



Appendix B –Existing ADOT Data Parameters



HPMS by Item Number

All records

- 1 Year of Submittal
- 2 State Code
- 3 English or Metric Reporting Units
- 4 County Code
- 5 Section Identification (ID)
- 6 Sample Panel? (yes/no)
- 7 Donut Panel? (yes/no)
- 8 State Control Field
- 9 Grouped Record? (yes/no)
- 10 LRS Identification

- 11 LRS Beginning Milepoint
- 12 LRS Ending Milepoint
- 13 Rural/Urban Designation
- 14 Urbanized Area Sampling Technique
- 15 Urbanized Area Code
- 16 NAAQS Nonattainment Area Code
- 17 Functional System Code
- 18 Generated Functional System Code
- 19 National Highway System
- 20 Planned Unbuilt Facility

- 21 Official Interstate Route Number
- 22 Route Signing
- 23 Route Signing Qualifier
- 24 Signed Route Number
- 25 Governmental Ownership
- 26 Special (funding) Systems
- 27 Type of Facility
- 28 Designated Truck Route/Parkway
- 29 Toll
- 30 Section Length

- 31 Donut area Sample Panel AADT Volume Group ID
- 32 Standard Sample Panel AADT Volume Group ID
- 33 AADT (value)
- 34 Number of Through Lanes
- 35 Measured Pavement Roughness
- 36 Pavement Condition
- 37 HOV Operations? (yes/no)
- 38 Surveillance by Real-time Electronics? (yes/no)
- 39 Ramp Metering? (yes/no)
- 40 Variable Message Signing? (yes/no)

- 41 Highway Advisory Radio? (yes/no)
- 42 Surveillance by Video? (yes/no)
- 43 Incident Management System?(yes/no)
- 44 Non-911 Cell Number Available? (yes/no)
- 45 Motorist Service Patrol? (yes/no)
- 46 In Vehicle Signing? (yes/no)

Sample Panels Only

- 47 Sample Number
- 48 Donut Area Sample Expansion Factor
- 49 Standard Sample Expansion Factor
- 50 Surface/Pavement Type

- 51 SN or D (of pavement)
- 52 General Climate Zone
- 53 Year of Surface Improvement
- 54 Lane Width
- 55 Access Control
- 56 Median Type
- 57 Median Width
- 58 Shoulder Type
- 59 Shoulder Width – right
- 60 Shoulder Width – left

- 61 Peak Parking
- 62 Is Widening Feasible?
- 63-68 Curves by Class
- 69 Horizontal Alignment Adequacy
- 70 Type of Terrain

- 71 Vertical Alignment Adequacy
- 72-77 Grades by Class
- 78 Percent Passing Sight Distance
- 79 Weighted Design Speed
- 80 Speed Limit

- 81 Percent Single Unit Trucks (peak daily)
- 82 Percent Single Unit Trucks (avg daily)
- 83 Percent Combination Unit Trucks (peak daily)
- 84 Percent Combination Unit Trucks (avg daily)
- 85 K Factor
- 86 Directional Factor
- 87 Peak Lanes
- 88 Turning Lanes/Bays, Left
- 89 Turning Lanes/Bays, Right
- 90 Prevailing Type of Signalization

- 91 Typical Peak Percent Green Time
- 92 Signals, at-grade intersections controlled by
- 93 Stop Signs, at-grade intersections controlled by
- 94 Other or No Controls, at-grade intersections controlled by
- 95 Peak Capacity
- 96 Volume/Service Flow (V/SF) Ratio
- 97 Future AADT
- 98 Year of Future AADT



