

PROJECT SPECIAL PROVISIONS

Project specific amendments to the

2015 Standard Specifications for Public Works Construction “Greenbook”

and

City of San Marcos Standard Special Provisions

The City of San Marcos hereby requires that these Project Special Provisions be used with the CLARIFIER REPLACEMENT and Agreement to which they are attached. The modifications, additions, or deletions shall take precedence as indicated in the Section 2-5.2 of the Standard Special Provisions. All work performed will be done in accordance with the Contract Documents.

Isaac Etchamendy, City Engineer

R.C.E No. 81294, Expires 09-30-2024

Date:

PART 1- GENERAL PROVISIONS

2-1.3 SCOPE OF WORK

The scope of work consists of replacement of three concrete clarifiers, the application of anti-corrosion lining on the three new concrete clarifiers and one of the existing concrete clarifiers, associated drainage improvements, and several utility adjustments, all in accordance with the Plans and these Special Provisions.

The items are to be constructed, finished, and installed in a complete and satisfactory manner in accordance with City Standard Specifications, Vallecitos Water District Specifications, Caltrans Standard Specification and these Special Provisions.

STANDARD SPECIFICATIONS AND STANDARD DRAWINGS:

- City of San Marcos Municipal Code
- Standard Specifications for Public Works Construction, 2015 Edition (“Greenbook”)
- San Diego Regional Standard Drawings (“SDRSD”), dated September 2012
- City of San Marcos Standard Special Provisions
- 2014 California Manual on Uniform Traffic Control Devices, Revision 6 (“MUTCD”)
- California Code of Regulations (CCR)
 - a. Title 19, Public Safety Title
 - b. 24, California Building Standards Code
 - c. 28 CCR Part 35
 - d. 36 CCR Part 1191
- Uniform Mechanical Code
- Uniform Plumbing Code
- Uniform Fire Code
- American National Standards Institute (ANSI)
- American Society of Mechanical Engineers (ASME)
- American Water Works Association (AWWA)
- American Welding Society (AWS)
- American Iron and Steel Institute (AISI)
- National Fire Protection Association (NFPA)

All provisions applicable to the work to be performed in accordance with these drawings and Special Provisions of this project shall apply whether specifically referred to herein or not. References to these various standards have been made in these Special Provisions. These references apply directly to the work the Contractor is to perform.

2-6 WORK TO BE DONE.

ADD THE FOLLOWING:

2-6.1 Phasing of Work. The Contractor shall phase improvements so that one of the concrete clarifiers at the vehicle wash area (Clarifier #1 or #2) remains in service at all times for use by public works staff or other authorized users. Improvements to Clarifier #3 may occur concurrently with one of the clarifiers at the vehicles wash area. Improvements to Clarifier #4 may occur concurrently with the second clarifier at the vehicle wash area. Contractor shall coordinate with public works facility personnel prior to doing the work for Clarifier #4. Contractor shall locate

all maintenance building drains, temporarily restrict discharge into all drains, and then perform work for Clarifier #4.

SECTION 5 - UTILITIES

DELETE SECTION 5-4 AND REPLACE WITH THE FOLLOWING:

5-4 RELOCATION. The Contractor shall relocate portions of existing waterlines interfering with the new facilities. Such relocations shall be performed in accordance with the Uniform Plumbing Code and other applicable codes and standards required by local building codes and water agencies, as appropriate, and as shown on plans. The Contractor shall pothole location(s) of potential utility conflict(s), as shown on plans, and notify the Engineer of any conflicts. The Engineer shall approve all relocations, including materials and routing, prior to said relocation work by the Contractor.

5-4.1 Payment. The bid shall include an allowance of \$5,000 for “**Relocate Portion of Existing Waterline**”. Relocation of existing waterlines shall be compensated as Extra Work in accordance with the provisions of 3.3.

SECTION 6 – PROSECUTION, PROGRESS AND ACCEPTANCE OF THE WORK

ADD THE FOLLOWING:

6-7.2 Delay Start. Contractor will be issued a delay start for this project. The delay start will be for duration of 30 calendar days. The delay start duration will begin on the date the Notice to Proceed is issued. The Notice to Proceed shall indicate the Date of Commencement which will be the start of the Contractor’s Working Days. The Contractor may only pursue the activities listed below during the delay start period. Once the delay start period has passed, the Contractor must pursue completion of the Work to completion. The Contractor may elect, by written request, to end the delay start period earlier or waive the delay start period completely. Allowable activities during the delay start period are:

