



# Westside Subway Extension

Frequently Asked Questions (Updated October 2011)

## Introduction

Metro is currently in the final phase of the environmental analysis for the Westside Subway Extension through the preparation of a Final Environmental Impact Statement/Environmental Impact Report (Final EIS/EIR) and Preliminary Engineering. Environmental analysis of this project began in 2007 with the preparation of an Alternatives Analysis (AA) Study. In January 2009, the Metro Board of Directors approved the AA Study and authorized proceeding with the Draft EIS/EIR. In October 2010, the Metro Board of Directors approved the Draft EIS/EIR, adopted the Locally Preferred Alternative (LPA), and authorized preparation of the Final EIS/EIR.

This set of “Frequently Asked Questions” (FAQs) is intended to provide information on the work that has already occurred and is continuing. It will be updated throughout the ongoing study.

Please go to our website at [metro.net/westside](http://metro.net/westside) for public documents that have been released during development of the Final EIS/EIR, as well as those that were developed during the earlier Draft EIS/EIR and AA Study.

Subjects discussed here include:

- Study Overview
- Cost & Funding
- Ridership & Travel Time
- Alignments & Stations
- Subway Construction, Construction Impacts & Mitigation Measures
- Construction & Operations Under & On Private Property
- Safety
- Station Area Parking
- Schedule & Phasing
- Public Involvement

## Study Overview

### **1. *What is being studied in the Final EIS/EIR?***

The Metro Board of Directors selected an extension of the Metro Purple Line to the Westwood/VA Hospital as the Locally Preferred Alternative (LPA) for the Westside Subway Extension. The Final EIS/EIR will respond to comments received during the public comment period on the Draft EIS/EIR. It will also further refine the LPA conducting additional engineering and other technical studies that will help determine remaining station locations and alignments, identify construction procedures, further assess impacts during both construction and operations, recommend mitigation measures, and may lead to alignment adjustments. Preliminary Engineering (PE) is taking place concurrently with the Final EIS/EIR.

## Westside Subway Extension – FAQs (Updated October 2011)

### 2. **What kinds of comments did you hear on the Draft EIS/EIR and when will you provide responses?**

There was a 45-day public comment period for the Draft EIS/EIR from September 3-October 18, 2010. Metro held five public hearings and received input from nearly 800 commenters at the hearings and in writing during this period. Most of the comments Metro heard dealt with:

- Station locations, especially:
  - Century City
  - Westwood/UCLA
  - Westwood/VA Hospital
- Beverly Hills to Westwood tunnel alignment
- Accelerating the construction
- Interest in extending the subway as far west as possible
- Questions about station access (including station parking)
- Construction impacts
- Technical issues (such as traffic and noise impacts)

The responses will be included in the Final EIS/EIR which is expected to be released in Fall 2011.

### 3. **What is the Locally Preferred Alternative (LPA)?**

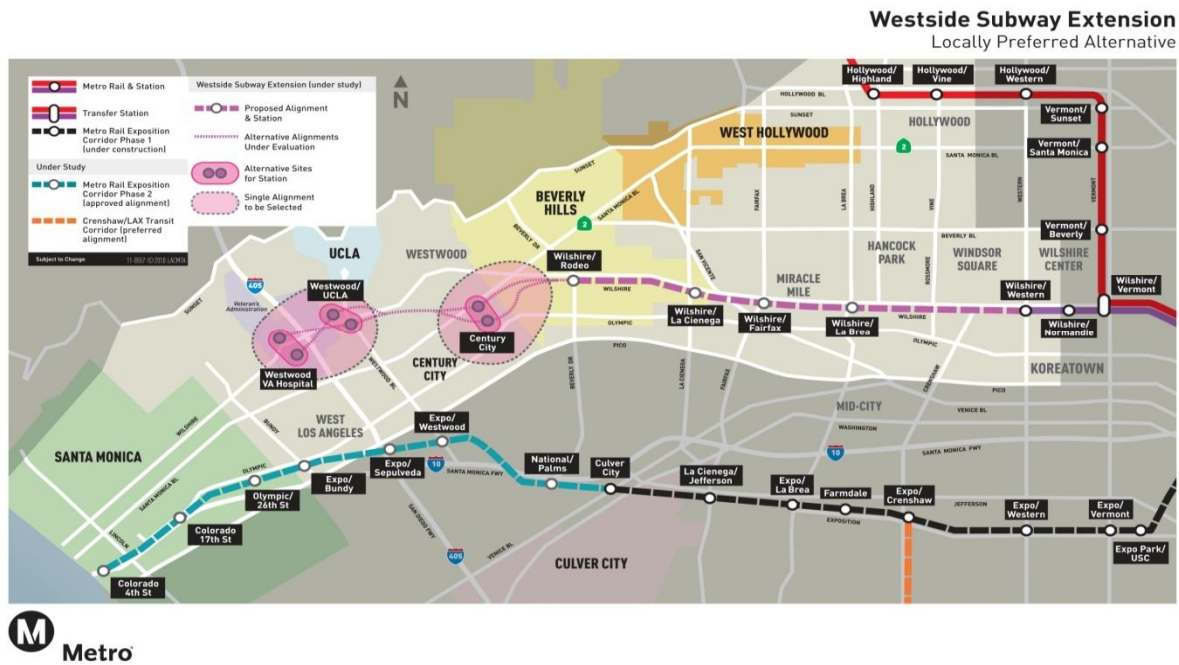
As a part of the federal process to seek “New Starts” matching funds for the Westside Subway Extension, the Metro Board of Directors needed to select what is known as a “Locally Preferred Alternative” (LPA) at the conclusion of the Draft EIS/EIR. The LPA identifies the project that is being evaluated in the final environmental review. The Metro Board of Directors selected the LPA at their meeting in October 2010 when they considered the Draft EIS/EIR. The LPA was then submitted to the Federal Transit Administration (FTA) which, on January 4, 2011, granted permission for Metro to enter Preliminary Engineering (PE) of the LPA.

