

Section	Subject	Prior	Update
2	Change Process	-	Updated process flowchart
General	Oregon Standard Specifications for Construction (OSS)	Modified the 2008 OSS	Modify the 2021 OSS
00110	Quality Control Personnel	Required ODOT certs	Expanded QC certifications beyond only ODOT
00150/00305	Construction Surveying	Requirements split between 00150 and 00305	All requirements in 00305
00180	End of Contract	Options for either specific date or duration	Contract end to be based on specific date
00180	Liquidated Damages	LDs amount determined from table based on project cost	Adopted ODOT computation which will provide unique amount for each project

Section	Subject	Prior	Update
2.2	Survey Plat	-	Added language to be incorporated into the plat declaration
2.2.1	Shadow Plat	-	Added shadow plat requirements
2.3	Information Required on Plans	-	Provides further guidance
2.4	CAD Drafting Standards	-	Updated drafting standards
2.6	Revised Plan Submittal	-	Added requirements for plan revisions
3	Streets	-	Defines complete streets
3.3.1	Traffic Studies	-	Provides further guidance
3.3.2	Intersection Controls	-	Provides further guidance
3.3.5	Level of Traffic Stress	-	Adds LTS categories and City methodology for determining LTS. Provides target LTS guidance.
3.4.2	Paved Street Widths and Lane Widths	-	Provides further guidance on complete streets and LTS requirements - references typical sections STD DWGs. Defines minor collectors. Defined queuing streets and applications.
3.4.7	Hillside	-	Defines hillside standard
3.5.3.2	Vertical Alignment - Minimum Grades	0.5% min.	1% min. Allows reduction to 0.5% with curb and gutter
3.5.3.3	Vertical Alignment - Maximum Grades	-	Introduces use of combination catch basin inlet where road grade exceeds 6%
3.6.1	Sidewalks, SUPs, Low Stress Routes	-	Provides additional guidances on PROWAG requirements. Minimum SW width increasing from 5' to 6'. Adds low stress route requirements.
3.6.2	Curb Ramps and Crosswalks	-	Provides further guidance
3.6.3.4	Mobility Hubs	-	New section providing guidance for mobility hubs.
3.6.5	Signing	-	Removes many of the requirements and refers to the upcoming Signing and Striping Manual
3.6.8	Illumination	-	Provides further guidance
3.6.10	On-Street Parking	-	Provides further guidance and establishes maximum length of 220'
3.6.11	Traffic Calming Devices	-	Identifies traffic calming devices and when each are applicable
3.6.12	Railroad Crossings	-	New section - requires all new crossings to meet quiet zone requirements
3.7	Temporary Traffic Control	-	TPAR should be a same level of stress or better than existing without creating excessive out of direction travel
3.8	Pavement Restoration Requirements	-	Defines quality pavement treatments to better identify when trench, half-street, or full-street restoration applies
4.1.12	OAR 333	-	Provides guidance for following OAR 333. The City applies the term "sewer" in OAR 333 to all non-potable lines.
4.1.16	Septic Systems	-	Provides guidance that septic systems will be in accordance with Deschutes County requirements

Section	Subject	Prior	Update
4.2	Manholes	-	Expands types of allowable types of corrosion resistance manholes.
4.2.1	Drop Manholes	-	New section - provides requirements for types and applications of drop manholes and refers to the standard drawings
4.3	Sewer Service Fittings	Tee fittings	Services from mains 12" and smaller shall be wye fittings
4.3	Services through PUE	-	Clarifies that services need to extend through PUEs
4.4.1.5	Wetwell Wiring	-	Adds wiring requirements previously in Section 13
5.1.4	OAR 333	-	Provides guidance for following OAR 333. The City applies the term "sewer" in OAR 333 to all non-potable lines.
5.2	Services through PUE	-	Clarifies that services need to extend through PUEs
6.4	UIC Decommissioning	-	Provide UIC decommissioning guidance
6.4.1	Residential Conveyance to ROW	-	New section
6.6.5	Maintenance Agreements	-	New section
10.5.2	Monuments of Record	-	New section referring to ORS requirements
14.3.8	Testing Requirements	-	Updated testing requirements due to elimination of supplemental specifications

