

ATTACHMENT 25
SUPPLEMENTAL DATA REQUEST NO. 134b

TANK FARM PLAN

RESPONSE TO DATA REQUESTS
MAY 4, 2001

**El Segundo Power Redevelopment, 00-AFC-14
Proposed Tank Farm Plan**

EI SEGUNDO POWER REDEVELOPMENT– TANK FARM PLAN

The following is an analysis of how the tank farm area of El Segundo Generating Station (ESGS) could be used during the El Segundo Power Redevelopment (ESPR) project. The tank farm area consists of approximately 7 acres of land containing, primarily, two large tanks that used to provide fuel oil. El Segundo Power II LLC, the ESPR project proponent, is purchasing this tank farm and proposes to use it to provide construction laydown and staging space to accommodate ESPR on the extremely space restrained ESGS. Following this use, ESP II proposes to dedicate 1.2 acres of the property for public use Strand and the bikepath. This analysis has been prepared to describe the uses of the tank farm area to avoid impacts to the El Porto community of the City of Manhattan Beach. ESP II encourages interested residents to carefully read this proposal and evaluate its adequacy in addressing and resolving concerns over use of the tank farm. Following the Tank Farm Plan, this attachment contains several proposed conditions of certification that go beyond the tank farm and address other El Porto community concerns as well.

Overview of Tank Farm Plan

Use of the tank farm area can be described in four phases:

- Phase I: Preparation of Tank Farm Area
- Phase II: Use of Tank Farm Area During Demolition of Units 1 and 2
- Phase III: Use of Tank Farm Area During Construction of Units 5,6,7
- Phase IV: Remediation and Public Benefit

The use of the tank farm during each phase is described below. The major components of this plan are:

- 1) Use of the tanks as shielded, insulated domes.
- 2) Time restrictions on activities
- 3) Location based restrictions on activities
- 4) Restrictions on activities themselves

A map has been provided to visually depict events during each phase. Figure 1 to this attachment represents existing conditions and Figures 2 through 5 progressively depict Phases 1 through 4. During Phase I, holes are cut in the sides of the tanks and they are prepared for use. The west and north berms are removed and a ramp is constructed on the west face of the berm ending close to the center area between the tanks. A so-called “nighttime exclusion area” is marked off in the area south of the south tank.

During Phase II, excavated soil and crushed concrete from demolition of Units 1 and 2 will be stored in the tanks for later reuse as fill. A dozer and grader will operate in the tanks and the area between them.

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During Phase III, trailers are set up and the soil and crushed rock are hauled from the tanks for use as fill at the ESRP project site. When emptied of stored fill, the north tank is removed. This will leave the south tank to provide a dome as well as a shield for operations. As Phase III progresses, the trailers, tool lockers, a change room will be installed and some fabrication work areas established. Activities after 6:00 PM are restricted to small pickups and workers entering the tank and the area north of the tank to pick up smaller pieces of equipment.

Finally, during Phase IV the remaining south tank is removed and the top section of soil is removed and appropriately disposed of off-site. Soil will be brought in for use as fill to restore the elevation of the tank farm. The tank farm area will then be repaved. Meanwhile, the rip rap will be removed from in front of the western berm. Utilities in the public use area are removed and fence lines are shifted to open the public use area for development.

Noise During the Tank Farm Activity

To analyze for noise from tank farm activities, equipment lists were completed and noise information was obtained for that equipment. Evaluation of the site led to the creation of several worst case-exposure lines of sight/ situations. These are:

Entrance Point of the Tank Farm: As a “worst case,” as vehicles and equipment arrive at the top of the ramp on the western face of the tank farm, or prepare to exit down the ramp, they will be exposed to the frontage of the homes on the north end of the strand. The exposure point applies to all phases, but reaches it maximum exposure in the latter part of Phase II and the beginning of Phase III while the maximum daily volumes of soil and crushed rock are moved into and out of the tank farm area.

Receiver Area: Northernmost residences along The Strand, approximately 500 feet from the source. Assumes the direct line-of-sight between source and receiver is blocked by existing containment area, and thus receives 5 decibels of noise attenuation

Ambient Noise Level (based upon measurement): 60 - 63 dBA Leq.

Construction Equipment Type	Quantity	L_{eq} (dBA)
Pickup Truck	1	56
Dump Truck	1	60
Excavator	1	61
Dozer	1	62
Water Truck	1	57
Backup Alarm (87 dBA at 50')		62
Combined Construction Noise Levels ¹	2	65
Combined Construction Noise Levels plus Ambient		67

¹ Assumes that the two loudest equipment types operate simultaneously.

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Between Tanks Line of Sight: As vehicles drive in the area around the north tank in Phase II and later in the area where the north tank had been in Phase III they will sometimes pass the gap between the smaller oil receiver tank and the south tank exposing them to the homes midway up 45th street. This exposure point also applies to Phase I, but the higher degrees of exposure to the homes is likeliest during removal of the north tank and after the removal of the north tank. It is likely that sometimes two noise sources will simultaneously be exposed through this line of site.