The LPA selected by the Metro Board is a nine mile extension of the Metro Purple Line from the Wilshire/Western station to the Westwood/VA Hospital. This was the best performing alternative utilizing required federal criteria including ridership, cost-effectiveness, travel time savings, and available funding. It will include the following seven new stations:

- Wilshire/La Brea
- Wilshire/Fairfax
- Wilshire/La Cienega
- Wilshire/Rodeo
- Century City
- Westwood/UCLA
- Westwood/VA Hospital

Two alignment options between the Wilshire/Rodeo and Century City stations are still under study.

## Westside Subway Extension – FAQs (Updated October 2011)



#### 4. **What is happening during the Final EIS/EIR phase?**

During the Final EIS/EIR phase, Metro is conducting further analysis and preparing responses to all comments and questions submitted during the public comment period for the Draft EIS/EIR. At the same time, Metro is conducting Preliminary Engineering (PE) for the project. PE will result in a more detailed level of engineering than the Advanced Conceptual Engineering (ACE) conducted during the Draft EIS/EIR. Considerable effort is also being focused on geotechnical and seismic investigations to refine the alignment and station locations. During the Final EIS/EIR/PE phase, details related to station locations, such as station entrance locations, are being solidified. In addition, methods for tunnel and station construction are being determined. Metro will also establish areas for construction staging and assess earth removal procedures and haul routes. Further analysis of project impacts during construction and operations are being conducted and associated mitigation measures detailed.

#### 5. **What happens at the conclusion of the Final EIS/EIR? When will we know the final alignment and station locations?**

Once the analysis is complete, the Final EIS/EIR will be released for public review. The document will include recommendations on all aspects of the project including the alignment, station locations and the mitigation program. Following a 45 day public availability period, the Final EIS/EIR with the recommendations will be presented to the Metro Board of Directors who will be asked to decide about these recommendations and to certify the Final EIS/EIR as complete. It is anticipated that the Final EIS/EIR will be released for public review in Fall of 2011 and the Metro Board will consider acting on it in Winter 2011/2012. Following certification by the Metro Board, the Federal Transit Administration (FTA) will consider issuing of a "Record of Decision" denoting completion of federal environmental clearance for the project. These combined actions will define the project that will be submitted to the FTA for consideration for federal "New Starts" funding, and that will be taken into Final Design and construction.

## Westside Subway Extension – FAQs (Updated October 2011)

### Cost & Funding

#### **6. *What is the cost and status of funding for the subway?***

Building the subway extension to the Westwood/VA Hospital station is estimated to cost \$5.3 billion (escalated costs) based on an expected completion date of 2022. This cost estimate will be refined in the Final EIS/EIR/PE and Final Design phases of the project.

The adopted Long Range Transportation Plan for Los Angeles County allocates this amount to the subway project, including an assumed federal contribution, over the next 25 years. On January 4, 2011, the Federal Transit Administration (FTA) authorized the project to proceed into Preliminary Engineering. This notification means that the project is well positioned to be considered for future federal funding through the federal New Starts funding program. There is an effort underway to accelerate funding for the subway as well as other Measure R transit projects to allow them to all be constructed in 10 years. Known as “America Fast Forward” (formerly the “30/10 Initiative”), this effort is seeking a variety of loans and other creative financing from the federal government that would be repaid over 30 years with Measure R revenues. The FTA recently announced that the Westside Subway Extension has been approved to receive a \$640 million TIFIA loan to be applied towards the full construction cost of the project.

Information about the adopted Long Range Transportation Plan, Measure R and America Fast Forward can be found on the Metro web site at [www.metro.net](http://www.metro.net).

### Ridership & Travel Time

#### **7. *How many people will ride the Westside Subway Extension?***

Based on the analysis conducted during the Draft EIS/EIR, the Westside Subway Extension to the Westwood/VA Hospital station will generate about 50,000 daily boardings at the seven new stations. Calculated another way, the project would generate about 78,000 daily project trips which includes everyone riding the new extension whether they board at one of the seven new stations or travel to the new project from elsewhere on the Metro system. These projections are being further analyzed and refined as part of the Final EIS/EIR.

#### **8. *How long will it take to travel to the Westside on the Subway from various destinations around LA County?***

The table below illustrates the projected travel time that will result from the project. Travel times to Westwood/UCLA will improve by about 30 - 60% from various parts of the region compared with existing bus and train schedules. It should also be noted that travel times on the subway will remain constant over time, whereas bus and auto travel times on surface streets vary depending on traffic conditions and are expected to deteriorate further over time as congestion increases.