City of Bend Standards and Specifications Update  
City Project No. 1XSTS  
Part III - Special Provisions to the Oregon Standard Specifications

January 2022

Section	Subject	Prior	Update
General	Oregon Standard Specifications for Construction (OSS)	Modified the 2008 OSS	Modify the 2021 OSS
00215	Unanticipated Utility Conflicts	-	New spec section with bid item
00225	Temporary Traffic Control	All in Section 00225	Split into sections 00221 to 00228 following the ODOT updates
00231	Temporary Access Road	-	Added new section providing details for temporary access roads
00294	Contaminated Media	-	Added contaminated media spec
00299	UIC Decommissioning	-	Added UIC Decommissioning spec
00405	Backfill materials	Class A thru Class G options	Updates to Class A and Class D material requirements. Deleted concrete and sand cement slurry backfill options.
00405	QC Testing	Independent QC tester required	In-house QC testing allowed under certain circumstances
00412	Styrene-Free Resin	-	Adding NTD to allow use of styrene and styrene-free resin
00412	Styrene Monitoring	-	Adding styrene gas emission monitoring requirements
00412	Chain of Custody	-	Adding chain of custody template
00413	GRP Cured-In-Place Pipe Lining & UV Cure	-	Similar update to 00412
00415	Video Pipe Inspection	Section 00401	Move to 00415 for consistency with ODOT
00440	Commercial Grade Concrete	City specific CGC proportions	Follow ODOT CGC proportions with modifications to add fiber and 4,000psi strength
00440	Warm Weather Concrete	-	Added warm weather concrete requirements
00445	Line and Grade	Per ODOT	Minor changes to line and grade as well as modification to CCTV requirements to clarify sag tolerance
00445	Epoxy on Service Saddles	-	Adding requirements for epoxy around sanitary service saddles
00470	Corrosion Resistant Manholes	-	Add material requirements for corrosion resistant manholes
00470	Drywell Drain Rock	-	Defined drywell drain rock material
00490	Rubber Composite Grade Rings	-	Adding rubber composite grade rings
00492	Experience Requirements	30 manholes in last 2 years	250 manholes in last 10 years
00492	Vacuum Testing	Vacuum testing required	Eliminating vacuum testing requirement
00499	As-Built Drawings	Requirements were present but did not include bid item	New spec section with bid item
00500	Structures	-	Adding specs in the 00500s
00640/00641	Aggregate Base	-	Adding NTS with guidance for when to use each section
00744/00745	ACP	-	Adding NTS with guidance for when to use each section
00746	Crack Sealing	-	Adding references to 00495, 00744, and 00745 to require crack sealing at all new to existing joints

City of Bend Standards and Specifications Update  
City Project No. 1XSTS  
Part III - Special Provisions to the Oregon Standard Specifications

January 2022

Section	Subject	Prior	Update
00759	Concrete Cracking	-	Adding crack tolerance for no action vs. repair vs. replace
00759	Smart Levels	48" smart level	Maintaining requirement for 48" smart level rather than following the ODOT update to 24" and 6" levels
00759	Truncated Domes	ADA Cast-In-Place with mechanical anchors	Follow ODOT - QPL item
00850	Striping Manufacturer Rep	Required on all projects	Eliminating requirement on small quantity projects
00868	Colored Lane Markings	-	Adding colored lane marking spec
00870	Curb Painting	-	Adding curb painting spec
00940	Double-Sided Signs	-	Adding measurement clarification on double-sided signs
00960	Conduit System	-	Adding clarification that installation of conduit systems do not require a licensed electrician
00970	Illumination	ODOT Highway Illumination	Revised section name to "Illumination" and added power company requirements
00990	Solar Powered Flashing Beacon	-	Adding requirements for solar powered flashing beacons
01000	ROW Development	-	Adding specs in the 01000s
02220	Painting and Coating	Included boilerplate	Removed from specs
02221	Spectrashield	-	Added Spectrashield as an additional product for use
02230	Steel Tank Coating	Included boilerplate	Removed from specs
02930	Electrical Facilities	Included boilerplate	Removed from specs
02940	Engine Generator Set	Included boilerplate	Removed from specs
02950	Instrumentation and Control Components	Included boilerplate	Removed from specs
Part IV	Supplemental Specifications	Supplemental specs included in Part IV	Sections 00331, 00645, 00760, 00902, 00937, 02221 moved to Part III. Others deleted.

