IMPLEMENTATION PLAN

INTRODUCTION

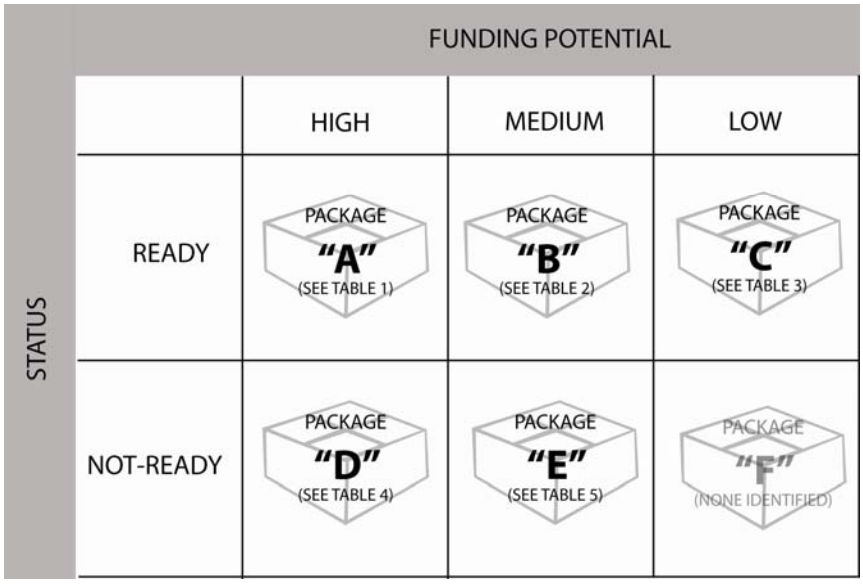
The Implementation Plan is intended to provide the City of Berkeley a framework to define the future steps for the West Berkeley Circulation Master Plan (WBCMP). Since the objective of the project was to develop a current list of network improvements and a living tool to monitor and update conditions in the future, this section contains two parts:

1. Packaging and phasing plans for the identified project improvements; and
2. The intended use of the WBCMP model.

PROJECT PACKAGES

Six packages of projects are outlined that are compiled from the projects identified in the project improvement section of the report as "high priority". These packages are identified based on the status of the project (ready or not ready) and the estimated funding potential for that project. This is shown below in Figure 1

Figure 1: Assignment of Project Packages



Ready projects are defined as those projects that generally meet the following criteria:

- Fully supported by all identified stakeholders;
- No significant design or pre-construction work needed; and
- Qualify for categorical exemption (CE) from environmental review.

Funding potential is assigned based on the total opportunities for funding and Berkeley/Redevelopment's likelihood of receiving that funding. Projects may be in competition for eligible funds with other projects on

the list, thus reducing the likelihood that multiple projects would be funded under the same source. This assessment does not take into account limitations of funds resulting from competing projects.

PACKAGE DESCRIPTIONS

The following packages of projects include detailed aspects of the projects related to the goal of implementation. These include:

- The project status as defined above (ready vs. not ready);
- The lead agency responsible for moving the project forward;
- Eligibility for categorical exclusion; and
- Next steps toward achieving a "ready" designation on the status or funding side and a general strategy to phase in the project amongst all other improvements in the list.

Although not formally ranked between modes, the high priority projects included within each package have a rank within each mode. The ranking column shown in the following tables indicates the primary mode which the project impacts and the rank within that mode relative to all other projects identified in the project improvement section of the report.

Package A (Ready, High Funding Potential)

Phase: *1 (2009-2011)*

Package A projects have the ability to be implemented in the next one-two years, depending upon Citywide priorities. Many of these projects are eligible for a categorical exemption and already have funding sources identified. As a percentage of total cost of the "priority projects", Package A accounts for 2.2% of the total capital cost and 28.5% of the total operating and maintenance costs. Table 1 shows a detailed summary of each project including the rank, lead agency and identified next steps.

Package B (Ready, Medium Funding Potential)

Phase: *2 (2009-2015)*

As with Package A, Package B projects have the ability to be implemented in the next one-two years, but identifying and securing of funds is anticipated to take slightly longer. Most projects will qualify for a categorical exemption during the environmental review process while others will need further environmental work. As a percentage of total cost of the "priority projects", Package B accounts for 1.9% of the total capital cost and 16.1% of the total operating and maintenance costs. Table 2 shows a detailed summary of each project including the rank, lead agency and identified next steps.

