SPR	Simplified Practice Recommendation
SSBC	Southern Standard Building Code, Southern Building Code Congress
SSPC	Steel Structures Painting Council
SSPWC	Standard Specifications for Public Works Construction
TAPPI	Technical Assn of the Pulp and Paper Industry
TFI	The Fertilizer Institute
UBC	Uniform Building Code
UL	Underwriters Laboratories, Inc.
USA	Underground Service Alert
WCLIB	West Coast Lumber Inspection Bureau
WCRSI	Western Concrete Reinforcing Steel Institute
WIC	Woodwork Institute of California
WRI	Wire Reinforcement Institute, Inc.
WWPA	Western Wood Products Association

END OF SECTION

SECTION 014500

QUALITY CONTROL

1.01 SITE INVESTIGATION AND CONTROL

- A. The CONTRACTOR shall verify all dimensions in the field and shall check all field conditions continuously during construction. The CONTRACTOR shall be solely responsible for any inaccuracies built into the WORK.
- B. The CONTRACTOR shall inspect related and appurtenant work and shall report in writing to the ENGINEER, any conditions which will prevent proper completion of the WORK. Any work required due to unsuitable conditions shall be done by the CONTRACTOR at its sole cost and expense.

1.02 INSPECTION OF THE WORK

- A. General: The WORK shall be conducted under the general observation of the ENGINEER and shall be subject to inspection by the ENGINEER to assure strict compliance with the requirements of the Contract Documents.
- B. The presence of the ENGINEER, or its representative, shall not relieve the CONTRACTOR of the responsibility for the proper execution of the WORK in accordance with all requirements of the Contract Documents. Compliance is distinctly a duty of the CONTRACTOR, and said duty shall not be avoided by any act or omission on the part of the ENGINEER.
- C. All materials and articles furnished by the CONTRACTOR shall be subject to rigid inspection, and no material or articles shall be used until it has been inspected and reviewed for compliance by the ENGINEER.
- D. Inspection at Place of Manufacture: Unless otherwise specified, all products, materials, and equipment shall be subject to inspection by the ENGINEER at the place of manufacture.
- E. The presence of the ENGINEER at the place of manufacture however, shall not relieve the CONTRACTOR of the responsibility for furnishing products, materials, and equipment which comply with all requirements of the Contract Documents.
- F. At all times during construction, the CONTRACTOR shall prevent the formation of any airborne dust nuisance. If the CONTRACTOR fails to comply within 2 hours of notification, the CITY will issue a "STOP WORK ORDER".

1.03 SAMPLING AND TESTING

- A. Sampling and testing for quality control is the sole responsibility of the CONTRACTOR. The CITY reserves the right to reject any products or materials found to be in non-compliance under quality assurance.
- B. Unless otherwise specified, all sampling and testing shall be in accordance with the methods prescribed in the current standards of the ASTM or other specified published standards, as applicable to the class and nature of the article or materials considered.
- C. Any waiver by the CITY of any specific testing or other quality assurance measures, whether or not such waiver is accompanied by a guarantee of substantial performance as a relief from the specified testing or other quality assurance requirements as originally specified, and whether or not such guarantee is accompanied by a "performance bond" to assure execution of any

necessary corrective or remedial WORK, shall not be construed as a waiver of any prescriptive or performance requirements of the Contract Documents. A "performance bond" as used herein is a separate bond in addition to the Performance Bond required in the Subdivision Agreement.

- D. Notwithstanding the existence of such waiver, and in addition to any testing and inspection performed by any other inspector on behalf of the CITY or any other public agency having jurisdiction, the ENGINEER shall have the right to make independent investigations and tests, and failure of any portion of the WORK to meet any of the requirements of the Contract Documents, shall be reasonable cause for the ENGINEER to require the removal or correction and reconstruction of any such work in accordance with the General Conditions for Development.

1.04 TIME OF INSPECTIONS AND TESTS

- A. Required samples and test specimens shall be furnished by the CONTRACTOR and prepared for testing in ample time for the completion of the necessary tests and analyses before the subject materials or articles are to be used. The CONTRACTOR shall furnish all required test specimens at its own expense. Except as otherwise provided performance of the required initial test and first test will be by the CITY, and all costs therefor will be borne by the CITY; except, that the cost of any test after the first re-test, which shows unsatisfactory results shall be borne by the CONTRACTOR.
- B. Whenever the CONTRACTOR is ready to backfill, bury, cast in concrete, or otherwise cover or make inaccessible any work, the CONTRACTOR shall notify the ENGINEER not less than 24 hours in advance of beginning any such work. Failure of the CONTRACTOR to notify the ENGINEER at least 24 hours in advance of any such inspections shall be reasonable cause for the CONTRACTOR's work to be delayed in order for inspections and any remedial or corrective work required, and all costs of such delays, including its impact or effect upon other portions of the WORK shall be borne by the CONTRACTOR.