Data Description for Bicycle/Pedestrian Related Parameters in HPMS

COLUMN NAME	HPMS DATA # (if applicable) or column heading from which entries are calculated	DATA DESCRIPTION
Street Name	NAME	The roadway name.
Mile Post	MP	The milepost of beginning point of the roadway section.
Section Length	Item 30 – Section Length (LENGTH)	This is the section length, in miles, as measured along the centerline of the roadway. On independently aligned, divided highways, centerline length may be reported as the average of the lengths of the directional roadways, measured along their centerlines.
From	SWTERM / SWO	<p>The data in the FROM column was derived from the SOUTHWEST TERMINATOR and SOUTHWEST OFFSET of the HPMS data. This information aids in the identification of the beginning point of the roadway section. The features identified are generally a town or city boundary, state border, milepost, a federal agency jurisdictional boundary, or a place such as a traffic interchange.</p> <p>The SWO (southwest offset) provides the distance, in miles, from the beginning point of the roadway section to the stated SWTERM feature.</p>
To	NWTERM / NWO	<p>The data in the TO column was derived from the NWTERM (Northwest Terminator) and NOW (Northwest Offset) of the HPMS data. This information aids in the identification of the ending point of the roadway section. The features identified are generally a town or city boundary, state border, milepost, a federal agency jurisdictional boundary, or a place such as a traffic interchange.</p> <p>The NWO (Northwest offset) provides the distance, in miles, from the ending point of the roadway section to the stated NWTERM feature.</p>



COLUMN NAME	HPMS DATA # (if applicable) or column heading from which entries are calculated	DATA DESCRIPTION
Functional Type	Item 17 – Functional System Code (FUNCCODE)	<p>This communicates the functional classification of the roadway. <i>Definitions of the highway functional systems can be found in Highway Functional Classification, Concepts, Criteria, and Procedures, FHWA, March 1989.</i> The data was originally reported numerically as shown in parentheses, and is presented as:.</p> <p>RURAL - (2): Principal Arterial – Other: Rural Arterial. (6): Minor Arterial: Minor Arterial (7): Major Collector: Rural Major Collector (8): Minor Collector: Rural Minor Collector (9): Local: Rural Local</p> <p>URBAN - (11) Principal Arterial – Interstate is Urban Interstate (12) Principal Arterial – Other Freeways & Expressways: Urban Freeway (14): Principal Arterial – Other: Urban Arterial (16): Minor Arterial: Urban Minor Arterial (17) –Minor Collector: Urban Collector (19)– Local: Urban Local</p>
Designated Truck Route	Item 28 – Designated Truck Route (TRUCKWAY)	This data identifies whether a section is on or off a truck route designated under Federal regulatory authority. The data is either YES, or NO. YES means that the route is part of a designated truck route under Federal authority in 23 CFR 658. NO means that the truck is not on a designated truck route.
AADT	Item 33 – Annual Average Daily Traffic (AADT)	For two-way facilities, this is the AADT for both directions, and the directional AADT if part of a one-way couplet or for a one-way street.
# Lanes	Item 34 – Number of Through Lanes	This is the number of through lanes, according to striping, if present, on multi-lane facilities, or according to traffic if no striping or only centerline striping is present.



COLUMN NAME	HPMS DATA # (if applicable) or column heading from which entries are calculated	DATA DESCRIPTION
Pavement Condition	Item 36 – Present Serviceability Rating (PSR)	<p>This item provides information on pavement condition on the selected roadway sections. This data was originally reported on a scale of 0.0 to 5.0. The following is summary of each PSR rating, with the numerical classification in parentheses:</p> <p>New or Nearly New: (4.0 to 5.0) Only new (or nearly new) superior pavements are likely to be smooth enough and distress free (sufficiently free of cracks and patches) to qualify for this category. Most pavements constructed or resurfaced during the data year would normally be rated in this category. .</p> <p>Little Deterioration: (3.0 to 4.0) Pavements in this category, although not quite as smooth as those described above, give a first class ride and exhibit few, if any, visible signs of surface deterioration. Flexible pavements may be beginning to show evidence of rutting and fine random cracks. Rigid pavements may be beginning to show evidence of slight surface deterioration, such as minor cracks and spalling.</p> <p>Noticeably Inferior: (2.0 - 3.0) The riding qualities of pavements in this category are noticeably inferior to those of new pavements, and may be barely tolerable for high-speed traffic. Surface defects of flexible pavements may include rutting, map cracking, and extensive patching. Rigid pavements in this group may have a few joint failures, faulting and/or cracking, and some pumping.</p> <p>Deteriorated: (1.0 - 2.0) Pavements in this category have deteriorated to such an extent that they affect the speed of free-flow traffic. Flexible pavement may have large potholes and deep cracks. Distress includes raveling, cracking, rutting and occurs over 50 percent of the surface. Rigid pavement distress includes joint spalling, patching, cracking, scaling, and may include pumping and faulting.</p>