Receiver Area: Residences midway up 45th Street and closer to Vista del Mar, approximately 625 feet or more from the source. Assumes receiver has a direct line-of-sight to this area, with no acoustical shielding.

Ambient Noise Level (based upon measurement): **64 dBA Leq.**

Construction Equipment Type	Quantity	L_{eq} (dBA)
Pickup Truck	1	49
Dump Truck	1	63
Excavator	1	64
Dozer	1	65
Water Truck	1	59
Crane	1	58
Fork Lift	1	59
Backup Alarm (87 dBA at 50')		65
Combined Construction Noise Levels ¹	2	67
Combined Construction Noise Levels plus Ambient		69

¹ Assumes that the two loudest equipment types operate simultaneously.

Exclusion Zone Worst Case: The exclusion zone is the area south of the south tank and marked off with lines. Because of its proximity to the homes of 45th street and the lack of shielding, activities in here are prohibited at night in all phases and limited to pick up trucks and the equivalent light duty vehicle during the day. The worst case scenario represents a pick up truck close to the homes directly across from the north south centerline of the south tank. No use of backup alarms will be permitted within the exclusion zone.

Receiver Area: Residences on 45th Street near The Strand, approximately 200 feet from the source. Assumes receiver has a direct line-of-sight to this area, with acoustical shielding providing a 3dB reduction in noise levels.

Ambient Noise Level (based upon measurement): **59 dBA Leq.**

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Construction Equipment Type	Quantity	L_{eq} (dBA)
Pickup Truck	1	54
Construction Noise Levels plus Ambient		60

Phase IV Typical: Here, because both tanks are removed, a closer than average location is chosen and 2 vehicles are considered for all individual exposures. Little shielding is present for most lines of sight, so for phase IV purposes the other lines of sights are not applied. Selected to be a typical exposure assuming south tank removed. Quantities of vehicles doubled as a conservative measure.

Receiver Area: Residences midway up 45th Street, approximately 400 feet from the source. Assumes the line-of-sight with no shielding.

Ambient Noise Level (based upon measurement): **64 dBA Leq.**

Construction Equipment Type	Quantity	L_{eq} (dBA)
Pickup Truck	2	51
Dump Truck	2	64
Excavator	2	65
Dozer	2	66
Water Truck	2	61
Backup Alarm (87 dBA at 50')	1	64
Combined Construction Noise Levels ¹	4	69
Combined Construction Noise Levels plus Ambient		70

¹ Assumes that the two loudest equipment types operate simultaneously.

Overall, the highest predicted increase over ambient is 6dB and this is predicted in Phase IV. To reduce the impact and likelihood of this level of increase actually occurring ESP II proposes to restrict heavy vehicle activities during Phase IV, to 9:00 AM to 5:00 PM.

During Phases II and III increases may occur during the daytime hours of as much as 4 dB on the Entrance Line of Site and 5 dB on the Between the Tanks line of site. These noise levels are not constant and are restricted to the hours of 7:30 AM to 6:00 PM.

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Phase I: Preparation of Tank Farm Area

Description:

This phase involves cutting access doors in side of tanks and leveling the west and north berm for an access ramp. Some asbestos remediation will occur on the tanks where the access doors will be cut. An access ramp on the western side of the tank farm will be built up designed to provide vehicular access to an area around and between the two tanks. The section south of the access on the Northwest area of the southern tank around behind the southern tank and east of the southern tank will be marked off as a nighttime exclusion zone. See Figure 2.

Duration and hours of activity:

Tank farm preparation will require approximately 30 days of work all between the hours of 730 AM and 6 PM.

Equipment on site:

Welder, backhoe, grader, small trucks, larger trucks

Noise issues:

Cutting of the tanks, use of grader, backhoe and small trucks. A few truck trips to remove material. Some welding. All evolutions will occur during daytime hours of 730 AM to 6 PM.. Noise exposures will occur on Entrance to Tank Farm and Between Tanks Line of Site. Worst case analysis assumes occasional 2 heavy vehicles simultaneously and yields occasional 4-6 dB daytime increase at north end of Strand and occasional 5 dB daytime increase at homes midway up 45th street. None of the noises are constant and all occur between the hours of 7:30 AM to 6:00 PM.

Visual issues:

Nearly all work will be invisible from 45th street. Some work on the berm will be visible from bike path and Strand. Some work will be visible from midday homes on 45th Street looking between tanks.

Dust and air quality issues:

Grading will involve standard CEC conditions regarding control of fugitive dust. These are stipulated to in the Air Quality section of the AFC

Light issues:

No nighttime work and thus no lighting impacts. Some low level shielded and hooded lighting will be installed for security.