City of Bend Standards and Specifications Update  
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Part IV - Construction Observation Inspection Requirements

January 2022

Section	Subject	Prior	Update
1.2	Quality Control Personnel	Required ODOT certs	Expanded QC certifications beyond only ODOT

City Project No. 1XSTS  
Part V - Standard Drawings

DWG	Title	Changes			
		None	Minor	Major	Comments
R	ROADWAY				
R-1	Typical Street Cross-Sections – General Notes	-	-	x	Updated typical sections
R-1A	Typical Street Cross-Sections – Arterial	-	-	x	Pavement widths increased from 52'-76' to 56' to 76'. ROW width unchanged. Sidewalks/paths increased from 6' to 8'-10'.
R-1B	Typical Street Cross-Sections – Major Collector	-	-	x	Pavement widths reduced from 52'-60' to 40' to 60'. ROW remains at 80'.
R-1C	Typical Street Cross-Sections – Minor Collector	-	-	x	Sidewalks/paths increased from 6' to 8'-10'.
R-1D	Typical Street Cross-Sections – Local	-	-	x	Pavement and ROW widths unchanged. Sidewalks increased from 5/6' to 6'.
R-1E	Typical Street Cross-Sections – Local	-	-	x	Pavement and ROW widths unchanged. Sidewalks increased from 5/6' to 6'.
R-1F	Typical Street Cross-Sections – Industrial Local	-	-	x	Pavement and ROW widths unchanged. Sidewalks increased from 5' to 6'-7'.
R-1G	Typical Street Section – Alley	-	x	-	Provides new typical section alternatives
R-1H	Typical Street Dead-End Turnaround	-	x	-	Added dead-end turnaround
R-2	Clear Vision Areas at Intersections	-	x	-	-
R-3	Concrete Curb	-	x	-	Added curb details
R-3A	Concrete Curb Notes	-	x	-	Moved notes to new drawing
R-4A	Shared-Use Path/Sidewalk, Setback	-	x	-	-
R-4B	Shared-Use Path/Sidewalk, Curb-Tight	-	x	-	-
R-5A	Driveway Approach, Setback (Standard)	-	x	-	-
R-5B	Driveway Approach, Setback, Partially Lowered (Alternate B)	-	x	-	-
R-5C	Driveway Approach, Curb-Tight, Fully Lowered (Alternate C)	-	x	-	-
R-5D	Driveway Approach, Curb-Tight, Partially Lowered (Alternate D)	-	x	-	-
R-5E	Driveway Approach, Curb-Tight, Wrapping Sidewalk (Alternate E)	-	x	-	-
R-6	Curb Ramp General Notes	-	x	-	Moved notes to new drawing
R-6A	Typical Perpendicular Curb Ramp	-	x	-	Modified drawing to show key PROWAG requirements
R-6B	Typical Parallel Curb Ramp	-	x	-	Modified drawing to show key PROWAG requirements
R-6C	Curb Ramp Details	-	x	-	-
R-7	PSST Anchor Base Foundation	-	x	-	-
R-7A	PSST Slip Base Foundation	-	-	x	New drawing
R-7B	Removal Post and Markings	-	x	-	Renumbered
R-8	Standard Street Name Signs	-	x	-	-
R-9	Standard Street Sign Placement	-	x	-	-
R-10	Typical Trench Section	-	-	x	Revised to be trench detail - surface restoration moved to R-11. Modifies trench width based on pipe size. Allows Class A-D backfill.
R-10A	Franchise Utility Joint Trench	-	x	-	Trench details refer to R-10
R-11	Trench Surface Restoration	-	-	x	Revised to be surface restoration - trench details moved to R-10. Designates allowable backfill material by surface restoration type.
R-24	Patterned Colored Concrete Detail	-	-	x	New drawing
R-25	Median End Detail	-	x	-	-
R-26	Local Street Curb Extensions	-	-	x	Modified to tee intersection
R-27	Collector / Local Intersection	-	x	-	-
R-29	Accessible Parking – Angle	-	x	-	-
R-32	Speed Humps and Sharrow Placement	-	-	x	New drawing
R-33	Raised Crosswalk	-	-	x	New drawing