Table 1: Package A (Ready, High Funding Potential)

Rank	Project Description	Estimated Capital Cost	Probability of Funding	Project Status	Lead Agency	Eligible for Env. CE*	Next Steps
T17	Extend Route 19 to Downtown (all day) and improve frequencies to 20 minutes	$ 800,000	High	Ready	AC Transit	Yes	Encourage AC Transit to extend service and work with residents to address community concerns.
P1	Improve pedestrian crossings along University between 6th and 10th Streets by adding sidewalk bulbs, ADA compliant pedestrian refuges, directional curb ramps, truncated domes, signal countdown heads, audible crosswalks and improved crossing times where appropriate and needed	$ 400,000	High	Ready	Trans.	Yes	Coordination between Office of Transportation and Public Works to add project to University Avenue restriping currently on the City's FY09 repaving plan. Final design work and striping plans are likely needed.
P2	Improve pedestrian crossings along San Pablo at Gilman, Cedar, University, Dwight and Ashby to include directional pedestrian curb ramps	$ 25,000	High	Ready	Caltrans	Yes	Work with Caltrans to identify proper funding source and need to upgrade crossings.
P3	Remove pedestrian actuation from controller at University and San Pablo and make pedestrian walk phase with audible signal automatic on all legs	$ 1,000	High	Ready	Trans.	Yes	Coordinate with ACCMA to identify any conflicts with the current signalization coordination on San Pablo.
P4	Improve pedestrian crossings along Gilman between 5th and 10th to include pavement striping, perpendicular curb ramps and truncated domes where appropriate and needed	$ 25,000	High	Ready	Trans	Yes	Basic design should be completed by Office of Transportation and coordinated with Public Works to have placed on capital list.
P9	Install audible signals along San Pablo at Gilman, Cedar, Delaware, Allston, Dwight, Grayson and Ashby and at 6th and Hearst	$ 16,000	High	Ready	Caltrans	Yes	Work with Caltrans to identify proper funding source and need to upgrade crossings.

** Env. CE (Environmental Categorical Exclusion). Eligibility is estimated, formal checklist must be complete by City to determine qualification status.*

Table 2: Package B (Ready, Medium Funding Potential)

Rank	Project Description	Estimated Capital Cost	Probability of Funding	Project Status	Lead Agency	Eligible for Env. CE*	Next Steps
T5	Upgrade high ridership AC transit stops on University Ave. based on San Pablo Corridor bus stop guidelines (Type A, C, D, and E stops)	$ 320,500	Medium	Ready	AC Transit	Yes	Work with AC Transit and Line 51 Task Force to prioritize stops based on ridership and need.
T15	Improve lighting and shelters at San Pablo bus stops (Cedar and Virginia)	$ 12,500	Medium	Ready	Public Works	Yes	Work with AC Transit to improve stop amenities and survey conditions to determine lighting needs.
T16	Increase frequency of Route 9 service to 20 minute headways throughout the day	$ -	Medium	Ready	AC Transit	Yes	Work with AC Transit to prioritize service request and add to future Short Range Transit Plan update.
T18	Improve connections and transfers of Route 9 and other transit services at San Pablo and Gilman	$ 50,000	Medium	Ready	AC Transit	Yes	Work with AC Transit to relocate and consolidate stops.
B5	Connect Virginia and Channing bike boulevards to bike bridge by designating 5th Street (between Virginia and Hearst), 4th Street (between Hearst and Channing) and Hearst (between 5th and 4th Streets) as bike boulevards	$ 85,000	Medium	Ready	Public Works	Yes	Create striping and signage plan and include with 4th Street overlay and reconstruction plans for FY10.
B10	Apply bike intersection treatment 1 (signage and striping) to Cedar and 9th St.	$ 5,000	Medium	Ready	Public Works	Yes	Develop signage and striping plan and possibly include with FY 2012 street repair overlay project for 9th St.
B11	Apply bike intersection treatment 1 (signage and striping) to Dwight and 9th St.	$ 1,200	Medium	Ready	Public Works	Yes	Develop signage and striping plan and possibly include with FY 2012 street repair overlay project for 9th St (Camelia-Cedar).
B14	Apply bike intersection treatment 1 (signage and striping) to Heinz and 9th St.	$ 1,200	Medium	Ready	Public Works	Yes	Develop signage and striping plan and possibly include with FY 2010 street repair reconstruction project for 9th St (Channing-Dwight).
P5	Improve pedestrian crossings along Cedar between 4th and 10th to include pavement striping, sidewalk bulbouts and truncated domes where appropriate and needed	$ 575,000	Medium	Ready	Trans.	Yes	Develop striping and paving plan for Cedar Street and add request for truncated domes at these locations.