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Phase II: Use of Tank Farm Area During Demolition of Units 1 and 2

Description:

This period will involve the use of the tanks as domed structures to collect and hold sand, soil, and concrete excavated from Units 1 and 2. Concrete will be crushed near Units 1 and 2 on North end of site and then transported to tank area and stored in tanks. Excavated sand and soil will also be transported to tanks. All access will occur via the “doors” cut on West faces and doors between tanks (see Figure 2 and 3). No heavy equipment will run before 7:30 AM or after 6:00 PM. This access and use of the tanks has been designed to eliminate noise and dust impact concerns for the El Porto Community. There may be some soil or crushed rock deposited in areas around North tank. Pursuant to CEC fugitive dust mitigation measures, all stored material will be covered when not attended. See Figure 3

Duration and hours of activity:

730 AM to 6PM. Entire phase will last 11 months

Equipment on site:

Frontloader, grader, backhoe, large trucks, dozer, bobcats, water trucks, large dump trucks, small pickups and forklifts.

NOTE: the only crushing activities will occur on North end of site where Units 1 and 2 currently reside and have been reduced in scope. **NO CRUSHING WILL OCCUR IN TANK FARM AREA.**

Noise issues:

All construction activities will be restricted to 7:30 AM to 6:00 PM on the tank farm. Moreover, other than trucks entering and exiting tanks, equipment will be operating inside the tanks. During the hours 9am to 5pm the nighttime exclusion area may be accessed to inspect tanks and possibly place supportive material on outside of them as tanks are filled. The Entrance Line of Site and the Between the Tanks Exposure have the potential to have two heavy vehicles exposed at one time which is considered the worst case situation. In those cases noise levels could increase by 4 dB at the Entrance exposure and 5 dB on the Between Tanks exposure. Such noise levels will not be constant and will only occur between the hours of 7:30 AM to 6:00 PM.

The activities within the tanks are not expected to materially contribute to the construction noise at nearby noise sensitive receivers. The tanks are constructed of solid steel, approximately 1 inch thick near the base and tapering to approximately 3/8 inch thick at the top, with a solid steel roof. Furthermore, the insides of the tanks are covered with insulated padding (approximately 3-inches thick), and with asbestos panels. These would absorb a good deal of noise, reducing the amount of acoustical reverberation. The steel exterior of the tanks would effectively prevent the direct transmission of noise for activities occurring within and near the tanks. Each of the tanks is 219 feet in diameter and 48 feet high, and is expected to provide a minimum of 25 decibels of noise reduction for activities within the

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tanks at receivers within the El Porto Community, based upon nominal exterior/interior building performance.

Visual issues:

Large trucks will be seen entering and exiting the tanks and the tank farm area. This will be visible from the bike path and a portion of the Strand. No construction activity after 6pm.

Dust and air quality issues:

Standard CEC fugitive dust control conditions combined by use of the tanks as a domed structure will ensure no dust or air quality impacts.

Light issues:

Tank farm area will not be used after 6:00 PM or before 7:30 AM and thus no light impacts are expected. Temporary security lights will be installed that will be shielded, hooded and directed down and into area requiring lighting.

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Phase III: Use of Tank Farm Area During Construction of Units 5,6,7

Description:

At the beginning of this phase, the soil, sand and crushed concrete that was stored in the tanks will return to the main construction site as fill. Large trucks will carry this soil and crushed rock back using the ramp on the front. Then, the northern tank will be removed using welders, cutters, pickers, and trucks. The area north of the southern tank will acquire some trailers and building materials may be stored there or in the tanks. Some extra equipment will be parked here. Trucks and loaders will make trips into and out of the area by the front access ramp and the north access ramp during the hours of 7:30 AM to 6:00 PM. Some welding and metal fabrication will occur, entirely inside the tank structures, and during the hours of 7:30 AM to 6:00 PM. Small pick-up trucks may enter and exit tank to pick up materials during second shift, but in no case will trucks enter the nighttime exclusion area after 6:00 PM. No fabrication or large material loading or unloading will occur outside of the construction hours of 7:30 AM to 6:00 PM. See Figure 4.

Duration and hours of activity:

This phase will last 18 months. Construction uses of Tank Farm Area will be restricted to 7:30 AM to 6:00 PM. Small uses such as small truck trips to pick up materials inside tanks may occur on second shift. The night time exclusion area will be observed for such trips.

Equipment on site:

Small pick up trucks, welder, loader, large truck, dump trucks, grader, dozer, forklift, tank trucks, crane, picker, and bobcat.

Noise issues:

Daytime activities will be extremely shielded from 45th street residents by the use of the south tanks as a dome and as a shield. No nighttime activities in nighttime exclusion zone. No construction activity or noise on second shift. The Entrance Line of Site and the Between the Tanks Exposure have the potential to have two heavy vehicles exposed at one time, which is considered the worst case situation. In those cases, noise levels could increase by 4 dB at the Entrance exposure and 5 dB on the Between Tanks exposure. Such noise levels will not be constant and will only occur between the hours of 7:30 AM to 6:00 PM.

The activities within the tanks are not expected to materially contribute to the construction noise at nearby noise sensitive receivers. The tanks are constructed of solid steel, approximately 1 inch thick near the base and tapering to approximately 3/8 inch thick at the top, with a solid steel roof. Furthermore, the insides of the tanks are covered with insulated padding (approximately 3-inches thick), and with asbestos panels. These would absorb a good deal of noise, reducing the amount of acoustical reverberation. The steel exterior of the tanks would effectively prevent the direct transmission of noise for activities occurring within and near the tanks. Each of the tanks is 219 feet in diameter and 48 feet high, and is expected to provide a minimum of 25 decibels of noise reduction for activities within the

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tanks at receivers within the El Porto Community, based upon nominal exterior/interior building performance.