City Project No. 1XSTS  
Part V - Standard Drawings

DWG	Title	Changes			
		None	Minor	Major	Comments
R-34	Traffic Circle	-	-	x	New drawing
R-35	Rectangular Rapid Flashing Beacon	-	-	x	New drawing
R-40	Pavement Markings – White	-	x	-	Reorganized and added striping details
R-41	Pavement Markings – Yellow	-	x	-	
R-42A	Pavement Markings	-	x	-	
R-42B	Pavement Markings	-	x	-	
R-43	Pavement Markings - Bike	-	x	-	
R-43A	Pavement Markings - Bike	-	x	-	
R-44	Turn Lane Marking Layout	x	-	-	-
R-44A	Intersection Bike Safety	-	-	x	New drawing
R-44B	Bike Lane Markings	-	-	x	New drawing
R-44C	Bike Lane Markings	-	-	x	New drawing
R-45	Intersection Pavement Marking Layout	x	-	-	-
R-47	Crosswalk Markings	x	-	-	-
R-48	Primary Trail	-	-	x	Revised trail drawings. Primary trail asphalt thickness increased to 3"
R-49	Connector Trail	-	-	x	Revised trail drawings. Connector trail asphalt thickness increased to 2.5"
R-50A	Mobility Points - Small/Medium	-	-	x	New drawing
R-50B	Mobility Points - Large	-	-	x	New drawing
<b>S</b>	<b>SANITARY</b>				
S-1	Sewer Main Typical Profile	-	-	x	Reorganized drawing for clarity
S-2A	Gravity Sewer/Storm Services on New Mains	-	-	x	Reorganized drawing for clarity
S-2B	Gravity Sewer/Storm Service Connection to Existing Main	-	-	x	Changed drawing to service on existing main
S-2C	Gravity Sewer/Storm Cleanout	-	-	x	New drawing - cleanout now on own drawing
S-3A	Standard Sewer Manhole Ring & Cover	-	x	-	New logo. Covers with old logo will continue to be accepted while suppliers use up remaining inventory.
S-3B	Composite Manhole Frame and Cover	-	-	x	New drawing for product that has been used on several projects.
S-3C	Standard Sewer/Storm Manhole	-	-	x	Drawing renumbered. New detail for cast in place manhole base.
S-3D	Typical Manhole Invert Layout	-	-	x	New drawing
S-4	Standard Outside Drop - Larger Than 12" Pipe	-	x	-	Clarified outside drop is for pipes larger than 12"
S-4A	Standard Inside Drop – 12" Pipe and Smaller	-	-	x	New drawing - allows inside drop for pipes 12" and smaller. Inside drop requires manhole to be 60" min.
S-5	3" & 4" Pressure Sewer Line Termination Cleanout	-	x	-	-
S-6	Air Release/Vac Breaker Pressure Sewer MH	-	x	-	Minimum pipe depth increased from 36" to 40"
S-7	Main Line Cleanout Pressure Sewer	-	x	-	-
S-8	Pressure Sewer Service – Traffic Area	-	x	-	-
S-9	Pressure Sewer Service – Non Traffic Area	-	x	-	-
S-15	Industrial and Commercial Services Sampling MH	-	x	-	-
S-16	Vacuum Sewer Service	-	x	-	-
<b>W</b>	<b>WATER</b>				
W-1	Water Main Typical Profile	-	-	x	Reorganized drawing for clarity
W-4	Residential Water Service Installation	-	x	-	-



