GREENBOOK SEMINAR October 30, 2024 PART 4 EXISTING IMPROVEMENTS





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SECTION 400 – PROTECTION AND RESTORATION

400-1 GENERAL.

- 1) "The Contractor shall be responsible for the protection of public and private property adjacent to the Work ..."
- 2) "The Contractor shall repair or replace all existing improvements <u>not designated for removal</u>... which are damaged or removed as a result of its operations."
- "The Contractor shall give <u>reasonable</u> notice to occupants or owners of adjacent property..."

400-2 PERMANENT SURVEY MARKERS.

1) "The Agency will:"

400-3 PAYMENT.

1) "No separate or additional payment will be made ..."

SECTION 401 – REMOVAL

- 1) Ensure the Plans clearly describe and show what is to be removed without a Bidder having to make assumptions, e.g. thicknesses, presence of reinforcing steel, etc.
- 2) Include an item in the Bid for removal of non-reinforced concrete as appropriate. (401-3,6,7)
- 3) Include an item in the Bid for reinforced concrete removal as appropriate. (401-3,6,7)



4) Specify the basis of measurement and payment for removal of composite payment. (401-4,6,7)



SECTION 402 - UTILITIES

402-1 LOCATION.

- 1) "Known utilities ... are <u>shown on the Plans or</u> <u>specified in the Special Provisions</u>."
- 2) "The Contractor shall provide the subsurface installation location data to the Engineer within the time period <u>specified in the Special</u> <u>Provisions</u>."

<u>Comment</u>: References Government Code Section 4216.

402-2 PROTECTION.

1) Specifies the requirements for the protection and support of utilities, and the repair or replacement of damaged utilities.



402-4 RELOCATION.

1) Specifies utility work to be completed by the owner prior to the start of the Work, "when feasible."



2) Specifies the Agency will make arrangements for utility work.

- 3) Specifies payment for changes in the Work to avoid interference with utilities to be per 7-3 or 7-4.
- 4) Specifies service connections will be relocated by the utility owner, or if relocated by the Contractor, payment to be 7-3 or 7-4.

402-5 DELAYS DUE TO UTILITY CONFLICTS.

- 1) Requires the Contractor to notify the Engineer of the affect of the protection, removal, or relocation of utilities upon its construction schedule per 6-1.
- 2) Specifies, if per 402-1, Contractor not entitled to "... damages or additional payment."
- 3) "... Agency will assume responsibility for ... utilities ... not identified in the Contract Documents."
- 4) If not per 402-1, Contractor entitled to "... such amount as the Engineer may find to be fair and reasonable compensation ... and ... may be granted an extension of time."

Comments:

402-5 is consistent with Government Code Sections 4215 4216, and Public Contract Code 7102.

402-6 COOPERATION.

- 1) If utility work during construction is necessary, specify the specify the utility owner, contact person name and contact information, work description, and expected duration.
- Require utility each utility operation to be a separate activity on the baseline construction schedule and each update.

SECTION 403 - MANHOLE ADJUSTMENT AND RECONSTRUCTION

- 1) Provides for utility manholes and vaults to be set to finish grade by their owner. (403-1)
- Requires the Contractor to adjust or reconstruct sewer and storm drain manholes to finish grade. (403-1)

3) Doesn't address manhole adjustment when cold milling full-width. (403-3)





- 4) Payment for adjusting manholes (< 15 inches) from lowest point of removal to top of frame) to be at Contract Unit Price for each. (403-5)
- 5) Payment for reconstructing manholes (≥ 15 inches) from lowest point of removal to top of frame) to be at Contract Unit for each. (403-5)

- 1) Include items in the Bid for "Adjust Manhole" and "Reconstruct Manhole" as appropriate.
- If cold milling full-width, specify the adjustment procedure and respective Bid item.

SECTION 404 – COLD MILLING

404-1 GENERAL.

- 1) "The type of pavement and depth to be cold milled shall be <u>as shown on the Plans</u> ..."
- 2) "The presence of pavement fabric or steel reinforcement within the depth to be cold milled shall be <u>as shown on the</u> <u>Plans</u>."



404-3 COLD MILLING TO SPECIFIED ELEVATIONS.

- 1) "... the controlled removal of a portion of the existing pavement ..."
- 2) "The finished elevations and depth of removal shall be <u>as shown on the Plans.</u>"

404-4 PROFILE MILLING.

 "... the controlled removal of a portion of the existing pavement ... using longitudinal grade controls ..."

2) "The grade shall be <u>as shown on the Plans</u>."

404-5 FULL-DEPTH MILLING.

1) "... the removal of the full depth of the existing pavement <u>as shown on</u> <u>the Plans</u> ..."



404-9 TRAFFIC SIGNAL LOOP DETECTORS.



404-11 MEASUREMENT.

- 1) "... will be measured by the ... square foot (square meter) for each thickness or range of thicknesses to be removed ... "
- 2) "The quantity of each type of pavement to be cold milled ... will be measured separately."

- 1) Cold milling is not "grinding."
- Concrete pavement can be cold milled, but only to a depth of typically 1-1/2" or less, and is very expensive.

SECTION 405 – MICRO-MILLING

- 1) "... cold milling of existing asphalt concrete pavement with a milling machine equipped with a cutting drum specifically designed and constructed for micro-milling." (405-1)
- 2) "... measured by the square foot for each thickness." (405-6)
- 3) "Payment ... will be made at the Contract Unit Price per square foot <u>for each thickness of</u> <u>micro-milling shown on the Plans</u>." (405-7)

Comments:

1) Milling using a special drum with more (approx. 3X) and closer spaced (2/10" apart vs. 5/8" apart) teeth than a standard cold milling drum resulting in a finer pavement texture (more ribs, lower rib height) than cold milling.



- 2) Typically, ≤ 1 " in depth.
- 3) Performed prior to seal coat application or resurfacing to remove previous surface treatments, improve the bond, and provide a smoother riding surface.
- 4) Both cold milling and micro-milling result in an increase in the pavement surface area necessitating greater tack coat application rates. Refer to 302-5.8.

Questions?