- Obtaining Building/Demolition Permit from the City of San Marcos Building Department (Permit Fee will be waived since Project is a City CIP Project)
- Procurement of clarifiers and lining material
- Submission of Requests for Information
- Administrative work
- Field investigations
- Pre-construction meeting
- Project Site Walk
- Other activities as approved by the Engineer

SECTION 7 – RESPONSIBILITIES OF THE CONTRACTOR

DELETE SUBSECTION 7-8.6.5 AND REPLACE WITH THE FOLLOWING:

7-8.6 Measurement and Payment. Payment for “**Water Pollution Control**” shall be made at the contract lump sum price (LS) for implementation and maintenance of BMPs and shall include full compensation for all labor, materials, tools, and equipment as indicated on the Plans, in the Special Provisions, and as directed by the Engineer to implement and maintain BMPs in a manner such that non-storm water discharges are eliminated or reduced to the maximum extent practicable until final acceptance of the Work, and no additional payment will be made therefor.

PART 3 – CONSTRUCTION METHODS

SECTION 201 – CONCRETE, MORTAR, AND RELATED MATERIALS

201-2 REINFORCEMENT FOR CONCRETE

201-2.2 STEEL REINFORCEMENT

ADD THE FOLLOWING:

Epoxy adhesive shall be a high-modulus epoxy-resin-based product intended for structural grouting of anchor bolts and dowels to concrete. A pourable, medium-viscosity epoxy shall be used on horizontal surfaces. A heavy-bodied, non-sag epoxy gel shall be used on vertical surfaces. The epoxy adhesives shall conform to ASTM C881. Epoxy adhesive shall be Sikadur 31 or Sika Sikadur 35 by Sika Corporation, or approval equal.

SECTION 300 – EARTHWORK

300-1 CLEARING AND GRUBBING

300-1.1 GENERAL

ADD THE FOLLOWING:

Clearing and Grubbing shall also include, but is not limited to, the following items:

- All Sawcut (asphalt concrete and Portland cement concrete).
- Removal and disposal of existing A.C. pavement and aggregate as shown on the construction drawings and as directed by the Engineer
- Removal and disposal of concrete (sidewalk, curb and gutter, pavement, cross gutters and curb ramps)
- Removal of trench drain
- Removal of vegetation within the project footprint
- Removal and replacement of crushed aggregate
- Utility adjustment and relocations
- Adjusting utilities to grade
- Dust control throughout the duration of the project conforming to Section 3-12.2, Air Pollution Control, of the Standard Specification.
- Removal of existing precast concrete clarifiers, including their contents and appurtenances
- Removal of Clarifier #4 contents
- Removal of all items necessary to complete the work within the project footprint including items not specifically shown on the construction drawing plans but discoverable through site visit or other

reasonable means at time of bid. The Engineer shall have sole discretion in determining what items were “discoverable” but will generally be defined as items that could be seen, measured, and/or otherwise identified through surface investigation.

300-1.3 REMOVAL, DISPOSAL AND ABANDONMENT OF MATERIAL

300-1.3.2 REQUIREMENTS

ADD THE FOLLOWING TO SUBSECTION 300-1.3.2 e):

Removal of existing precast concrete clarifiers shall include complete removal of contents in all four clarifiers, existing precast concrete clarifier structures and their appurtenances, and protection of existing improvements to remain.

300-1.4 PAYMENT

DELETE AND REPLACE WITH

Payment for “**Clearing and Grubbing**” shall be made at the contract lump sum price (LS) for all Work within the Project Site and at stockpile locations and shall include full compensation for all labor, materials, tools, and equipment as indicated in the Specifications and as directed by the Engineer, and no additional payment will be made therefor. The lump sum Bid price shall include full compensation for removal and disposal of all resulting materials.

The Contractor shall provide the Schedule of Values for Clearing and Grubbing to the Agency at the pre-construction meeting for review and approval by the Engineer in accordance with Section 9-2.1 Schedule of Values of the City of San Marcos Standard Special Provisions. Schedule of values will also be used for payment of additional items above the original estimate.

300-2 UNCLASSIFIED EXCAVATION

300-2.1 GENERAL

DELETE AND REPLACE WITH:

Unclassified Excavation shall consist of making all cuts and fills to the lines and grades as shown in the plans, stockpiling of suitable material, transport of stockpiled material to its ultimate location, all mixing, moisture conditioning, and compaction of stockpile and fill material, and export of excess material to approved areas off site.