## Westside Subway Extension – FAQs (Updated October 2011)

Transit Travel Time to Westwood/UCLA (in minutes)

From	Today*	With Project (LPA)	% Change	Days Saved/Year <sup>†</sup>
<b>San Gabriel Valley</b>				
Covina	99	72	-27%	10
Pasadena	82	51	-38%	11
<b>Downtown/Mid-City</b>				
Pershing Square	54	24	-56%	11
Koreatown	36	14	-61%	8
<b>San Fernando Valley</b>				
North Hollywood	61	41	-33%	7
Northridge	98	72	-27%	9
<b>South LA</b>				
Florence	76	41	-46%	13
Crenshaw/Green Line	85	62	-27%	8
<b>Gateway Cities</b>				
Long Beach	114	78	-32%	13
<b>East LA</b>				
	76	36	-53%	14

\*Based on current Metro Schedules

<sup>†</sup>Days Saved/Year presumes 2 trips/day \* 260 travel days/year

### Alignments & Stations

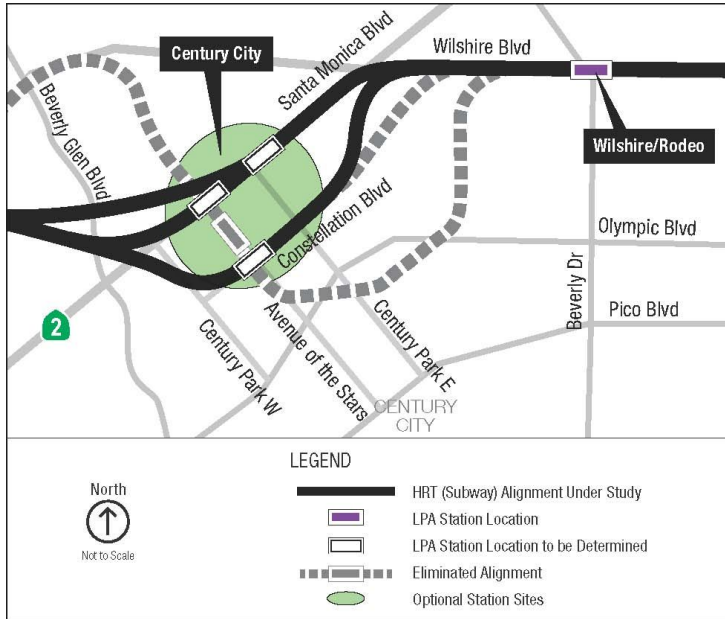
**9. Three locations are currently showing more than one station. Are you envisioning more than one station in those areas? If not, how will you determine the station location?**

Only one station is anticipated for each station area. However, Metro has currently identified and is evaluating alternative station locations at each of the following locations:

- *Century City*: A station located under Santa Monica Boulevard at Century Park East, or a station located under Constellation Boulevard at Avenue of the Stars.
- *Westwood/UCLA*: A station located under the UCLA parking lot (Lot 36) located on the north side of Wilshire Boulevard between Gayley & Veteran, or a station located under Wilshire Boulevard between Westwood Boulevard & Gayley.
- *Westwood/VA Hospital*: A station located south of Wilshire Boulevard at Bonsall Drive near the VA Hospital, or a station located on the north side of Wilshire Boulevard at Bonsall Drive.

Decisions about station locations depend on a variety of factors including environmental impacts, engineering and technical issues, costs, constructability, ability to locate convenient areas for construction staging, interest from adjacent property owners, public input, etc. During the Final EIS/EIR/PE phase, Metro is further evaluating these station locations utilizing these criteria. Recommendations on the station locations and station entrances will be developed by Metro staff for consideration by the Metro Board of Directors.

**10. Wasn't a Century City Station always planned on Santa Monica Boulevard? Where did the idea for locating the station below Constellation come from? What other options have you studied for a station location in that area?**



Any environmental analysis must consider all reasonable alternatives, consider all comments and evaluate all suggestions received. During the Alternatives Analysis (AA) conducted in 2007-08, Metro reviewed alignments and station locations in the Century City area that had been previously considered in the early 1990s as a starting point for input and evaluation. This was presented to the public and they were invited to provide input. Public comment received at the first round of scoping meetings in October 2007 during the AA and subsequently

during the Draft EIS/EIR phase noted that a Santa Monica Boulevard location placed a station on the northern edge of Century City immediately adjacent to the Los Angeles Country Club golf course and near a low-density residential area to the north. Metro was asked to also evaluate other alternatives including locating a station south of Santa Monica Boulevard that would be surrounded on all sides by high-rise office and dense commercial buildings.

In the Final EIS/EIR, Metro is still evaluating Century City station locations under Santa Monica Boulevard and under Constellation Boulevard. The station location under Santa Monica Boulevard was initially being studied at the intersection of Avenue of the Stars. Metro has now moved it to be under Santa Monica Boulevard at Century Park East to increase safety by locating the station farther away from the Santa Monica Fault zone. [See Question 13 and 21 for more information about the Santa Monica Fault and efforts to learn more about it.] The location being studied under Constellation Boulevard would place the station at Avenue of the Stars.

During earlier study phases, Metro also evaluated, and ultimately ruled out, a north-south oriented station located under Avenue of the Stars between Santa Monica and Constellation Boulevards. This location would have required a significantly longer tunnel in order to achieve the north-south orientation for this station and resulted in higher costs, longer travel times and tunneling under more private properties.

