

Rough Order Of Magnitude Cost Estimate

Table 1 - Total Project Cost Over 30 Years

| | Concept 1 | Concept 2 | Concept 3 | Concept 4A | Concept 4B |
|--------------|--|---|--|---|--|
| | Mobility Hub at NAVWAR with Tunnel APM | Mobility Hub at NAVWAR with APM At-grade/Aerial | Mobility Hub at ITC with APM At-grade/Aerial | Trolley Connection Via Aerial Wye at Laurel | Trolley Connection Via Tunnel at Grape & Hawthorne |
| Total | \$3.9B - \$4.7B | \$3.8B - \$4.6B | \$3.0B - \$3.6B | \$1.8B - \$2.2B | \$1.9B - \$2.5B |

Table 2 - by Work Breakdown Structure (30 year project costs)

| | Concept 1 | Concept 2 | Concept 3 | Concept 4A | Concept 4B |
|----------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Project Development | \$ 1,099 | \$ 955 | \$ 673 | \$ 357 | \$ 405 |
| Right-of-Way | \$ 172 | \$ 172 | \$ 480 | \$ 239 | \$ 144 |
| Construction | \$ 2,747 | \$ 2,388 | \$ 1,683 | \$ 892 | \$ 1,012 |
| Vehicles | \$ 63 | \$ 95 | \$ 79 | \$ 119 | \$ 119 |
| 30 Year Annual Transit Operation | \$ 213 | \$ 640 | \$ 427 | \$ 427 | \$ 427 |
| Total | \$ 4,294 | \$ 4,250 | \$ 3,343 | \$ 2,033 | \$ 2,107 |

Table 3 - by Major Facility (Construction, Professional Services, R/W, Contingency; excludes Transit Operations)

| | Concept 1 | Concept 2 | Concept 3 | Concept 4A | Concept 4B |
|-------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Central Mobility Hub | \$ 1,568 | \$ 1,568 | \$ 1,450.41 | N/A | N/A |
| Tunnel/Guideway | \$ 659 | \$ 344 | \$ 223 | \$ 608.22 | \$ 682.40 |
| APM/Trolley Vehicle & Systems | \$ 450 | \$ 610 | \$ 387 | \$ 237 | \$ 236 |
| Transit Stations | \$ 482 | \$ 158 | \$ 180 | \$ 172 | \$ 172 |
| Roadway/Freeway | \$ 922.21 | \$ 922.21 | \$ 676.22 | \$ 585.50 | \$ 585.50 |
| Total | \$ 4,081 | \$ 3,603 | \$ 2,916 | \$ 1,602 | \$ 1,676 |

Table 4 - Right-of-Way Cost

| | Concept 1 | Concept 2 | Concept 3 | Concept 4A | Concept 4B |
|---|---------------|---------------|---------------|---------------|---------------|
| I-5 Ramps at Laurel Street | \$ 22 | \$ 22 | \$ 22 | \$ 22 | \$ 22 |
| Laurel Street Widening from Pacific Hwy to I-5 | \$ 96 | \$ 96 | \$ 96 | \$ 96 | \$ 96 |
| NAVWAR Hotensia Interchange & Direct Access Ramps | \$ 54 | \$ 54 | \$ - | \$ - | \$ - |
| ITC Site, Direct Access Ramps, and Washington/Pacific Hwy | \$ - | \$ - | \$ 362 | \$ - | \$ - |
| LRT Aerial Wye Connection at Laurel Street | \$ - | \$ - | \$ - | \$ 121 | \$ - |
| LRT Cut & Cover Tunnel at Grape & Hawthorne | \$ - | \$ - | \$ - | \$ - | \$ 26 |
| Total | \$ 172 | \$ 172 | \$ 480 | \$ 239 | \$ 144 |

2019 \$'s in Millions

Right-of-Way Acquisition & Relocation

Note: Relocation, Good Will, Building Modifications, & Temp. Construction

| | | Concept 1 | Concept 2 | Concept 3 | Concept 4A | Concept 4B |
|--|---|---------------|---------------|---------------|---------------|---------------|
| Laurel Street I-5 Ramps | R/W Acquisition | \$ 14.8 | \$ 14.8 | \$ 14.8 | \$ 14.8 | \$ 14.8 |
| | Relocation & Goodwill | 25% | 25% | 25% | 25% | 25% |
| | Temporary Construction | 10% | 10% | 10% | 10% | 10% |
| | | \$ 20.0 | \$ 20.0 | \$ 20.0 | \$ 20.0 | \$ 20.0 |
| Laurel Street from Pacific Hwy. to I-5 | R/W Acquisition | \$ 58.4 | \$ 58.4 | \$ 58.4 | \$ 58.4 | \$ 58.4 |
| | Relocation & Goodwill; Building Modifications | 40% | 40% | 40% | 40% | 40% |
| | Temporary Construction | 10% | 10% | 10% | 10% | 10% |
| | | \$ 87.6 | \$ 87.6 | \$ 87.6 | \$ 87.6 | \$ 87.6 |
| NAVWAR Hortensia Interchange & DAR | R/W Acquisition | \$ 37.7 | \$ 37.7 | | | |
| | Relocation & Goodwill | 25% | 25% | | | |
| | Temporary Construction | 5% | 5% | | | |
| | | \$ 49.0 | \$ 49.0 | | | |
| ITC DAR and Washington Street/Pacific Hwy. | R/W Acquisition | | | \$ 227.0 | | |
| | Relocation & Goodwill | | | 40% | | |
| | Temporary Construction | | | 5% | | |
| | | | | \$ 329.2 | | |
| LRT Aerial Wye Connection at Laurel Street | R/W Acquisition | | | | \$ 68.5 | |
| | Relocation & Goodwill | | | | 40% | |
| | Temporary Construction | | | | 20% | |
| | | | | | \$ 109.6 | |
| LRT Cut & Cover Tunnel Connection at Grape/Hawthorne | R/W Acquisition | | | | | \$ 14.8 |
| | Relocation & Goodwill | | | | | 40% |
| | Temporary Construction | | | | | 20% |
| | | | | | | \$ 23.7 |
| Total | | \$ 157 | \$ 157 | \$ 437 | \$ 217 | \$ 131 |