Unclassified Excavation shall also include removal of any soil within the project footprint, imported borrow from site of suitable material in accordance with Section 300-4 Unclassified Fill and Section 300-5 Borrow Excavation of the Standard Special Provisions, if necessary, moisture conditioning and compaction to 95 percent relative compaction within the site. The Contractor shall ensure that the finish grade shall be smoothly feathered into the existing surrounding grade outside the clarifier and associated improvements footprint excavation.

ADD THE FOLLOWING:

300-2.9 PAYMENT

Full compensation for Unclassified Excavation shall be included in the various bid items of Work and shall include full compensation for all permits, labor, import borrow, unclassified fills, materials, tools and equipment for doing all work involved in removal of soil, moisture conditioning, compaction, and exporting of excess soil, as shown on the Plans, as specified in these Special Provisions, and as directed by the Engineer, and no additional payment will be made therefor.

ADD THE FOLLOWING:

300-12 CRUSHED ROCK

300-12.1 REQUIREMENTS

¾" crushed rock shall be self-consolidating and shall be placed below proposed concrete clarifier, over properly prepared subgrade to the depths shown on the Plans. The finished grade of the crushed rock shall be uniform and at the elevations shown on the Plans.

300-12.2 MEASUREMENT AND PAYMENT

Payment for "¾" Crushed Rock" shall be made at the contract unit price per cubic yard (CY) based on the volumetric quantity shown on the Plans and shall include full compensation for furnishing all labor, materials, equipment, tools, and incidentals, for doing all work involved in the subgrade preparation unless included in other bid items, spreading, compaction of crushed rock, complete in place and to correct grade, as shown on the Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer, and no additional payment shall be made therefor.

SECTION 301 – SUBGRADE PREPARATION, TREATED MATERIALS AND PLACEMENT OF BASE MATERIALS

301-2 UNTREATED BASE

301-2.4 MEASUREMENT AND PAYMENT

ADD THE FOLLOWING:

Payment for "Class II Aggregate Base" shall be made at the contract unit price per cubic yard (CY) based on the volumetric quantity shown on the plans and shall include full compensation for furnishing all labor, materials, equipment, tools, and incidentals, for doing all work involved in the subgrade preparation unless included in other bid items, spreading, compaction to 95 percent relative compaction and installation of the aggregate complete in place and to correct grade, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the City, and no additional payment shall be made therefor.

302-5 ASPHALT CONCRETE PAVEMENT

302-5.9 MEASUREMENT AND PAYMENT

ADD THE FOLLOWING:

Payment for “**Construct Asphalt Concrete Pavement**” shall be at the contract unit price per ton (Ton) and shall include full compensation for furnishing all labor, materials, equipment and incidentals necessary to perform the work complete in place, including tack coat application to existing surfaces; subgrade preparation, stockpiling, grinding, overlaying, compaction, permits, disposal fees, etc., as specified in the Standard Specifications, these Special Provisions and as directed by the City, and no additional payment shall be made therefor.

SECTION 303 – CONCRETE MASONRY CONSTRUCTION

303-5 CONCRETE CURBS, WALKS, GUTTERS, CROSS GUTTERS, ALLEY INTERSECTIONS, ACCESS RAMPS, AND DRIVEWAYS

303-5.9 MEASUREMENT AND PAYMENT

DELETE THIRD PARAGRAPH AND ADD THE FOLLOWING:

Measurement for the various items of work under Portland Cement Concrete (P.C.C.) Construction shall be measured in accordance with the units indicated in the bid schedule and as specified in the various sections of these Special Provisions.

Full compensation for Portland Cement Concrete construction is considered included in the unit or lump sum prices paid for the various concrete bid items and no additional compensation will be allowed therefor. The unit or lump sum prices paid for the items of work shall include full compensation for furnishing all labor, materials, reinforcement, tools, equipment, transportation, joints, joint sealant, structure excavation and backfill, forms, finishing, curing, scoring, steel reinforcement, joints, and incidentals necessary for a complete installation, Complete-In-Place, and no additional compensation will be allowed therefor.

Concrete bid items include:

- **Construct Concrete Pavement**

SECTION 306 - OPEN TRENCH CONDUIT CONSTRUCTION

ADD THE FOLLOWING:

306-11 PRECAST REINFORCED STRUCTURES

306-11.3 Precast Concrete Structures.

306-11.3.1 General. These specifications cover the construction of a Jensen Precast 2000-Gallon Concrete Clarifier or approved equal, Brooks 24" x 24" Precast Concrete Catch Basin or approval equal, and 12" x 12" Precast Concrete Junction Structure with Traffic Rated Hatch.