END OF SECTION

SECTION 015100

TEMPORARY UTILITIES

1.01 CONSTRUCTION WATER

- A. General: Construction water will be available and may be purchased from the City of Livermore, located at 1052 S. Livermore Ave., Livermore, CA 94550, or from the California Water Service Company, located at 195 South "N" Street, Livermore, CA 94550. The CONTRACTOR will also be required to apply for and furnish a deposit for use of the construction water meters (potable or recycled). The CONTRACTOR shall provide all facilities necessary to convey the water from the designated source to the points of use in accordance with the requirements of the Contract Documents
- B. Per the Stage 2 Drought Mandatory Conservation Measures adopted by the City Council, recycled water must be used for all construction water. The CONTRACTOR shall contact the City of Livermore Water Resources Division for all permits required for use of recycled water.
- C. The CONTRACTOR shall be solely responsible for the adequate functioning of its water supply system and shall be solely liable for any claims arising from the use of same, including discharge or waste of water therefrom.
- D. Where recycled water is used, CONTRACTOR shall post notices conspicuously throughout the site warning the CONTRACTOR'S personnel that recycled water is in use.
- E. Fire Hydrant Water Connections: The CONTRACTOR shall not make connection to, or draw water from, any fire hydrant without first obtaining permission of the CITY or other authority having jurisdiction over the use of said fire hydrant and from the agency owning the affected water system. For each such connection made, the CONTRACTOR shall first attach to the fire hydrant a valve and a construction meter, supplied by the CITY or said other authority and agency.
- F. Pipeline Water Connections: The CONTRACTOR shall not make connection to, or draw water from, any pipeline without first obtaining permission of the ENGINEER or California Water Service Company or other authority having jurisdiction over the use of said pipeline and from the agency owning the affected water system. For each such connection made, the CONTRACTOR shall first attach to the pipeline a valve and a construction meter, supplied by the CITY or said other authority and agency. A certified approved backflow device is to be used for this purpose.
- G. Removal of Water Connections: Before final acceptance of the WORK on the project, all temporary connections and piping installed by the CONTRACTOR shall be entirely removed, and all affected improvements shall be restored to their original condition, or better, to the satisfaction of ENGINEER, the CITY, and/or other agency owning the affected utility.

END OF SECTION

SECTION 015500

SITE ACCESS AND STORAGE

1.01 MAINTAINING TRAFFIC

- A. The CONTRACTOR shall be responsible for providing adequate traffic control in conformance with the requirements of the "Manual of Traffic Controls for Construction and Maintenance Work Zones," Current Edition, as Published by the State of California Department of Transportation.
- B. Traffic Control: For the protection of traffic in public or private streets and ways, the CONTRACTOR shall provide, place, and maintain all necessary barricades, traffic cones, warning signs, lights, and other safety devices in accordance with the requirements of the "Manual of Traffic Controls for Construction and Maintenance Work Zones," Current Edition, published by the State of California, Department of Transportation and the Drawings, if applicable.
- C. If closure of any street is necessary during construction, the CONTRACTOR shall submit a formal application and complete detour plan for a street closure to the CITY and/or other authority having jurisdiction at least 30 days prior to the needed street closure in order for the CITY and other agency having jurisdiction to review the application. The detour plan shall include all necessary signing and detour requirements, shall be signed and stamped by a registered professional engineer, and shall be a scaled design on 24" x 36" sheets.

1.02 HIGHWAY LIMITATIONS

- A. All hauling by motor vehicles shall be confined to designated truck routes, except where otherwise authorized in writing by the ENGINEER.

1.03 CONTRACTOR'S WORK AND STORAGE AREA

- A. The CONTRACTOR shall make its own arrangements for any necessary off-site storage areas necessary for the proper execution of the Work. Plans shall be submitted to the City's Planning Division for all proposed offsite storage areas in order to obtain any necessary permits. The CONTRACTOR shall obtain all necessary CITY permits for off-site storage and shall submit copies of the owner's written permission for such private property use, and a letter post use from the owner stating that the condition of the property was left to their satisfaction.
- B. The CONTRACTOR will not be allowed use of public street right-of-way or public land for work or storage areas without written approval of the ENGINEER.

1.04 TEMPORARY STREET USE

- A. Street Use: Nothing herein shall be construed to entitle the CONTRACTOR to the exclusive use of any public street, alley, way, or parking area during the performance of the Work hereunder, and it shall so conduct its operations as not to interfere unnecessarily with the authorized work of the CITY, utility companies, or other agencies, or public access in such streets, alleys, ways, or parking areas. The CONTRACTOR shall be responsible for any damage to public facilities in the public right-of-way. Any damage done to these public facilities will be repaired and/or replaced by the CONTRACTOR.