**11. Would a Constellation Boulevard Station have higher ridership than a Santa Monica Boulevard Station in Century City?**

Most studies of the issue show that one-quarter of a mile is considered to be a comfortable walking distance for transit commuters and that a greater proportion of riders comes from workers or residents within one-quarter of a mile of a station location. The proportion of riders

## Westside Subway Extension – FAQs (Updated October 2011)

drops sharply beyond that distance. A station under Constellation Boulevard would be closer to the center of Century City and be approachable by large numbers of pedestrians from all directions. A station under Santa Monica Boulevard would have very little density to the north side where it would sit adjacent to the Los Angeles Country Club. It would draw patrons primarily only from the south. On the other hand, the Santa Monica Boulevard Station may be more convenient for Santa Monica Boulevard auto and bus passengers who might wish to transfer to the subway.

The Metro Board did not select a station location in Century City in October 2010 at the conclusion of the Draft EIS/EIR. The Board directed continued evaluation of the Constellation and Santa Monica Boulevard locations in the Final EIS/EIR. A more detailed analysis is required to more accurately evaluate the costs, risks and relative ridership potential for the alternative station sites.

### **12. *What type of analysis is being done to assess ridership at the stations under Santa Monica Boulevard and under Constellation Avenue?***

To forecast potential ridership, Metro must use a computer model that is consistent with the Southern California Association of Governments (SCAG) regional travel demand forecasting model. The SCAG model is used for regional planning efforts and includes over 4,100 Traffic Analysis Zones (TAZs) in the five-county SCAG region. It distributes trips by all modes of transportation to and from each TAZ. Almost all of Century City, and all of Century City subway station locations being studied are within one TAZ. The model is the best available tool to forecast comparative ridership levels for alternate alignments and operating assumptions, but is not an ideal tool to assess ridership differences based on station entrance locations that are within a few blocks of one another.

As a part of the Final EIS/EIR, Metro is now refining the demographics of the model in the Century City and Beverly Hills areas by including the building-by-building specific populations and walking distances from each building to the different potential subway entrance locations. This will provide very detailed information on the number of employees, residents and potential visitors within walking distance of each station location and the potential for ridership at the alternative station locations. The information will be available in the Final EIS/EIR when it is released. Regardless, Century City is forecasted to have among the highest boarding numbers along the new subway line.

### **13. *Why are we just now hearing about the Santa Monica Fault and its implications for the location of the tunnels and station in the Century City area? Didn't you know about it earlier? What implications does this have for other building and development in the vicinity?***

When the Alternatives Analysis for the Westside Subway Extension began in 2007, the best information available about the Santa Monica Fault in the vicinity of Century City came from a 2005 study using a method known as "surface topography" to estimate the location of the fault. Surface topography is based on visual examination of ground surface elevations and contours. Information gathered this way is not always sufficient to fully identify the fault location and characteristics as configured underground.

In 2009-10, as a part of studies for the Draft EIS/EIR, Metro contractors conducted preliminary geotechnical tests in the area including soil borings and geophysical tests to measure how

## Westside Subway Extension – FAQs (Updated October 2011)

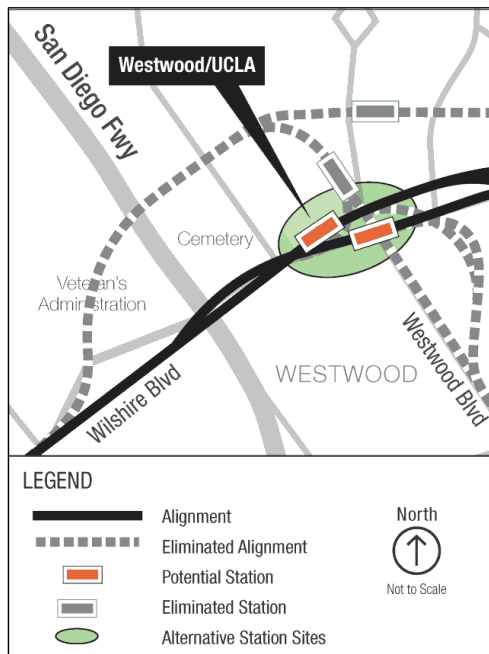
vibrations travel through the ground. These tests provided more information about the location and characteristics of the Santa Monica Fault in the Century City area than the earlier surface topography work.

During the Final FEIS/EIR currently underway, Metro is conducting further geotechnical studies to provide even more information about the Santa Monica Fault and other seismic features in the area, including the West Beverly Hills Lineament. This will be used to make recommendations about the tunnel alignment and station location in the Century City area as well as inform decisions about subway design and construction techniques. It is probable that this information will impact other non-Metro development in the future as well.

See Question 28 for more information about subways in earthquake areas.

### 14. **Why is the Westwood/UCLA Station not closer to the UCLA campus?**

In addition to locations along or close to Wilshire Boulevard, the Alternatives Analysis (AA) conducted in 2007-08 also considered station locations closer to the UCLA campus. Locations in



the middle of Westwood Village, at the entrance to UCLA along Le Conte, and on the UCLA campus were not carried forward into the Draft EIS/EIR for two primary reasons. First, they would have required tunnel alignments to travel under the Veterans National Cemetery in order to allow the subway to continue west. In addition, the narrow streets in Westwood Village and the additional distance from Wilshire Boulevard made these locations ill-suited for station construction and associated impacts, including locating sufficient land for construction staging and earth removal and identifying truck haul routes.

