

# Bohannon Huston

September 26, 2017

Mr. Richard Meadows  
Technical Planning Manager  
Infrastructure Planning Geo Resources Department  
Bernalillo County Public Works  
Building N  
2400 Broadway, SE  
Albuquerque, New Mexico 87102

Re: 2025 and 2040 Transportation Projects Based on Santolina Development Scenario

Dear Mr. Meadows:

This letter is in response to the August 30, 2017 Board of County Commissioners ("BCC") public hearing and approval of the Planned Communities Santolina Level B.I Master Plan. This letter addresses Condition 1 from the Notification of Decision dated September 1, 2017, which states: *"The applicant/agent will provide to Public Works a list of 2025 and 2040 transportation projects identifying Level B.I improvements to be built and the share of private, local and regional public funding for each project within 30 days of BCC approval."*

## SUMMARY

The Santolina Level B.I transportation projects consist of project and system infrastructure. Pursuant to the executed Santolina Level A Development Agreement between the County and the Owner dated August 10, 2015 and recorded as Doc# 2015073125 ("Level A Development Agreement") infrastructure that solely benefits the project is defined as ("Project Infrastructure") and infrastructure that benefits the Project as well as other real property is defined as ("System Infrastructure"). Included in this letter is the list of potential 2025 and 2040 Transportation System Infrastructure Projects ("System Infrastructure Projects"). Pursuant to the terms of the Level A Development Agreement Project Infrastructure shall be the responsibility of the Owner. Since actual development locations and intensities are not currently finalized, these will be identified in future Level C submittals, it is not appropriate to identify specific Project Infrastructure transportation costs and timeframes at this time.

The listing of System Infrastructure Projects included in this letter are preliminary and have been based on the most current available information and are subject to change. It is our opinion that this System Infrastructure Projects list best serves the County when applied to the listing of the Metropolitan Transportation Plan ("MTP") projects as development of the Santolina Level B.I progresses. The inclusion of the System Infrastructure Projects into *Appendix A, Project Listing of the Futures 2040 MTP* or future MTP's should coincide with the next MTP update and the update to the regional socioeconomic forecasts and subsequently reviewed on a regular basis (every 3-5 years). Doing so would ensure that System Infrastructure Projects are allocated properly and follows the terms of the approved Level A Development Agreement which details the allocation of Project Infrastructure and System Infrastructure, matches the phasing of development, allows use of the most up-to-date data estimates, roadway design standards, and MRCOG projections of roadway, entitled lands development and population growth.

Engineering ▲

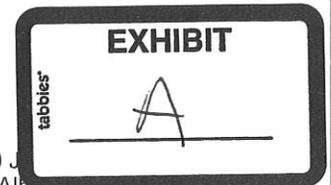
Spatial Data ▲

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On September 13, 2016, a meeting with the Mid-Region Council of Governments (“MRCOG”) staff, County staff and the Owner discussed funding options for the System Infrastructure Projects. It was determined during the meeting that MRCOG’s staff would consider an additional source of funding classification identified in *Appendix A, Project Listing* of the *Futures 2040 MTP* for Santolina project 719.0 (Santolina Development of Arterials and Collectors – 2025 Implementation) and project 719.1 (Santolina Development of Arterials and Collectors – 2040 Implementation). The revised classification would read, **“Private with the possibility of public funding per the Santolina Level A Development Agreement.”** The reclassification would reflect the terms of the existing approved Santolina Level A Development Agreement with the County which relates to Project Infrastructure and System Infrastructure, and other public funding sources which may be available at that time, including, but not limited to: Impact Fees, public improvement districts (“PIDs”), and tax increment development districts (“TIDDs”). The reclassification is also consistent with the classification utilized for the Mesa del Sol master plan development infrastructure projects.

The reclassification will also benefit the County by allowing the allocation of the current transportation infrastructure budget towards the County’s existing proposed projects without the impact from adding specific Santolina Infrastructure projects whose project timelines and ultimate funding have yet to be determined. Once the planning for Santolina becomes more definitive, the System Infrastructure Projects identified in this letter (or future evaluations), and identified in the *MTP Appendix A, Project Listing* as projects 719.0 and 719.1, will be clarified to identify funding amounts and sources as an update to this letter. Additional detail and specific terms to the funding sources would be provided through approved agreements in the case of Impact Fees, PIDs, TIDDs or other public sources that would be available at that time and would be added to the STIP or MTP as the specific transportation projects are identified.