- B. No street shall be closed to the public without first obtaining the permission of the ENGINEER, and other proper governmental authority, where applicable.
- C. Fire hydrants on or adjacent to the WORK shall be kept accessible to fire-fighting equipment at all times.
- D. Temporary provisions shall be made by the CONTRACTOR to assure the use of sidewalks and the proper functioning of all gutters, sewer inlets, and other drainage facilities.
- E. Wherever necessary or required for the convenience of the public or individual residents or business places at street or highway crossings, private driveways, or elsewhere, the CONTRACTOR shall provide suitable temporary bridges or steel plates over unfilled excavations, except in such cases as the CONTRACTOR shall secure the written consent of the individuals or authorities concerned to omit such temporary bridges or steel plates, which written consent shall be delivered to the ENGINEER prior to beginning the excavation. All such bridges or steel plates shall be maintained in service until access is provided across the backfilled excavation.
- F. Temporary bridges or steel plates for street and highway crossings shall conform to the requirements of the authority having jurisdiction in each case, and the CONTRACTOR shall conform to Section 312300-3.13 (steel plate).
- G. No equipment or material left on the street shall block line of site at intersections, or traffic signal and signs.

1.05 ACCESS SECURITY

- A. Where construction site access is directly off of a public street the CONTRACTOR shall be responsible for providing and maintaining adequate fencing, barricades, and/or signs to prevent public access from the public street into the construction site 24-hours a day.

END OF SECTION

SECTION 015526

TEMPORARY TRAFFIC CONTROL SYSTEMS

1.01 THE REQUIREMENT

- A. The CONTRACTOR shall provide all materials, equipment, and labor necessary to furnish, place, and maintain all temporary traffic control systems, including construction and maintenance area traffic control devices and flaggers as required to perform the WORK in accordance with this Section, and all other appurtenant work, complete in place, as shown on the Drawings and as specified herein.
- B. Work Specified in this Section:
 - 1. Review of proposed WORK areas to determine temporary traffic control requirements.
 - 2. Verification of temporary traffic controls with the ENGINEER or appropriate agency prior to implementation.
 - 3. Maintenance of traffic control during the WORK.
 - 4. Monitoring traffic control during the WORK to determine necessary changes required to maintain adequacy.
 - 5. Maintenance of traffic control during non-work hours to maintain adequacy.
 - 6. Removal of temporary traffic control systems after completion of the WORK.
 - 7. Removal of traffic detector loops/detouring vehicles through signalized intersections.
- C. The CONTRACTOR shall comply with Section 7058 of the Business and Professions Code as it applies to establishment of traffic control.

1.02 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. State of California, Department of Transportation (Caltrans) Specifications and Standards:
 - 1. Standard Specifications:

Section 7	Legal Relations and Responsibility
Section 12	Construction Area Traffic Control Devices
 - 2. Standard Plans
 - 3. Traffic Manual, current edition
- B. Commercial Standards:

State of California, Division of Industrial Safety, Department of Industrial Relations:

Safety Orders of the Division of Industrial Safety, Department of Industrial Relations of the State of California, current edition.
- C. State Codes: State of California Business and Professions Code.

1.03 CONTRACTOR SUBMITTALS

- A. In addition to the submittal requirements of Section 011100 "Summary of Work," the CONTRACTOR shall provide the following at the pre-construction conference:

1. A "Letter of Responsibility," on company letterhead, indicating the names and telephone numbers of at least three different persons who shall be available to be contacted in case of emergency at any time during the life of the contract. Said persons must have decision-making authority within the company.
 2. "Traffic Control/Construction Staging Plans" indicating proposed traffic control measures during all stages of the WORK. These plans shall be submitted for review and approval by the ENGINEER in order to determine the CONTRACTOR'S compliance with the requirements of this section.
- B. The CONTRACTOR shall be responsible for submitting separate applications for encroachment permits to the appropriate agencies for WORK or traffic control within areas outside of the jurisdiction of the CITY. The CONTRACTOR shall be responsible for compliance with all traffic control requirements determined necessary by other permitting agencies or other public authorities acting within their jurisdictions.

1.04 PRODUCTS

- A. All construction area stationary and portable sign panels, lights, barricades, and traffic control devices shall be the product of a commercial sign or safety device manufacturer conforming to the requirements of Section 12, "Construction Area Traffic Control Devices," of the Caltrans Standard Specifications, unless otherwise specified in this Section, shown on the Drawings, and/or as directed by the ENGINEER.

1.05 GENERAL

- A. The CONTRACTOR shall provide all appropriate traffic control measures in accordance with this Section prior to start of construction in the public right-of-way or in any area adjacent to the street right of way where public safety is affected.
- B. The CONTRACTOR shall take all necessary precautions for the protection of the WORK and the safety of its employees and the public. Traffic shall be maintained through the construction or maintenance zone in accordance with Sections 7-1.08, 7-1.09 and 12 of the Caltrans Standard Specifications and Sections 011100 "Summary of Work."
- C. Proposed traffic control plans shall be approved by the ENGINEER and any other public agency with jurisdiction over the roadway prior to installation.
- D. All construction area signs, lights, barricades, and traffic control devices shall be furnished, installed, maintained, and removed in conformance with the specifications of the Caltrans Traffic Manual, current edition, as published by the State of California Department of Transportation and Business and Professions Code Section 7058. Additional or alternate signs may only be used when specifically authorized by the ENGINEER.
- E. The CONTRACTOR shall station guards or flaggers and shall conform to such special safety regulations relating to traffic control as may be required by these Technical Specifications, the ENGINEER, or other public authorities acting within their jurisdictions. Section 12-2.02 of the Caltrans Standard Specifications is revised to provide that all flaggers and guards shall be furnished by the CONTRACTOR at its expense.
- F. The CONTRACTOR shall monitor traffic and safety conditions and maintain adequate traffic control measures during both work and non-work hours in order to maintain compliance with the requirements of this Section.