## City Project No. 1XSTS

## Part V - Standard Drawings

DWG	Title	Changes			
		None	Minor	Major	Comments
W-4A	3/4"-1" Residential Meter Service Installation	-	x	-	-
W-4B	3/4"-1" Residential Meter Service Installation	-	x	-	-
W-5	Commercial & IRR Meter Service Installation	-	-	x	New drawing showing commercial and irrigation meter requirements in plan view, similar to W-4 for residential.
W-5A	1" Commercial & IRR Meter Service Installation	-	-	x	Drawing renumbered - previously W-5
W-5B	1 1/2" & 2" Commercial and Irrigation Meter Service Installation	-	x	-	Drawing renumbered. 2" GV replaced with a 2" corp stop.
W-5C	3" & 4" Commercial Meter Installation	-	x	-	Drawing renumbered
W-5D	6" and Larger Commercial Meter Installation	-	x	-	Drawing renumbered
W-5E	Meter Installation in Sidewalks	-	x	-	Drawing renumbered
W-6	Galv. Ladder w/ Alum Ext For Water Vaults	-	x	-	-
W-7	Typical Hydrant	-	x	-	Distance from face of curb to center of hydrant reduced from 6'-2" to 3.5'
W-8	Hydrant Location and Clear Zone	-	x	-	-
W-9	Separation of Water Line to Irrigation Culverts	x	-	-	-
W-10	1" & 2" Standard Air Release Valve – Traffic Area	x	-	-	-
W-10A	1" Standard Air Release Valve	x	-	-	-
W-10B	2" Standard Air Release Valve	-	x	-	-
W-13	Typical DCVA Installations 2" and Smaller	-	x	-	Replace vault with hatch requirement to meter box
W-13A	2" & Larger Double Check Valve Assembly	-	x	-	-
W-13B	Fire Sprinkler Line	-	x	-	Remove reference only language regarding sump and heater
W-15	2 1/2"-10" Reduced Pressure Backflow Assembly	x	-	-	-
W-15A	1"-2" Reduced Pressure Backflow Assembly	-	x	-	-
W-15B	2 1/2" + Reduced Pressure Backflow Assembly	x	-	-	-
W-21	Fire Gate	-	-	x	Revised to leaf gate
W-22	Hydrant Permit/Filling Tanker Truck	x	-	-	-
W-23	Standard 2" Blow-Off Assembly	-	x	-	-
W-24	4" Blow-Off Detail	-	x	-	-
W-25	Standard Water Sampling Station	-	x	-	-
W-29	Cross Connection Detail	x	-	-	-
W-30	Valve Box and Operator Extension Assembly	-	x	-	-
<b>STRM</b>	<b>STORMWATER</b>				
STRM-2	Vegetated Swale Detail	-	x	-	-
STRM-3	Typical Swale Layout	-	x	-	Added typical curb cut detail
STRM-3A	Typical Curb Cut	-	-	x	New drawing
STRM-4	Check Dam Detail	x	-	-	-
STRM-5	Stormwater Planter Detail	-	x	-	-
STRM-6	Stormwater Filter Detail	-	x	-	-
STRM-7	Stormwater Sedimentation Manhole	-	-	x	Changed from tee to snout
STRM-7A	Stormwater Sedimentation Manhole – Alternate	-	x	-	-
STRM-8	Stormwater Manhole Lid Detail	-	x	-	New logo. Covers with old logo will continue to be accepted while suppliers use up remaining inventory.
STRM-9	Standard Catch Basin Special Inlets	-	x	-	Added galvanized face plate
STRM-10	Standard Pre-Cast Drywell	-	x	-	Revised to align with current installation practices

