

**SWITCH OUT DIVISION 100 FOR NEW VERSION (Numerous Changes)**

- 101-1.01 Specifications are gender free. Divisions 100 written in passive voice (per AG's direction), the rest of the highway specifications are active voice.
- 101-1.02 Add acronym SSHC, Standard Specifications for Highway Construction
- 101-1.03 Add Definitions of: agreed price, Alaska Test Methods Manual, construction, cost, materially and mathematically unbalanced, pathway, profile, substantial completion, trail. Deleted: roadside development.
- 102-1.06 Revised list of shall/may reject bids
- 102-1.10 Add protest of Invitation to Bid
- 102-1.13 Add items to bidder nonresponsible list
- 103-1.01 Add protest of proposed Award
- 103-1.03 Bids valid for 120 days, may be extended
- 103-1.06 Revised language, added umbrella clause
- 103-1.10 New integrated contract clause
- 104-1.04 Contractor to use Useable Excavation (defined as meeting 703-2.07) before Borrow with payment under the unit bid price for excavation.
- 105-1.01 Engineer may orally order suspension of work for safety of worker or public
- 105-1.01 All reasons for ordering a suspension of work moved to 108-1.06
- 105-1.06 Utilities has been totally revised, combined with 107-1.04 and 107-1.16
- 105-1.13 Contractor to maintain work until substantial completion or seasonal susp.
- 105-1.14 Partial acceptance for completed portion over 5 miles long, or geographically separate
- 105-1.15 Engineer to identify date of substantial completion
- 105-1.16 Add contractor record retention, moved from 105-1.01
- 105-1.17 Many minor changes to clarify claims process
- 106-1.01 Expanded language for source of supply
- 106-1.02 Total rewrite, add Mandatory sources and excluded sources, add rights and permits required,
- 106-1.03 Requires contractor quality control test to be similar to departments
- 107-1.02 Detailed lists of responsibility to acquire permits
- 107-1.04 New Wage Rate section includes Davis-Bacon and DOLWD filing
- 107-1.06 Add Contractor Safety and Health management program
- 107-1.09 Add eagle nests and anadromous fish streams
- 107-1.10-1.12 Sections are expanded with more detail
- 107-1.15 Add Contractor responsible for work from date construction begins until substantial completion
- 107-1.16 Reserved – Old language moved to 105-1.06 Utilities
- 107-1.18 Personal Liability of Public Officials added back in from 1998
- 108-1.01 Subletting has been revised to make clearer
- 108-1.03 Add Safety Officer, delete wastewater treatment plan
- 108-1.05 Character of workers is expanded
- 108-1.06 All reasons for suspension or extension of contract time listed here, process of declaring a suspension of work, when equitable adjustment is owed
- 108-1.07 Ties the amount of liquidated damages to substantial completion
- 109-1.01 No adjustment made to lump sum prices due to actual quantity
- 109-1.02 New definition of contingent sum
- 109-1.05 Minor revisions throughout, especially in Item 3 and 5, basically the same
- 109-1.06 Add that we can withhold 10% for unsatisfactory progress, we can withhold 200% of estimated cost of final punch list items. Notes AS regarding withholding procedure and when interest is due.
- 109-1.08 Add requirement to get clearance from DOLWD. Receipt of certificates and guarantees deleted, this is listed in 105-1.16.

## TEST METHOD CHANGES THROUGHOUT TECH SPECS.

### REPLACE TEST METHOD:

### WITH TEST METHOD:

WAQTC FOP for AASHTO T 89/T 90...WAQTC FOP for AASHTO T 89 and WAQTC FOP for AASHTO T 90

WAQTC TM 1 .....WAQTC FOP for AASHTO TP 61

WAQTC TM 4 .....ATM 405

### ADD STANDARD MODS:

- E 03 – Set guardrail posts
- E 04 – Square steel tubes for sign posts
- E 05 – Measurement of octagons and round signs
- E 06 – Worksite traffic supervisor and traffic control devices
- E 09 - Erosion, Sediment and Pollution Control including SPCC Plans

### DID NOT ADD

- E 01 – Detectable warnings on curb ramps
- E 02 – Asphalt pavement temperature and compaction requirements
- E 07 – High visibility clothing
- E 08 – Night lighting is a special now
- E 10 – Contractor to report accidents

**401-5.01** Fifth paragraph after: "\$100.00 per hole per day" add a period: .

## 641 EROSION, SEDIMENT AND POLLUTION CONTROL

Add new language in standard modification E 09

**642 CONSTRUCTION SURVEYING AND MONUMENTS.** Add revised Section 642 dated Oct. 20, 2003. There are minor changes throughout. New pay item 642(3A) Contingent Sum.