Rank	Project Description	Estimated Capital Cost	Probability of Funding	Project Status	Lead Agency	Eligible for Env. CE*	Next Steps
P7	Pave sidewalks (full block) adjacent to James Kenney Park on 7th and 8th, along 9th between Cedar and Page, along west side of 8th between Camelia and Gilman, along east side of 7th between Camelia and Harrison, and along Harrison between 7th and 8th	$ 36,000	Medium	Ready	Public Works	Yes	Incorporate into City's street repair program when equipment and materials in close proximity.
A10	Extend Ashby EB left turn bay at 7th by 150'	$ 1,800	Medium	Ready	Caltrans	Yes	Work with Caltrans to develop striping plan.
A14	Create additional WB lane on Gilman between San Pablo and Kains	$ 5,000	Medium	Ready	Trans.	Yes	Create striping plan and work with Caltrans to re-time cycle to account for new movement. Work with locals to address slight parking loss.
A15	Add 2nd NB left turn lane at 6th and University	$ 8,000	Medium	Ready	Trans.	Yes	Create striping plan and re-time cycle to account for new movement. Work with locals to address parking loss.
A20	Create two WB lanes on Heinz (Through/Right and Left only) at 7th	$ 2,500	Medium	Ready	Trans.	Yes	Create striping plan and re-time cycle to account for new movement. Work with locals to address parking loss.
A21	Add additional SB lane between Heinz and Anthony on 7th	$ 10,000	Medium	Ready	Trans.	Yes	Create striping plan and re-time cycle to account for new movement. Work with locals to address parking loss.
A24	Add EB right turn pocket (~100') at Hearst and 6th	$ 5,000	Medium	Ready	Public Works	Yes	Create striping plan and re-time cycle to account for new movement.
A25	Create additional EB/WB lane along Allston Way at 6th	$ 2,500	Medium	Ready	Trans.	Yes	Monitor for need based on new development. Create striping plan and re-time cycle to account for new movement.
A26	Create additional NB/SB left turn lane along 6th at Channing	$ 5,000	Medium	Ready	Trans.	Yes	Monitor for need based on new development. Create striping plan and re-time cycle to account for new movement. Coordinate design with bike crossing project (B6).
TR3	Add/update truck routing signage Ashby, Gilman, University, San Pablo, 2nd St, 6th/7th St	$ 20,000	Medium	Ready	Trans.	Yes	Develop truck master plan with signage plan.

** Env. CE (Environmental Categorical Exclusion). Eligibility is estimated, formal checklist must be complete by City to determine qualification status.*

Package C (Ready, Low Funding Potential)

Phase: *2 (2009-2015)*

Package C projects have the ability to be implemented in the next one-two years, but funding potential is estimated to be relatively low compared to the other projects. These projects all likely receive a categorical exception in the environmental review process. As a percentage of total cost of the "priority projects", Package C accounts for 0.5% of the total capital cost and 25.9% of the total operating and maintenance costs. Table 3 shows a detailed summary of each project including the rank, lead agency and identified next steps.

Package D (Not Ready, High Funding Potential)

Phase: 3 *(2011-2020)*

Package D projects are estimated to need additional implementation time. Funding, however, has already been defined for this group of projects, thus implementation time will be dependent upon advancing the project's readiness. Some projects will qualify for a categorical exception while others will need additional environmental study. As a percentage of total cost of the "priority projects", Package D accounts for 64% of the total capital cost and 12.2% of the total operating and maintenance costs. The high capital cost is due primarily to the Gilman grade separation and Gilman roundabouts which are estimated to account for 35% and 27% of all capital projects on the high priority list, respectively. Table 4 shows a detailed summary of each project including the rank, lead agency and identified next steps.

