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## A Major Phase Area

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The Major Phase Application includes descriptions of intended development on the blocks, block vicinity and site plans, conceptual infrastructure plans, descriptions of proposed building massing and supporting illustrative materials.

Blocks 2-7 and 13 are located in the Mission Bay South Plan Area to the west of Third Street, east of Mission Bay Circle, north of Mission Bay Blvd, North and south of the China Basin Channel. The Blocks represent 18.83 acres of developable land area and are programmed consistent with the Redevelopment Plan as Mission Bay Residential. Blocks 2, 3 West, 4 West, 5, and 13 West are designated as market rate residential development. Blocks 3 East, 4 East, 6 and 7 and 13 East are designated as San Francisco Redevelopment Agency affordable housing sites.

It is anticipated that approximately 1,097 units will be provided on the total parcels within low, mid-rise, and tower residential components. The Major Phase Application allows for structured parking, medium level open space development, and enhanced pedestrian and vehicular site access through public access on private streets, in accordance with the Mission Bay South Redevelopment Plan.

Building massing proposed in this application conforms to Standards and Guidelines defined within the Design for Development Document of the South Plan Area Redevelopment Plan. The percentage of floor area shown in the illustrations contained in this document are consistent with the Design for Development document.

The conceptual designs for Parks P5, P6, P13 and P15 are submitted within this document for concurrent review and approval. The parks represent 4.62 acres of developable land area that are likewise programmed consistent with the Redevelopment Plan.

The infrastructure phasing is planned for three stages and will facilitate development of all the parcels. Phase 1 consists of all street infrastructure including sub-grade utilities, streets, lighting, and sidewalks. In some cases installation of street trees may be delayed until completion of adjoining on-site development. Also included in Phase 1 is the construction of the sewer pump station located In park P15. Construction of infrastructure in Phase 2 includes parks P13, P16 and P5. Phase 3 of the infrastructure includes completion of park P8. To avoid conflict with on-site construction activities, construction of this park will begin following substantial completion of the development on Block 5. Approximate timing of construction within each project phase has been provided as shown in the Phasing Plan on page 11. This schedule is an estimate and may vary.
Major Phase Vicinity Plans
Transit Routes
Regional and Local Transportation

- Blue: Cal Train/Sam Trans
- Red: Muni Metro (N Judah & Third Street Light Rail)
- Green: Muni 22
- Purple: Muni 10
- Muni 47
- Muni Metro Surface Station

NOTE: Route 15 is not shown as it will be eliminated once the Third Street Light Rail becomes operational.

Bicycle Routes
Mission Bay Project Bikeways

- Green: Class I
- Red: Class II
- Yellow: Class III
- Purple: Existing City-Wide Bicycle Routes

Pedestrian Routes and Open Spaces
Mission Bay Open Spaces

- Open Spaces
- Bay Pedestrian Trail
- Mission Bay Project
- Pedestrian Access and Jogging Trails

Major Phase Application
Major Phase Area
Major Phase Vicinity Plans / Transit, Bicycle and Open Spaces

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### MAJOR PHASE DEVELOPMENT CHART AND SUMMARY BLOCKS 2-7 AND 13

<table>
<thead>
<tr>
<th>Use</th>
<th>Site Area</th>
<th>Lot Coverage</th>
<th>Residential Units</th>
<th>Net Retail</th>
<th>Proposed Parking Spaces</th>
<th>Proposed Bicycle Parking Spaces</th>
<th>Maximum Building Height</th>
<th>Required Loading Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Square Feet</td>
<td>Parcel Area / Block Area</td>
<td>min. #</td>
<td>max. #</td>
<td>min. #</td>
<td>max. #</td>
<td>min. #</td>
<td>max. #</td>
</tr>
<tr>
<td>BLOCK 2 Residential</td>
<td>89,407</td>
<td>100 %</td>
<td>232</td>
<td>325</td>
<td>8,000 sq. ft.</td>
<td>9,000 sq. ft.</td>
<td>232</td>
<td>325</td>
</tr>
<tr>
<td>BLOCK 3E SFRA Residential</td>
<td>48,818</td>
<td>100 %</td>
<td>87(5)</td>
<td>97(5)</td>
<td>5,000 sq. ft.</td>
<td>6,500 sq. ft.</td>
<td>97</td>
<td>97</td>
</tr>
<tr>
<td>Residential</td>
<td>47,576</td>
<td>100 %</td>
<td>90</td>
<td>100</td>
<td>3,000 sq. ft.</td>
<td>12,000 sq. ft.</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>BLOCK 4E SFRA Residential</td>
<td>45,650</td>
<td>100 %</td>
<td>85(7)</td>
<td>94(7)</td>
<td>2,500 sq. ft.</td>
<td>3,500 sq. ft.</td>
<td>85</td>
<td>94</td>
</tr>
<tr>
<td>BLOCK 5 Residential</td>
<td>85,456</td>
<td>100 %</td>
<td>173</td>
<td>192</td>
<td>10,000 sq. ft.</td>
<td>11,700 sq. ft.</td>
<td>173</td>
<td>192</td>
</tr>
<tr>
<td>BLOCK 6E SFRA Residential</td>
<td>73,490</td>
<td>100 %</td>
<td>180</td>
<td>200</td>
<td>16,000 sq. ft.</td>
<td>17,000 sq. ft.</td>
<td>180</td>
<td>200</td>
</tr>
<tr>
<td>BLOCK 6W SFRA Residential</td>
<td>47,045</td>
<td>100 %</td>
<td>88(5)</td>
<td>98(5)</td>
<td>7,500 sq. ft.</td>
<td>8,800 sq. ft.</td>
<td>88(5)</td>
<td>98(5)</td>
</tr>
<tr>
<td>BLOCK 7E SFRA Residential</td>
<td>95,636</td>
<td>100 %</td>
<td>122(5)</td>
<td>135(5)</td>
<td>0 sq. ft.</td>
<td>0 sq. ft.</td>
<td>122(5)</td>
<td>135(5)</td>
</tr>
<tr>
<td>BLOCK 7W SFRA Residential</td>
<td>83,836</td>
<td>100 %</td>
<td>144</td>
<td>190(5)</td>
<td>0 sq. ft.</td>
<td>0 sq. ft.</td>
<td>144</td>
<td>190(5)</td>
</tr>
<tr>
<td>BLOCK 13E SFRA Residential</td>
<td>41,810</td>
<td>100 %</td>
<td>78(5)</td>
<td>87(5)</td>
<td>9,000 sq. ft.</td>
<td>10,200 sq. ft.</td>
<td>78</td>
<td>87</td>
</tr>
<tr>
<td>BLOCK 13W Residential</td>
<td>64,000</td>
<td>100 %</td>
<td>121(5)</td>
<td>134(5)</td>
<td>7,000 sq. ft.</td>
<td>8,700 sq. ft.</td>
<td>121</td>
<td>134</td>
</tr>
<tr>
<td>TOTAL</td>
<td>734,523</td>
<td>100 %</td>
<td>1,717</td>
<td>1,907</td>
<td>74,000 sq. ft.</td>
<td>87,400 sq. ft.</td>
<td>1,717</td>
<td>1,907</td>
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</tbody>
</table>

### CUMULATIVE DEVELOPMENT - SOUTH

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Redevelopment Plan Allocation</th>
<th>Previous Major Phase Blocks 9-10A</th>
<th>Development Blocks 26-28</th>
<th>Development Blocks 41-43</th>
<th>Blocks 2, 3E, 3W, 4E, 4W, 5, 6E, 6W, 7E, 7W, 13E, 13W</th>
<th>Remaining Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mission Bay Residential</td>
<td>3,000 units</td>
<td>687 units</td>
<td>-</td>
<td>-</td>
<td>1,717 - 1,307 units</td>
<td>516 - 796 units</td>
</tr>
<tr>
<td>Mission Bay Retail</td>
<td>230,000 sq.ft.</td>
<td>12,000 sq. ft.</td>
<td>40,000 sq. ft.</td>
<td>10,000 sq. ft.</td>
<td>43,000 - 49,700 sq.ft.</td>
<td>118,300 - 125,000 sq.ft.</td>
</tr>
</tbody>
</table>