- G. The CONTRACTOR shall conform to all requirements of the current "Safety Orders of the Division of Industrial Safety, Department of Industrial Relations of the State of California."
- H. If a hazardous condition is observed and the CITY notifies the CONTRACTOR either directly or by telephone, the CONTRACTOR shall correct the condition immediately. If the CONTRACTOR fails to correct the hazardous condition immediately, the CITY reserves the right to call in a local contractor to perform the necessary work needed to improve public safety. The cost incurred shall be billed to the DEVELOPER.
- I. All construction area signs, lights, barricades, and temporary traffic control devices shall be completely removed from the roadway when not in use. Locations and methods of storing traffic control equipment adjacent to the roadway between interrupted uses shall require prior approval of the ENGINEER.
- J. The CONTRACTOR shall completely remove all temporary signs, striping and/or delineators and restore the pavement, as necessary, upon removal or relocation of any temporary traffic controls or detours constructed as part of the WORK.
- K. When traffic is detoured to the bicycle/parking lane adjacent to the curb where street tree branches are interfering with vehicular traffic, the CONTRACTOR shall trim the trees in accordance with Section 311300 "Selective Tree and Vegetation Trimming and Removal."
- L. When the construction activity will make any detector loop at a traffic signal inoperative for a period of 72 hours or more, the CONTRACTOR shall provide video detection, or any other similar device which is not installed in the pavement prior to the start of work at his own expense. The CONTRACTOR shall provide a temporary video detection device attached to the traffic signal pole luminaire arm which is wired to the traffic signal controller. The proposed detection device must conform to Section 344100, or as approved by the ENGINEER.

- END OF SECTION -

SECTION 015600

PROTECTION OF EXISTING FACILITIES

1.01 GENERAL

- A. The CONTRACTOR shall protect all existing utilities, trees, shrubbery, landscaping, irrigation facilities, buildings, fences, roadside signs, poles, mailboxes, and all other improvements not designated for removal and shall restore damaged or temporarily relocated utilities and improvements to a condition equal to or better than they were prior to such damage or temporary relocation, all in accordance with requirements of the Contract Documents.
- B. Prior to beginning any work, the CONTRACTOR shall verify the exact locations and depths of all utilities shown and the CONTRACTOR shall make exploratory excavations of all utilities that may interfere with the WORK at CONTRACTOR's sole expense. When such exploratory excavations show the utility location as shown to be in error, the CONTRACTOR shall so notify the ENGINEER.
- C. Private hose bibs and hoses shall not be used for construction unless the CONTRACTOR secures the owner's permission to use same.
- D. All reference markings made by the CONTRACTOR shall be done with water base paint and shall be removed by the CONTRACTOR.

1.02 PROTECTION OF STREET OR ROADWAY SURVEY MARKERS

- A. The CONTRACTOR shall not destroy, remove, or otherwise disturb any existing survey markers or other existing street or roadway markers unless specifically shown on the Drawings. No pavement breaking or excavation shall be started until all survey or other permanent marker points that will be disturbed by the construction operations have been properly referenced for easy and accurate restoration. All survey markers or points disturbed by the CONTRACTOR shall be accurately restored to the satisfaction of the Engineer by the CONTRACTOR at its own expense.

1.03 EXISTING UTILITIES AND IMPROVEMENTS

- A. General: The CONTRACTOR shall protect all Underground Utilities and other improvements which may be impaired during construction operations. It shall be the CONTRACTOR'S responsibility to ascertain the actual location of all existing utilities and other improvements that will be encountered in its construction operations, and to see that such utilities or other improvements are adequately protected from damage due to such operations. The CONTRACTOR shall take all possible precautions for the protection of unforeseen utility lines to provide for uninterrupted service and to provide such special protection as may be necessary. Any damages occurring during construction shall be repaired to pre-existing or better conditions by CONTRACTOR at their own expense.
- B. Utilities to be Moved: In case it shall be necessary to relocate or move the property of any public utility or franchise holder, the CONTRACTOR shall be responsible to contact the appropriate utility or franchise holder and obtain proper permits prior to work?.
- C. Where the proper completion of the WORK requires the temporary or permanent removal and/or relocation of an existing utility or other improvement which is shown, the CONTRACTOR shall remove and, without unnecessary delay, temporarily replace or relocate such utility or the facility at the direction of the affected utility. In all cases of such temporary removal or relocation, restoration to former location shall be accomplished by the CONTRACTOR in a manner that will

restore or replace the utility or improvement as nearly as possible to its former locations and to as good or better condition than found prior to removal.