COLUMN NAME	HPMS DATA # (if applicable) or column heading from which entries are calculated	DATA DESCRIPTION
Pavement Condition (continued)	Item 36 – Present Serviceability Rating (PSR) (continued)	<p>Extremely Deteriorated: (0.0 - 1.0) Pavements in this category are in an extremely deteriorated condition. The facility is passable only at reduced speeds, and with considerable ride discomfort. Large potholes and deep cracks exist. Distress occurs over 75 percent or more of the surface.</p>
Surface Pavement Type	Item 50 – Surface/Pavement Type (SURFACE)	<p>This item details the type of pavement surface on the roadway section. The pavement types were originally represented numerically as shown in parentheses:</p> <p>Unpaved: (1) Road is unpaved.</p> <p>Low Type: (2) Low type bituminous surface-treated—a bituminous surface course with or without a seal coat, the total compacted thickness of which is less than 25 millimeters (1 inch). Seal coats include those known as chip seals, drag seals, plant-mix seals, and rock asphalt seals.</p> <p>Intermediate Type: (3) Intermediate type mixed bituminous or bituminous penetration surface—a surface course 25 millimeters (1 inch) or greater and less than 178 millimeters (7 inches) in compacted thickness com-posed of gravel, stone, sand or similar material, and mixed with bituminous material under partial control as to grading and proportions or bound with bituminous penetration material.</p> <p>High Type Flexible: (4) High type flexible—mixed bituminous or bituminous penetration road on a flexible base with a combined surface and base thickness of 178 millimeters (7 inches) or more. Includes any bituminous concrete, sheet asphalt, or rock asphalt having a high load-bearing capacity. Includes any brick, stone, wood, or steel block pavement with or without a wearing surface of less than 25 millimeters (1 inch).</p>



COLUMN NAME	HPMS DATA # (if applicable) or column heading from which entries are calculated	DATA DESCRIPTION
Surface Pavement Type (continued)	Item 50 – Surface/Pavement Type (SURFACE) (continued)	<p>High type rigid: (5) Portland cement concrete (PCC) pavement with or without joints; with or with-out mesh or similar reinforcement. Includes continuously reinforced PCC pavement, PCC pavement over a PCC pavement, bonded, unbonded, or partially bonded, and PCC pavement over a bituminous pavement, either mixed or penetration.</p> <p>High Type Composite: (6) High type composite— mixed bituminous or bituminous penetration road on a rigid pavement with a combined surface and base thickness of 178 millimeters (7 inches) or more. Includes any bituminous concrete, sheet asphalt or rock asphalt overlay of rigid pavement that is greater than 25 millimeters (1 inch) of compacted bituminous material; otherwise coded as “5”.</p>
Lane Width	Item 54 – Lane Width (LANEWIDTH)	This item is a measure of the existing lane width, to the nearest foot, on a roadway section. This is recorded as to where the pavement/shoulder surface changes, or to the pavement lane striping if the should and pavement surface are the same, or according to traffic use if no striping or only centerline striping is present.
Shoulder Type	Item 58 – Shoulder Type (SHOULDER)	<p>This item provides information on the type of existing shoulders on the roadway section. If the shoulder changes back and forth in the section, the predominant type is recorded. If the left and right shoulders differ on a facility, the right shoulder is recorded. This data was originally numerically coded as shown in parentheses:</p> <p>None: (1) No shoulders or curbs exist.</p> <p>Surfaced: (2) Surfaced shoulder exists (bituminous concrete or Portland cement concrete surface).</p> <p>Stabilized: (3) Stabilized shoulder exists (stabilized gravel or other granular material with or without admixture).</p>