(5) Maximum Usable Square Footage, not including access corridors and vertical elements (i.e., elevators, stairs and mech. venting).
(6) See the mid-rise and lower area allocation chart and map on page 9 for further information.
(7) A request for a reduction in the number of required loading zones can be applied for during the design review process.
(8) SFRA Residential sites assume a minimum of 50 residential units per acre of developable area. SFRA retains the option to increase the number of units on their sites by 10%.
(9) Parking will be shared between developments at Block 8 East and 8 West.
(10) SFRA residential sites illustrated in this Major Phase Application are Type V construction with a 50' building height, however this is not indicative of the maximum allowed base building height of 65'.
(11) UCSF is contracted to retain a maximum of 160 units at Block 7 East.
(12) Per Mission Bay South Redevelopment Plan, Section 304.5, retail s.f. located at SFRA residential development is not included in the total Mission Bay retail entitlement. Therefore, 49,700 s.f. net retail at the private development sites is shown in the cumulative development chart below.
Mid-rise and Tower Area Allocation

One of the key components of this Major Phase Application is determining the appropriate allocation of the maximum allowable square footage for mid-rise height and tower height development permitted within each height zone. The Mission Bay South Design for Development requires allocations not exceed the percentages indicated in Image 1 and Chart 1 shown to the left. The percentage of developable area at a specified height is calculated for the entire developable area within a height zone, not on a block by block basis.

This Major Phase Applications includes development in both Height Zones 2 and 3. Therefore, Chart 2 below includes the proposed breakdown of mid-rise and tower height area allocation spanning each separate height zone. The allocation map shown on page 10 shows how the chart below reflects the proposed massing described later in this document. The chart below indicates the proposed development area for this Major Phase and also remaining allocation for future Major Phase developments.

<table>
<thead>
<tr>
<th>Height Zone 2</th>
<th>Block</th>
<th>Site S.F.</th>
<th>Midrise % Allowed for Height Zone 2</th>
<th>Midrise S.F. Allow for Height Zone 2</th>
<th>Tower % Allow for Height Zone 2</th>
<th>Tower S.F. Allowed for Height Zone 2</th>
<th>Number of Towers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Allowed</td>
<td>All Sites</td>
<td>418,180</td>
<td>10%</td>
<td>41,818</td>
<td>15%</td>
<td>62,728</td>
<td>7</td>
</tr>
<tr>
<td>SFRA Sites</td>
<td>Block 13 East</td>
<td>34,900</td>
<td>10%</td>
<td>3,490</td>
<td>15%</td>
<td>5,235</td>
<td>1</td>
</tr>
<tr>
<td>Developer Sites</td>
<td>Block 13 West</td>
<td>70,940</td>
<td>10%</td>
<td>7,094</td>
<td>15%</td>
<td>10,641</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>Current MPA</td>
<td>135,840</td>
<td>10%</td>
<td>13,584</td>
<td>15%</td>
<td>20,676</td>
<td>2</td>
</tr>
<tr>
<td>Future Phases</td>
<td></td>
<td>282,340</td>
<td>10%</td>
<td>28,234</td>
<td>15%</td>
<td>46,393</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Height Zone 3</th>
<th>Block</th>
<th>Site S.F.</th>
<th>Midrise % Allowed for Height Zone 3</th>
<th>Midrise S.F. Allow for Height Zone 3</th>
<th>Tower % Allow for Height Zone 3</th>
<th>Tower S.F. Allowed for Height Zone 3</th>
<th>Number of Towers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Allowed</td>
<td>All Sites</td>
<td>686,605</td>
<td>13%</td>
<td>85,246</td>
<td>7%</td>
<td>48,055</td>
<td>6</td>
</tr>
<tr>
<td>SFRA Sites</td>
<td>Block 3 East</td>
<td>43,818</td>
<td>13%</td>
<td>5,623</td>
<td>7%</td>
<td>3,450</td>
<td>1</td>
</tr>
<tr>
<td>Block 4 East</td>
<td>45,650</td>
<td>13%</td>
<td>5,902</td>
<td>7%</td>
<td>3,560</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Block 6 East</td>
<td>35,836</td>
<td>13%</td>
<td>4,873</td>
<td>7%</td>
<td>3,150</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Block 7 East</td>
<td>47,045</td>
<td>13%</td>
<td>6,166</td>
<td>7%</td>
<td>3,860</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Block 7 West</td>
<td>39,666</td>
<td>13%</td>
<td>5,160</td>
<td>7%</td>
<td>3,300</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Block 7 West</td>
<td>41,610</td>
<td>13%</td>
<td>5,394</td>
<td>7%</td>
<td>3,470</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Developer Sites</td>
<td>Block 2</td>
<td>99,597</td>
<td>13%</td>
<td>13,215</td>
<td>7%</td>
<td>8,040</td>
<td>1</td>
</tr>
<tr>
<td>Block 3 West</td>
<td>47,570</td>
<td>13%</td>
<td>6,140</td>
<td>7%</td>
<td>3,680</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Block 4 West</td>
<td>35,856</td>
<td>13%</td>
<td>4,760</td>
<td>7%</td>
<td>2,850</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Block 5</td>
<td>79,499</td>
<td>13%</td>
<td>10,324</td>
<td>7%</td>
<td>6,200</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>Current MPA</td>
<td>598,783</td>
<td>13%</td>
<td>79,246</td>
<td>7%</td>
<td>48,055</td>
<td>2</td>
</tr>
<tr>
<td>Future Phases</td>
<td></td>
<td>87,722</td>
<td>13%</td>
<td>11,204</td>
<td>7%</td>
<td>6,600</td>
<td>1</td>
</tr>
</tbody>
</table>

Chart 1: Height Zone Map

Chart 2: Height Zone Map
Note: This map shows the approximate massing of the mid-rise and towers proposed for the current Major Phase Application. Greater detail is shown in the Block Development chapter of this document. The maximum floorable square footage for each block is indicated in the allocation chart on page 9.
<table>
<thead>
<tr>
<th>B</th>
<th>Infrastructure</th>
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</thead>
<tbody>
<tr>
<td>Infrastructure Description</td>
<td>13</td>
</tr>
<tr>
<td>Circulation - Vehicular, Pedestrian, &amp; Bicycle</td>
<td>19</td>
</tr>
<tr>
<td>Joint Trench &amp; Gas</td>
<td>20</td>
</tr>
<tr>
<td>Water</td>
<td>21</td>
</tr>
<tr>
<td>Sanitary Sewer</td>
<td>22</td>
</tr>
<tr>
<td>Storm Drain</td>
<td>23</td>
</tr>
<tr>
<td>Street Sections</td>
<td>24</td>
</tr>
</tbody>
</table>
Infrastructure Lines

Recent infrastructure projects bordering the south of channel residential area have resulted in the construction of new or improved roadways and new utilities that will service the residential area; 
- Construction of Park P1 and draining of old Channel Street within the limits of P1
- Construction of Channel Street along the south side of P1 and between Third and Fourth Streets
- Installation of a traffic signal at the intersection of Third and Channel Streets
- Construction of Fourth Street from 1st Street north to UCSF Lane
- Reconstruction of Third Street from Channel Street south through Mission Bay
- Reconstruction and signalization of the 16th Street / Seventh Street highway-railroad grade crossing

These roadway projects included the installation of new utility systems including: 
- Separated sanitary sewer and storm drain systems
- Low Pressure Water mains
- High Pressure Water mains
- Reclaimed Water mains
- Gas mains
- Joint utility trenches containing telecommunications, telephone and electrical lines

Proposed utility systems within the residential area are consistent with the South of Channel Infrastructure Plan or pending revisions thereto.