- D. Underground Utilities: The CONTRACTOR shall notify the appropriate utility or agency for any existing utility lines that are damaged or exposed during construction.
- E. The CONTRACTOR shall keep existing streets free from dust and debris during all phases of construction.

1.04 TREES WITHIN STREET RIGHTS-OF-WAY

- A. General: The CONTRACTOR shall exercise all necessary precautions so as not to damage or destroy any trees or shrubs, including those lying within street rights-of-way, and shall not trim or remove any trees unless such trees have been approved for trimming or removal by the CITY or other jurisdictional agency. Trees and shrubs which are not scheduled for removal shall be protected with temporary fencing placed around their driplines. All existing trees and shrubs which are damaged during construction shall be trimmed or replaced by the CONTRACTOR or a certified tree company to the satisfaction of said CITY and/or other jurisdictional agency. Tree trimming and replacement shall be accomplished in accordance with the requirements of the CITY or other jurisdictional agency.

1.05 NOTIFICATION BY THE CONTRACTOR

- A. The CONTRACTOR shall notify all utilities 48 hours prior to any excavation so that their lines can be marked. Those to be notified include, but are not limited to:
 - 1. Underground Service Alert (USA), 800-227-2600.
- B. Prior to any excavation in the vicinity of any existing underground facilities, including all water, sewer, storm drain, irrigation, gas, petroleum products, or other pipelines; all buried electric power, communications, or television cables; all traffic signal and street lighting facilities; and all roadway and state highway rights-of-way the CONTRACTOR shall notify the respective authorities representing the owners or agencies responsible for such underground facilities 48 hours prior to the day of excavation so that a representative of said owners or agencies can be present during such work if they so desire.

END OF SECTION

SECTION 015700 - SITE PREPARATION

PART 1 -- GENERAL

1.1 THE REQUIREMENT

- A. The CONTRACTOR shall provide all materials, equipment and labor necessary to protect or control traffic, surface drainage, pedestrians, noise, dust and any nuisance conditions created by construction and shall perform all work required to protect existing streets, curbs, gutters, sidewalks, access ramps, driveways, utilities, landscaping, fences and other existing improvements as shown on the Drawings and as specified herein.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 310000 Earthwork.
- B. Section 312300 Utility Earthwork.
- C. Division 1 General Requirements.

1.3 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

A. **State of California (Caltrans):**

- 1. Standard Specifications.
- 2. Standard Plans.
- 3. Manual of Traffic Controls for Construction and Maintenance Work Zones.
- 4. Traffic Manual.

B. **Commercial Standards:**

- 1. USA/Underground Service Alert.

1.4 CONTRACTOR SUBMITTALS

- A. The CONTRACTOR shall obtain and submit copies of all permits required by governing agencies prior to any construction.
- B. The CONTRACTOR shall submit to the ENGINEER those drawings required in PART 2 - PRODUCTS of this Section outlining all methods and materials intended to protect existing features and control local conditions prior to construction.

PART 2 -- PRODUCTS

2.1 GENERAL

- A. All products shall conform to State, Federal and local standards as well as manufacturers' printed recommendations.

2.2 SAFETY AND NOISE BARRIERS

- A. If the proximity of existing features will require construction of an appropriate barrier such as temporary fencing, berms, acoustic barriers, or similar facilities the CONTRACTOR shall prepare a

submittal for review to the ENGINEER of drawings that define the proposed safety or noise barriers, including any required signage, prior to beginning any construction.

2.3 TRAFFIC CONTROL

- A. If the proximity of existing streets or access ways will require construction of appropriate safety barriers, flagging, trench plates, temporary lanes, warning signs, lane striping or similar facilities the CONTRACTOR shall prepare a submittal for review to the ENGINEER of drawings that define the proposed traffic control devices prior to beginning any construction. The submittal shall be submitted in accordance with the latest edition of the State of California (Caltrans) Traffic Manual, and Manual of Traffic Controls for Construction and Maintenance Work Zones.

2.4 SURFACE DRAINAGE

- A. If the proximity of existing surface drainage will require construction of appropriate bypass, appropriate bypass, interceptors, or similar facilities the CONTRACTOR shall prepare a submittal for review to the ENGINEER of drawings that define the proposed drainage devices prior to beginning any construction.

PART 3 -- EXECUTION

3.1 SITE INSPECTION

- A. Prior to moving onto the project site the CONTRACTOR shall visit and inspect the site conditions and review maps of the existing site and facilities delineating existing utilities, property and right-of-way lines.

3.2 SITE MOBILIZATION

- A. All safety, noise, traffic, drainage control and other features required for construction shall be established at the site prior to any construction.
- B. The CONTRACTOR shall notify and coordinate the utility location services of all agency utilities affected by the construction work. In addition, the Underground Services Alert (USA) organization shall be used to locate and mark underground utility locations prior to construction in each affected area.

