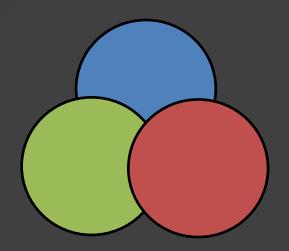
# Understanding the Developer's Perspective and Creating a Multi-Modal Development Review Process

NACTO – Designing Cities
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# Understanding the Development Process

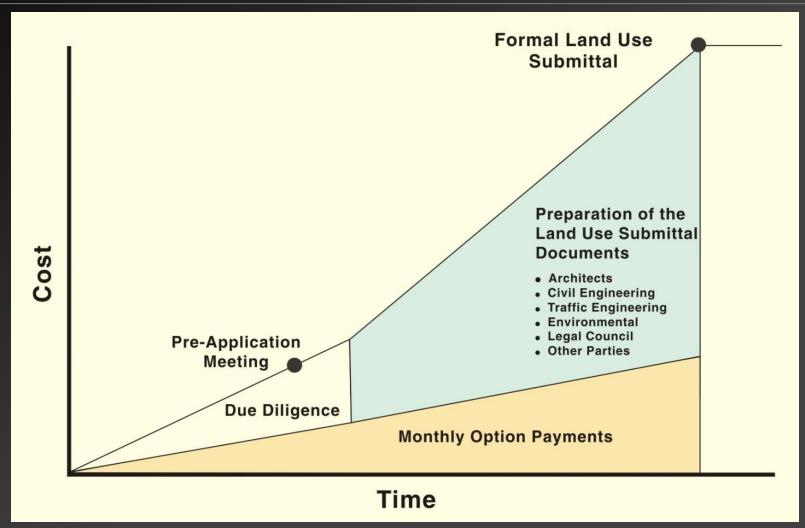
Does the Developer
Typically Own the
Property at the
Time of a Pre-App
Conference?

What is an Option?

What is a Pro Forma?



# The Importance of Time and Certainty



# **Development Review Processes**

Do Local Agencies and Developers Desire Certainty?

Can We Provide More Certainty? Will a
Developer
Pay for
Certainty?



# Traditional LOS-Based Development Review Approach

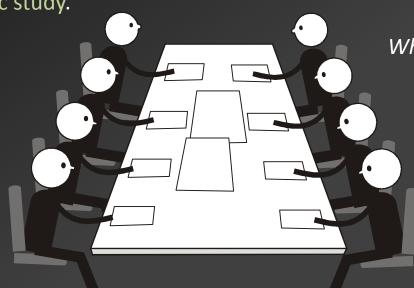




# Traditional Vehicular LOS-Based Development Review Process

You need to do a traffic study.

By the way, please study impacts to alternative modes.



Do you have TIA standards?

What intersections?

What time periods?

What happens if we can't mitigate?



# The Land of Uncertainty (Existing)



# The Land of Uncertainty (Background w/o site)

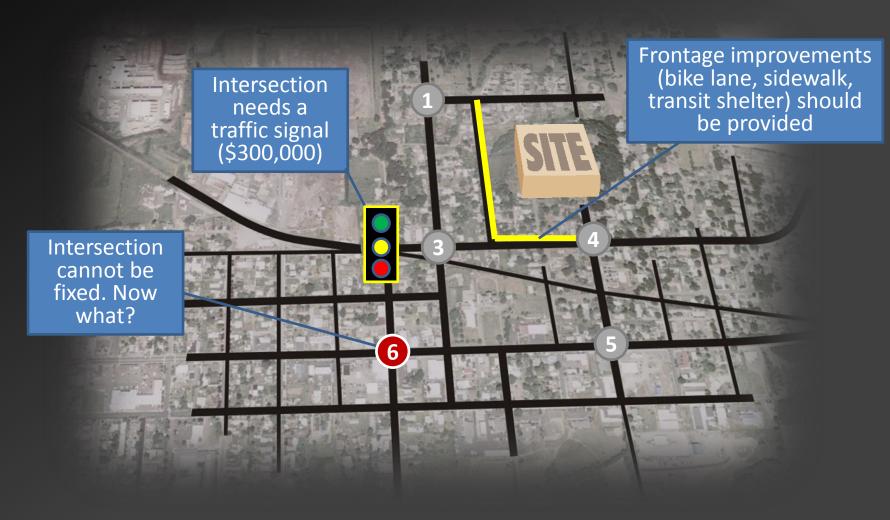




# The Land of Uncertainty (w/site)



# The Land of Uncertainty (TIA Findings)



#### The Exactions are Made



#### The Results

**Agency Problems:** 

Nollan/Dolan
Compromise/Jobs

**Developer Problem:** 

\$1,200,000 wasn't in Pro Forma

**Collective Problems:**Level of
Certainty?

**Ability to Attract Jobs?** 

Return on Transportation Investment?