Low Pressure Water

The City’s low pressure water (LPW) system is the primary supply for domestic use and fire suppression purposes. The new piping shown matches that identified as necessary in the LPW system master plan. The recently installed LPW line in Fourth Street will be extended northerly from Mission Bay Boulevard South, through the residential area, to the existing LPW line in the intersection of Fourth Street and Channel Street. Additional new lines will also be installed in the following locations:
- Long Bridge Street from Fourth Street southeasterly to China Basin Street
- Merrimac Street from China Basin Street to Mission Bay Blvd. North
- Lot A from Fourth Street
- Channel Street to Park P2
- Mission Rock Street between Third Street and Fourth Street
- China Basin Street between Third Street and Long Bridge Street
- El Dorado between Long Bridge Street and Channel Street
- Mission Bay Boulevard North between Third Street and Merrimac Street
- Mission Bay Boulevard South between Third Street and Merrimac Street
- Interim line between the intersection of MBSS / Merrimac westly to connect an existing water line in the intersection of future Mission Bay Circle and future Channel Street,

As development plans proceed, site-specific analysis will be performed to confirm that the combination of plging built as a part of this project and the connections with the existing LPW system will adequately serve the project area, especially with respect to required fire flow. New fire hydrants will be installed throughout the project area at required locations.

High Pressure Water

The City’s high pressure water system (AWSS) is used for fire suppression only during a significant fire event. A new AWSS main will be installed in Mission Bay Boulevard South from an existing main in Third Street west to Merrimac Street.

Reclaimed Water

The reclaimed water system within Mission Bay is intended to supply treated water for use in toilet systems and landscape irrigation. The existing reclaimed water system has been energized, on an interim basis, using supply from the low pressure water system pending the creation of a reclaimed water source.

Reclaimed water line in Fourth Street will be extended northerly from Mission Bay Boulevard South through the residential area, to the existing reclaimed water line in the intersection of Fourth Street and Channel Street. Additional new lines will also be installed in the following locations:
- El Dorado between Long Bridge Street and Channel Street
- Long Bridge Street from El Dorado to China Basin Street
- China Basin Street between Long Bridge Street and Merrimac Street
- Merrimac Street between China Basin Street and Mission Bay Boulevard North
- Mission Bay Boulevard North between Fourth Street and Merrimac Street

Storm Drainage

Separate storm drains and sanitary sewers are being installed in the south of channel area of Mission Bay replacing the existing combined sewer system within the area. Installation of these separate systems within the project area, along with previously installed separate systems in Third Street and Channel Street, will allow the abandonment of the large existing Third Street/Fourth Street combined sewer. New storm drain lines will be installed in all streets within the project area.

Storm drainage collected in the project area north of China Basin Street will be conveyed on a temporary basis to the existing San Francisco Gaits treatment facilities located near Third Street and Channel Street. In the future SWPS II will be constructed in Park P1 which will allow abandonment of the SF Gaits treatment facilities. Storm drainage collected in the project area along and south of China Basin Street will be conveyed to a temporary detention pond located along the western boundary of this Major Phase as shown on page 23.

Very heavy storms will fill the underground storm sewer system to capacity and result in "overflow" flows. During these times the excess stormwater flow will be conveyed via the network of streets and drainage channels to China Basin, as indicated in the storm drainage master plan documents. The overland flow paths include an existing outfall into China Basin located near the middle of Park P1, a new outfall to be constructed at the westerly end of Park P1, and an existing overland flow path through Park P16 east of Third Street.
Sanitary Sewer
To help reduce sanitary sewer overflow into the Bay during rainfall events, the south of channel area of Mission Bay includes the separation of storm and sanitary sewer systems. The project area includes the installation of separate sanitary sewers as indicated in the sanitary sewer master plan documents that will provide sanitary sewer service to all parcels within the project area.
Installation of these separate systems within the project area, along with previously installed separate systems in Third Street and Channel Street, will allow the abandonment of the large existing Third Street/Fourth Street combined sewer. New sanitary sewer lines will be installed in all streets within the project area with the exception of El Dorado and Merrimac Street.

Joint Trench Utilities
“Dry” utilities will be located in a common trench, including primary and secondary electric power, telephone, CATV, police and fire alarm conductors, high-speed data communications (fiber optics), municipal telemetry lines, and similar utilities. Secondary power for street lighting will also be located in the joint trench.

The recently installed joint trench in Fourth Street will be extended northward from Mission Bay Boulevard South, through the residential area, to the existing joint trench in the intersection of Fourth Street and Channel Street. Additional new joint trench will also be installed in the following locations:
- El Dorado between Long Bridge Street and Channel Street
- Long Bridge Street from El Dorado to China Basin Street
- China Basin Street between Long Bridge Street and Third Street
- Merrimac Street between China Basin Street and Mission Bay Boulevard North
- Mission Bay Boulevard North between Merrimac Street and Third Street
- Channel Street from the end of an existing joint trench westerly to the limit of this Major Phase area.

Natural Gas
The recently installed natural gas line in Fourth Street will be extended northward from Mission Bay Boulevard South, through the residential area, in the existing natural gas line in the intersection of Fourth Street and Channel Street. Additional new natural gas lines will also be installed in the following locations:
- China Basin Street between Merrimac Street and Fourth Street
- Merrimac Street between China Basin Street and Mission Bay Boulevard North
- Mission Rock Street from Fourth Street east to Block 3 East.

Roads & Appurtenances
To serve Development Blocks 2, 3, 4, 5, 6, 7, and 13, and the larger transportation needs of the Mission Bay South Project Area, existing public streets around these blocks will require improvements as identified in the Mission Bay South Infrastructure Plan. All of the circulation improvements to be implemented as part of this Major Phase are consistent with the transportation measures contained in the Final Mission Bay Subsequent EIR Mitigation Monitoring and Reporting Program. The Final Mission Bay SEIR identified project features and mitigation measures to be implemented by the project sponsor in order to avoid significant impacts. The Mitigation Monitoring and Reporting Program assigns implementation of these features and measures to one or more development blocks and tracks its implementation in accordance with the SEIR requirements. On the other hand, it may not be possible to assign some of the project features or mitigation measures to a specific development block due to their project-wide nature or because some key intersections or roadway segments may be expected to reach congested conditions before development occurs on adjacent blocks. Examples include opening of a new railroad crossing, major roadway construction, or installation of traffic signals outside of the project area. In these instances, the SEIR establishes through the Mission Bay South Infrastructure Plan a cumulative development requirement by which project features and mitigation measures are implemented based on project development triggers. These triggers are based on the cumulative number of p.m. (evening) vehicle trips generated by the Mission Bay project.

Appendix page 100 provides a detailed list of those mitigation measures that would be implemented as part of this Major Phase and specifies which measures would be applicable to each development block. Appendix page 107 provides a list of the expected development schedule on a block by block basis for the Mission Bay Project and identifies the transportation related project features and mitigation measures that would be subject to cumulative development requirements, as well as their estimated implementation date. The transportation improvements to be built as part of this Major Phase are as follows:

Fourth Street
Fourth Street is being reconstructed to accommodate MUNI’s Third Street Light Rail Transit Extension Project in its median between King and Channel Streets. Fourth Street will be extended between Channel Street and Mission Bay Boulevard. It will generally provide one 11-foot traffic lane and one 6-foot bicycle lane each way to facilitate both vehicle and bicycle travel, with 8-foot on-street parking lanes on both sides of the street and 12-foot sidewalks. The Mission Bay Final Subsequent EIR anticipated that during peak periods parking would be prohibited on Fourth Street in the peak travel direction to allow a second traffic lane to be provided during the weekday peak commute periods. A new traffic analysis (see Appendix, page 31) has been prepared that indicates that the peak traffic volumes expected at the buildout of Mission Bay would not require the second traffic lane and that the on-street parking could be maintained to preserve the neighborhood retail commercial character of the street. Fourth Street will become a designated Class II Bikeway or bicycle route (striped bike lanes). The intersections of Fourth Street with Channel Street, China Basin Street, and Mission Bay Boulevard will be signalized. The east and west approaches to Fourth Street at the Lot A Varie easement, Long Bridge Street and Mission Rock Street will be STOP-sign controlled.
Third Street
Third Street is being reconstructed to accommodate MUNI's Third Street Light Rail Transit Extension Project. In its median, while maintaining two travel lanes each way, no on-street parking will be allowed on Third Street. Northbound and southbound travel lanes will generally be 10 to 11 feet in width. The intersections of Third Street with Channel Street, Mission Rock Street and Mission Bay Boulevard will be signalized. Exclusive northbound and southbound left-turn lanes will be provided at Mission Bay Boulevard and Mission Rock Street; an exclusive northbound left-turn lane will also be provided at Channel Street. The intersections of Third Street with the Lot A Vara easement and China Basin Street will be STOP sign controlled in the eastbound direction. The east side of Third Street will have a 5-foot setback which results in a 12-foot wide sidewalk. A light rail station with two side platforms will be built to the north and south of the intersection of Third Street and Mission Rock Street.