Concept 1 - NAVWAR - Tunnel APM
Airport Connectivity Study
Conceptual Cost Estimate
(2019 Dollars in Millions)

| ID | Project Element | Description | Public Investment |
|----------|---|-------------|-------------------|
| 1 | CAPITAL CONSTRUCTION | | |
| E01 | Convert Laurel Street to Primary Airport Entrance/Exit Roadway | | \$158.03 |
| E02 | Modify Laurel Street Between Pacific Highway and I-5 | | \$15.94 |
| E03 | Dedicated Transit Lanes on Harbor Drive between Grape St and Harbor Island Dr | | \$14.18 |
| E04 | Install New I-5 Freeway Ramps at Laurel and Redwood St. | | \$115.20 |
| E05.1 | I-5 Freeway Direct Access Ramps to Grand Central Station at NAVWAR | | \$34.04 |
| E06 | I-5 Hortensia St Interchange | | \$149.60 |
| E07.1 | Grand Central Station at NAVWAR | | \$1,018.45 |
| E08.1 | People Mover from NAVWAR to Airport (Tunnel) | | \$991.51 |
| E10.1 | NAVWAR Commerical Site Development (Split 70) | | |
| | Subtotal Capital Construction | | \$2,496.95 |
| 2 | VEHICLES | | |
| E08.1 | People Mover Vehicles | | \$57.60 |
| | Subtotal Vehicles | | \$57.60 |
| 3 | LAND ACQUISITION | | |
| | Purchase or lease of real estate | | \$156.59 |
| | Subtotal Land Acquisition | | \$156.59 |
| 4 | PROFESSIONAL SERVICES (Calculated on Capital Construction) | | |
| | Engineering, Management, Legal, Etc. | 40.0% | \$998.78 |
| | Subtotal Program Cost | | \$3,709.92 |
| 5 | CONTINGENCY | 10.0% | \$370.99 |
| | Total Program Cost | | \$4,080.91 |

Concept 2 - NAVWAR - Surface APM
Airport Connectivity Study
Conceptual Cost Estimate
(2019 Dollars in Millions)

| ID | Project Element | Description | Public Investment |
|----------|---|-------------|-------------------|
| 1 | CAPITAL CONSTRUCTION | | |
| E01 | Convert Laurel Street to Primary Airport Entrance/Exit Roadway | | \$158.03 |
| E02 | Modify Laurel Street Between Pacific Highway and I-5 | | \$15.94 |
| E03 | Dedicated Transit Lanes on Harbor Drive between Grape St and Harbor Island Dr | | \$14.18 |
| E04 | Install New I-5 Freeway Ramps at Laurel and Redwood St. | | \$115.20 |
| E05.1 | I-5 Freeway Direct Access Ramps to Grand Central Station at NAVWAR | | \$34.04 |
| E06 | I-5 Hortensia St Interchange | | \$149.60 |
| E07.1 | Grand Central Station at NAVWAR | | \$1,018.45 |
| E08.2 | People Mover from NAVWAR to Airport (Surface) | | \$665.19 |
| E10.1 | NAVWAR Commerical Site Development (Split 70) | | |
| | Subtotal Capital Construction | | \$2,170.63 |
| 2 | VEHICLES | | |
| E08.2 | People Mover Vehicles | | \$86.40 |
| | Subtotal Vehicles | | \$86.40 |
| 3 | LAND ACQUISITION | | |
| | Purchase or lease of real estate | | \$156.59 |
| | Subtotal Land Acquisition | | \$156.59 |
| 4 | PROFESSIONAL SERVICES (Calculated on Capital Construction) | | |
| | Engineering, Management, Legal, Etc. | 40.0% | \$868.25 |
| | Subtotal Program Cost | | \$3,281.87 |
| 5 | CONTINGENCY | 10.0% | \$328.19 |
| | Total Program Cost | | \$3,610.06 |