Station locations closer to or under Wilshire Boulevard will serve Westwood Village as well as the high rise office buildings along Wilshire Boulevard and the multi-family residential buildings in that vicinity. There

is already significant bus service in the Westwood Village area provided by Metro, Santa Monica Big Blue Bus, Culver City Municipal Bus Lines, UCLA Transit and others that provide many connections between Wilshire and the campus.

### 15. **How will the stations look in my neighborhood? Will the public have input into their design?**

Metro has been working closely with city staff, the public and other stakeholders on all aspects of station planning and design. During the earlier Alternatives Analysis (AA) study and the Draft EIS/EIR, city staff were consulted to better understand key issues at all of the various station locations being studied. During the Final EIS/EIR in 2011, Station Area Advisory Groups (SAAGs) were formed to assist further in station area planning. SAAG members were initially suggested by city staff and elected officials. They included representatives from residents, homeowner associations, neighborhood councils, property owners, businesses and key institutions in the vicinity of the stations. The groups met three times providing input on location and orientation

## Westside Subway Extension – FAQs (Updated October 2011)

of station entrances, potential for future development, consideration of future planning in areas around the stations, issues to consider in station design, locations for station drop off/pick up, station bus connections, station amenities. The SAAGs also heard presentations and provided feedback on planning for future land use around station areas and how to create transit supportive land uses around stations.

Station design work and planning will continue following the Final EIS/EIR when the project moves into the pre-construction and final design phase. Metro will continue to provide opportunities for the public to have input into station design during these upcoming phases.

### **16. How many entrances will there be at the stations?**

Metro plans to fund and construct one “primary” entrance, or portal, at each station that will include escalators, elevators and stairs. The one exception is at the Westwood/UCLA Station where Metro is planning to provide two “primary” entrances to accommodate the high ridership projected for that station. All the stations will be designed with “knock-out panels” at select locations that will allow additional entrances to be added should an adjacent property owner or local jurisdiction want to fund another entrance to the station. If other funding is available, additional entrances could be included at the time of initial subway construction or could be added subsequently. Further, additional entrances do not necessarily require a full complement of escalators, elevators or stairs.

## **Subway Construction, Construction Impacts and Mitigation Measures**

### **17. How will the Subway tunnels and stations be built?**

The subway tunnels will be built through the use of “Earth Pressure Balance” tunnel boring machines. Most of the tunneling happens completely below ground with little if any noticeable impact on the surface. Subway stations are built by excavating the site for the “station box” and then building the station below ground. If the station is built under a street, it is covered over with concrete decking during construction to allow traffic to continue to flow overhead. Traffic would be disrupted at the beginning of station construction to allow for initial excavation and installation of the concrete decking, and again at the end to remove the decking and reconstruct the street.

Please read the Westside Subway Construction Fact Sheet for more information about subway construction. You may also wish to view the presentations from our meetings in August 2009 and January 2011 and the video “A Subway Story: Metro’s Westside Subway Extension.” These can all be found on the project website at [www.metro.net/westside](http://www.metro.net/westside).

### **18. How will you avoid construction problems such as those that occurred in the 1990s during construction of the Metro Red Line?**

In recent years, Metro has employed improved tunneling techniques to minimize impacts on adjacent properties. The primary method for avoiding subsidence is the use of “Earth Pressure Balance” tunnel boring machines. With this new technology, pressure is maintained in the surrounding earth while the tunnel is being excavated, thereby significantly reducing the risk of subsidence. Using this technology, Metro recently completed a 1.8-mile tunnel for the Metro Gold Line Eastside Extension project with no measurable surface subsidence and no

## Westside Subway Extension – FAQs (Updated October 2011)

substantiated damage claims from settlement. If necessary, secondary ground stabilization methods will be used.

### **19. *What are the construction impacts of a subway? How might construction impact businesses, residents & property owners?***

Impacts of construction and potential mitigation measures are being further evaluated during the Final EIS/EIR. Typical impacts that might occur during construction include temporary lane or roadway closures (to install decking over station areas or for temporary placement of construction equipment or materials), removal and hauling of earth from tunneling and station excavation, construction traffic and parking, potential detours to reach businesses or residences, and noise and air quality impacts. Most of these impacts have associated mitigation measures that seek to minimize the inconvenience of these activities. See question 17 for more information on subway construction and the Westside Subway Construction Fact Sheet on the project website.

As we have with other construction projects, Metro will work to minimize those impacts on businesses, residents and property owners. Mitigation measures might encompass ensuring that decking is flush with the street, locating earth removal locations near major streets and freeways, specifying haul routes, etc. Improved communications, including signage and advertising, are typically employed to help maintain access to businesses. In addition, Metro has established procedures to document existing conditions at properties along the subway construction alignment in advance of construction to accurately assess and address any damage claims that may arise.

While mitigation measures were evaluated in the Draft EIS/EIR, a construction mitigation plan will be adopted during the Final EIS/EIR.

### **20. *Are there other steps Metro takes to work with property owners before or during construction to prevent or address any damage that may occur?***

Prior to beginning any work on the project, Metro or the construction contractor will conduct "pre-construction surveys." This is a typical survey that can be valuable to property owners, tenants and Metro. It provides a record of building conditions prior to the start of construction. This documentation can include written information as well as still photos or video and will protect all interests and allow Metro to quickly and efficiently assist in the unlikely event that construction affects properties. If during the course of construction, any damage occurs to a building that is related to construction of the subway, the property owner/tenants and Metro can refer to this record to arrive at a fair resolution. A claims process will be established and the construction project will carry insurance to address any of these issues should they arise.