The balance of this letter provides the background for these conclusions.

## **SYSTEM INFRASTRUCTURE DEVELOPMENT NEEDS BACKGROUND**

The System Infrastructure Projects listed herein are based on the *2016 Level B.I Transportation Master Plan*, which utilizes the 2016 Santolina Level B.I projected development scenario submitted by the Applicant. It is important to note that the proposed development in the 2016 Level B.I Santolina scenario does not coincide with the level of development in the Santolina Master Plan Area in the officially adopted MRCOG *Futures 2040 MTP* Trend scenario. This is due to the fact that in order to evaluate the impacts and transportation needs for the Master Plan Area, the *2016 Santolina Transportation Master Plan* utilized land use assumptions which re-allocated development to the Santolina Master Plan Area, as described in the *2016 Level B.I Transportation Master Plan*. However, regional control totals for population and employment remain consistent between the two land use scenarios; only the location of the development was adjusted to allow for the evaluation of the demands for Santolina in the Master Plan Area.

The following table, taken from *Appendix T-1 Travel Demand Model Socioeconomic Forecast of the 2016 Santolina Level B.I Transportation Master Plan*. It compares the socioeconomic forecast between the MRCOG *Futures 2040 MTP* and the Santolina scenario which was utilized to develop the System Infrastructure Projects requirements in this letter. As shown in the table below, the MRCOG *Futures 2040 MTP* has a much lower forecast for the Master Plan area than the Santolina scenario.

<b>Table 1 – Comparing Santolina Level B.I Scenario Projections with the MTP</b>					
<b>Year</b>	<b>DASZ</b>	<b>Household Population</b>		<b>Employment</b>	
		<b>MTP</b>	<b>Santolina</b>	<b>MTP</b>	<b>Santolina</b>
<b>2025</b>	5701	2,161	2,574	70	486
	5741	711	5,826	15	2,667
	5761	126	0	10	0
	5762	1,396	0	292	0
	5911	387	6,920	830	5,525
	<b>Total</b>	<b>4,781</b>	<b>15,320</b>	<b>1,217</b>	<b>8,678</b>
<b>2040</b>	5701	3,972	7,057	130	486
	5741	2,716	10,768	56	3,171
	5761	3,150	13,284	71	651
	5762	2,055	2,395	293	135
	5911	2,139	14,612	1,068	28,367
	<b>Total</b>	<b>14,032</b>	<b>48,116</b>	<b>1,618</b>	<b>32,810</b>

The MRCOG *Futures 2040 MTP* socioeconomic forecast is the adopted land use forecast for the region, and provides an estimate of where future development may occur. The Santolina scenario is an alternate scenario of projected land use based on the planned development of Santolina. Roadway projects in the *Futures 2040 MTP Appendix A, Project Listing*, identify the projects for the MRCOG Trend scenario forecast. As the MTP projects listing is part of the adopted MTP, it is inappropriate to include roadway projects in the MTP project listing for development that has not been included in the adopted socioeconomic forecast but MRCOG should adjust their future socioeconomic forecast to take into consideration the Santolina entitlements and water situation compared to other growth areas in the MTP. However, prudent planning suggests the Applicant, County and MRCOG should identify likely projects that would be required if the Master Plan area were to be developed as proposed by the Applicant. This letter serves as a guide to the County for the potential System Infrastructure Projects that would be needed when Santolina develops at an accelerated pace greater than anticipated by the MRCOG forecast. If Santolina were to develop as proposed by the Applicant, the System Infrastructure Projects identified in this letter would be required.

As such, the System Infrastructure Projects listing should not be included in *Appendix A, Project Listing* of the *Futures 2040 MTP*, or future MTP's, until the earlier of (i) development of Santolina commences or (ii) the next socioeconomic forecast update. Then System Infrastructure Projects requirements should be reviewed as development of Santolina commences and/or on a regular basis (every 3-5 years), as the MTP's are updated and the regional socioeconomic forecasts are revised, in order to keep the System Infrastructure Projects requirements up-to-date and appropriate for future development expectations. It is anticipated, that with the approval of entitlements for Santolina, and expected water and sewer development agreement with the Water Authority, Santolina will accommodate a larger share of future growth than currently forecast by MRCOG in future MTP's.