Package E (Not Ready, Medium Funding Potential)

Phase: *4 (2011-2030)*

Package E projects are estimated to need additional implementation time. These projects also have a medium rating for funding, adding additional time and resource to identify the appropriate funding source. Most of these projects will not qualify for a categorical exception and will need additional environmental study. As a percentage of total cost of the "priority projects", Package E accounts for 31.43% of the total capital cost and 17.4% of the total operating and maintenance costs. Table 5 shows a detailed summary of each project including the rank, lead agency and identified next steps.

Table 3: Package C (Ready, Low Funding Potential)

Rank	Project Description	Estimated Capital Cost	Probability of Funding	Project Status	Lead Agency	Eligible for Env. CE*	Next Steps
T6	Improve bus connection from Downtown/UC to West Berkeley and Amtrak station	$ -	Low	Ready	AC Transit or Trans.	Yes	Work with AC Transit and Line 51 Task Force to identify improvements that would improve service along this corridor. City should support operational improvements identified by AC Transit and request additional service to serve existing and future markets.
T11	Improve AC Transit Transbay service to West Berkeley along 6th Street through new service or modified/upgraded existing service	$ -	Low	Ready	AC Transit	Yes	Request AC Transit explore solutions for improvements to transbay service, evaluating options that may include rerouting the H, adding an opposite direction Z service, or adding a new service in this corridor. Encourage AC Transit to add this to their formal service request and include in any future Short Range Transit Plan.
P6	Improve pedestrian crossings along Dwight between 4th and 10th to include pavement striping, sidewalk bulbouts and truncated domes where appropriate and needed	$ 293,000	Low	Ready	Public Works	Yes	Prepare initial paving and striping plan and conduct outreach to address local concerns or those of AC Transit.

** Env. CE (Environmental Categorical Exclusion). Eligibility is estimated, formal checklist must be complete by City to determine qualification status.*

Table 4: Package D - (Not Ready, High Funding Potential)

Rank	Project Description	Estimated Capital Cost	Probability of Funding	Project Status	Lead Agency	Eligible for Env. CE*	Next Steps
T8	Install queue jump lanes along University Ave at 6th St. in the WB and EB direction	$ 160,000	High	Not Ready	Trans.	Yes	Work with AC Transit staff to identify preferred design and coordinate with Public Works to try to get included in FY09 University reconstruction.
B3	Remove or flip stop signs on bicycle boulevards to limit stopping of bikes. Implement traffic calming as necessary to limit auto use of these facilities	$ 3,500	High	Not Ready	Trans.	Not Likely	Develop initial plan showing traffic control changes and identity appropriate traffic calming. Work with community to address local concerns.
B13	Add bike boxes at Gilman and 8th and Gilman and 6th intersections	$ 2,500	High	Not Ready	Trans.	Yes	
A1	Grade separate Gilman railroad crossing; see Figure 3.6 of the Project Improvement Report.	$ 20,256,000	High	Not Ready	ACCMA	No	Work with UP to identify future timeline for increased rail traffic. Work with ACCMA to lead effort.
A2	Construct dual roundabouts at Gilman Interchange	$ 15,700,000	High	Not Ready	Trans.	No	Update existing PSR and coordinate final design with Gilman Grade separation.
A13	9th and Ashby intersection improvements: extend bike boulevard south from 9th St. to connect to Emeryville Greenway, create new SB drive lane from West Berkeley Bowl to Ashby, separate SB turns (right turn heading WB on west side of bike path crossing; left turn heading EB on east side of path), extend width of intersection to include new SB drive and bike crossing, stencil 9th St. between Ashby and Anthony as bike boulevard, remove stop control at 9th and Potter in SB direction.	$ 500,000	High	Not Ready	Trans.	No	Finalize design concept for crossing of Ashby and then complete modeling effort to determine potential traffic and circulation impacts.
TR1	Create new north/south truck route by paving 2nd Street between Gilman and Hearst to heavy vehicle standards	$ 1,000,000	Medium	Not Ready	Redevelop ment	Not Likely	Develop truck master plan for area, evaluating 2nd Street's role. Ensure turning radii are consistent with heavy vehicle maneuvers. Consider future traffic patterns with Gilman interchange design and Gilman rail crossing.