### **21. *Metro has conducted soils and seismic tests throughout the study area. What was this for and what was discovered? What else will be studied in the Final EIS/EIR?***

In this Final EIS/EIR phase of the project, Metro has been conducting one of the most extensive geotechnical and seismic investigations of any transit project at this phase of development. These investigations will more precisely locate fault zones, particularly in the Century City area, and further determine soil conditions along the route of the LPA. Tests are also being conducted to determine how noise and vibration from the subway would dissipate in the soil

## Westside Subway Extension – FAQs (Updated October 2011)

along the alignments. Additional analysis is also being conducted to more precisely locate any abandoned oil wells.

At the conclusion of the testing, Metro will have completed close to 600 field tests along the project alignment, including in the mid-Wilshire, Fairfax, Beverly Hills, Century City and Westwood areas and utilizing a variety of equipment to test soil conditions, measure noise and vibration, assess water tables and analyze fault zones. Once testing is complete, Metro will analyze the data and prepare a detailed report of the findings from all the geotechnical and seismic investigations. Metro plans to release this information in Fall 2011.

### **Construction and Operations Under and On Private Property**

#### **22. *Will the trains operate under residential or other private property or sensitive land uses, such as schools? What could the impacts be?***

It is very common for subways throughout the world to operate under residential and private properties. Older cities in other parts of the world do not have a perpendicular street grid that would allow for subways to be constructed under long, straight roadways. Subways in these cities must be constructed almost entirely under occupied buildings. In Southern California, however, major arterial streets allow for subway construction under city streets in many areas and, for this reason, most of Metro's subway tunnels travel under city streets instead of under properties. Areas where Metro subway lines pass beneath properties are generally in locations where the subway has to make turns in Downtown Los Angeles, Mid-Wilshire, Hollywood and Universal City. The normal curve radius for subway tunnels is 1,000 feet, much wider than a turn at a typical surface street intersection.

The Westside Subway Extension is being planned to operate mostly under Wilshire Boulevard, however there are segments where this will not be possible. In order to serve Century City, the subway may need to pass beneath homes and businesses in Southwest Beverly Hills, depending upon the station location that is selected for Century City. This includes the possibility of travelling beneath the Beverly Hills High School campus. Whichever location is selected for the Century City station, the subway will also need to travel under homes and businesses between Century City and Westwood/UCLA.

Since the first segment of the subway opened in 1993, Metro has received no complaints about noise or vibration due to subway operations. Additionally, in the North Hollywood area, there are sound recording studios adjacent to current subway tunnels. These studios utilize sensitive equipment capable of detecting noise and vibration that would otherwise be imperceptible. Special track work in these areas ensures that the studios are able to continue operation without being impacted by the subway operations.

#### **23. *How deep will the tunnels be below private property?***

The tops of subway tunnels on the Metro Red and Purple Line are typically between 40-70 feet below the surface and are designed to minimize noise and vibration. In some instances, the tunnels are more than 600 feet deep, such as in the area between Hollywood and Universal City where the subway tunnels pass under the Santa Monica Mountains. In the Westwood/Comstock Hills area where the Westside subway extension would travel between Century City and Westwood, the topography of the land rises and the tunnels are bored at a

## Westside Subway Extension – FAQs (Updated October 2011)

near constant elevation that varies between 70 and 120 feet below ground depending on the surface topography above. If the alignment travels under the Beverly Hills High School campus, the top of the tunnels would be approximately 45 to 60 feet below ground. As noted in Question 21, additional detailed geotechnical studies are being conducted during the Final EIS/EIR to assess soil conditions and determine the potential for noise or vibration impacts on the surface along the refined alignments. This has included measurements at the Beverly Hills High School site, as well as in the residential area between the Century City and Westwood/UCLA stations.

**24. *Is it possible to build new buildings or remodel existing ones above subway tunnels and stations? What sort of restrictions would apply to the construction of buildings above the subway?***

Yes, it is possible to build or remodel buildings above subway tunnels and stations. The easement that Metro buys from property owners extends 10 feet above the top of the tunnel, not all the way to the surface. There are many examples of new and remodeled buildings above the existing Red and Purple Line tunnels and stations. Please refer to our tunneling presentation from May/June 2010 for areas where Metro tunnels travel beneath private property.

Whether the tunnels and stations are built before construction on the surface occurs, at the same time, or after, Metro typically works with the property owner or developer to ensure that both can be accommodated. As a part of the Final EIS/EIR and ongoing Preliminary Engineering Metro has asked property owners along the subway routes under consideration for information about their buildings including their foundations.

**25. *Are there any existing subways currently located below schools?***

There are rail tunnels below schools in California as well as others elsewhere in the United States. In California these include West Portal Elementary School in San Francisco, the Bentley School in Berkeley, and Young Oak Kim Academy Middle School here in Los Angeles. Some schools outside of California include East Sylvan Middle School in Portland, Ore., Jefferson Middle School and Woodrow Wilson High School both in Washington, DC, and the Global Village School in Decatur, Georgia.

