307 Summary of Quantities

Modification for Non-Conventional Projects:
Delete this chapter and replace with the following: Provide a Summary of Quantities sheet within the "Released for Construction" plan set that contains a Summary of Pavement summary box with planned asphalt quantities in accordance with the ***Basis of Estimates Manual***. Include with submittal the electronic shape file (QTDSRD.dgn) and other documentation (i.e., calculations, sketches, or spreadsheets) that support the asphalt quantities shown in the summary box. The Summary of Quantities sheet is to be placed after the numbered Plan Sheets. Number the Summary of Quantities sheet prefixed by the letter "SQ"; e.g., SQ-1, SQ-2, SQ-3. See the RFP for Monitor Existing Structures requirements.

307.1 General

The Summary of Quantities sheets contain plan summary boxes for all work to be performed on the project with the exception of work provided for on the Summary of Drainage Structure sheet(s). Document the quantities by location in the plan summary boxes. The Summary of Quantities sheets is the only location where quantities are to be documented. Do not place plan summary boxes in any other location in the plan set. ***Chapter 8*** of the ***Basis of Estimates Manual*** contains guidance on plan summary boxes

The Summary of Quantities sheets are to be placed after the numbered Plan Sheets. Number the Summary of Quantities sheets prefixed by the letter "SQ"; e.g., SQ-1, SQ-2, SQ-3. Consider providing an index for the summary boxes as shown in ***Exhibit 307-1*** when there are more than ten Summary of Quantities sheets.

Include with phase submittals the electronic shape file (QTDSRD.dgn) and other documentation (i.e., calculations, sketches, or spreadsheets) that support the quantities shown in the summary boxes, beginning with Phase III.

Examples of Summary of Quantities sheets are included as ***Exhibits 307-1*** and ***307-2***.

307.1.1 Tabulation of Quantities Sheets

When signing and pavement marking, lighting, signal, ITS, or landscape improvements are shown in the roadway plan set, in lieu of a component plan set, place the Tabulation of Quantities sheet for those improvements behind roadway Summary of Quantities sheets. Number the Tabulation of Quantities sheet in sequence with the Summary of Quantities sheets using the prefix “SQ”.

307.2 Plan Summary Boxes and Format

The plan summary boxes are provided in the FDOT CADD Software. Boxes should be placed on the sheets in order of pay item numbers. A continuation of a box onto subsequent plan sheets may be necessary. On contracts with multiple Financial Project ID numbers or federal aid and non-federal aid quantities, make provisions to tabulate and summarize their respective quantities. Refer to ***Chapter 8*** of the ***Basis of Estimates Manual*** for further guidance.

307.2.1 Standard Notes

Place the following standard note below the Summary of Earthwork box:

> Earthwork has been calculated using the _____ base option.

Place the following standard note below the Summary of Monitor Existing Structures box:

> This list includes existing structures (as determined by the Department) located outside the limits specified in ***Article 108-2*** of the FDOT Specifications that are required to be monitored. This list should not be considered all inclusive and does not contain existing structures to be monitored that are located within the distances specified in Article 108-2.

307.2.2 Pay Item Notes

Place the following applicable pay item notes on the first Summary of Quantities sheet;

(1) **110- 86-** Deliver salvageable material designated in the plans to:

(*Provide address of nearest FDOT Maintenance Yard*.)

(On applicable Utility Work by Highway Contractor (UWHC) Agreement plans, also include the following note):

Deliver utility infrastructure designated in the utility plans to:

(Provide applicable Utility/Agency Owner address.)

(2) (For new construction projects with Asphalt Base):

520-1-7 or **520-1-10**

Cost of asphalt curb pad and additional curb thickness is included in the cost of curb and gutter.

(3) **536- 73-** (To be used for the removal of existing guardrail when FDOT Maintenance wants materials).

Dismantle and stockpile existing guardrail within the R/W in areas designated by the plans for removal by FDOT maintenance forces.

(4) Temporary Turf: When required by the project design, these items are included in the cost of the Performance Turf items. Provide the approximate quantities as follows:

570- 1- 1 Includes approximately _____ SY Turf for temporary erosion control.