## **METHODOLOGY TO DETERMINE POTENTIAL SYSTEM INFRASTRUCTURE PROJECTS**

The System Infrastructure Projects identified in the letter were evaluated and documented in the *2016 Santolina Level B.I Master Plan On-Site and Off-Site Locations of Interest Traffic Analysis* dated March 31, 2016. The locations required to be evaluated in the *Locations of Interest* report were identified by Bernalillo County Public Works Staff based on the review of the *2016 Level B.I Santolina Transportation Master Plan* which compared the operational performance of the Santolina scenario to the MRCOG *Futures 2040 MTP* Trend scenario roadway networks.

To determine the locations to be evaluated, the *Futures 2040 MTP Appendix A, Project Listing* was utilized as follows:

- If the *Appendix A Project Listing* had no improvements identified at the location, the existing laneage was used for the analysis.
- If the *Appendix A Project Listing* identified improvements at the studied locations, the improvements identified in *Appendix A* were used as the starting point in the analysis of additional improvements that would be required by the Santolina scenario.
- For locations where the *2016 Level B.I Santolina Transportation Master Plan* found the roadway links approaching the intersections were over capacity, these links were evaluated to determine the number of additional lanes that were required to achieve acceptable levels of service.

The above approach allows the additional roadway improvements that would be required by the Santolina scenario, which exceed that required by the *Futures 2040 MTP* Trend scenario to be identified.

The estimates of probable construction cost were developed using 2014 NMDOT unit prices. The estimates were based on conceptual layouts, and included the required lengths for turn bays, additional through lanes (if required), and signalization. Additional costs were added to the traffic signals to account for ITS and adaptive signal timing equipment. It was also assumed that each intersection would require a new traffic signal to accommodate the ITS and adaptive signal equipment.

The provided System Infrastructure Projects listing and allocation of probable construction costs includes gross receipts tax and a 30% contingency factor, is for informational purposes only, and is subject to change. The actual allocation of System Infrastructure Projects costs shall be governed by the terms of the Level A Development Agreement. The conceptual estimates for the roadway improvements and typical roadway sections are included in *Appendix D* of the *2016 Santolina Level B Master Plan On-Site and Off-Site Locations of Interest Traffic Analysis* report. Please refer to the *2016 Santolina Level B Master Plan On-Site and Off-Site Locations of Interest Traffic Analysis* dated March 31, 2016, for complete documentation of the traffic analysis and development of anticipated construction costs for each improvement

**LISTING OF PROJECTS**

The list of required System Infrastructure Projects based on the 2016 Level B.I Santolina Transportation Master Plan development scenario is shown below, with detail on the following pages in the Enclosure.