#### Other Flaws with Vehicular LOS Based Regulations

#### Unintended Consequences

Sprawl, Low Densities, etc.

#### Wider Roadways

- Accommodating and facilitating more automobiles
- Creating longer crossings for pedestrians and bicyclists

#### System Improvements are...

- Piecemeal, Isolated
- Conducted unsystematically
- Difficulty in Obtaining Non-Vehicular Improvements
  - Creating a Nexus to Development





# Where Would You Make Transportation Investments?





# Where Would You Make Transportation Investments?



# Is There An Alternative Approach?

Understand
Alternative
Performance
Measures

Explore
System- vs.
IntersectionBased
Approaches

Understand the Value of Certainty



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• 100 Percent bicycle trips connected	Changes in total value of exports and imports     Crash Rates*     Population and/or Employment Density     Resiliency of the Network     Transit Productivity	Congestion Duration (Hours of Congestion)     Congestion Extent     Non-residential Intensity     System Completeness     System Completeness     System Completeness     System Completeness     System Completeness	Shading indicates	s top candidate measures for testing.
Accessibility to Freight Network     Accessibility to Freight Terminals     Non-Recurring Delay     Passengers per transit vehicle mile     Percent nodes connected     Population and employment within X miles of a transit stop served by at least X vehicles per day*     Ride Quality     Transit Reliability     Work Accessibility	6 Accessibility to Frequent Transit Service     14 Average number of transfers     45 Crash Frequency     53 Destination Travel Times     54 Destination Travel Times     71 Labor Force Accessibility     73 Land Use Mix/Balance     85 Multiple Route Choices     95 Off-peak transit availability     152 Transportation Accessibility Index     Vehicle Hours of Delay (VHD)*	Affordability     Connectivity: Intersections per linear-mile     Connectivity: Intersections per square mile*     Connectivity: Network locations without dead ends*     Failure/On-Time Measures     Misery Index     On-Time Arrivals     Skew Statistic	Adjacent Sites with Connectivity     81 Mode choice availability     107 Person Throughput     117 Queues	163+ Performan Measure
11 Air Quality 17 Average Trip Length 18 Average Trip Length 24 Bike Storage Facility Utilization 25 Buffer Index 28 Change in Employment Density 29 Change in Population Density 31 Clean Air 35 Congested Traffic (percent) 36 Congestion 40 Cost of Delay to Economy 41 Creeway Lane Miles with ITS 45 Fuel Consumption per VMT or PMT 47 Lives saved due to active transportation 48 MPO Location with Low VMT 49 Number of violations of weight restrictions 40 Person Hours of Travel (PHT) 41 Population within 45 minutes of work and home 419 Reduced incidence of disease due to active transportation 410 Relative Land Value Change 412 Retail Activity 413 Speed Consistency 4141 Tons of Pollutants Generated	2 95th Percentile Travel Time 51 Demand to Capacity Ratio* 61 Excess Proportions of Specific Crash Types 70 Jobs Housing Balance 79 Miles of bicycle facilities* 110 Planning Time Index 118 Recurring Delay 1133 Speed suitability 1151 Transit Supply 1155 User Costs 1157 Vehicle Hours Traveled (VMT) / VMT percapita*	Accessibility to Transit     Connectivity: Link to node ratio     Connectivity: Road Density*     Expected Average Crash Frequency with Empirical Bayes Adjustment     Mode Share*     Road Share*     Road Natural, Cultural, Bullit, and Resources at Risk     Pedestrian Crossings Completeness     Percent Effective Network     Percent of Transportation Projects that Impact     High Value Habitat Areas     Cuality of the Travel Environment     Transit Access*     Transit Access*     Transit Frequency	Average Speed     S7 Equivalent Property Damage Only Average Crash Frequency with EB Adjustment     S8 Excess Expected Average Crash Frequency with Empirical Bayes Adjustment     S9 Excess Predicted Average Crash Frequency Using Method of Moments     60 Excess Predicted Average Crash Frequency Using Safety Performance Functions     102 Percent Miles Bicycle Accommodation (bicycle coverage)*	Bicycle Level of Traffic Stress     Critical Movement Delay     Level of Service (LOS)     Level of Service of Safety (LOSS)     Multi-Modal Level of Service (LOS)     121 Relative Severity Index     129 Sidewalk Coverage     160 Volume to Capacity (v/c)
13 Average Incident Clearance Times     16 Average transit travel time; travel time reliability     31 Changes in productivity from increased connectivity     52 Designated High-Priority Locations     09 Overweight permits     104 Percent of Residential Areas within a mile of an elementary school     142 Total Freeway lane-Miles     161 Waiting Time	Changes in transportation costs by industry     1    Number of jobs associated with a plan or project     2    Number of residents displaced by a transportation project     3    Voff/On Street Parking V/C     135    Street connectivity     150    Transit Station Parking V/C	10 Agricultural land conservation     19 Bicycle access to destinations     20 Bicycle access to schools/employments     22 Bicycle Network     25 Bike/ Pedestrian Route Directness     30 Changes in employment by industry and wage category     67 Hours of Service     68 House and jobs proximity     176 Lifecycle Costs     128 Share of funding that is new or recycled     143 Total Revenues     154 Travel Time Ratio	1 80th Percentile Travel Time Index 23 Bicycle storage 27 Capital Costs 55 Driveway Density 72 Land Consumption 87 Nearby Neighborhood Assets 126 Seat Capacity 153 Travel Time* 162 Walkable streets	Accessibility to Destinations/Daily Needs*     49    Crosswalk spacing*     69    Infill Sites     127    Shade and Shelter     131    Spatial enclosure
		Highway Runoff     88 Noise Impacts     108 Person Travel Time     115 Projected Transit Ridership     122 Residents Impacted by Noise     336 Street Layout	Cocal Traffic Diversion     Physically Permeable Frontage     Hap Project location type     Transit Service Density     Sissally Active Frontage	12 Auto Trips Generated     134 Square Feet of Paths/Sidewalks, Bike Lanes, and Roadways