306-11.3.2 Subgrade. Unsuitable subgrade material shall be removed to the depth shown on the Plans or determined by the Engineer and replaced with leveling bed material. Voids below subgrade shall be filled with leveling bed material prior to densification. Subgrade material shall be compacted to a minimum of 90 percent relative compaction.

306-11.3.3 Leveling Bed Material. Leveling bed material shall conform to 200-1.2.1 and 300-12 and shall be self-consolidating.

306-11.3.4 Installation. Precast concrete structures shall be laid up-grade, unless otherwise approved by the Engineer. Connections shall be constructed as shown on the Plans and per the manufacturer's recommendation.

306-11.3.5 Joints. Joints shall be sealed by one of the following:

- a) Preformed flexible joint sealant conforming to ASTM C990 or AASHTO M198. Preformed flexible joint sealant shall be installed in accordance with the manufacturer's specifications in order to fill joint annular spaces.
- b) Preformed flexible joint sealant bands conforming to ASTM C877, in conjunction with mastic or mortar, when installed in accordance with the manufacturer's specifications.

306-11.3.5.1 Profile Gasket (Single Offset) Joints. Profile gasket joints shall contain a gasket conforming to 208-3 unless otherwise specified. The gasket shall be the sole element responsible for watertightness of the joint.

The slope of the longitudinal gasket contact surfaces of the joint shall not exceed 2 degrees with respect to the longitudinal axis of the pipe. The gasket shall be uniformly stretched and equally tensioned around the spigot end of the joint. Lubrication of the joint and assembly shall be in accordance with the manufacturer's specifications.

306-11.3.6 Acceptance Testing. The precast structure shall be watertight and shall be air pressure tested in accordance with the procedures specified in 306-7.8.

306-11.3.7 Structure Backfill. Structure backfill material shall conform to 217-3. Structure backfill placement shall conform to 300-3.5.1. Structure backfill material shall be placed 12 inches from the top and 24 inches from each side.

306-11.3.8 Measurement and Payment. Measurement for precast concrete structures shall be measured in accordance with each structure furnished and installed.

Payment for "***Furnish and Install Jensen Precast 2000-Gallon Concrete Clarifier (or approved equal)***" and "***Furnish and Install 12" x 12" Precast Concrete Junction Structure with Traffic Rated Hatch***" shall include full compensation for furnishing all labor, materials, tools, equipment, transportation, shoring, precast structures, joints, joint sealant, structure excavation and backfill, disposal of excess material, precast concrete risers and cast iron frames/covers for clarifiers, traffic rated hatch for junction structure, testing, and incidentals necessary for a complete installation, and no additional compensation will be allowed therefor.

Payment for "***Furnish and Install 24" x 24" Brooks Precast Concrete Catch Basin with Bioclean Inlet Filters***" shall include full compensation for furnishing all labor, materials, tools, equipment, transportation, shoring, precast inlet, Bioclean filters or approved equal, as shown on the Plans, metal surface screen as shown on the Plans (including steel grate, perforated 16 gauge galvanized metal screen, and associated galvanized steel bolts, plates, and nuts for mounting), joints, joint sealant, structure excavation and backfill, disposal of excess material, testing, and incidentals necessary for a complete installation, and no additional compensation will be allowed therefor.

Full compensation for the removal and disposal of existing structures shall be included in the lump sum amount paid for "***Clearing and Grubbing***" and no additional compensation will be allowed therefor.

306-15 PAYMENT

DELETE SUBSECTIONS 306-15.2 AND 306-15.3 AND REPLACE WITH THE FOLLOWING:

306-15.2 Shoring and Bracing. Payment for shoring and bracing shall be included in the various bid items of Work and no additional compensation will be allowed therefor.

306-15.3 Dewatering. Payment for dewatering shall be included in the various bid items of Work and no additional compensation will be allowed therefor.

PART 5 UTILITIES

SECTION 500 – PIPELINE SYSTEM REHABILITATION

500-2 MANHOLE AND STRUCTURE REHABILITATION.

DELETE SUBSECTION 500-2 AND REPLACE WITH THE FOLLOWING:

502-2.1 General. This subsection specifies an epoxy lining system for existing and new clarifiers, as shown on the plans and as specified in these Special Provisions.

500-2.2 Requirements.

500-2.2.1 Installer Qualifications. The installer, whether the Contractor or a subcontractor, shall be a certified installer of the lining system. The installer's personnel shall be adequately trained in maintenance and operation of the required installation equipment, as certified by the lining manufacturer. A letter from the manufacturer of the lining system, verifying the certification of the installer required to be on-site during installation, shall be submitted per 2-5.3.