570- 1- 2 Includes approximately _____ SY Sod for temporary erosion control.

307.3 Box Culvert

The structural design of any size concrete box culvert may be performed utilizing computer programs as described in ***FDM 265.13.*** The ***LRFD Box Culvert Program*** complements the details shown on ***Standard Plans***, ***Index 400-289.***

Complete the Box Culvert Data Table (cell is included in the Structures workspace of the FDOT CADD Software) and the Reinforcing Bar List. Place the table and list on plan sheets in the Structures Component Plan Set

For box culverts without FDOT assigned bridge numbers (typically ≤ 20-foot spans measured along the centerline of the roadway from face-face (inside) of the extreme abutments or sidewalls), place quantity totals in a Summary of Box Culverts box on a "BQ-" numbered plan sheet in the Structures Component Plan Set. Do not include the quantities in the Summary of Structure Quantities table. Load these planned quantities into AASHTOWare Project™ Preconstruction or Designer Interface in the Roadway Category.

For box culverts with FDOT assigned bridge numbers (bridge culverts), place quantity totals in the Box Culvert section of the Summary of Structure Quantities in the Structures Component Plan Set. Load these planned quantities into AASHTOWare Project™ Preconstruction or Designer Interface in the Structures Category under the assigned bridge number.

307.4 Litter Removal and Mowing

Provide the estimated litter removal and mowing areas in the Summary of Litter Removal and Mowing box. Provide the following for each construction phase:

(1) Phase duration

(2) Cycle frequency

(3) Number of cycles

(4) Area per cycle

(5) Total area

The District Construction Office will provide the phase duration (calendar days) for each construction phase, based on the Temporary Traffic Control Plans. Phase durations are provided during the Phase III Plans Review.

Use a 30 day cycle frequency when estimating number of cycles for litter removal and mowing (with a minimum of one cycle per phase). It is not necessary to adjust the estimated number of cycles for growing season, special events, or project location.

The area per cycle for each construction phase is to be supported by calculations or shape files (Area ID). Mowing and litter removal for new landscape areas is included in ***Section 580*** of the ***Standard Specifications***; payment is incidental to the landscape pay items. Existing landscape areas will be included in the litter removal areas. It is not necessary to adjust for inlets, drains, slopes, ditch pavement, turnouts, driveways, sidewalks, small variations in tree lines, or other similar areas.

The estimated total area per construction phase is determined by multiplying the number of cycles in each phase with the area per cycle.

307.5 Monitor Existing Structures

Monitor Existing Structures includes settlement, vibration, and groundwater monitoring of existing structures during construction as described in ***Section 108*** of the ***Standard Specifications***. Structures requiring consideration for monitoring typically include

buildings, bridges, and retaining walls which are adjacent to construction activities. When there is a concern regarding vibration, structures to be monitored may also include historic features and buildings in which sensitive business operations are conducted; e.g., eye surgery, medical treatments, rehabilitation operations, recording and broadcasting operations, places of worship, antique shops, or museums.

When appropriate, include a note on the General Notes sheet that:

(1) Restricts hours of construction operations.

(2) Restricts the type of construction equipment to be used.

Pay item 108-1 is to be used to mitigate the risk for damage occurring to an existing structure due to settlement.

Pay item 108-2 is to be used to mitigate the risk for interfering with the intended use of an existing structure. This pay item is not typically used for residential properties.

Pay item 108-3 is to be used only when recommended by a geotechnical firm and concurred with by the District Geotechnical Engineer. The use of this pay item is not common.

307.5.1 Inspection and Settlement Monitoring

307.5.1.1 Miscellaneous Structures

Activities that may cause harm to existing structures include the construction of foundations for mast arm signal poles, strain poles, cantilever signs, overhead truss signs, high mast light poles and ITS.

Based on visual field observations, the EOR will identify existing structures that are recommended to be monitored during these activities. The Department will make the final determination of the existing structures to be monitored. If a determination is made to monitor a structure, include pay item 108-1 in the Summary of Monitor Existing Structures summary box and list the structure as shown in ***Exhibit 307-1***.