**26. *Will Metro take or condemn private property needed for construction, station entrances or other purposes?***

Metro only owns property at two locations along the alignment – at Wilshire/Crenshaw (SW corner) and at Wilshire/La Brea (NW corner). Since no station is planned for Crenshaw, that Metro property will be used for construction staging and possibly as the site for a tunnel ventilation structure or power substation. The Metro property at Wilshire/La Brea is expected to be used first as a construction staging area and then as the location of the La Brea station entrance.

At other station locations, Metro prefers to work in partnership with adjacent property owners to secure property needed during construction or for station entrances. Many property owners find it beneficial to have easy access to the subway and some have already contacted Metro about allowing for future subway entrances to their buildings/property.

## Westside Subway Extension – FAQs (Updated October 2011)

Where the subway operates under private property, we will work with the property owner to secure an easement. Please refer to the Westside Subway Property Acquisition Fact Sheet posted on the project website for more information about this process.

As a last resort, if agreements with property owners cannot be reached, Metro may then be required to use its condemnation powers to acquire the necessary easements for the project.

### **Safety**

#### ***27. I've heard that there is subsurface gas and tar in the study area. How can I be sure that the system can be constructed and operate safely?***

Subsurface gas is present throughout much of the greater Los Angeles area and is often a factor in construction projects. While tunneling for transportation has special considerations, other projects have been constructed in subsurface gas zones within the Los Angeles region including buildings with deep parking garages and basements, storm drains, sewer projects and other utility projects. Similar protocols for safety and testing apply to these projects as they do for a transportation project.

Safety, both during construction and eventual operations, is one of Metro's highest priorities. It was also one of the key evaluation criteria during the Draft EIS/EIR, and is being further considered in the FEIS/FEIR phase. We have safely operated the current Metro Red/Purple Line subway for over 15 years and have successfully constructed subway tunnels where subsurface gas has been present. In 2005, an American Public Transit Association Peer Review Panel determined that "It is possible to tunnel and operate a subway along the Wilshire Corridor safely."

During construction, the pressure face tunnel boring machines isolate gas from workers and the public, while gassy soil and tar sands are separated and treated appropriately. Enhanced ventilation systems will be used where necessary to ensure tunnel and station safety and, if necessary, double gaskets for the tunnel lining or other measures may also be installed.

Where needed, tunnels and stations will be designed and built to provide a redundant protection system against gas intrusion. This might include:

- Physical barriers to keep gas out of the tunnels
- High volume ventilation systems
- Gas detection systems with alarms
- Emergency ventilation triggered by the gas detection systems.

During operations, safety codes require rigorous and continuous gas monitoring, alarms, automatic equipment shut-off and additional personnel training.

Please view the presentation from our meetings in August 2009 and January 2011 for more information about subway construction. You may also wish to view the video "A Subway Story: Metro's Westside Subway Extension". You can find these on the project web site at [www.metro.net/westside](http://www.metro.net/westside).

### **28. How can subways be built and operate safely in an area with earthquake faults?**

Many underground facilities – subway tunnels, sewers, storm drains and buildings – have been built in Los Angeles and throughout California near active fault lines. California has some of the strictest building standards when it comes to designing infrastructure to withstand earthquakes.

One of the initial steps in planning a transportation project like a subway is to identify where faults are located and understand their characteristics. The goal in planning the subway is to avoid faults if possible. If that is not possible, then every effort is made to minimize exposure to the fault(s). This can be accomplished by crossing a fault in a perpendicular orientation. Various special engineering techniques have been employed in fault zones to reduce the risk of damage, limit any damage that may occur, and allow for a swift return to regular operations should a seismic event take place. This can include constructing larger diameter tunnels with secondary linings or the use of enhanced tunnel linings and other measures to accommodate ground movement in fault zones. No transit agencies in North America have built a subway station within a known active fault zone. In fact, the Crenshaw/LAX light rail project – another Metro project currently being developed – moved the location of its planned La Brea station to avoid having it sit atop the Newport-Inglewood Fault.

Subways throughout the world have excellent records of withstanding major earthquakes over the last 25 years. They have performed well during earthquakes with no damage or service interruptions, including after the Northridge earthquake in 1994. The Metro Red Line tunnels cross the Hollywood fault north of the Hollywood & Highland Station.

Metro is particularly focused on faults in the area around Century City, where seismic features in the area may influence decisions regarding station locations and tunnel alignments. Preliminary seismic analysis shows that the Santa Monica Fault appears to extend under the Los Angeles Country Club and beneath Santa Monica Boulevard from somewhere between Century Park East and Avenue of the Stars and extending west until it begins to turn away from Santa Monica Boulevard somewhere near of Westwood Boulevard. In addition to the Santa Monica Fault, Metro is also trying to better understand the West Beverly Hills Lineament. A possible seismic feature, it runs north-south through the western part of the City of Beverly Hills near the Beverly Hills High School. More testing and analysis is being conducted during the Final EIS/EIR to learn more about the soils, including faults, and to determine the best way to design and build the subway in this area. [See Question 13 and 21 for more information about the Santa Monica Fault and efforts to learn more about it.]