Merrimac Street
Merrimac Street will be a new one-block street linking Mission Bay Boulevard with China Basin Street. It will typically provide one 12-foot travel lane each way with an 8-foot curb parking lane and a 14.4-foot sidewalk on each side.

El Dorado Street
El Dorado Street will be a new one-block one-way couplet connecting Long Bridge and Channel Streets. Each segment of the couplet will provide one 12-foot travel lane and an 8-foot curb parking lane each way and a 14.4-foot sidewalk on both sides of street. The intersection of El Dorado Street with Channel Street will be signalized. The southbound approach of El Dorado Street at Long Bridge Street will be STOP sign controlled.

Mission Bay Boulevard North and South
Mission Bay Boulevard North will be constructed as a one-way couplet, connecting Third Street with Merrimac Street. Mission Bay Boulevard North and South will typically have one travel lane approximately 15 feet wide to facilitate bicycle travel and an 8-foot parking lane. Approximately 100 feet to the east and to the west of Fourth Street, Mission Bay Boulevard will have one exclusive 12-foot right-turn lane and one shared 11-foot through-left lane. A 12-foot sidewalk would be provided on the north and south sides of Mission Bay Boulevard. An approximately 120-foot wide open space area will be provided in the median of Mission Bay Boulevard. Mission Bay Boulevard will eventually link Terry François Boulevard and the parks along the Bay with Seventh Street along the western boundary of Mission Bay, via Mission Bay Circle.

China Basin Street
China Basin Street will be a new roadway connecting Long Bridge Street with Third Street that will provide local access to the residential development in Blocks 4, 5, 6 and 7. The configuration of China Basin Street between Third Street and Long Bridge Street Boulevard will accommodate one 11.8-foot traffic lane and one 8-foot parking lane each way. A 12-foot sidewalk will be provided on both the north and south sides of China Basin Street. The intersection of China Basin Street with Fourth Street will be signalized. All vehicular traffic travelling eastbound on China Basin Street will be STOP sign controlled and will have to turn right (southbound) at Third Street.

Mission Rock Street
Mission Rock Street will be a new one-block street linking Fourth Street with Third Street and will provide local access to the residential development in Blocks 3 and 4. The configuration of Mission Rock Street between Third and Fourth Streets will accommodate one 11.8-foot traffic lane and one 8-foot parking lane each way. A 12-foot sidewalk will be provided on both sides of Mission Rock Street. The intersection of Mission Rock Street with Third Street will be signalized. The westbound approach of Mission Rock Street at Fourth Street will be STOP sign controlled.

Lot A Vara easement
An east-west Vara corridor will be constructed between Blocks 2 and 3, from Fourth to Third Street. It will be a two-way local private street accessible by the public; to be used for local vehicular and pedestrian access, passenger drop-off, utility corridors and preservation of the view corridors. There will be a limited amount of parking that will be monitored directly by the development owners. According to the South Infrastructure Plan, the total minimum width of the traveled way will be 20 feet. All vehicular traffic traveling eastbound on the Lot A Vara easement will have to turn right (southbound) at Third Street. All vehicular traffic traveling westbound will also have to turn right (northbound) at Fourth Street. The approaches of the Lot A Vara easement to Third and Fourth Streets will be STOP sign controlled.

Long Bridge Street
Long Bridge Street will be a new diagonal street running southwest from Fourth Street to Mission Bay Boulevard. The configuration of Long Bridge Street will accommodate one 11.8-foot traffic lane and one 8-foot parking lane each way. A 12-foot sidewalk will be provided on both sides of Long Bridge Street. The eastbound approach of Long Bridge Street at Fourth Street and the westbound approach of Long Bridge Street at Mission Bay Boulevard will be STOP sign controlled.

Channel Street
Channel Street is an existing right-of-way that will extend towards Mission Bay Circle. Between Third and Fourth Streets, Channel Street will accommodate the MUNI Third Street Light Rail; its median as well as two travel lanes each way. West of Fourth Street, Channel Street will generally provide two 11-foot travel lanes in each direction. An 8-foot parking lane will be provided along the north side of the street adjacent to the park. The Mission Bay Pedestrian and Jogging Trail will parallel the north side of the street and a 12.5-foot sidewalk will serve the south side of the street. An eastbound exclusive left turn lane will be provided at the intersection with Fourth Street, which will be signalized. The intersection of El Dorado Street with Channel Street will be signalized.

Intersection Improvements
The intersection of Third and Channel Streets will be signalized. A new traffic signal controller will be installed, as well as new traffic signal poles, masts and heads, including pedestrian traffic signal heads with countdown timers. The Third Street/Channel Street intersection will be reconstructed to accommodate the MUNI Third Street Light Rail, which will run through the intersection. The northbound and southbound approaches to the intersection will have two through travel lanes and there will be an exclusive northbound left-turn lane. The eastbound approach will accommodate two lanes, one for right-turns and one for left-turns.
Third Street/Lot A Varra Easement
The intersection of Third Street and the Lot A Vara easement will be STOP sign controlled for vehicles traveling eastbound on the easement. Vehicles traveling northbound or southbound on Third Street will not stop. The northbound and southbound approaches to the intersection will have one shared right-through lane and one through lane. Northbound or southbound left-turn movements will not be allowed at this intersection due to the raised median for MUNI. The eastbound approach will accommodate one right-turn only lane.

Third Street/Mission Rock
The intersection of Third and Mission Rock Streets will be signalized. A new traffic signal controller will be installed, as well as new traffic signal poles, masts and heads, including pedestrian traffic signal heads with countdown timers. Third Street will be reconstructed to accommodate the MUNI Third Street Light Rail station at Mission Rock Street. Two side platforms will be built by MUNI in the median of Third Street, to the north and south sides of Mission Rock Street for northbound and southbound rail passengers, respectively. The northbound and southbound approaches to the intersection will have one shared right-through lane, one through lane and an exclusive left-turn lane. The westbound approach will accommodate one shared left-through right lane.

Third Street/China Basin Street
The intersection of Third and China Basin Streets will be STOP sign controlled for vehicles traveling eastbound on China Basin Street; vehicles traveling northbound or southbound on Third Street will not stop. The northbound and southbound approaches to the intersection will have one shared right-through lane and one through lane. Northbound or southbound left-turn movements will not be allowed at this intersection due to the raised median for MUNI. The eastbound approach will accommodate one right-turn only lane.

Third Street/Mission Bay Boulevard North
The intersection of Third Street and Mission Bay Boulevard North will be signalized. A new traffic signal controller will be installed, as well as new traffic signal poles, masts and heads, including pedestrian traffic signal heads with countdown timers. The northbound approach to the intersection will have two through lanes and an exclusive left-turn lane. The southbound approach will accommodate two through lanes and one shared right-through lane. The westbound approach will have one exclusive right-turn lane and one shared through left lane.