Visual issues:

Trucks will be visible from the bike path and a portion of the Strand entering and exiting tanks. Some activities will be visible to houses on upper 45th street looking between the south tank and the oil storage tank

Dust and air quality issues:

By using the south tank as a dome and standard CEC fugitive dust mitigation conditions dust or air quality impacts are not expected

Light issues:

Any small vehicles entering tank farm area at night will be required to turn headlights off when approaching tank farm area going up ramp. Security lighting may be required on ramp and will, if so required, be shielded and aimed down and in and be at minimum levels required.

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Phase IV: Operation of Project/ Creation of Public Access Area

Description:

Following the construction of the Units 5, 6, and 7, the remaining tank will be removed and the top section of soil will be removed and sent to an appropriate facility. Replacement soil will be brought in and the tank farm elevation will remain unchanged. The tank farm area will be repaved. Meanwhile, the rip rap will be removed from down in front of the western berm. Utilities in the public use area will be removed and fence lines will be shifted, exposing the public use area for development.

The public access area will be graded and landscaped pursuant to a special design committee's decisions. ESP II would fund a pooled fund as well that can provide additional funds for either increased noise reduction or be put towards expanded development effort for the public use area. The new admin building at north end of site will be constructed during this time period as well. *See Figure 5*

A key issue here is what authority will take responsibility for permitting and completing the work on the public access area. ESP II believes the City of EL Segundo or Los Angeles County should administer the work with funding from ESP II, the City of El Segundo, and the Los Angeles County Department of Beaches and Harbors. A committee should be formed to approve development plans. A proposed condition of certification is included in the proposed conditions that follow this tank farm plan.

Duration and hours of activity:

Asbestos abatement: 1 month, 9:00 AM to 6:00 pm

Tank removal: 2 months, 9:00 AM to 5:00 PM

Soil remediation: 1 month 9:00 AM to 5:00 PM

Admin building construction: 6 months, 7:30 AM to 6:00PM

Fence shifting: 1 month 9:00 AM to 6:00 PM

Landscaping and construction of public access area: 3 months 9:00 AM to 6:00 PM.

Equipment on site:

Welders, small trucks, large trucks, crane, dozer, picker, backhoe, grader

Noise issues:

During daytime only, metal cutting noises from 9:00 AM to 5:00 PM. During daytime only, trucks to remove tank material and to remove soil. Bulldozers, graders etc used during daytime hours only to move, excavate and replace soil. All activities between 7:30 AM and 6:00 PM except where noted as even more restricted.

Visual issues:

More activity during this phase will be visible than during any other phase. The tanks will be removed. New fence lines will be in place. The low to the ground admin building will be

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slightly visible. New plantings will go in as well as public access area. In total the visual effect will be one of enhancement.

Dust and air quality issues:

Fugitive dust will be controlled under CEC standard conditions for fugitive dust control.