### **29. How can tunneling be done safely through an area where there are oil fields and wells, many of which have been abandoned and some of which are still active?**

Greater Los Angeles is an oil producing area and there is significant local experience building here. During the Draft EIS/EIR, known oil fields and documented active or abandoned oil wells were identified from oil well maps. This initial analysis indicated that the oil fields are much deeper than the potential subway tunnels. Shafts for active and abandoned oil wells are also located in the vicinity of the project alignment along with other utilities such as sewer, water, gas and electric lines. These will be further mapped during Final EIS/EIR/PE phase and relocated, if necessary, during the construction phase of the project. There are established procedures, regulated by government agencies, for dealing safely with any unmapped or

## Westside Subway Extension – FAQs (Updated October 2011)

unknown wells that are encountered during construction. Metro recently tunneled successfully through the former Boyle Heights oil field while constructing the Metro Gold Line Eastside Extension.

### Station Area Parking

#### **30. *Will there be parking at the stations? Will it be free?***

The current Metro Red/Purple Line Subway has dedicated parking only at the stations at North Hollywood, Universal City, and Union Station. Union Station offers paid parking. North Hollywood and Universal City Stations offer a mix of free parking and paid/reserved parking.

The stations on the Westside Subway Extension are in built-up urban areas where the provision of dedicated subway parking would be very difficult. Existing buildings would need to be acquired and demolished to make room for parking garages and the cost of providing free or highly subsidized parking at the sites would be quite high. Enforcement of free or highly subsidized parking for transit patrons would be difficult as non-transit users would seek to park in such facilities to avoid paying higher parking rates at commercial lots. Many of these stations are also destination stations, with many riders commuting to the Westside for employment. The Draft EIS/EIR evaluated the station locations without the provision of dedicated parking and estimated what the parking demand might be at the stations, available public and private parking that may already exist in the station areas that could possibly be shared for subway purposes, and the potential for spillover parking into neighborhoods near stations. During the public comment period for the Draft EIS/EIR, numerous comments were received on this issue and it is being further evaluated in the Final EIS/EIR.

### Schedule & Phasing

#### **31. *What is the schedule for the Final EIS/EIR and how soon could construction start?***

Following is an anticipated schedule for the Westside Subway Extension Final EIS/EIR and subsequent activities leading to construction:

- Fall 2011 (anticipated): Release Final EIS/EIR with staff recommendations for public review
- Winter 2011/12 (anticipated): Metro Board consideration of Final EIS/EIR for approval and certification
- Spring 2012: Secure federal Record of Decision and request federal “New Starts” funding
- 2012: Secure federal funding, complete engineering, prepare bid documents, award construction contracts, begin pre-construction activities (surveys, utility relocation, etc.), and begin Final Design.
- 2013: Begin construction.

#### **32. *What types of activities happen between the Metro Board approval of the Final EIS/EIR and groundbreaking on construction of the subway extension?***

Following receipt of a Record of Decision from FTA, Metro will begin pre-construction activities that will include securing federal funding, developing Final Design plans, preparing bid documents, awarding construction contract(s), property acquisition negotiations, utility relocation work and potential paleontological work. Ongoing community outreach will also

## Westside Subway Extension – FAQs (Updated October 2011)

continue including discussions with property owners, businesses and the community on station design and station art, and construction mitigations activities.

### **33. *When will I be able to ride the Subway and how does the America Fast Forward Initiative affect the project?***

How fast the Subway is built and open for service is largely a question of when committed funding can be available for the project. During the Draft EIS/EIR, funding projections indicated that the subway would be built in three phases ultimately reaching Westwood/VA Hospital in 2036.

In early January 2011, the Federal Transit Administration granted permission for the Subway to begin Preliminary Engineering to build the project in one phase to Westwood/VA Hospital, and to complete the project by 2022-2024. While we still need to secure federal funding, we are currently developing new funding plans that would allow us to meet this new time frame.

One effort to accelerate funding is known as the America Fast Forward Initiative (formerly the 30/10 Initiative). This is an effort to build the subway and all the Measure R projects in 10 years. Metro is working closely with the federal government to find ways for them to “advance” the funding for these projects. Any federal money not already presumed to be part of the funding for a project would be paid back by the local Measure R revenues over 30 years. The FTA recently announced that the Westside Subway Extension has been approved to receive a \$640 million TIFIA loan to be applied towards the full construction cost of the project. Information on Measure R and the America Fast Forward Initiative is available at [www.metro.net](http://www.metro.net).

## **Public Involvement**

### **34. *How can I be involved in the decision-making process? How can I stay informed about this study?***

You can register to receive future updates on the project and meeting notices by going to the project website, [www.metro.net/westside](http://www.metro.net/westside), and going to “Contact Us.” You can leave a phone message for us at the project information line at 213-922-6934. You can also find us on Facebook at [www.Facebook.com/WestsideSubwayExtension](http://www.Facebook.com/WestsideSubwayExtension) or you can follow us on Twitter at WestsideSubway.

During the Final EIS/EIR, Metro has conducted two rounds of community update meetings and a third round will be held when the Final EIS/EIR is released for public review. During the Final EIS/EIR, Metro also held meetings with Station Area Advisory Groups appointed to provide input on the locations of station entrances and other features in the station areas. These groups included property owners, community leaders, business owners and representatives of key institutions around each station. Please go to the project website, [www.metro.net/westside](http://www.metro.net/westside) and click on “Meetings” for more information.

### **35. *Can Metro make a presentation to my neighborhood or business organization?***

Please leave a message on the project phone line at (213) 922-6934, or leave the request on our website, [www.metro.net/westside](http://www.metro.net/westside), by going to “Contact Us”. A Metro representative will contact you to arrange a meeting for your group or to invite you to one planned in your area.