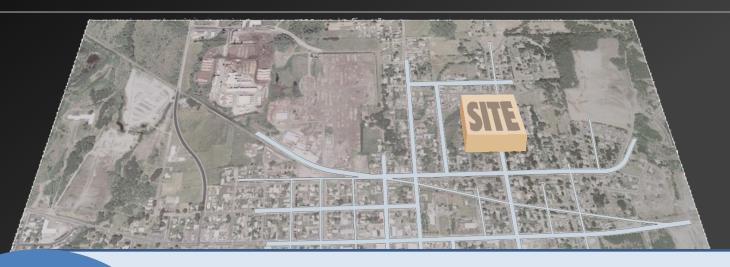
**Usefulness for Development Review** 

(Sum of comparison and near-term standard or threshold rating)

\* Measures currently proposed in the Washington County TSP, including measures that track progress towards regional goals and measures to be used within specific study areas.



# Case Study



Understand
Alternative
Performance
Measures

Identification, Monetization, & Prioritization of System Improvements

- HSM Crash Modification Factors
- System Completeness / Bicycle Level of Stress
- Travel Time Reliability

# Case Study



Explore
System- vs.
IntersectionBased
Approaches

Introduces a System-Based Development Review Approach (No TIAs)

- Developers Submit Multimodal Safety & Circulation Assessments Only
- Requires Only Off-Site Safety Mitigation (or Fee) & Frontage Improvements

# Case Study



Understand the Value of Certainty

**Prioritizes Certainty and Reduces Risk** 

- Converts Transportation System Fees to Person-Based Trips
- Increased Flexibility and Revenues
- Manages Transportation Investments
- Allows Higher Density



#### An Alternative Result

- Private Investment is more systematic and reflective of community values
  - Used to fill-in sidewalk gaps
  - Used to construct buffered and protected bicycle lanes
  - Set aside for larger multimodal projects (e.g., bike share program, multiuse paths, transit stop improvements)
  - Fund traditional vehicular capacity improvements
- Higher Level of Certainty for Developers
  - Attracts Investment and Jobs
  - Willingness to Pay Higher System Fees in Exchange for Higher Certainty
- Higher Level of Control and Flexibility for Agencies
  - Increases the Return on Investment and Lowers Cost/Risk



# The End

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