307.5.1.2 Structures other than Miscellaneous Structures

Activities that may cause harm to existing structures include the construction of retaining walls, noise walls, sheet pile walls, deep excavations and foundations for bridges and other structures.

(1) If any existing structure is within the distances specified in ***Section 108-2*** of the ***Standard Specifications***, include pay item 108-1 in the Summary of Monitor Existing Structures summary box. Use a distance of 250 feet as the limit for pile driving. Do not list or identify these structures in the Contract Plans.

(2) Based on visual field observations, the EOR may recommend monitoring existing structures located beyond the distances specified in ***Section 108-2*** during these activities. The Department will make the final determination of the existing structures to be monitored. If a determination is made to monitor a structure outside of the specified distances, include pay item 108-1 in the Summary of Monitor Existing Structures summary box and list the structure as shown in ***Exhibit 307-1***.

307.5.1.3 Roadway Compaction Operations

Activities that may cause harm to existing structures include embankment and asphalt vibratory compaction.

(1) If an existing structure is within the distances specified in ***Section 108-2*** of the ***Standard Specifications***, include pay item 108-1 in the Summary of Monitor Existing Structures summary box. Do not list or identify these structures in the Contract Plans.

(2) Based on visual field observations, the EOR may recommend monitoring existing structures located beyond the distances specified in ***Section 108-2*** during these activities. The Department will make the final determination of the existing structures to be monitored. If a determination is made to monitor a structure outside of the specified distances, include pay item 108-1 in the Summary of Monitor Existing Structures summary box and list the structure as shown in ***Exhibit 307-1***.

307.5.2 Vibration Monitoring

Activities that may cause harm to existing structures include pile driving, sheet pile and casing installation, and embankment and asphalt vibratory compaction.

Based on visual field observations, the EOR will identify existing structures that are recommended to be monitored during these activities. The Department will make the final determination of the existing structures to be monitored. If a determination is made to monitor a structure, include pay item 108-2 in the Summary of Monitor Existing Structures summary box and list the structure as shown in ***Exhibit 307-1***.

307.5.3 Groundwater Monitoring

Based on visual field observations, the EOR will identify existing structures that are recommended to be monitored during anticipated dewatering operations. The Department will make the final determination of the existing structures to be monitored. If a determination is made to monitor a structure, include pay item 108-3 in the Summary of Monitor Existing Structures summary box and list the structure as shown in ***Exhibit 307-1***.

307.6 Pedestrian Longitudinal Channelizing Devices

Provide the estimated lengths for pedestrian Longitudinal Channelizing Devices (LCDs) in the Summary of Pedestrian Longitudinal Channelizing Devices box. Provide the following for each installation of pedestrian LCD per construction phase (see ***Exhibit 307-2***):

(1) Begin and End Station for Longitudinal Run

(2) Station Locations for Pedestrian Way Closure

(3) Side of Road

(4) Estimated Quantity, in feet

  (a) Pedestrian LCDs are quantified for each installation.

  (b) For pedestrian way closures, the quantity is equal to the width of the pedestrian way that is being closed (e.g., 5-foot-wide sidewalk will be paid for as 5 linear feet of pedestrian LCD, even if a longer LCD is used).

  (c) The Design Notes column should be used to clarify the locations of LCD installations that are to remain in place for more than one phase.