DWG	Title	Changes			
		None	Minor	Major	Comments
STRM-11	Drywell w/ Manufactured Treatment Layout	-	x	-	Reduced separation requirement between sedimentation manhole and drywell from 5' to 3'
STRM-12	Standard Catch Basin	-	x	-	-
STRM-13A	Stormwater Grate	-	-	x	New drawing - changed to ductile iron grate
STRM-13B	Combination Catch Basin Inlet	-	-	x	New drawing
STRM-14	Existing Catch Basin Pavement Resurfacing	-	x	-	-
STRM-16	Infiltration Pond Detail	x	-	-	-
STRM-17	Chainlink Fence Detail	x	-	-	-
<b>E</b>	<b>EROSION CONTROL</b>				
E-1	Sediment Fence Detail	-	x	-	-
E-2A	Bio-Filter Bag Inlet Protection	-	x	-	-
E-2B	Filter Insert Inlet Protection	-	x	-	-
E-3	Tree/Vegetation Protection Fencing	x	-	-	-
E-4	Straw Wattle	-	-	x	New drawing
E-5	Slope / Stockpile Stabilization	-	x	-	-
E-6	Erosion Blanket – Channel Installation	-	x	-	Renumbered
E-7	Concrete Truck Washout	x	-	-	-
E-8	Gravel Construction Entrance	-	x	-	-
<b>L</b>	<b>LANDSCAPING</b>				
L-1	Planting or Turf Bed Drip Layout	x	-	-	-
L-2	Sprinkler Head and Joint	x	-	-	-
L-3	Irrigation Sleeve Under Paving	-	x	-	-
L-4	Irrigation – Typical Trench	x	-	-	-
L-5	Irrigation Fittings	x	-	-	-
L-6	Irrigation Remote Control Valve	-	x	-	-
L-7	Irrigation Blow Out	-	x	-	-
L-8	Termination Point	x	-	-	-
L-9	Quick Coupling Valve	x	-	-	-
L-10	Drip Control Valve, Filter, and Regulator	x	-	-	-
L-12	1" Comm. Control Zone Kit with Basket Filter	x	-	-	-
L-13	Air Relief Valve in Kit – AR Valve Kit	x	-	-	-
L-14	Drip Irrigation Mainline Layout	-	x	-	-
L-15	Point Source Drip Emitter	-	x	-	-
L-16	Dripline 2" Below Grade Potable System	-	x	-	Renumbered - previously L-19
L-17	Landscape Dripline Flush Point Potable System	x	-	-	-
L-18	Tree Root Watering System Detail	-	-	x	New drawing
L-19	Tree Well Detail	-	x	-	-

Section	Subject	Prior	Update
Appendix A	Tier III ROW Permit	-	Updated example set
Appendix B	Lift Station Plan Set	-	Updated example set
Appendix C	Connector Routes and Crossings Map	-	Added placeholder for forthcoming maps

City of Bend Standards and Specifications Update  
City Project No. 1XSTS  
Bidding Documents

January 2022

Section	Subject	Prior	Update
General	Oregon Standard Specifications for Construction (OSS)	Modified the 2008 OSS	Modify the 2021 OSS
Invitation to Bid	Pre-Qualification	Project specific	Bidder must be prequalified with the City of Bend at the time bids are opened
Invitation to Bid	Point of Contact	Both PM and Issuing Officer listed	Single point of contact (Issuing Officer) for all questions
Bidding and General Conditions	Federal Labor Standards	-	Added NTS (notes to specifier) on when to add federal labor standards
Bidding and General Conditions	CWSRF Funding	-	Added NTS on where changes need to be made when CWSRF funding is involved