Third Street/Mission Bay Boulevard South
The intersection of Third Street and Mission Bay Boulevard South will be signalized. A new traffic signal controller will be installed, as well as new traffic signal poles, masts and heads, including pedestrian traffic signal heads with countdown timers. The northbound approach to the intersection will have two through lanes and one shared right-through lane. The southbound approach will accommodate two through lanes and one exclusive left-turn lane. The eastbound approach will have one exclusive right-turn lane and one shared through left lane.

Fourth Street/Channel Street
The intersection of Fourth and Channel Streets will be signalized. A new traffic signal controller will be installed, as well as new traffic signal poles, masts and heads, including pedestrian traffic signal heads with countdown timers. The Fourth Street/Channel Street intersection will be reconstructed to accommodate the MUNI Third Street Light Rail which will turn through the intersection. The east and west approaches will provide two through travel lanes in each direction with an additional eastbound exclusive left-turn lane on Channel Street. The northbound Fourth Street approach will provide one shared left-through lane, one bike lane and one exclusive right-turn lane.

Fourth Street/Lot A Varra Easement
The intersection of Fourth Street and the Lot A Vara easement will be STOP sign controlled. Vehicles traveling northbound or southbound on Fourth Street will not stop. The northbound approach to the intersection will have one exclusive through lane, one shared right-through traffic lane and one bike lane. The southbound approach to the intersection will have one shared left-through traffic lane and one bike lane. The westbound approach will accommodate one right-turn only lane.

Fourth Street/Long Bridge Street
Long Bridge Street will intersect with Fourth Street at a diagonal to form a shared T-intersection. Traffic on eastbound Long Bridge Street will be STOP sign controlled. Vehicles traveling northbound or southbound on Fourth Street will not stop. The northbound and southbound approaches will provide one traffic lane and one bike lane. The eastbound approach will provide one exclusive left and one exclusive right turn lane.

Fourth Street/Mission Rock Street
The Mission Rock Street approach to this intersection will be STOP sign controlled. Vehicles traveling northbound or southbound on Fourth Street will not stop. The northbound and southbound approaches will provide one travel lane and one bike lane. The westbound approach will provide one shared left and right turn lane.

Fourth Street/China Basin Street
The China Basin Street approaches to this intersection will be signalized. A new traffic signal controller will be installed, as well as new traffic signal poles, masts and heads, including pedestrian traffic signal heads with countdown timers. The northbound and southbound approaches will provide one traffic lane and one bike lane. The eastbound and westbound approaches will provide one shared left-through right turn lane.

Fourth Street/Mission Bay Boulevard North
The intersection of Fourth Street and Mission Bay Boulevard North will be signalized. A new traffic signal controller will be installed, as well as new traffic signal poles, masts and heads, including pedestrian traffic signal heads with countdown timers. The northbound approach to the intersection will have one exclusive through lane, one bike lane and one exclusive left-turn lane. The southbound approach will accommodate one shared through right lane and one bike lane. The westbound approach will provide one exclusive right-turn lane and one shared through left turn lane.
Fourth Street/Mission Bay Boulevard South
The intersection of Fourth Street and Mission Bay Boulevard South will be signalized. A new traffic signal controller will be installed, as well as new traffic signal poles, masts and heads, including pedestrian traffic signal heads with countdown timers. The northbound approach to the intersection will have one exclusive through lane and one exclusive right-turn lane. The southbound approach will accommodate one exclusive left-turn lane, one bike lane and one exclusive through lane. The eastbound approach will have one exclusive right-turn lane and one shared through-left turn lane.

Channel Street/El Dorado Street
The intersection of Channel and El Dorado Streets will be signalized. A new traffic signal controller will be installed, as well as new traffic signal poles, masts and heads, including pedestrian traffic signal heads with countdown timers. The northbound approach to the intersection will have one shared left-turn turn lane. The eastbound and westbound approach will have two traffic lanes each way.

Long Bridge Street/El Dorado Street
The southbound El Dorado Street approach to this intersection will be STOP sign controlled; vehicles traveling on El Dorado Street will not stop. The southbound approaches will provide a shared left-turn turn lane. The eastbound and westbound approaches will provide one traffic lane each way. Differential color or texture pavement will be installed at the pedestrian crosswalks across Long Bridge Street.

Menimac Street/China Basin Street
The northbound Menimac Street approach to this intersection will be STOP sign controlled; vehicles traveling eastbound or westbound on Menimac Street will not stop. All approaches will provide one traffic lane each way.

Access
Development Blocks 2, 3, 4, 5, 6, 7 and 13 will be at the confluence of key vehicular and public transportation facilities. The site will be flanked by a major City arterial street (Third Street) and on the west by Channel Street, a major arterial street in the Mission Bay South Project Area. In addition to carrying vehicular traffic volumes, Third Street will also carry the Third Street light rail extension.

Transit Service
Existing and proposed transit service in the vicinity of Blocks 2, 3, 4, 5, 6, 7, and 13 include the following:

Regional Transit
Caltrain - Caltrain provides South Bay regional transit service to the Fourth and Townsend station, about 0.25 miles to the northwest of Blocks 2, 3, 4, 5, 6, 7, and 13. Caltrain currently operates 69 trains each day between San Jose and San Francisco at weekday peak period frequencies varying between five and thirty minutes. Caltrain service is expected to be expanded to approximately 105 weekday daily trains by the year 2015, as cited in the Mission Bay Subsequent Environmental Impact Report, September 1996.

Local Transit
Blocks 2, 3, 4, 5, 6, 7, and 13 will be served by MUNI's local transit service provided to the Mission Bay South Plan Area. Proposed Muni transit routes in the vicinity of Blocks 2, 3, 4, 5, 6, 7, and 13 include:

Third Street Light Rail - The light rail line will extend from Market Street to The Embarcadero, continuing along King Street, then onto Fourth Street, from Fourth Street to Channel Street, on Channel Street to Third Street, and would extend through Mission Bay South on Third Street to terminate near the Bayshore Caltrain station. A light rail station will be located on the median at the intersection of Third and Mission Road Streets. Both the N-Judah and J-Church light rail lines will serve the Mission Bay South Plan Area in the future.

Stockton / 45 Union-Stockton - In response to increased expected in Mission Bay transit demand, MUNI will extend either the 45-Stockton or the 45-Union/Stockton trolley coach route south from its current terminus at the Caltrain terminal, via Fourth Street, and future Long Bridge Street and Mission Bay Boulevard in Mission Bay south, continuing on Hooper/linn, Sixteenth, Connecticut, and Eighteenth Streets, and ending somewhere in the vicinity of Third and Nineteenth or Twentieth Streets. MUNI anticipates extending about fifty percent of the present 30-Stockton or 45-Union/Stockton peak service.

Filletto - MUNI will re-route the 22-Filletto trolley coach route to access the Mission Bay South Area via Sixteenth and Third Streets, to terminate at Mission Bay Boulevard South near the intersection of Third Street.

Bus stops for the 30-Stockton or the 45-Union/Stockton trolley coach route could be located at both sides of El Dorado Street, on the north side of the intersection of El Dorado and Long Bridge Streets, past the crosswalks, to avoid pedestrians crossing El Dorado Street from being blocked by a stopped trolley bus. A terminal bus stop for the 22-Filletto trolley coach route will be located on Mission Bay Boulevard South between Fourth and Third Streets.

Transportation Management Plan
In conformance with Mitigation Measure E-47, the Mission Bay Transportation Management Association (TMA) has been formed. The initial efforts of the TMA will be to explore the feasibility of a shared shuttle service and development of a Bicycle and Pedestrian Plan.

The MBTMA board recently met to vote in a dues billing program, and has retained the services of a TMA consultant to assist with the approved 2005 work plan for the Mission Bay area. Commercial owners (of completed projects possessing a Certificate of Occupancy) are billed $2.00 per square foot of developed area per annum and residential units are billed at a flat $80.00 per annum.