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Table 5: Package E (Not Ready, Medium Funding Potential)

Rank	Project Description	Estimated Capital Cost	Probability of Funding	Project Status	Lead Agency	Eligible for Env. CE*	Next Steps
T1	Further study options for creation or designation of segregated transit lanes along San Pablo, including options for restrictions during a limited number of peak travel hours and options which allow use of lane by other vehicle types such as trucks or high occupancy vehicles	$ 80,000	Medium	Not Ready	Trans./AC Transit	No	Monitor congestion impacts on transit and work with Caltrans and AC Transit to identify feasibility of project.
T3	Apply appropriate transit intersection improvements (bus bulbs and/or queue jumps) at congested locations (Ashby, Dwight, University, Gilman) along San Pablo	$ 320,000	Medium	Not Ready	Trans./AC Transit	Not Likely	Work with AC Transit to identify appropriate treatment at each of the four intersections
T4	Extend transit or shuttle service to connect North Berkeley BART to Ashby BART along Ashby/6th/7th/Cedar Streets. Service would be a weekday peak hour service on 20-minute headways in both directions	$ 600,000	Medium	Not Ready	Trans. or AC Transit	Yes	City should discuss adding service with AC Transit to explore what opportunities may be available for providing enhanced service to these markets. City based shuttle programs should also be discussed if AC Transit is unable to deliver requested improvements.
T14	Provide more direct bus service from Downtown Berkeley to Berkeley Pier/Cesar Chavez Park (existing 51M)	$ -	Medium	Not Ready	AC Transit or WETA	Yes	Work with AC Transit to explore service expansion between these two areas and/or work with future shuttle services offered from the ferry terminal (if located near Pier) to serve the Downtown area.
B1	Create parallel bike boulevard facility to University Ave. to connect Downtown Berkeley/UC to bike bridge via either Addison or Allston. Implement an appropriate bike boulevard crossing (Type 3 or 4) across San Pablo Ave. including consideration of Addison's offset alignment at San Pablo Ave.	$ 125,000	Medium	Not Ready	Trans.	Not Likely	Identify appropriate alignment (Addison vs. Allston) and study traffic impacts and ROW needs. Crossing of San Pablo will also need to be identified based on alignment selection.
B2	Apply appropriate bike boulevard crossing treatment (Type 3 or 4) at Virginia and San Pablo	$ 8,000	Medium	Not Ready	Trans.	Not Likely	Study impacts on removal of SB left turn pocket on Adult School access and surrounding neighborhoods.

Rank	Project Description	Estimated Capital Cost	Probability of Funding	Project Status	Lead Agency	Eligible for Env. CE*	Next Steps
B4	Apply appropriate bike boulevard crossing treatment (Type 3 or 4) at Channing and San Pablo	$ 8,000	Medium	Not Ready	Trans.	Not Likely	Study impacts on removal of left turns on surrounding business and neighborhoods.
B6	Apply appropriate bike intersection treatment to 6th and Channing, either Type 3 (bike refuge median with no left- or U-turns on 6th to Channing) or Type 4 (HAWK signal with a partial signal phase)	$ 200,000	Medium	Not Ready	Trans.	Not Likely	Study impacts on removal of left turns on surrounding business and neighborhoods.
B12	Improve connection between Russell and Heinz bike boulevards through connection to Oregon and installation of appropriate bike boulevard crossing treatment (Type 3 or 4) at San Pablo Ave. on Oregon and Heinz, considering the offset intersection	$ 12,500	Medium	Not Ready	Trans.	Not Likely	Identify appropriate crossing treatment with new signal at Heinz and San Pablo.
A3	Extend/pave 5th between Potter and Ashby	$ 750,000	Medium	Not Ready	Trans./ Planning	No	Monitor demand and need for improvement. Work with impacted business to identify feasibility of project. Coordinate with Caltrans on any redesign efforts of Ashby interchange and assess their willingness for another access point at this location.
A4	Open 5th St. (SB) at WB University; see Figure 3.4 in the Project Improvement Report.	$1,000,000	Medium	Not Ready	Trans.	No	Monitor demand and need for improvement. Conduct traffic study to determine impacts of new signal. Work with AC Transit to ensure their operations are not negatively impacted.
A6	Move traffic signal from Potter to Anthony	$ 180,000	Medium	Not Ready	Trans.	Not Likely	Monitor future development to determine need for improvement. Conduct traffic study to assess impacts.
A7	Widen WB approach at Ashby and San Pablo to create dedicated left turn lane	$ 20,000	Medium	Not Ready	Trans./ Planning	Not Likely	Work with future development to consider land dedication needed to create new approach. Conduct traffic study to optimize signalization improvements and integrate with existing signalization coordination along San Pablo.
A8	Signalize University and West Frontage	$ 300,000	Medium	Not Ready	Trans.	No	Further study traffic impacts on I80 WB off ramp movements and develop signal timing plans that target local vs. regional demands. Coordinate efforts with ACCMA ramp metering.