<b>Table 2 - Required System Infrastructure Projects for Santolina Level B.I based on the Santolina Development Scenario</b>				
<b>Location and Year of System Infrastructure Projects</b>	<b>Estimated Construction Cost of Improvements (1)</b>	<b>Santolina's Contribution of Traffic (1)</b>	<b>Santolina's Share of Cost (1)</b>	<b>County's Share of Cost (1)</b>
<b>Year 2025</b>				
Atrisco Vista Boulevard and WB I-40 Ramp	\$630,460	66%	\$416,104	\$214,356
Atrisco Vista Boulevard and EB I-40 Ramp	\$664,530	76%	\$505,043	\$159,487
Atrisco Vista Boulevard and Central Avenue	\$1,292,000	93%	\$1,201,560	\$90,440
<b>Year 2040</b>				
118th Street and Central Avenue	\$1,272,000	68%	\$864,960	\$407,040
106th Street and Central	\$1,602,000	43%	\$688,860	\$913,140
118th Street and Dennis Chavez	\$1,409,000	84%	\$1,183,560	\$225,440
118th Street and Gibson	\$2,863,000	73%	\$2,089,990	\$773,010
118th Street and Gun Club	\$551,000	91%	\$501,410	\$49,590
118th Street Interchange with I-40	\$25,000,000	43%	\$10,750,000	\$14,250,000
98th Street and Central	\$1,172,000	30%	\$351,600	\$820,400
Coors and Gun Club	\$1,163,000	18%	\$209,340	\$953,660
Dennis Chavez and Unser	\$1,485,000	49%	\$727,650	\$757,350
Dennis Chavez/Rio Bravo and Coors	\$1,332,000	28%	\$372,960	\$959,040
Eastbound I-40 Between 118th Street and Unser	\$2,960,000	49%	\$1,450,400	\$1,509,600
Isleta and Gun Club	\$523,000	5%	\$26,150	\$496,850
Paseo del Volcan Interchange with I-40	\$15,400,000	90%	\$13,860,000	\$1,540,000
Rio Bravo and Broadway	\$1,569,000	14%	\$219,660	\$1,349,340
Rio Bravo and Isleta	\$2,319,000	17%	\$394,230	\$1,924,770
Unser and Gun Club	\$1,444,000	47%	\$678,680	\$765,320
<b>Total Off-Site Contribution</b>	<b>\$64,650,990</b>		<b>\$35,041,756</b>	<b>\$26,649,234</b>

**FOOTNOTE:**

(1) Estimate. Subject to change.

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The estimated summary of costs required by 2025 and 2040 is shown in the table below.

Table 3 – Summary of Estimated System Infrastructure Projects Costs for Santolina Scenario		
Year	Santolina Estimated Share of Cost (1)	County's Estimated Share of Cost (1)
2025	\$921,146	\$373,843
2040	\$34,120,610	\$26,275,390
Total	\$35,041,756	\$26,649,233

**FOOTNOTE:**  
(1) Subject to change.

If you have any questions or comments regarding this submittal, please contact me at [ewrage@bhinc.com](mailto:ewrage@bhinc.com), or 505-798-7859.

Sincerely,

  
Eric J. Wrage, PE, PTOE  
Senior Project Manager  
Traffic and Transportation

EJW/jma

cc: Jeff Garrett, WALH  
Matt Look, WALH  
James Topmiller, BHI



Required System Infrastructure Improvements for Santolina based on Santolina Development Scenario						
Location of System Infrastructure	Potential Required Improvements	Estimated Construction Cost of Improvements	Santolina's Estimated Contribution of Traffic to Total	Santolina's Estimated Share of Cost	County's Estimated Share of Cost	
Atrisco Vista Boulevard and WB I-40 Ramp 2025	Signalize Re-stripe to allow 2 WB Off Lefts	\$630,460	66%	\$416,104	\$214,356	
Atrisco Vista Boulevard and EB I-40 Ramp 2025	Re-stripe Northbound approach to allow 2 NB Through (1 is shared Through/Right) 1 NB Right	\$664,530	76%	\$505,043	\$159,487	
Atrisco Vista Boulevard and Central Avenue 2040	Signalize 1 EB Left, 2 EB Through, 1 EB Right 3 WB Left, 2 WB Through, 1 WB Right 1 NB Left, 3 NB Through, 2 NB Right 2 SB Left, 3 SB Through, 1 SB Right	\$1,292,000	93%	\$1,201,560	\$90,440	
118th Street and Central Avenue 2040	Signalize 2 EB Left, 2 EB Through, 1 EB Right 1 WB Left, 2 WB Through, 1 WB Right 1 NB Left, 2 NB Through (1 shared Right) 1 SB Left, 2 SB Thru, 1 SB Right	\$1,272,000	68%	\$864,960	\$407,040	
118th Street interchange with I-40 2040	Signalize Construct interchange	\$25,000,000	43%	\$10,750,000	\$14,250,000	
Paseo del Volcan Interchange with I-40 2040	Included as MTP Project 526.7 Construct interchange	\$15,400,000	90%	\$13,860,000	\$1,540,000	
118th Street and Gibson 2040	Included as MTP Project 719.2 2 EB Left, 3 EB Through, 1 EB Right 1 WB Left, 3 WB Through (1 shared Right) 2 NB Left, 2 NB Through (1 shared Right) 1 SB Left, 2 SB Through (1 shared Right), + 1 SB Right	\$2,863,000	73%	\$2,089,990	\$773,010	
118th Street and Dennis Chavez 2040	Signalize 1 EB Left, 3 EB Through, 1 EB Right 1 WB Left, 3 WB Through, 1 WB Right 2 NB Left, 1 NB Through, 1 NB Right 1 SB Left, 1 SB Through, 1 SB Right	\$1,409,000	84%	\$1,183,560	\$225,440	
118th Street and Gun Club 2040	Signalize 1 WB Left, 1 WB Through/Right 1 NB Through, 1 NB Right 1 SB Left, 1 SB Through	\$551,000	91%	\$501,410	\$49,590	
Dennis Chavez and Unser 2040	Signalize 1 EB Left, 2 EB Through, 1 EB Right 1 WB Left, 2 WB Through, 1 WB Right 1 NB Left, 2 NB Through, 1 NB Right 1 SB Left, 2 SB Through, 1 SB Right	\$1,485,000	49%	\$727,650	\$757,350	
	New Signal					