Currently, the work plan, MBTMA participating member dues and the scope of services offered by the MBTMA are the same for both North and South of Channel areas. It is anticipated the scope of services the MBTMA will provide will evolve as commercial and residential developments are completed and new members join the Association. Based upon the differing needs of each type of development, the MBTMA shall modify its focus to best serve those particular users. For instance, members in the residential areas of Mission Bay will likely require assistance with parking options within the immediate area, the use of a car sharing program and the discounted transit pass program. Commercial tenants/employees will find that their needs would include help with ease of shared or pooling programs, possible shuttle service to public transit, and access guides distributed within their workplace.
The Board plan for 2005/2006 includes publishing an Access Guide and distribute to residents, which outline public transit lines, freeways and connections to nearby attractions such as shops, restaurants and entertainment area. The plan also includes an outreach campaign to residents which promotes MUNI and Caltrain connections, with a focus on drive-alone who work within 10 miles, by promoting the use of "flat" transit pass. The plan also calls for establishing casual carpool at specific locations within Mission Bay. The TMA will survey retail employees to coordinate with RIDES for zip maps and act as liaison with property managers and business managers to promote the ongoing services.

Below is the board approved 2005 work plan for the MBTMA:

1. Publish simple Access Guide and distribute to residents (Fall 2005)
   Outline public transit lines, freeways, connections
   Outline nearby attractions (shops, restaurants, entertainment)
   Resources (RIDES, etc.)

2. Campaign to residents to promote MUNI, Caltrain connections (Fall 2005)
   Include "flat" transit pass
   (Focus on drive-alone who work within 1-10 miles)

3. Establish casual carpools to specific locations (Fall 2005)
   (Campaign - survey those interested: coordinate with property managers)

4. Survey retail employees per City requirements (completed in May 2005)
   Coordinate with RIDES for zip-maps, etc.

5. Liaison with property managers and business managers to promote TMA services (on going)

Parking

With the exception of Third Street, Channel Street between Third and Fourth Streets and the south side of Channel Street west of Fourth Street, on-street parking will be available on all streets totaling about 250 spaces. Required on-street parking may be provided at a maximum rate of one space for each dwelling unit and one space per 500 square feet of occupied floor area up to 20,000 square feet for retail, plus one space for each 250 square feet occupied in excess of 20,000 square feet of retail, consistent with Mission Bay South Design for Development requirements. Loading zones will also be provided with requirements addressed within the Mission Bay South Design for Development.

Pedestrian Circulation

The plan envisions a substantially enhanced environment for pedestrians. Minimum 12-foot wide sidewalks are planned on all streets. The Mission Bay Pedestrian and Jogging Path will parallel the north side of Channel Street and link to the planned pedestrian bridge across the channel.

Differential color or texture pavement will be installed at the north-south pedestrian crosswalks across Long Bridge Street at the intersection with El Dorado Street.

Care has been taken to develop preliminary designs of pedestrian crosswalks in a manner that accommodates those with mobility or visual disabilities. In order to accommodate a pedestrian-friendly environment, curb line radii of approximately 15 feet are proposed. Improvements such as these will result in a pedestrian-friendly environment that increases safety and reduces street crossing times. The proposed radii also respond to an urban design theme that discourages the use of large curb radii which channeled block corner and which is not consistent with historic block development patterns throughout San Francisco.

In some cases, these reduced radii may increase the difficulty of larger vehicles to negotiate turns. The Owner has been working with the Department of Parking and Traffic, the Department of Public Works, the Municipal Railway and Caltrans to develop a truck and large vehicle routing plan which encourages these movements only on streets which can safely accommodate this traffic and provide a safe pedestrian environment.

A neighborhood linking pedestrian bridge across the China Basin Channel at Fifth Street will connect the neighborhood open space system north and south of the China Basin Channel. The bridge will have a center swing bridge, 11 feet wide, with an steel approach span of approximately 115 feet long, a steel center swing span of approximately 70 feet, an approach span of approximately 85 feet long, and steel deck supports, turntable systems, wall abutments (not higher than five feet above adjacent finish grades at the north and south channel banks) and a control building (or equivalent type bridge structure which achieves the same pedestrian connection between the north and south sides of the China Basin Channel).

The possibility of providing sidewalk bulb extensions on the west side of the pedestrian crosswalks at Mission Rock Street and on the east side of the pedestrian crosswalks at Long Bridge Street has been considered as part of the urban design and transportation analyses conducted for Fourth Street. The evaluation identified two key issues, loss of operational flexibility and overwhelm flow capacity, which will require further analyses before their implementation. The presence of sidewalk bulb extensions would diminish the operational flexibility of Fourth Street when due to roadway surface or underground repairs it may be necessary to close one or more travel lanes and use on-street parking as a temporary travel lane. Similarly, construction of the sidewalk bulb extensions will change the hydrology of the overland storm drain flow system and will require restudy and reinstallation of the storm drain flow elevations along Fourth Street. Thus the sidewalk bulbs are not currently shown as part of the proposed design for Fourth Street, but may be incorporated at a later time after these two issues are resolved.

Pedestrian Walkway

A 40-foot mid-block pedestrian walkway has been provided between Lots 13E and 13W. This walkway will be for pedestrian use and provide access frontage to on site buildings in both lots. A public pedestrian and emergency access easement will be provided over the improvement area for the pedestrian walkway. Other utility easements can be provided in this area as necessary. Included with the improvements are trees, lighting and pavement treatment.

Bicycle Circulation

Fourth Street will generally have six-foot wide striped bicycle lanes from Channel Street to Mission Bay Boulevard South to facilitate bicycle travel and will be designated as a Class II bicycle facility. Mission Bay Boulevard will generally have one 15-foot wide travel lane in the eastbound and westbound directions to facilitate bicycle travel and will be designated as a Class III bicycle travel route with a share arrow, a chevron Image indicating the bikes share the travel lane.

Rail Operations

Past railroad operations in the area have already been discontinued as part of the extension of the Third Street Light Rail project into the Mission Bay South Plan Area and unused tracks for freight operations are in the process of being removed. The on-going reconstruction and signification of the 16th Street/Seventh Street highway-railroad grade crossing will be completed before the end of 2005.
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DESIGN FOR DEVELOPMENT STANDARDS SUMMARY

The following chapter summarizes how the proposal contained in this Major Phase Application complies with the Design for Development guidelines from the Mission Bay South Redevelopment Plan. The Redevelopment Plan establishes the basic land use standards for the Major Phase Application boundary encompassing Blocks 2 through 13 as shown on page 8. These include requirements for land use, height, bulk, setbacks, block coverage, street walls, view corridors, open areas, parking/landscaping and access, neighborhood and primary streets, site access, wind analysis, and signage. The description that follows summarises how each of the criteria requirements listed above will be complied with.

Land Use Requirements

The maximum development program that has been established for the Plan Area is outlined in the Data Chart on page 8. The development program is consistent with the Land Use Map (located on page 4). The boundary area inscribed within the dashed red outline includes the residential development blocks and parks under consideration in this Major Phase Application.

Height Requirements

Height zones have been established for each block as shown in the Height Zone Map on page 9 and again on Map 2, page 36. Building heights are distinguished as base, mid-rise and tower heights as indicated in Image 2. The designs within this application are required to not exceed a given developable area percentage at the base, mid-rise and tower heights. Pages 9 and 10 in the Introduction describe in detail the maximum tower and mid-rise area allocations allowed in this application and how the current design intends to comply with these requirements.

At towers proposed within this major phase will achieve the maximum 160’ height allowed. Additional mechanical equipment housings will occur at rooftops of several towers, which is allowed per the standards. These mechanical areas will be sufficiently spaced away from the edge of the towers to maintain on overall maximum 160’ height.