Rank	Project Description	Estimated Capital Cost	Probability of Funding	Project Status	Lead Agency	Eligible for Env. CE*	Next Steps
A9	Improve safety at rail crossings in West Berkeley in the most efficient way possible to allow a quiet zone designation to occur	$13,600,000	Medium	Not Ready	Planning	Yes	Identify cost effective SSM from Quiet Zone Study. Develop proposal for FRA for formal designation.
A12	Improve 4th Street access from Gilman Street to commercial district through repaving and new left turn pockets at Gilman	$ 5,000	Medium	Not Ready	Trans.	Not Likely	Monitor demand and need for improvement.
A16	Upgrade signals (adaptive, emergency, transit, etc) along WB arterials (Gilman, University, Ashby, 6th/7th and San Pablo)	$ 700,000	Medium	Not Ready	Trans.	No	Evaluate citywide need for technology and integrate in West Berkeley if deemed a good investment.
A17	Restripe WB University at San Pablo to create new right turn lane and additional through lane	$ 25,000	Medium	Not Ready	Trans.	Yes	Develop preliminary striping plans to determine ROW impacts.
A23	Signalize priority intersection to address development impacts south of University Avenue and along 4th Street. Options include: 6th and Addison (with restriction on eastbound movements), 4th and Allston, or 4th and Hearst	$ 240,000	Medium	Not Ready	Planning	Not Likely	Monitor demand and need for improvement. Future development patterns will identify appropriate traffic mitigations in this area.
A28	Reduce the speed limit on San Pablo to 25 mph	$ 20,000	Medium	Not Ready	Caltrans	Yes	Request speed study from Caltrans.
A30	Improve wayfinding from Interstate 80 to major destinations in West Berkeley along Ashby, Gilman, and University	$ 40,000	Medium	Not Ready	Planning	Yes	Support citywide wayfinding study. Work with Caltrans to improve signage on I80. Coordinate with truck improvement (TR3)
TR2	Designate 6th/7th between Gilman and Ashby as truck route	$ 225,000	Medium	Not Ready	Trans.	Yes	Develop truck master plan for area, evaluating 6th/7th Streets' role. Ensure existing turning radii are consistent with heavy vehicle maneuvers.

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PACKAGE PHASING

General phasing for the various projects is important to give the lead agencies a methodology for prioritization of time and resources to achieve implementation. Phasing was developed based on three primary factors:

- Is the project ready? If not, what additional design work or agency coordination is needed?
- Is funding currently available? If not, how much time will it take to complete the administrative tasks, grant writing, etc.?
- Does the project require environmental review? If so, what would be the timeline for such activity?