**643-1.04 WORKSITE TRAFFIC SUPERVISOR. ITEM 1.b.** Delete: Work Zone Traffic Safety Specialist or a" and replace with: Level One

**Table 703-6 SUBBASE.** Add asterisk by No. 200 in table and add a note below table: \* Gradation shall be determined on that portion passing the 3-inch screen.

**701-2.03 GROUT.** Replace: "Type C" with: Grade C

### 706-2.05 Change title to: PVC PIPE FOR WATER AND SANITARY SEWER SYSTEMS.

Add: Use Polyvinyl Chloride (PVC) pipe systems manufactured from a compound that meets ASTM 1784 with a cell classification of 12454B. Ensure the entire pipe system is made of materials with a 150 psi rated working pressure. Use pipe with push on type joints and an exterior size compatible with ductile iron fittings. Meet the following:

PVC Pipe	ANSI/AWWA	C 900 or C905
PVC Fittings	ANSI/AWWA	C 907
Rubber Gaskets	ASTM	F477
Joints	ASTM	D3139

**706-2.06 PLASTIC PIPE.** Delete from title: "FOR SANITARY SEWERS"

### Add: **706-2.08 HDPE PIPE FOR WATER AND SANITARY SEWER SYSTEMS.**

Use high density polyethylene (HDPE) pipe and fittings manufactured from a PE 3408 resin that meets ASTM D3350 with a cell classification of 345464C. Ensure the entire system is made of materials with a 150 psi rated working pressure, except material two inch or less in diameter shall

have a 200 psi rated working pressure. Join all pipe and fittings by either butt fusion or flanges as per manufacturers recommendation. No mechanical joints are allowed. Meet the following:

HDPE Pipe 2" or less	ASTM D2737
HDPE Pipe over 2"	ASTM F714
Butt Fusion Fittings	ASTM D3261
Flanged joints	ASTM D3261

When HDPE pipe is used in arctic applications:

1. Protect by using a thaw wire, control system, and power supply designed by an Electrical Engineer, and meeting the requirements of Section 616; except use heating cable consisting of 10 AWG nickel-plated copper bus wires in a self-regulated polymeric core, with a continuous exposure capability of 150°F;
2. Surround with a minimum of three inch thick polyurethane insulation; and
3. Provide an outer surfacing of 24 gauge galvanized steel or 16 gauge aluminum.

**707-2.05 Change title to: DUCTILE IRON PIPE FOR WATER AND SANITARY SEWER.**

Delete all text and replace with: Use ductile iron pipe and fittings that are bituminous coated, cement mortar lined, have push on type joints, and a 150 psi working pressure. Meet the following:

Cement mortar lining	ANSI/AWWA C104
Loose Polyethylene Encasement	ANSI/AWWA C105 (8 mil when required)
Ductile Iron Fittings	ANSI/AWWA C110 or C153, and C104
SBR Rubber Gaskets	ANSI/AWWA C111 (Push on or mech. type joint)
Threaded Flange Joints	ANSI/AWWA C115
Ductile Iron Pipe	ANSI/AWWA C150 and C151 and C104

Add the following new subsection:

**707-2.07 GALVANIZED STEEL WATER CONDUIT.**

Galvanized Steel Pipe ASTM A 53 or ASTM A 120

**712-2.15 RAISED AND RECESSED PAVEMENT MARKERS. ITEM 2 OVERALL DIMENSIONS.**

Replace: "4x4x3/4 inches" with: 4x2x3/8 inches.

**712-2.15 RAISED AND RECESSED PAVEMENT MARKERS. ITEM 5 ADHESIVE.** Delete and replace entire sentence with: Install pavement markers with an epoxy adhesive recommended by the marker manufacturer and approved by the Engineer.

**713-2.01 STRUCTURAL TIMBER.** Delete and replace with the following: Use grade and species shown on the Plans, or if not shown on the plans use Douglas Fir No. 1 or equal for timber, lumber and piling.

**714-2.01 Add first sentence:** Apply preservative to all timber that is exposed to weather, water, or soil.

**714-2.01 In Item 1, add last sentences:** Use Copper Naphthenate with a retention of preservative conforming to AWPAs Use Category 4B for highways and bridges, and Use Category 4A for non-highway. Pressure treat by empty cell method in accordance with AWPAs Standards C1 and C2.

**714-2.01 In Item 2, delete and replace with the following:** Use Copper Naphthenate with a retention of preservative conforming to AWPAs Use Category 4B for highways and bridges. Pressure treat by empty-cell process after gluing, in accordance with AWPAs Standards C1 and C28.

**714-2.01 Add Item 3: 3. Timber Piling.** Use 17 pcf creosote treatment for ground contact or 20 pcf creosote treatment for marine use, treated in accordance with AWPAs Standards C1 and C3.