Required System Infrastructure Improvements for Santolina based on Santolina Development Scenario					
Location of System Infrastructure	Potential Required Improvements	Estimated Construction Cost of Improvements	Santolina's Estimated Contribution of Traffic to Total	Santolina's Estimated Share of Cost	County's Estimated Share of Cost
Dennis Chavez/Rio Bravo and Coors 2040	3 EB Left, 2 EB Through, 1 EB Right 3 WB Left, 2 WB Through, 1 WB Right 2 NB Left, 3 NB Through, 1 NB Right 2 SB Left, 3 SB Through, 1 SB Right New Signal	\$1,332,000	28%	\$372,960	\$959,040
Rio Bravo and Isleta 2040	2 EB Left, 3 EB Through, 1 EB Right 2 WB Left, 3 WB Through, 2 WB Right 2 NB Left, 2 NB Through, 2 NB Right 2 SB Left, 2 SB Through, 1 SB Right New Signal	\$2,319,000	17%	\$394,230	\$1,924,770
Unser and Gun Club 2040	2 EB Left, 1 EB Through/Right 1 WB Left, 1 WB Through/Right 1 NB Left, 2 NB Through/Right 1 SB Left, 1 SB Through, 1 SB Right Signalize	\$1,444,000	47%	\$678,680	\$765,320
Coors and Gun Club 2040	1 EB Left, 1 EB Through/Right 1 WB Left, 1 WB Through, 1 WB Right 1 NB Left, 3 NB Through, 1 NB Right 1 SB Left, 3 SB Through, 1 SB Right New Signal	\$1,163,000	18%	\$209,340	\$953,660
Isleta and Gun Club 2040	1 EB Left, 1 EB Right 1 NB Left, 1 NB Through 1 SB Through/Right New Signal	\$523,000	5%	\$26,150	\$496,850
Rio Bravo and Broadway 2040	3 EB Left, 3 EB Through, 2 EB Right 2 WB Left, 3 WB Through, 2 WB Right 3 NB Left, 3 NB Through, 1 NB Right 2 SB Left, 3 SB Through, 2 SB Right New Signal	\$1,569,000	14%	\$219,660	\$1,349,340
98th Street and Central 2040	2 EB Left, 2 EB Through (1 shared EB Right) 2 WB Left, 2 WB Through, 1 WB Right 2 NB Left, 2 NB Through (1 shared Right) 2 SB Left, 2 SB Through, 1 SB Right New Signal	\$1,172,000	30%	\$351,600	\$820,400
106th Street and Central 2040	2 EB Left, 2 EB Through, 1 EB Right 2 WB Left, 2 WB Through, 1 WB Right 1 NB Left, 1 NB Through, 1 NB Right 1 SB Left, 1 SB Through, 1 SB Right Signalize	\$1,602,000	43%	\$688,860	\$913,140
Eastbound I-40 Between 118th Street and Unser 2040	Widen 1 lane on the interstate for one mile	\$2,960,000	49%	\$1,450,400	\$1,509,600
<b>Total Off-Site Contribution</b>		<b>\$64,650,990</b>		<b>\$35,041,756</b>	<b>\$26,649,234</b>