SUMMARY OF LUMP SUM ITEMS

PAY ITEM NO.	PAY ITEM DESCRIPTION	QUANTITY P	QUANTITY F	DESIGN NOTES	CONSTRUCTION REMARKS
0101 1	MOBILIZATION	1			

SUMMARY OF MONITOR EXISTING STRUCTURES

SITE NO.	LOCATION ADDRESS AND /OR STA.	STRUCTURE USAGE	INSPECTION & SETTLEMENT MONITORING 0108 1 LS P	INSPECTION & SETTLEMENT MONITORING 0108 1 LS F	VIBRATION MONITORING 0108 2 LS P	VIBRATION MONITORING 0108 2 LS F	GROUNDWATER MONITORING 0108 3 LS P	GROUNDWATER MONITORING 0108 3 LS F	DESIGN NOTES	CONSTRUCTION REMARKS
1	230 WALNUT ST	MUSEUM					X		CULVERT EXTENTION	
2	744 PINE CIRCLE	HISTORIC CEMETERY WALL	X						SHEET PILE INSTALLATION	
3	624 OAK DRIVE	ANTIQUE SHOP			X				MILLING AND RESURFACING	
4	888 OAK DRIVE	LASIK EYE SURGERY			X				PILE DRIVING OPERATIONS	
5	648 OAK DRIVE	BED & BREAKFAST	X		X				MILLING AND RESURFACING	
		TOTAL:	1		1		1			

THIS LIST INCLUDES EXISTING STRUCTURES (AS DETERMINED BY THE DEPARTMENT) LOCATED OUTSIDE THE LIMITS SPECIFIED IN ARTICLE 108-2 OF THE FDOT SPECIFICATIONS THAT ARE REQUIRED TO BE MONITORED. THIS LIST SHOULD NOT BE CONSIDERED ALL INCLUSIVE AND DOES NOT CONTAIN EXISTING STRUCTURES TO BE MONITORED THAT ARE LOCATED WITHIN THE DISTANCES SPECIFIED IN ARTICLE 108-2.

PAY ITEM NOTES

110- 1- 1	COST OF THE REMOVAL OF EXISTING MSE WALL AND CONCRETE RETAINING WALL TO BE INCLUDED IN THE COST OF CLEARING AND GRUBBING.
110- 86	DELIVERSALVAGEABLE MATERIAL IN THE PLANS TO: 5301 NE 39TH AVE GAINESVILLE, FL 32609
520- 1	COST OF ASPHALT BASE CURB PAD AND ADDITIONAL CURB THICKNESS IS INCLUDED IN THE COST OF CURB AND GUTTER.
536- 73	DISMANTLE AND STOCKPILE EXISTING GUARDRAIL WITHIN THE R/W IN AREAS DESIGNATED BY THE PLANS FOR REMOVAL BY FDOT MAINTENANCE FORCES.
538- 1	THIS IS TO INCLUDE REPLACEMENT OF 10 PANELS, 1390 REGULAR POSTS AND 1 SPECIAL POST WHICH HAVE BEEN DETERMINED TO BE NON SALVAGEABLE. ADDITIONAL POSTS AND PANELS DETERMINED TO BE NON SALVAGEABLE DURING RESETTING SHALL BE PAID FOR UNDER 538-5 OF THE SPECIFICATIONS.
570- 1 - 1	INCLUDES APPROXIMATELY 94 SY TURF FOR TEMPORARY EROSION CONTROL.
570- 1 - 2	INCLUDES APPROXIMATELY 357 SY SOD FOR TEMPORARY EROSION CONTROL.

ADDITIONAL PAY ITEM NOTES MAY BE CONTAINED WITH THE OTHER COMPONENTS OF THE CONTRACT PLANS SET.

INDEX OF SUMMARY OF QUANTITIES

SHEET NO.	SHEET DESCRIPTION
SQ-1	SUMMARY OF LUMP SUM ITEMS, SUMMARY OF MONITOR EXISTING STRUCTURES, SUMMARY OF LITTER REMOVAL AND MOWING
SQ-2 - SQ-6	SUMMARY OF TEMPORARY TRAFFIC CONTROL PLAN ITEMS
SQ-7	SUMMARY OF TEMPORARY SIGNALIZATION & DETECTION
SQ-8 - SQ-13	SUMMARY OF EROSION AND SEDIMENT CONTROL DEVICES
SQ-14 - SQ-19	SUMMARY OF LITTER REMOVAL AND MOWING
SQ-20	SUMMARY OF REMOVAL ITEMS
SQ-21	SUMMARY OF EARTHWORK
SQ-22	SUMMARY OF GEOTECHNICAL ITEMS
SQ-23 - SQ-35	SUMMARY OF PAVEMENT
SQ-36	SUMMARY OF MISCELLANEOUS ASPHALT PAVEMENT
SQ-37 - SQ-38	SUMMARY OF STRUCTURE QUANTITIES
SQ-39	SUMMARY OF UTILITY ADJUSTMENTS
SQ-40	SUMMARY OF MISCELLANEOUS DRAINAGE ITEMS
SQ-41	SUMMARY OF PERMANENT BARRIER WALL
SQ-42	SUMMARY OF CURB & GUTTER AND/OR TRAFFIC SEPARATORS
SQ-43	SUMMARY OF SIDEWALK & DETECTABLE WARNINGS
SQ-44	SUMMARY OF DITCH PAVEMENT
SQ-45 - SQ-49	SUMMARY OF GUARDRAIL
SQ-50	SUMMARY OF PERMANENT CRASH CUSHIONS
SQ-51 - SQ-53	SUMMARY OF PERFORMANCE TURF