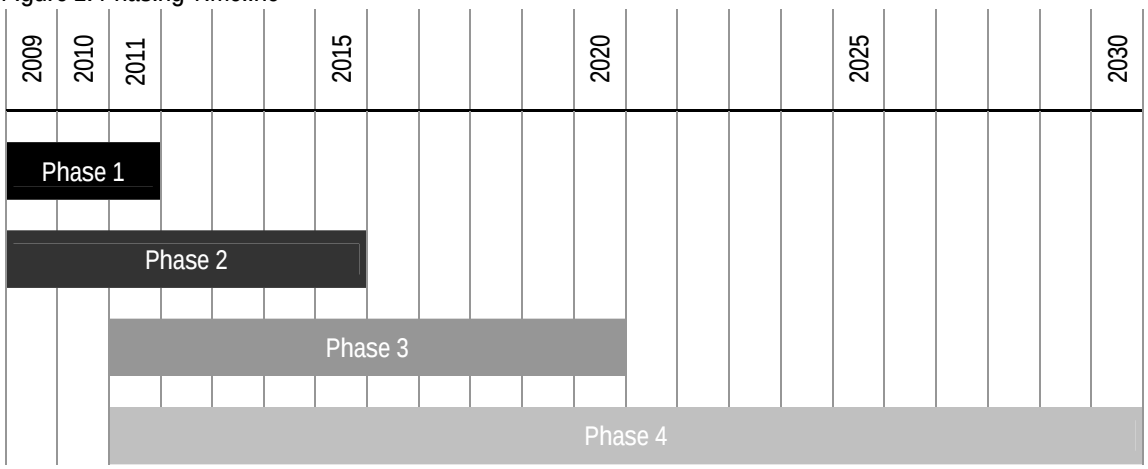
Using these factors, four phasing periods were established using the different project packages. Table 6 shows the grouping of packages into the four phases.

Table 6: Phasing Strategy by Packages

	Funding Potential		
Project Status	High	Medium	Low
Ready	Phase 1	Phase 2	
Not Ready	Phase 3	Phase 4	

Phase 1 and 2 projects will likely require very little environmental review and already have a good funding source identified. These projects have potential to start immediately and have potential to be implemented by 2015. Phases 3 and 4 still have a fair bit or work needed to get the project "ready". Both phases account for time needed for likely environmental review. Since Phase 3 projects already have funding identified, they will likely need less overall time to implement. These projects should look at 2020 for a final implementation schedule. Phase 4 projects, which still need to identify funding sources, will have a slightly longer timeline to implement. Figure 2 shows the estimated start and completion years of each phase.

Figure 2: Phasing Timeline



Phasing for projects is based on West Berkeley needs and does not take into account citywide priorities. The City will need to consider the importance of each project individually when considering implementation and phasing.

WBCMP MODEL USE

The WBCMP model was developed with three specific objectives. These include:

1. To easily allow the City to do sensitivity testing with future land use scenarios and transportation network improvements;
2. To allow future traffic impact studies to be completed with greater consistency and ease; and
3. To provide a consistent project database of existing, approved, pending and future development.

SENSITIVITY TESTING

The first objective will give Planning and Transportation staff the ability to test different land use scenarios to determine the impacts on the transportation network. Office of Transportation staff can then test various mitigation measures or general transportation improvements to assess their ability to improve travel conditions in the study area. The model also has the ability to test how various TDM programs and policies will impact future trip making and vehicle use in West Berkeley.

TRAFFIC IMPACT STUDIES

The WBCMP model includes a component that will allow future traffic studies completed in West Berkeley to be more consistent and done with greater ease by the applicant. The traditional traffic impact study would be transitioned to be a multi-modal transportation impact study, taking into account the impacts on the transit, bike and pedestrian network as well as the traffic network.

This transportation study would be completed by the project applicant using the WBCMP tool, distributed by the City during the pre-application stages of the project. The applicant would simply enter in their proposed land use in the geographic transportation analysis zone (TAZ) within the model. TDM measures associated with the project would be included in addition to the land use information. The model will then create a simple, one-page formatted trip generation summary which would be reviewed by Office of Transportation staff, prior to any modeling efforts. This report would show the entered land use and TDM measures by the applicant and report the total trips generated by the project and the total trips, by mode generated by the project.

Once Office of Transportation staff has approved the trip generation and mode split results of the application, the applicant would be given the complete West Berkeley traffic simulation model to forecast any existing and future traffic impacts associated with the project. The traffic model consists of a trip assignment application (TRAFFIX) and a microsimulation model (Synchro/SimTraffic) used to report intersection and arterial performance measures for traffic. The approved trip generation numbers will be exported to a formatted input file to be read into the TRAFFIX network. Once project trips have been assigned to the network, the TRAFFIX file will be exported and read into the Synchro network. Reports will then be generated directly from the Synchro program.