In addition, any towers proposed within the development zone are required to maintain separation distance from one another as indicated in Image 3. Two towers are proposed in Block 13 West in Height Zone 2. Four towers are proposed in Height zone 3, with two towers at Block 2 and two towers at Block 5. Distances between towers range from 160’ separation to 220’ separation, well above the minimum 125’ separation required. The towers have also been sufficiently spaced apart from one another to avoid two towers at any one intersection. Furthermore, the towers have been sized to be no more than 160’ in any one direction.

Blocks 3 West and 4 West include plans for rooftop recreation spaces within the base height zone. The areas of these respective recreation rooms fall within the maximum 25% roof area threshold, and the heights of these spaces are planned to be 15’ tall, also below the maximum height allowed for such spaces.

Bulk Requirements

Bulk standards control the length and width of towers to preserve light and air and prevent construction of massive buildings which block views and generally disrupt the character of the city. The design of each block’s towers have been carefully assembled to comply with the bulk standards required as shown in Image 4. Floor plates for towers above 30’ have been designed to be less than the maximum 17,000 square foot area allowance. In addition, the location of towers in this application is intended to "hold the corner" (Image 5) for the required distance from street intersections. Where development blocks adjoin mid-block pedestrian walkways, additional open space at these corners may be acceptable per the Design for Development guidelines; this is the case at the intersection of Block 3 West and Lot A.
Setback Requirements

Setbacks are required to provide space for certain pedestrian and bike path links and for connection of major open spaces. The only required setback that affects this Major Phase is the 5’ setback on the west side of Third Street from one block south of the Channel to Mariposa Street (Map 4, page 38). This setback has been factored into the designs of Blocks 2, 3 West, 4 West and 7 West as indicated in the block development chapter starting on page 37.

Lot Coverage and Streetwall

Streetwall and lot coverage standards are required to maintain the consistent building to street relationship that is common throughout San Francisco. Chart 3 summarizes the lot coverage and streetwall requirements mandated for this Major Phase Application. The minimum height of streetwalls should be 15’, and the designs adhere to this requirement. Developments along neighborhood streets also maintain a 20’ setback above the 55’ average height threshold. Blocks 5 and 13 West maintain a 20’ setback from the edge of the developable site as required adjacent to Parks P9 and P8. Streetwall variation and minimum projection heights are requirements the design teams have factored into the residential development for this Major Phase, however greater detail on these topics will be provided during subsequent design reviews.

Public and Private Open Space

At full buildout, the Plan Area will include approximately 41 acres of publicly accessible open space. This area includes Parks P5, P8, P13 and P15 as part of this application, shown in the Land Use Map on page 4.

Private open space has also been provided in the required amount of 70 square feet per dwelling unit. Every development proposed within this application intends to provide a rooftop terrace/recreation area for its residents. Many of the market-rate residential developments further intend to provide exterior balconies adjoining residential units. In general, approximately 85% of the private open space requirement will be provided for with common open spaces along roof tops and courtyards, while 15% will be satisfied with private decks.

View Corridors

View corridors are required to be maintained in the Mission Bay development to preserve the orientation and visual linkages to the Bay and Channel, as well as vistas to hills, the Bay Bridge and the downtown skyline. These view corridors preserve orientation and visual linkages, helping to provide a sense of place within Mission Bay.

As illustrated on the view corridor diagram on page 4, visual linkages along both primary and neighborhood streets will be preserved by the proposed massing in this Major Phase. More importantly, the visual linkages connecting Parks P1, P5 and P8 to the Mission Bay Commons (Parks P13 and P15) will not be obstructed by the proposed massing. One of the most important view corridors is the Fourth Street retail corridor. The south entry into the retail corridor is enhanced with strategic setbacks. In the development massing at Blocks 6 East and 7 West, as shown on page 48. Likewise, the north entry to the retail corridor is enhanced by minimizing the height of the massing at Block 13 East, leaving a more open view corridor towards the south (see page 54).

Chart 3
Sunlight Access to Open Space

The Design for Development standards encourage new developments that ensure sunlight access to public open spaces and limit the area and duration under shadow. Initial shadow studies conducted during the SEIR have determined that development complying with the Design Standards will reasonably limit areas of shadow on public open spaces during the active months of the year and during the most active times of the day. Accordingly, additional shadow analysis will not be required unless a design concept seeks a variance from the Design Standards that establish the shape and location of buildings.

To confirm the findings of the original SEIR with the proposed massing in this Major Phase, a complete solar shading analysis was conducted to confirm the current massing strategy for the residential developments is in conformance with the solar shading criteria. It was concluded that shadow issues during the summer months will be minimal, and during the fall and spring months there will be moderate shading within the surrounding parks but within allowable ranges. Refer to the solar shade analysis in the appendix (pages 78 to 85) for the analysis results.

Wind Analysis

According to the Design for Development guidelines, wind review will be required for all projects that include buildings over 100 feet in height. Wind tunnel testing may also be required for these buildings unless, upon review by a qualified wind consultant, and with concurrence by the Agency, it is determined that the exposure, massing, and orientation of the building are such that adverse wind impacts will not occur. A wind analysis was therefore conducted for the proposed massing, and is included in the appendix of this document. The results concluded that the proposed massing would reduce the average general wind speed by more than 7 mph and would create no new comfort criterion exceedances. Refer to the wind analysis in the appendix (pages 86 to 90) for further details.

Parking Requirements

The required number of parking spaces will be provided at the residential developments as indicated in the development chart on page 8. The number of parking spaces cannot exceed a maximum of 1 space per residential dwelling unit. Parking for residential uses will be enclosed within the developments and thus screened from view of pedestrians. The entrance to any offsite parking will not be more than 500' from the entrance to the building in which units are located. Where applicable, additional landscape buffers have been provided (Blocks 3 East, 4 East and 7 East) to further obscure the parking levels from pedestrian view.

Approximately 88,000 square feet of retail is planned within this major phase along the Fourth Street retail corridor. Per the requirements described in Chart 4 to the right, a minimum of 230 spaces is necessary for the retail area proposed. Therefore, approximately 250 on-street parking spaces are planned within this Major Phase to facilitate the retail development along Fourth Street. Additional parking spaces could be shared with the off-street parking facility provided at Block 3 East.

Lastly, one secure bicycle parking space will be provided for every 10 vehicular parking spaces within the residential developments. Residential developments have the option of using bike racks or lockers within their developments provide for this requirement.

Loading Space Requirements

Off-street loading spaces have been provided per gross square feet of floor area as indicated in Chart 5. Care has been taken in the designs to locate the loading spaces away from Fourth Street and instead along the adjoining streets. Loading areas and all refuse storage and dumpsters will be enclosed within structures and out of view from pedestrian areas. The Design for Development guidelines state that a lower ratio may be established by the Redevelopment Agency based on a development-specific loading study. In discussions with the agency staff, it is anticipated that the number of loading spaces will be reduced in future design phases based on the types of ownership envisioned for this development.
Signage Requirements

Any signage intended for use within this development is required to be verified with the existing signage standards and is subject to design review with the San Francisco Redevelopment Agency. For the general Major Phase application area, certain signage types are prohibited within the development, such as billboards, flashing signs, moving signs or roof signs. Business signs are allowed for retail uses, however no business signs are permitted above 1/2 of the base height of the building.

The Fourth Street retail corridor is of particular importance within this application. Any signage proposed for the Fourth Street retail corridor must be in conformance with the Mission Bay South Signage Master Plan. Signage for retail uses shall be limited to identification signage and business signage. The total area allowed for signage shall be the combined total of these types. However, the total gross area of all signage is limited to two square feet of signage per linear foot of street building frontage. Signage implementation shall be located by an area determined by the frontage of each use.

Signage Implementation shall conform to the following locations and area limitations:

1. Window signs. The total area of all window signs shall be not more than one-third the area of the window in which they are located, or not more than ten square feet, whichever is less.

2. Wall signs. The lower edge of wall signs shall be above the ground floor storefront or ten feet above the sidewalk, whichever is greater and the upper edge of such signage shall be no higher than the lower window sill of the first residential floor. Wall signs should not be continuous along a parcel; each individual business should have a separate sign. For business frontages up to 25 feet in length, wall signs are permitted for 100% of the frontage. For business frontage exceeding 25 feet in length, wall signs are permitted for up to 75% of the frontage.