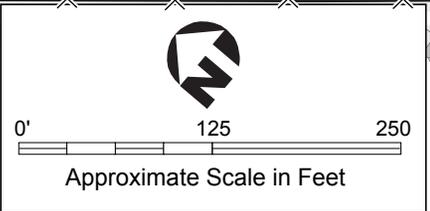
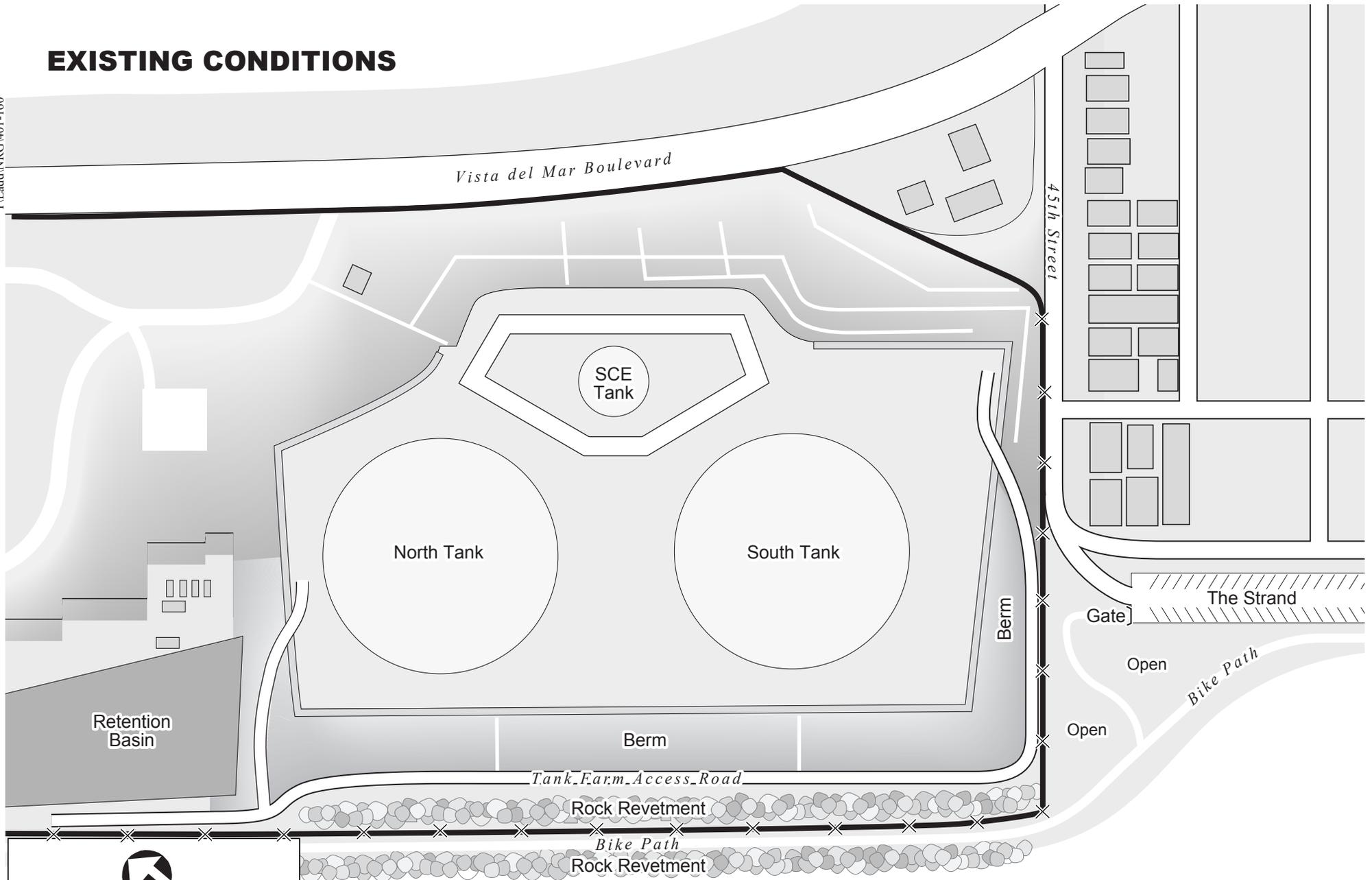
Asbestos work is done using containment. No air quality or dust impacts

Light issues:

No nighttime work will occur in the tank farm area during Phase IV.

EXISTING CONDITIONS

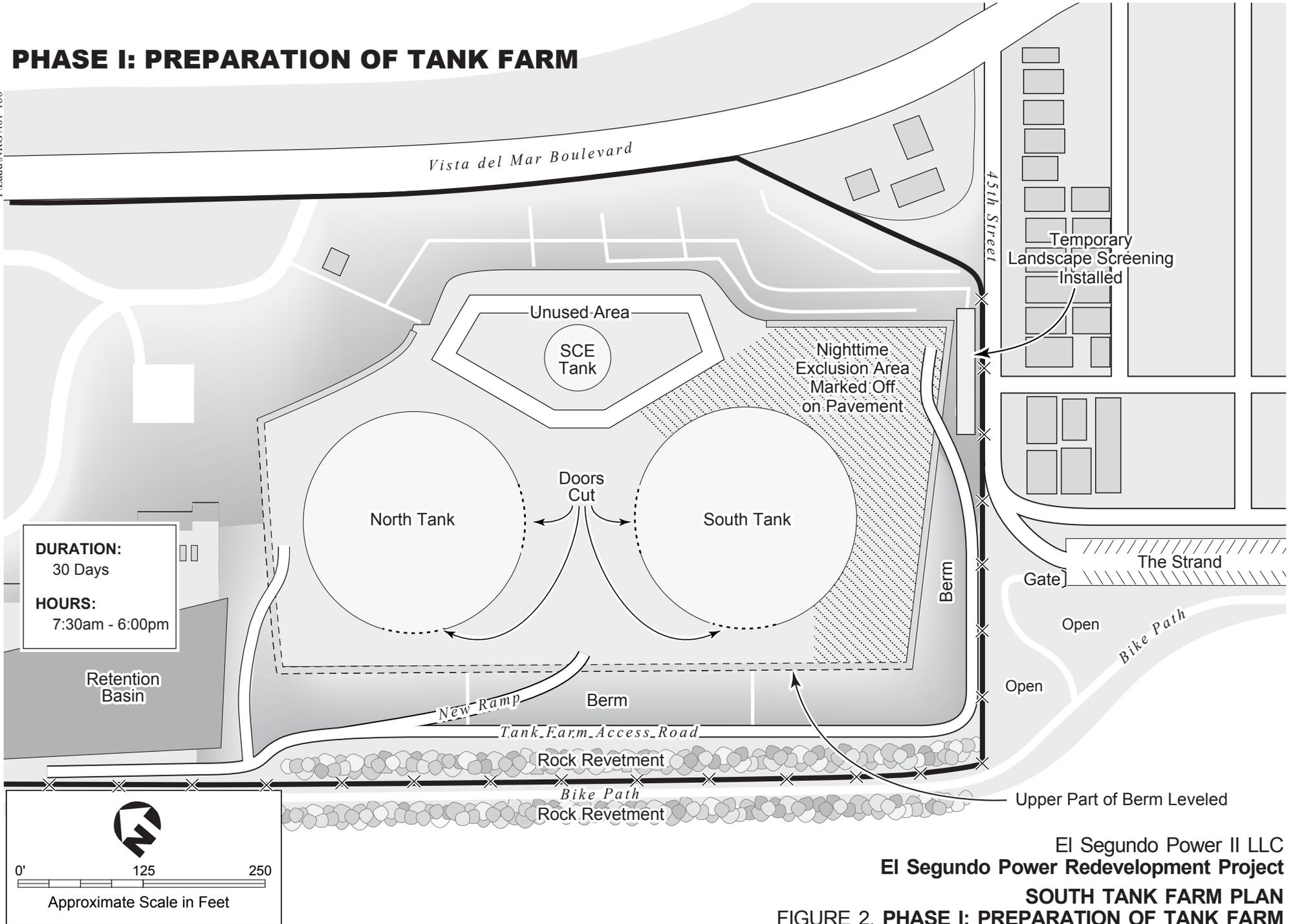
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SOUTH TANK FARM PLAN
FIGURE 1. EXISTING CONDITIONS