COLUMN NAME	HPMS DATA # (if applicable) or column heading from which entries are calculated	DATA DESCRIPTION
Shoulder Type (continued)	Item 58 – Shoulder Type (SHOULDER) (continued)	<p>Combination: (4) Combination shoulder exists (shoulder width has two or more surface types; for instance, part of the shoulder width is surfaced and a part of the width is earth, etc.).</p> <p>Earth: Earth shoulder exists.</p> <p>Barrier Curb: (6) Barrier curb exists; no shoulders in front of curb.</p>
Right Shoulder Width	Item 59 – Right Shoulder Width (SHOULDERR)	This item measures the existing shoulder width on a sample roadway section. Parking and bicycle lanes are not included in the measurement.
Left Shoulder Width	Item 60 – Left Shoulder Width (SHOULDERL)	This item measures the existing shoulder width on a sample roadway section. Parking and bicycle lanes are not included in the measurement.
Widening Feasibility	Item 62- Widening Feasibility (WIDENING)	<p>This item provides a measure of whether it is feasible to widen an existing section. Features such as large single family residences or office buildings, shopping centers and other large enterprises, severe terrain, cemeteries, wet lands, park land, or where otherwise widening would be cost or environmentally prohibitive. The data was originally numerically coded as shown in parentheses:</p> <ul style="list-style-type: none"> (1) No Widening is Feasible (2) Yes, Partial Lane (3) Yes, One Lane (4) Yes, Two Lanes (5) Yes, Three Lanes or More <p>For the purposes of this report, codes 2 through 5 were consolidated into one response, YES, while code 1 was changed to NO.</p>



COLUMN NAME	HPMS DATA # (if applicable) or column heading from which entries are calculated	DATA DESCRIPTION
Terrain	Item 70 – Type of Terrain (TERRAIN)	<p>This data provides information on the type of terrain through which the roadway section passes. The data was originally numerically coded as shown in parentheses:</p> <p>Urban: (0) Not Applicable; this is an Urban Section.</p> <p>Level: (1) Any combination of grades and horizontal or vertical alignment that permits heavy vehicles to maintain the same speed as passenger cars; this generally includes short grades of no more than 2 percent.</p> <p>Rolling (2): Any combination of grades and horizontal or vertical alignment that causes heavy vehicles to reduce their speeds substantially below those of passenger cars but that does not cause heavy vehicles to operate at crawl speeds for any significant length of time.</p> <p>Mountainous (3): Any combination of grades and horizontal or vertical alignment that causes heavy vehicles to operate at crawl speeds for significant distances or at frequent intervals.</p>
Speed Limit	Item 80 – Speed Limit (SPEEDLIMIT)	This item is the posted daytime speed limit on the section, in miles per hour.
% Trucks	Items 82 – Percent Average Daily Single Unit Trucks, and Item 84 – Percent Average Daily Combination Trucks	The data for this item was calculated by summing the Percent Average Daily Single Unit Trucks and the Percent Average Daily Combination Trucks. The data is recorded as a percentage of the AADT.
Volume/Service Flow Ratio	Item 96 – Volume/Service Flow Ratio (LOS)	This item is computed reflecting the peak hour congestion for the section, and is a function of the volume divided by the capacity of the roadway.
ROW Width	(ROWWIDTH)	This is the right-of-way of the roadway segment.
#RR Crossings	(RAILROADS)	



COLUMN NAME	HPMS DATA # (if applicable) or column heading from which entries are calculated	DATA DESCRIPTION
Bike Suitability		<p>This data was obtained from the ADOT Bike Suitability Table. The data was originally numerically coded as shown in parentheses:</p> <p>N/A – No Data Recorded No Data (0) – Recorded as No Data Available More Suitable (1) – This route is more suitable for bicycles. Less Suitable (2) – This route is less suitable for bicycles. Prohibited (3) – Bicycles are prohibited.</p>