SUMMARY OF LITTER REMOVAL AND MOWING

CONST. PHASE	LOCATION STA. TO STA.	SIDE	DURATION (DAYS)	FREQUENCY (DAYS)	AREA ID	LITTER REMOVAL 0107 1 CYCLES	LITTER REMOVAL 0107 1 AREA AC/CYCLE	LITTER REMOVAL 0107 1 TOTAL (AC) P	LITTER REMOVAL 0107 1 TOTAL (AC) F	AREA ID	MOWING 0107 2 CYCLES	MOWING 0107 2 AREA AC/CYCLE	MOWING 0107 2 TOTAL (AC) P	MOWING 0107 2 TOTAL (AC) F	DESIGN NOTES	CONSTRUCTION REMARKS
1	159+44 TO 305+20	Lt.	42	30	35005	1	8.700	8.700		35005	1	8.700	8.700			
2	159+44 TO 305+20	Lt.	98	30	35120	3	7.300	21.900		35120	3	7.300	21.900			
3	159+44 TO 305+20	Rt.	114	30	35301	4	5.800	23.200		35301	4	5.800	23.200			
4	159+44 TO 305+20	Rt.	68	30	35301	2	5.800	11.600		35301	2	5.800	11.600			
							SUB-TOTAL:	65.400				SUB-TOTAL:	65.400			
							TOTAL:	65.40				TOTAL:	65.40			

Exhibit 307-1
Date: 1/1/18

REVISIONS DATE	DESCRIPTION	DATE	DESCRIPTION

LUKE S. WALKER, P.E.
P.E. NO.: 99991
ROADWAY ENGINEERS, INC.
123 MAIN STREET
TALLAHASSEE, FL 32301
CERTIFICATE OF AUTHORIZATION: 12345

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 22	BAY	123456-1-52-01

SUMMARY OF QUANTITIES

SHEET NO. SQ-1

10/18/2017 1:29:12 PM

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SUMMARY OF PEDESTRIAN LONGITUDINAL CHANNELIZING DEVICES

CONST. PHASE	LOCATION STA. TO STA.	SIDE	QUANTITY 0102 74 7 LF P	QUANTITY 0102 74 7 LF F	DESIGN NOTES	CONSTRUCTION REMARKS
1	160+00 TO 161+50	Lt.	150		REMAINING IN PLACE FROM PHASE 1 THRU PHASE 3	
1	161+50 TO 165+00	Rt.	350			
1	163+00 TO 164+00	Lt.	100			
1	166+00 TO 166+00	Lt.	5		SIDEWALK CLOSURE	
2	164+00 TO 165+00	Rt.	100		REMAINING IN PLACE FROM PHASE 2 THRU PHASE 3	
3	164+00 TO 165+00	Lt.	100			
3	166+00 TO 166+00	Rt.	5		SIDEWALK CLOSURE	
		TOTAL	810			

Exhibit 307-2
Date: 1/1/19

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

LUKE S. WALKER, P.E.
P.E. NO.: 99991
ROADWAY ENGINEERS, INC.
123 MAIN STREET
TALLAHASSEE, FL 32301
CERTIFICATE OF AUTHORIZATION: 12345

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 22	BAY	123456-1-52-01

SUMMARY OF QUANTITIES

SHEET NO. SQ-2

9/16/2018 2:49:10 PM

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