PHASE I: PREPARATION OF TANK FARM

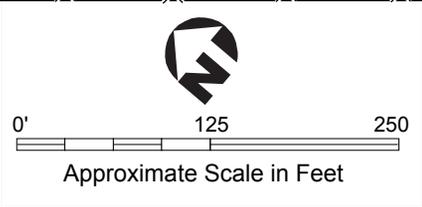
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DURATION:
30 Days

HOURS:
7:30am - 6:00pm

Retention Basin



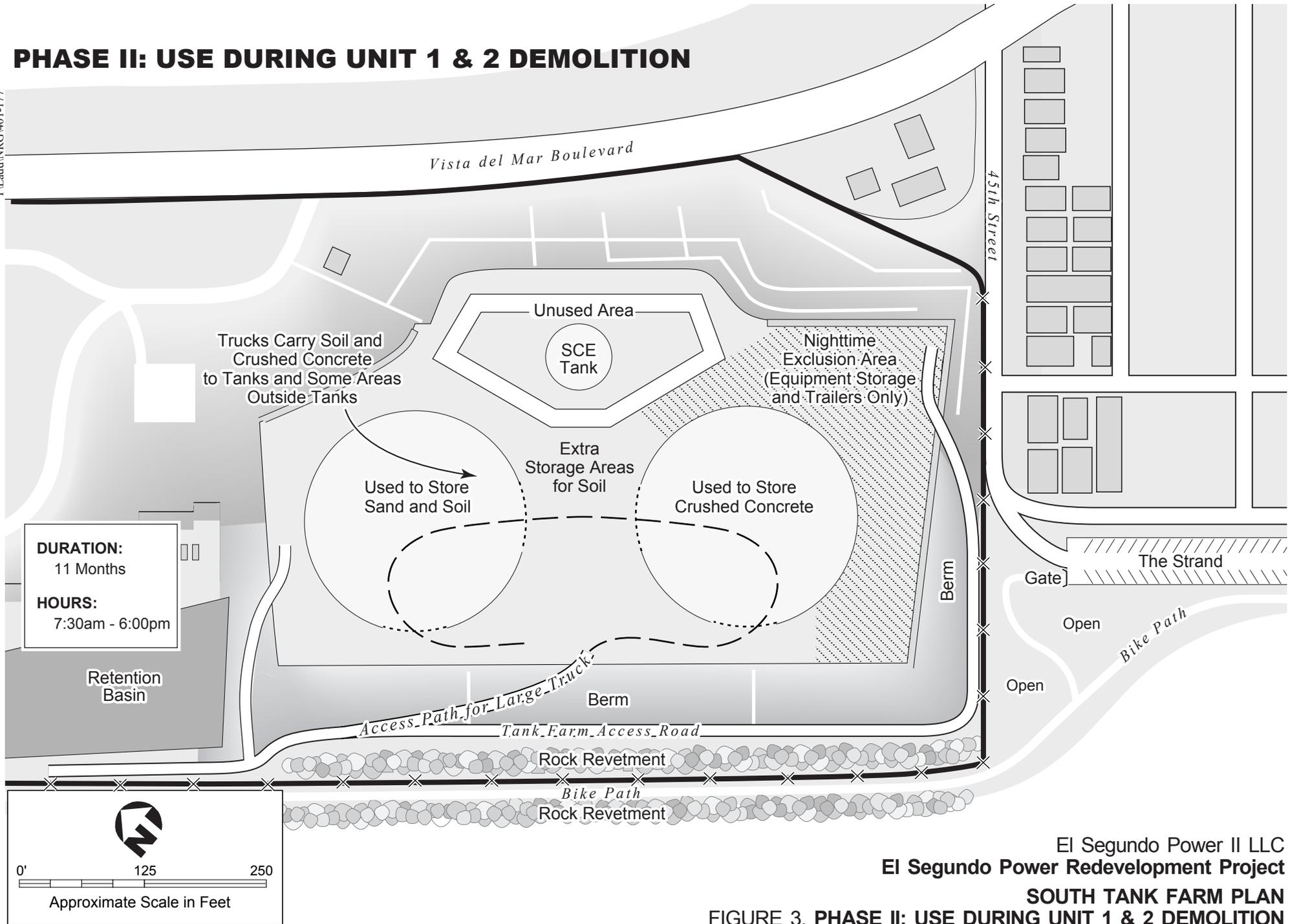
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SOUTH TANK FARM PLAN