Concept 3 - ITC - Surface APM
Airport Connectivity Study
Conceptual Cost Estimate
(2019 Dollars in Millions)

| ID | Project Element | Description | Public Investment |
|----------|---|---|-------------------|
| 1 | CAPITAL CONSTRUCTION | | |
| E01 | | Convert Laurel Street to Primary Airport Entrance/Exit Roadway | \$158.03 |
| E02 | | Modify Laurel Street Between Pacific Highway and I-5 | \$15.94 |
| E03 | | Dedicated Transit Lanes on Harbor Drive between Grape St and Harbor Island Dr | \$14.18 |
| E04 | | Install New I-5 Freeway Ramps at Laurel and Redwood St. | \$115.20 |
| E05.3 | | I-5 Freeway Direct Access Ramps to Grand Central Station at ITC | \$58.91 |
| E07.3 | | Grand Central Station at ITC | \$706.72 |
| E08.3 | | People Mover from ITC to Airport (Surface) | \$461.41 |
| E10.3 | | ITC Commerical Site Development | |
| | | Subtotal Capital Construction | \$1,530.39 |
| 2 | VEHICLES | | |
| E08.3 | | People Mover Vehicles | \$72.00 |
| | | Subtotal Vehicles | \$72.00 |
| 3 | LAND ACQUISITION | | |
| | | Purchase or lease of real estate, SDG&E Substation Relocation | \$436.73 |
| | | Subtotal Land Acquisition | \$436.73 |
| 4 | PROFESSIONAL SERVICES (Calculated on Capital Construction) | | |
| | | Engineering, Management, Legal, Etc. | 40.0% \$612.16 |
| | | Subtotal Program Cost | \$2,651.27 |
| 5 | CONTINGENCY | | |
| | | | 10.0% \$265.13 |
| | | Total Program Cost | \$2,916.40 |

Concept 4A - Trolley - Laurel St Aerial Structure
Airport Connectivity Study
Conceptual Cost Estimate
(2019 Dollars in Millions)

| ID | Project Element | Description | Public Investment |
|---------------------------|---|---|-------------------|
| 1 | CAPITAL CONSTRUCTION | | |
| E01 | | Convert Laurel Street to Primary Airport Entrance/Exit Roadway | \$158.03 |
| E02 | | Modify Laurel Street Between Pacific Highway and I-5 | \$15.94 |
| E03 | | Dedicated Transit Lanes on Harbor Drive between Grape St and Harbor Island Dr | \$14.18 |
| E04 | | Install New I-5 Freeway Ramps at Laurel and Redwood St. | \$115.20 |
| E09.1 | | Trolley Connection to Airport, Aerial Wye at Laurel St. | \$273.32 |
| E11 | | Grade Separation of Existing Trolley Line | \$231.49 |
| E12 | | Kiss and Ride Lots | \$2.36 |
| | | Subtotal Capital Construction | \$810.51 |
| 2 | VEHICLES | | |
| E09 | | LRT Vehicles | \$108.00 |
| | | Subtotal Vehicles | \$108.00 |
| 3 | LAND ACQUISITION | | |
| | | Purchase or lease of real estate | \$217.18 |
| | | Subtotal Land Acquisition | \$217.18 |
| 4 | PROFESSIONAL SERVICES (Calculated on Capital Construction) | | |
| | | Engineering, Management, Legal, Etc. 40.0% | \$324.21 |
| | | Subtotal Program Cost | \$1,351.90 |
| 5 | CONTINGENCY | 10.0% | \$135.19 |
| Total Program Cost | | | \$1,487.09 |

Concept 4B - Trolley - Hawthorn St/Grape St Trench
Airport Connectivity Study
Conceptual Cost Estimate
(2019 Dollars in Millions)

| ID | Project Element | Description | Public Investment |
|----------|---|---|-------------------|
| 1 | CAPITAL CONSTRUCTION | | |
| E01 | | Convert Laurel Street to Primary Airport Entrance/Exit Roadway | \$158.03 |
| E02 | | Modify Laurel Street Between Pacific Highway and I-5 | \$15.94 |
| E03 | | Dedicated Transit Lanes on Harbor Drive between Grape St and Harbor Island Dr | \$14.18 |
| E04 | | Install New I-5 Freeway Ramps at Laurel and Redwood St. | \$115.20 |
| E09.2 | | Trolley Connection to Airport, Trench/Cut & Cover at Grape & Hawthorn | \$382.60 |
| E11 | | Grade Separation of Existing Trolley Line | \$231.49 |
| E12 | | Kiss and Ride Lots | \$2.36 |
| | | Subtotal Capital Construction | \$919.79 |
| 2 | VEHICLES | | |
| E09 | | LRT Vehicles | \$108.00 |
| | | Subtotal Vehicles | \$108.00 |
| 3 | LAND ACQUISITION | | |
| | | Purchase or lease of real estate | \$131.26 |
| | | Subtotal Land Acquisition | \$131.26 |
| 4 | PROFESSIONAL SERVICES (Calculated on Capital Construction) | | |
| | | Engineering, Management, Legal, Etc. | 40.0% \$367.92 |
| | | Subtotal Program Cost | \$1,418.97 |
| 5 | CONTINGENCY | | 10.0% \$141.90 |
| | | Total Program Cost | \$1,560.87 |