**715-2.02 GENERAL REQUIREMENTS.** Add to end of second sentence: for Zone 3 fracture critical impact testing.

**715-2.02, ITEM 1 Structural Steel for Piling.** Delete and replace entire subsection with:

a. Meet ASTM A 709, Grade 50T3. Piles 14 inches in diameter or less must be seamless. Fabricate according to the American Petroleum Institute (API) Specification 2B.

b. Meet American Petroleum Institute Specification 5L.

c. Meet ASTM A 53 grade B. Piles 14 inches in diameter or less must be seamless.

**716-2.02 STRUCTURAL STEEL. ITEM 10 IMPACT TEST.** After: "ASTM A 709" add: Zone 3

**716-2.07** Add to end of first paragraph: Galvanize tubes and piles on inside and outside surface.

Add last paragraph:

Steel Bridge members, apply 10 mils zinc galvanizing by spray-metalizing process according to Steel Structures Painting Council (SSPC) Coating System Guide No. 23.00. Prepare surfaces in accordance with SSPC-SP 5 White Metal Blast Cleaning.

**729-2.05 GEOGRID.** Delete subsection and replace with the following: Biaxial polymer grid, specifically fabricated for use as a soil reinforcement, having high tensile strength, modulus, and stiffness in both principal directions. Use a single-layered, integrally-formed grid structure. Use either extruded or punched and drawn polypropylene or high density polyethylene. Geogrid must be UV-stabilized, chemically inert, and meet the physical requirements in Table 729-1.

Package, label, handle, and store geogrid material according to ASTM D 4873.

Replace table: **TABLE 729-1**

#### **GEOGRID PHYSICAL REQUIREMENTS**

PROPERTY	REQUIREMENT	TEST METHOD
Average Aperture Size, MD <sup>(1)</sup> XD <sup>(2)</sup>	0.8-2.0 in. 0.8-2.0 in.	I.D Calipered Maximum Inside Dimension
Installation Damage Resistance	80% <sup>(3)</sup>	Sample per D5818 Test per D6637
Rib Thickness, min. (Nominal)	40 mils	Rib Thickness Calipered Minimum
Tensile Strength, min. At 2% Strain At 5% Strain	MD & XD 400 lb/ft 800 lb/ft	ASTM D6637
Junction Strength, min.	90% <sup>(4)</sup>	GRI GG-GG2
<sup>(1)</sup> MD: Machine Direction which is along roll length. <sup>(2)</sup> XD: Cross machine direction which is across roll width. <sup>(3)</sup> 80% relative to pre-installation Tensile Strength values. Perform Test install using GP or GW Class soil. <sup>(4)</sup> 90% relative to Ultimate Tensile Strength as determined by ASTM D6637		

**730-2.04 SIGN POSTS. ITEMS 2.** After: "0.105-inch thick" add: (12 gauge)

**730-2.04 ITEM 6. SOLID POST (STANDARD MOD E 05)** Delete and replace: "0.105" with: 3/16

**740-2.02 SIGNAL AND LIGHTING STRUCTURES.**

Add the following after the fifth paragraph: Furnish all poles and mast arms with a round or 16-sided cross section. Fabricate all elements greater than ½-inch thick from steel that conforms to ASTM A 709 and meets the Fracture Critical Impact Test requirements for zone 3.

Delete the sixth and seventh paragraphs and substitute the following: Fabricate all posts, poles, and mast arms from tapered steel tubes. Fabricate tubes with walls up to ½-inch thick from the pre-qualified base metals listed in AWS D1.1 and which feature maximum yield strengths of 70,000-psi.

Fabricate 10 feet long signal posts from sheet steel that features a minimum thickness of 11 US Standard Gage. Fabricate each post with a minimum inside diameter of five inches at the base plate. Use a three and one-half inch long piece of 4-inch schedule 40 pipe that conforms to ASTM A 53 as a post-top adapter.

Add the following to the eighth paragraph: The Department will not accept poles and mast arms made with laminated steel elements.

In the ninth paragraph after AASHTO M 111 add: 4 mil thickness

Delete the twelfth paragraph and substitute the following: Fabricate pile cap adapters from grade X42 steel line pipe that conforms to API 5L and from steel plate that conforms to ASTM A 709 Grade 50. Attach the anchor plate to the pile section with a complete joint penetration (CJP) weld. Fabricate the anchor plate to match the base plate of the lighting standard.

Delete the fourteenth paragraph and substitute the following: Perform all welding to conform to Subsection 504-3.01 8. Welding and the following:

Delete the last two sentences in the eighteenth.

Add the following to the nineteenth paragraph: Inspect 100% of all fillet welds by MT.

**740-2.04 HIGH TOWER POLES. In Subsection 1, add the following subitem:**

I. Furnish poles that allow the luminaire-lowering device to come within five feet of the base plate.