FIGURE 2. PHASE I: PREPARATION OF TANK FARM

PHASE II: USE DURING UNIT 1 & 2 DEMOLITION

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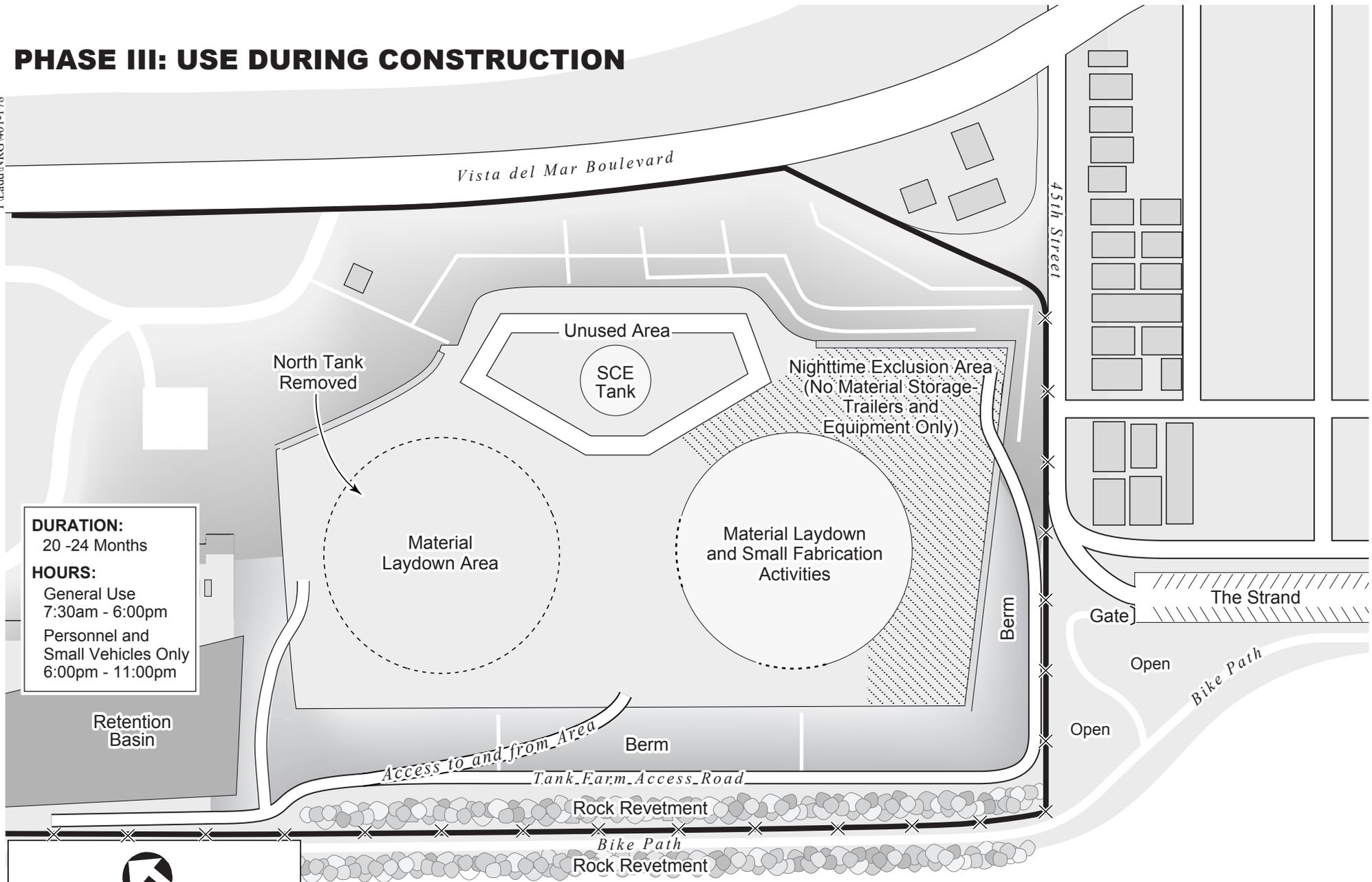
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SOUTH TANK FARM PLAN