3.3 SITE ACCESS

- A. The CONTRACTOR shall install any necessary access to the site, including barrier facilities to be installed at the beginning of construction to prohibit entry of unauthorized persons.

3.4 SITE CLEARING, GRUBBING, AND STRIPPING

- A. All clearing, grubbing and stripping shall be in accordance with Section 310000, "Earthwork," and Section 312300, "Utility Earthwork."

3.5 OVEREXCAVATION, REGRADING, AND BACKFILL

- A. All over excavation, regrading and backfill shall be in accordance with Section 310000, "Earthwork," and Section 312300, "Utility Earthwork."

- END OF SECTION -

SECTION 015713

TEMPORARY EROSION CONTROL

1.01 GENERAL

- A. Temporary erosion control shall consist of, but not be limited to, constructing such facilities and taking such measures as are necessary to prevent, control, and abate water, mud, construction materials, hazardous materials and erosion damage to public and private property as a result of the CONTRACTOR'S operations.
- B. Conformance with the requirements of this section shall in no way relieve the CONTRACTOR from the CONTRACTOR'S responsibilities, as provided in Section 7-1.01G, "Water Pollution," Section 7-1.11, "Preservation of Property," of the Caltrans Standard Specifications, and National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity (General Permit) of the California Regional Water Quality Control Board.
- C. Construction vehicles and equipment entering existing paved areas shall be free of mud, silt and other debris during all phases of work. No mud, silt and other debris shall be tracked on paved surfaces. If such materials are tracked on the streets or other paved areas both public and private, the CONTRACTOR shall immediately remove these materials prior to these materials entering into the storm drain system.
- D. Stockpiling of materials on the street will not be allowed unless otherwise approved by the ENGINEER. The CONTRACTOR shall cover with plastic any construction or excavated materials between October 15th and April 15th which may possibly erode and enter the storm drain system of paved streets or other paved areas both public and private. Stockpiling of dirt on paved areas will not be allowed.
- E. The CONTRACTOR shall sweep the work area as necessary to meet all NPDES requirements and shall clean up the work site daily before leaving the site.
- F. A Storm Water Pollution Prevention Plan (SWPPP) is required for the project, The CONTRACTOR shall be responsible for obtaining a SWPPP permit (should we call out how??) and throughout the duration of the project for installing, constructing, inspecting and maintaining the control measures included in the SWPPP and any amendments thereto and for removing and disposing of temporary control measures.
- G. By October 15th of each year the temporary erosion control features as are necessary to prevent damage during forthcoming winter season shall be constructed and functioning. If the earthwork in any area has not progressed to a point where any part of the facilities on the temporary erosion control plans for that area can be constructed, the CONTRACTOR shall construct such supplementary temporary erosion control facilities as are necessary to protect adjacent private and public property.

Temporary erosion control measures shall include, but not be limited to, the following:

1. The CONTRACTOR shall conduct operations in such a manner that storm runoff will be contained within the site or channeled into the storm drain system which serves the runoff area. Storm runoff from one area shall not be allowed to divert to another runoff area.
2. Storm drain systems, toe of slope drains, and outlet structures shall be constructed and operating prior to commencing, or concurrently with placing an embankment.

Temporary downdrains, drainage structures, and other devices shall be provided to channel storm runoff water into the respective permanent storm drain systems during construction. Mud and silt shall be settled out of the storm runoff before the runoff enters the storm drain system.

3. Embankment areas, while being brought up to grade and during periods of completion prior to final roadbed construction, shall be protected by various measures to eliminate erosion and the siltation of downstream facilities and adjacent areas. These measures may include, but shall not be limited to: temporary downdrains, either in the form of pipes or paved ditches with protected outfall areas; graded berms around areas to eliminate erosion of embankment slopes by surface runoff; confined ponding areas to desilt runoff; and temporary check dams in toe of slope ditches to desilt runoff.
4. Excavation areas, while being brought to grade, shall be protected from erosion and the resulting siltation of downstream facilities and adjacent areas by use of various temporary erosion control measures. These measures may include, but shall not be limited to: check dams; confined ponding areas to desilt the runoff; and protection, such as sandbags around inlets which have not been brought up to grade.
5. Contour graded areas shall be protected against erosion and the resulting siltation of downstream facilities and adjacent areas during grading operations. Various measures may include, but shall not be limited to: the use of graded contour berms to control sheet flow; supplemental grading of large areas around temporary or unfinished inlet structures to provide desilting basins; and temporary ditch paving.
6. From October 15th to April 15th:
 - A. During embankment construction, an earth berm or appropriate grading to direct drainage away from the edge of the top of the embankment shall be constructed and maintained on those embankments where earthwork operations are not in progress.
 - B. Special attention will be required to protect areas, which have been cleared, and grubbed prior to excavation or embankment operations, and which are subject to runoff during the period from October 15th to April 15th. Temporary measures may include, but shall not be limited to: temporary desilting basins; contour graded ditches; temporary paved and unpaved ditches; and filter fabric fences to contain silt and sediment from runoff.
 - C. After each storm, desilting basins shall be checked against their design capacity and if necessary, silt and sediment shall be removed to restore capacity.