3. Fh signs. The number of fh signs shall not exceed one per business on street frontage. The lower edge of fh signs shall be not less than twelve feet above the sidewalk, the upper edge shall be no higher than the lower window sill of the first residential floor or within a residential district, otherwise may not exceed 50% of the height of the buildings, and shall not extend more than half the distance from the building to the curb or eight feet, whichever is less. The total area per face of each sign shall not exceed twenty-five feet.4. Awning signage. Signage shall be allowed on awnings not exceeding 20% of the area of the vertical face of the awning with no letters higher than 12".

5. Freestanding signage. One freestanding sign is permitted within the Commercial/Industrial/Retail designation where the building is set back from the property line. Freestanding signs may consist of graphics on a tower where the area of graphics independent of the supporting structure shall be no more than twenty square feet, and the tower may be no more than forty feet high.

Potential examples of these signage types have been provided in the Fourth Street Commercial Retail Chapter, Page 87.
ADDITIONAL DESIGN STANDARDS

Fourth Street Retail Stepback Requirement
In discussions with Agency staff, two additional standards have been adopted as part of this application in consideration of the Fourth Street retail corridor.

1. A minimum 5' stepback is required above retail development along Fourth Street. The stepback is meant to reinforce the retail spaces at ground level and provide additional relief from the higher residential spaces above. A minimum 80% of any building length along Fourth Street should have at least a 5' stepback either at the roof of one level of retail or the roof of one retail level plus one residential level. The minimum height to be maintained before the stepback occurs is 15', and the maximum height shall be no greater than 30'. Refer to sample sections A and B on the next two pages for the various methods this requirement can be complied with.

2. Limit balcony encroachment into the retail stepback zone along Fourth Street. Combined balcony lengths encroaching over the retail stepback may be a maximum 20% of the retail stepback length. Balconies setback behind the retail stepback depth may be on any length along Fourth Street. Refer to Image 6 to the right.

The massing diagrams and building sections which follow in the Block Development chapter illustrate how these two standards have been incorporated along the Fourth Street side of the residential developments.

Additional Urban Design Guidelines
In addition to the preceding design standards required by the Design for Development document, the additional design guidelines may be considered for the layout and massing of the proposed Major Phase Application. While some of these guidelines deal with design decisions outside the scope of this Major Phase booklet, the ongoing design of the residential developments has taken them under consideration:

1. Create frequent building entrances along the first level and maintain pedestrian-oriented facade design at the ground floor, minimizing blank walls and utility areas.

2. Provide special architectural treatments where view corridors terminate at buildings (Blocks 5, 6 West, 12 and 13).

3. Building mass should step down toward the Mission Creek Channel.

4. Private podium level open space should open up towards the channel or Park P5.

5. Modulate building masses and articulate large building facades with architectural elements, such as cornices, material differentiation, and stepbacks. Provide facade modulation at appropriate intervals (base, mid-rise and lower height transitions) depending on the height of the building to avoid a monolithic appearance.

6. Provide variation in tower and mid-rise rooflines to create interest for skyline views. Create visual interest along the roofscape. Organize and screen mechanical systems and use screening elements to resolve building designs and distinguish tower rooflines.

7. Create a ground presence for towers with a strong base and other design elements connecting the tower facade with lower floors.

8. Avoid excessive dark color tones especially for tower portions of projects.

9. Make parking spaces available to car sharing organizations.

10. Enhance the neighborhood-serving environment of 4th Street by establishing good neighbor considerations and other limitations such as ground rules for: noise generation, disporation of trash, speeding up, etc.
## D Block Development

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Legend

Residential Development

20'-0"
Property Line Dimension

150'
Building Height

Note 1: Configuration to be refined in future design phase, consistent with Design for Development Standards.

Note 2: An additional setback is provided at the Block 3 West entry adjacent to the Lot A pedestrian path to allow a more generous open space presence, as recommended by the Residential Design Guidelines.
Note: The design of Lot A to be refined in future design phases, consistent with the Design for Development Standards.
Note: Blocks 6 East and 7 West have incorporate step-backs at this intersection to provide a more gracious opening to the Fourth Street retail corridor. The steps also mirror the masking strategy proposed by the UCSF structures to the south of Mission Bay Commons.
Legend

- Residential Development
- Property Line Dimension
- Building Height

Note: Block 13 East has incorporated a setback at this intersection to provide a more gracious opening to the Fourth Street retail corridor. An open plaza is planned for this corner to provide additional openness across from the adjacent Block 2 tower.
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Retail Standards

These design standards apply to the ground floor level of all buildings located on Fourth Street from Channel Street to Mission Bay Boulevard North.

Objectives:
- Ensure the successful development of a new neighborhood-serving retail and service district.
- Create a sense of identity for 4th Street with a diversity of shops and services, attractive public areas, well-lit and visible storefronts, and convenient and safe pedestrian access.

Allowed Uses:
The entire street frontage of buildings along Fourth Street shall include active ground floor uses, predominantly neighborhood-oriented serving retail and services.

Other allowed uses include residential building lobbies, walk-up facilities such as ATM’s, ticket booths, and take-out windows, and accessory outdoor activity areas.

No entrance to off-street parking and loading facilities and utility rooms are permitted along Fourth Street.

Dimensional Standards:

Step-backs:
Along Fourth Street, all buildings shall step back at least 5 feet from the property line of the above either the retail floor or the first residential floor, however the stepback must occur no higher than 30 feet above the sidewalk. The 5 foot stepback must occur for no less than 80% of the building frontage along Fourth Street.

Minimum Retail Height:
All retail areas shall be designed with a minimum floor to floor height of 15 feet. All tenant improvements shall maintain a minimum floor to ceiling height of 12 feet.

Minimum Depth:
Retail areas shall be at least 40 feet in depth, plus additional depth for service corridors. The total width of any retail store may have up to a 15% maximum allowance into the minimum 40 foot depth to allow for vertical elements such as stairs, elevator shafts, mechanical ducting, grease traps or other necessary elements.

Maximum Width:
The maximum width of any single retail use is 75 feet of street frontage. Special review by SFRA staff shall be required for projects or tenant improvements wider than 75 feet.

Design Standards:

Fenestration:
At least 50% of the total storefront area of any street frontage retail/service space along Fourth Street shall be devoted to entrances, windows, display windows at the pedestrian eye level.

Transparency:
The area of fenestration shall be enclosed by clear unframed glass, except for decorative or architectural accents.

Any decorative railings or grilles work, placed in front or behind such windows, shall be at least 75% open in perpendicular view and no more than 5 feet in height above grade.

Security measures must minimize their impact on building transparency. Solid roll-down doors and permanent security bars on windows are not permitted.

Exhausts:
All projects should accommodate venting suitable for restaurants. The exhaust must vent vertically; no venting directly to the sidewalk is permitted.

Encroachments:
Outdoor activity areas associated with the adjacent ground level retail/service activities, including walk-up facilities, shall be permitted to encroach into the public sidewalks. However the sidewalks must maintain a minimum pedestrian path of 6 feet outside of these encroachments.

Outdoor displays, tables, chairs, planters, windscreen and other furnishings to support such activities will be permitted.

Outdoor eating and drinking establishments must be self-sufficient for disposal of the waste they generate by providing additional trash receptacles,

Exhausts that vent directly into the sidewalk are prohibited. All venting must be run vertically through the building. Grease traps shall be provided for any restaurant retail.

Design Guidelines:

Finishment:
Architectural treatments may include varied types of windows and entries, individual storefronts and use of different colors and textures.

Full facade surfaces shall be broken up at least every 30 feet by projecting bays or by vertical recesses.

Projects having more than 75% of street frontage shall be divided in architectural treatment to appear as two or more independent facades.