FIGURE 3. PHASE II: USE DURING UNIT 1 & 2 DEMOLITION

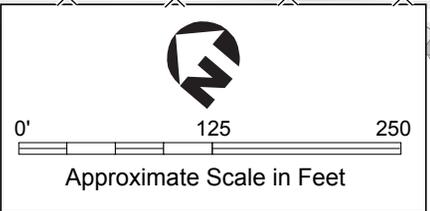
PHASE III: USE DURING CONSTRUCTION

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DURATION:
20 -24 Months

HOURS:
General Use
7:30am - 6:00pm
Personnel and
Small Vehicles Only
6:00pm - 11:00pm

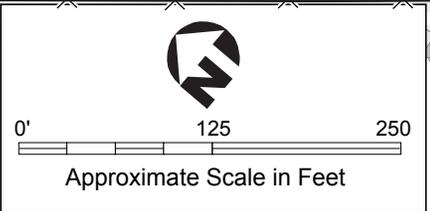
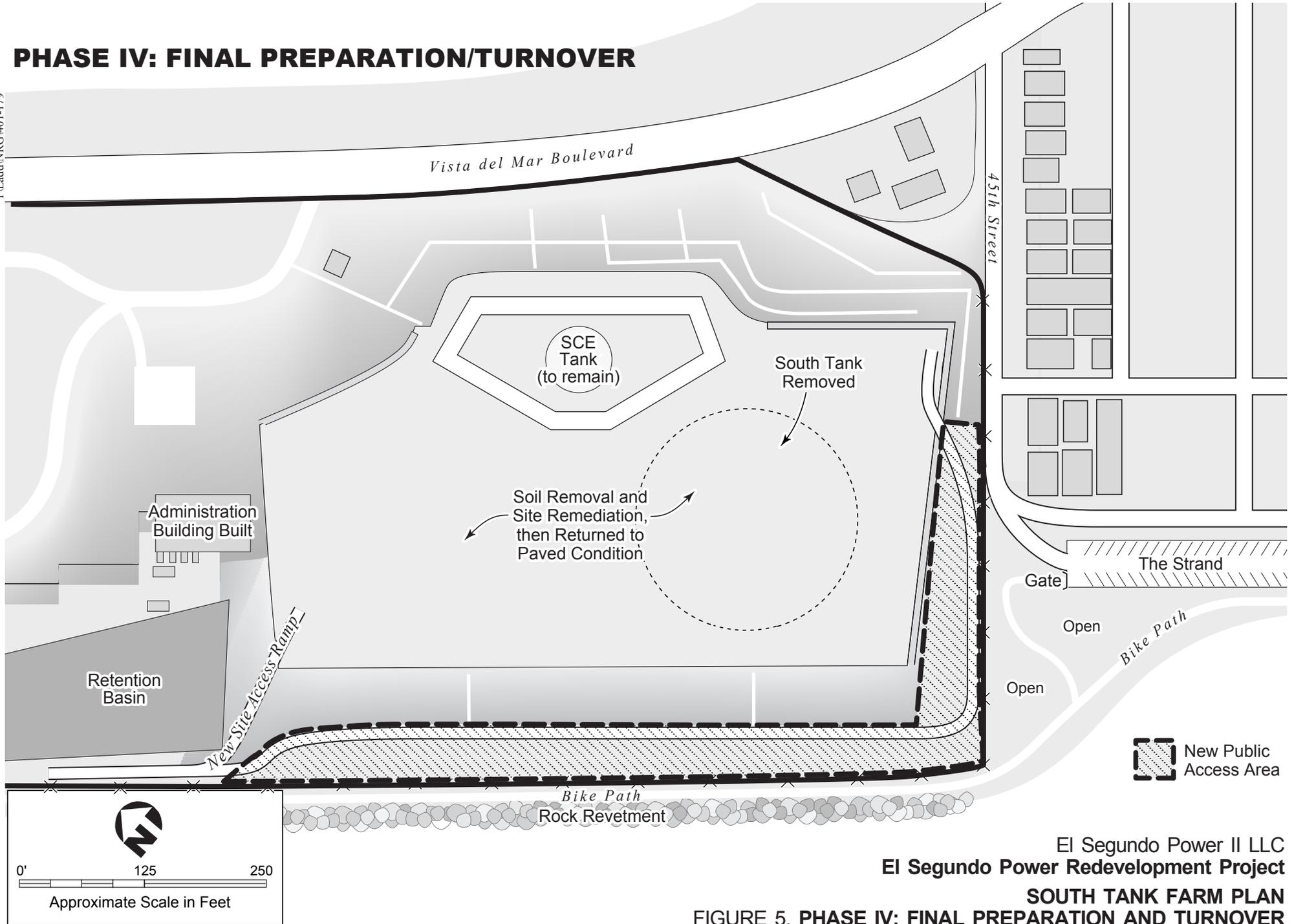


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SOUTH TANK FARM PLAN
FIGURE 4. PHASE III: USE DURING CONSTRUCTION

PHASE IV: FINAL PREPARATION/TURNOVER

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SOUTH TANK FARM PLAN

FIGURE 5. PHASE IV: FINAL PREPARATION AND TURNOVER