1.02 INSPECTION AND MAINTENANCE

- A. To ensure the proper implementation and functioning of temporary erosion control measures, the CONTRACTOR shall regularly inspect and maintain the construction site for the control measures identified in the Storm Water Pollution Prevention Plan (SWPPP). The CONTRACTOR shall identify corrective actions and time frames to address any damaged measures or reinstate any measures that have been discontinued.
- B. During the winter season defined as between October 15th to April 15th, inspections of the construction site shall be conducted by the CONTRACTOR to identify deficient measures, as follows:
 1. Prior to a predicted storm;

2. After all precipitation which causes runoff capable of carrying sediment from the construction site;
3. At 24 hours intervals during extended precipitation events; and
4. Routinely, on a minimum twice monthly basis.

If the CONTRACTOR identifies a deficiency in the deployment or functioning of an identified control measure, the deficiency shall be corrected in a timely manner. If the ENGINEER identifies a deficiency in the deployment or functioning of an identified control measure, the CONTRACTOR will be notified in writing and the deficiencies shall be corrected by the CONTRACTOR in a timely manner. Upon failure of the CONTRACTOR to remedy the defect as specified within 4 hours after notification by the ENGINEER, the CITY may order that such work be done by others, and all costs therefore shall be charged to the CONTRACTOR

END OF SECTION

SECTION 015719

TEMPORARY ENVIRONMENTAL CONTROLS

ADD A PARAGRAPH referencing any Project level environmental mitigations

1.01 DUST ABATEMENT

- A. The CONTRACTOR shall furnish all labor, equipment, and means required and shall carry out effective measures at all times during construction to prevent its operation from producing any airborne dust nuisance and dust in amounts damaging to property, cultivated vegetation, or domestic animals, or causing a nuisance to persons living in or occupying buildings in the vicinity all in conformance with Section 10, "Dust Control", and Section 18, "Dust Palliative" of the Caltrans Standard Specifications. The CONTRACTOR shall be responsible for any damage resulting from any dust originating from its operations. The dust abatement measures shall be continued until the CONTRACTOR is relieved of further responsibility by the ENGINEER.
- B. Reclaimed water, as specified in Section 015100, "Temporary Utilities" must be used when available for CONTRACTOR's use for dust abatement.
- C. Upon failure of the CONTRACTOR to remove the dust nuisance as specified in Paragraph A within 2 hours after notification by the ENGINEER, the CITY may order that such work be done by others, and all costs therefore shall be charged to the CONTRACTOR.

1.02 RUBBISH CONTROL

- A. During the progress of the Work, the CONTRACTOR shall not allow any rubbish or construction debris to blow or travel off the construction site. The CONTRACTOR shall keep all public streets and roads free from mud, dirt, rubbish, and unnecessary obstructions resulting from its operations. Disposal of all rubbish and surplus materials shall be in accordance with local codes and ordinances governing locations and methods of disposal, and in conformance with all applicable laws and regulations.

1.03 SANITATION

- A. The CONTRACTOR shall insure that adequate existing sanitation facilities are available or the CONTRACTOR shall provide and maintain adequate sanitation facilities. All wastes and refuse from sanitary facilities provided by the CONTRACTOR or organic material wastes from any other source related to the CONTRACTOR'S operations shall be disposed of away from the site in accordance with all laws and regulations pertaining thereto. Sanitation facilities will not be allowed in public street rights-of-way or in public lands. If more than four sanitation facilities are being used on a particular site, the CONTRACTOR shall locate these facilities no closer than 100' from existing residential units.

1.04 CHEMICALS

- A. All chemicals used during project construction whether defoliant, soil sterilant, herbicide, pesticide, disinfectant, polymer, reactant or of other classification, shall show approval of either the U.S. Environmental Protection Agency or the U.S. Department of Agriculture. Use of all such chemicals and disposal of residues shall be in strict accordance with the printed instructions of

the manufacturer.

1.05 CULTURAL RESOURCES

- A. The CONTRACTOR'S attention is directed to the National Historic Preservation Act of 1966 (16 U.S.C. 470 and 36 CFR 800) which provides for the preservation of potential historical architectural, archaeological, or cultural resources (hereinafter called "cultural resources").
- B. The CONTRACTOR shall perform remediation in conformance with the requirements of the National Historic Preservation Act of 1966 as it relates to the preservation of cultural resources.
- C. In the event potential cultural resources are discovered during subsurface excavations in the public street right-of-way or on public lands, the CONTRACTOR shall immediately cease all operations and shall immediately notify the ENGINEER.
 - 1. The CONTRACTOR shall be responsible for hiring a qualified archaeologist to assess the value of such potential cultural resources and make a recommendation to the State Historic Preservation Board Cultural Resources Officer.
 - 2. The CONTRACTOR shall obtain all necessary permits from the CITY Historic Preservation Committee.
- D. If the archaeologist determines that the potential find is a bona fide cultural resource, at the direction of the State Water Resources Control Board Cultural Resources Officer, the CONTRACTOR shall suspend work at the location of the find.