500-2.2.2. Cleaning, Inspection, and Surface Preparation. Prior to the installation of the lining system, the host structure shall be prepared in accordance with the manufacturer's recommendations/requirements to produce a concrete surface suitable for application and adhesion of the specified lining system. Cleaning and surface inspection shall include the inspection of the host structure for any damage or leaks, and the removal of any protrusions on the surface of the host structure that could interfere with installation and adhesion of the lining system. Any damage or leaks shall be reported to the Engineer. Cleaning methods may include high pressure water cleaning at a minimum of 5,000 pounds per square inch, abrasive blasting, or a method recommended by the manufacturer of the lining system, or other method submitted to the Engineer for approval per 2-5.3. The Contractor shall protect the host structure from damage by the cleaning equipment, water, and air pressure.

Debris from the cleaning operation shall not be allowed to enter the sewer or storm drain systems. The Contractor shall remove and dispose of all debris collected from the cleaning operation. If reinforcing steel is exposed, either before or after removing deteriorated concrete, it shall be thoroughly cleaned to remove all contamination and rust particles. Immediately after the cleaned reinforcing steel is inspected by the Engineer, the Contractor shall

place a protective coating on the exposed reinforcing steel. The protective coating shall be approved by the Engineer.

500-2.3 Epoxy Lining System.

500-2.3.1 Lining Material. Lining material shall consist of solvent free, high-build epoxy resin capable of spray application to 200 mils minimum thickness in one continuous coat. Pre-approved epoxy spray-lining materials include Warren Environmental, Inc. S-301-14 Epoxy Spray System , Neopoxy NPR-5304, Raven 405, EpoxyTec CPP Sprayliner, or an approved equal.

500-2.3.2 Surface Repairs. Surface repairs shall be made using a trowel-grade epoxy product from the same manufacturer and product line as the epoxy spray liner.

500-2.3.3 Installation and Curing. Lining material shall be applied in accordance with the manufacturer's recommendations/requirements to all pre-prepared interior surfaces of the concrete clarifiers unless otherwise specified. Termination points of the lining to the existing subsurface shall be keyed into the subsurface by mechanically scoring a minimum 1/4-inch x 1/4-inch keyway. Epoxy shall be applied to a thickness of 200 mils. Lining material shall be uniform in color, fully cured, free of holidays, surface imperfections, blisters and sags and adequately adhered to the subsurface.

500-2.3.4 Testing. The set or cured lining materials shall be tested in accordance with 502-6 unless otherwise specified.

500-2.3.5 Performance Requirements. The liner system shall meet or exceed the following specifications:

Product Type	Epoxy, No VOCs
Solids Content (vol %)	100
Flexural Modulus	425,000 psi
Flexural Strength	7,500 psi
Compressive Strength	10,000 psi
Tensile Strength	7,000 psi
Tensile Elongation	5% Minimum
Hardness, Type D	83 Minimum
Bond Strength – Concrete	greater than tensile strength of concrete

500-2.3.6 Measurement and Payment. Measurement for epoxy lining shall be measured in accordance with each structure lined.

Payment for “**Apply Single-Coat Epoxy Liner (200 mils)**” shall include full compensation for furnishing all labor, materials, tools, equipment, surface preparation, surface repairs, and epoxy spray application and cleaning, inspection, testing, and repair of the installed liner system, and no additional compensation will be allowed therefor.

PART 6 – TEMPORARY TRAFFIC CONTROL

SECTION 600 – ACCESS

600-2 VEHICULAR ACCESS

ADD THE FOLLOWING AFTER THE THIRD PARAGRAPH:

The Contractor shall keep all main access drive aisles clear of equipment, materials, and vehicles at all times and shall establish work and site traffic controls to assure that public works and other site operations are not interrupted.

600-2.1 WORKER PARKING

DELETE AND REPLACE WITH THE FOLLOWING

Personal vehicles of the Contractor's employees shall be parked in areas of the Public Works Center designated by the Engineer. The Contractor's equipment, whether empty or loaded, shall be parked with the designated Work areas, unless otherwise directed by the Engineer.

601-5 MEASUREMENT AND PAYMENT

DELETE AND REPLACE WITH THE FOLLOWING:

Temporary vehicular and pedestrian traffic controls and work zone safety measures implemented within the City Public Works Center are included in the lump-sum item for “**Public Convenience, Safety and Traffic Control**” and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in installing, maintaining, and removing temporary traffic measures and work zone safety measures necessary to protect the Contractor's personnel, the public, and the City and its employees and agents, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.