While the WBCMP model will provide the core inputs to the traditional traffic impact study, additional analysis outside the model will need to be completed and included in the assessment. This detailed analysis would occur near the driveway of the site where the model's resolution will likely not accurately depict micro-level turning movement conditions. In addition to the refined driveway analysis, parking conditions and truck loading will need to occur outside the model and reported in the project's traffic impact study.

The use of the WBCMP model would also allow impacts on other modes to be equally assessed, including transit, bikes and pedestrians. Although not formally adopted in the City's traffic impact guidelines, person delay rather than vehicle delay could be measured and reported if desired by the City. The current guidelines for calculating level of service are only based on vehicle delay.

WEST BERKELEY PROJECT DATABASE

A project can be added and tracked within the WBCMP model at four different levels. These include:

- Approved-project approved by the City which may or may not be in development;
- Pending-project proposed to the City which is still in the review stages;
- Project-project being considered for review by the City; and
- 2030-future long-term development potential that has not filed an application with the City but would likely do so in the future.

These assignments will allow new projects being proposed in West Berkeley to have an accurate assessment of recent projects, whether they are built and in operation, under construction, or simply approved by the City.

Monitoring/Updating

In an effort to ensure the model will continue to be a valuable tool for the City, all baseline data used in the model has the ability to be easily updated. This data includes the travel survey data[1] used in assigning travel modes to newly created trips, the national trip generation rates published by the Institute of Transportation Engineers, baseline traffic counts for weekday and weekend peak hours and Bay Area regional traffic projects obtained from the ACCMA model.

A plan should be developed that outlines how much data and how often the model is monitored and updated. Ideally, every time a new project is added to the network, before and after travel surveys and traffic counts would be completed and used in a model validation. Due to the limited resources of the applicant and City staff, this is not feasible. The City should look at an alternative monitoring program that requires large developments to prepare after studies of travel behavior for their tenants/residents and provide a report to the city. This would allow the city to validate the existing travel behavior inputs and determine the impact of various TDM measures that may have been associated with a specific development.

Baseline traffic counts are another key input that needs to be regularly monitored and updated. A new project would be required to perform traffic counts on any intersection near their development that currently does not existing with the WBCMP model. Otherwise, those already coded into the network would come from the baseline counts with a growth factor applied to obtain an opening day volume of the project. These baseline counts should be refreshed every 4-5 years, based on the amount of new development. When new counts are done, the WBCMP model removes all "approved" projects that were added to network and have opened since the previous baseline counts. This takes away the chance of double counting project trips.

[1] Travel Survey data includes the 2000 US Census data and the 2000 Bay Area Travel Survey data

NEXT STEPS

The WBCMP report and model provide both a current and future assessment of the transportation network and a tool to for continued assessment of the changing conditions in West Berkeley. The recommendations included in project improvement and TDM sections of the report will require many future actions to occur to enable the transportation network to meet future land use changes. Four logical next steps have been identified during the final process of the study. These include:

1. Conduct a program EIR for the West Berkeley study area. Use the WBCMP report and model as the transportation section of this work
2. Conduct a transportation nexus fee study to determine the estimated cost of new trips in West Berkeley. This should be done on a per trip basis for all modes and priced accordingly to encourage non-motorized travel and meet the capital and operations and maintenance funding needs of the project improvements.
3. Meet with partnering agencies (Caltrans, ACCMA, AC Transit, Berkeley TMA) assigned to each of the projects to discuss the need for the project and the positive impacts of that project for West Berkeley. Since many leading roles for these projects will be assigned to outside agencies, their support and commitment will be crucial to the success of these projects.
4. Restructure the City's Traffic Impact Study Guidelines to focus less on vehicle delay and more on person delay. This change would put less emphasis on solely accommodating single auto vehicles during the new project assessment stages and more emphasis on accommodating transit, bikes and pedestrians.
5. Focus on integrating TDM "next steps" (see TDM Plan) for existing and future projects in West Berkeley. This process will help meet citywide goals of VMT reduction and reduce future auto demand on the transportation network.

These critical next steps will continue the momentum of the WBCMP and move West Berkeley toward the development of a mature multi-modal transportation network.