1.06 CONSTRUCTION NOISE

The CONTRACTOR shall be advised that the operation of any noise creating blower, power fan, or internal combustion engine which causes noise due to the explosion of operating gases or fluids is prohibited, unless the noise from such blower or fan is muffled and such noise in such a manner so as not to be plainly audible at a distance of either 75 feet from the source of the noise, or between the hours of 6:00 p.m. Saturday to 7:00 a.m. Monday; 8:00 p.m. to 7:00 a.m. on Monday, Tuesday, Wednesday and Thursday; 8:00 p.m. Friday to 9:00 a.m. on Saturday or at all on city-observed holidays. The operation between the hours of 6:00 p.m. Saturday to 7:00 a.m. Monday; 8:00 p.m. to 7:00 a.m. on Monday, Tuesday, Wednesday and Thursdays; 8:00 p.m. Friday to 9:00 a.m. Saturday or at all on city-observed holidays of any pile driver, steam shovel, pneumatic hammer, derrick, steam, electric hoist, sandblaster or other equipment used in construction, demolition or other repair work, the use of which is attended by loud or unusual noise, is prohibited.

In addition, to the above noise requirements, the CONTRACTOR shall comply with all other requirements of Chapter 9.36 "Noise" of the Livermore Municipal Code.

END OF SECTION

SECTION 016600

MATERIALS AND EQUIPMENT

1.01 SALVAGE OF EXISTING FACILITIES

- A. Any existing public or CITY facilities to be removed as directed by the ENGINEER shall be salvaged by the CONTRACTOR and delivered to the CITY facility as directed by the ENGINEER.
- B. The CONTRACTOR shall carefully remove, in a manner to prevent damage, any and all materials and equipment specifically designated by the ENGINEER to be removed and salvaged.
- C. Any items damaged during the removal, storage, or handling as a result of carelessness, negligence, or improper procedures shall be replaced by the CONTRACTOR with corresponding items of equal or greater value.
- D. The CONTRACTOR may at its option and on approval of the CITY furnish and install new items in lieu of those indicated to be salvaged or reused, in which case the original items shall become the property of the CONTRACTOR and shall be removed from the site after completion of the WORK. The cost of substituting new items in lieu of salvaged or revised items, at the CONTRACTOR'S option, shall be the responsibility of the CONTRACTOR.
- E. Existing materials and equipment removed by the CONTRACTOR shall not be reused in the WORK, except where otherwise called for in the contract documents.

END OF SECTION

SECTION 017123

FIELD ENGINEERING

1.01 SUMMARY

- A. The CONTRACTOR shall lay out and install all construction to lines and grades in accordance with the Drawings.
- B. The CONTRACTOR shall be responsible for setting and maintaining all field engineering, establishing lines and grades, and for the accuracy of the stake information. All horizontal and vertical stake datum shall agree with the Drawings.

END OF SECTION

SECTION 017700

PROJECT CLOSEOUT

1.01 GENERAL

A. ALL construction shall meet the City Occupancy Requirements prior to any building occupancy. City occupancy requirements include, but are not limited to, the following:

1. All underground facilities
2. Buildings
2. Asphalt concrete pavement
3. Portland cement concrete improvements which may include, but not limited to: curb; gutter; sidewalk, driveways, and access ramps
4. Finish grading within the street right-of-way
5. Street name signs
6. Traffic regulatory signs, striping, and markings
7. Street lights and signals installed and energized
8. Fire hydrants installed and accepted
9. All potential hazards removed within the street right-of-way
10. Street, and sidewalks and driveways cleaned
11. Water meters and boxes installed
12. Sanitary sewers cleaned out
13. Street trees installed *
14. All training on equipment or systems satisfactorily completed
15. All conditions of approval complied with

* The CONTRACTOR may provide a tree bond in order to receive occupancy.

1.02 FINAL CLEANUP

A. The CONTRACTOR shall promptly remove all rubbish, debris, unused materials, concrete forms, construction equipment, and temporary structures and facilities used during construction. Final acceptance of the WORK by the CITY will be withheld until the CONTRACTOR has satisfactorily complied with the foregoing requirements for final cleanup of the project site.

1.03 FINAL SUBMITTALS

A. The CONTRACTOR, prior to final acceptance, shall submit the following items to the ENGINEER:

1. Written guarantees or warranties
2. Record drawings as specified in Section 013300 "Submittals."
3. Completed Pavement Management Form
4. Maintenance stock items, including special parts; spare parts; special tools
5. Signed-off permits and/or certificates of inspection and acceptance by local governing agencies having jurisdiction
6. Releases from all parties who are entitled to claims against the subject project, property, or improvement pursuant to the provisions of law.

END OF SECTION