



 **SOUNDTRANSIT**

# **Lynnwood Link Extension Update**

Sound Transit Board Meeting  
August 24, 2017

# Today's Agenda

- Project Status
- Current Pre-Baseline Project Cost Estimates/Schedule
- Value Engineering Efforts
- Federal Funding Update

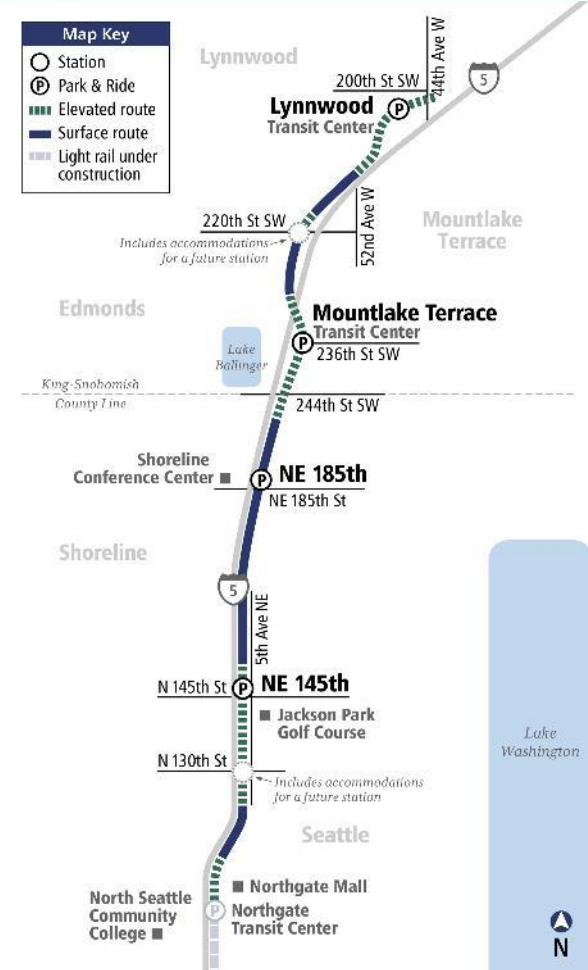
# Lynnwood Link Extension

- **Length:** 8.5 miles from Northgate to Lynnwood
- **Elevated/at-grade:** approximately 4.1 miles of elevated guideway and 4.4 miles at-grade
- **Stations:** Shoreline South/145<sup>th</sup>, Shoreline North/185<sup>th</sup>, Mountlake Terrace, Lynnwood City Center
- **Parking:** 3 parking garages with 1,500 added spaces over the 8.5 mile extension



# Project Benefits

- Fast, frequent, reliable service in congested I-5 corridor - 28 minutes from Lynnwood Transit Center to downtown
- Generates over 74,000 weekday boardings system-wide by 2035
- Connects Shoreline, Mountlake Terrace, and Lynnwood to regional Link system
- Serves existing transit centers at Mountlake Terrace and Lynnwood Transit Center
- Potential TOD opportunities



# Project Status

- Final Design began in April 2016
- Designer, Civil GC/CM Contractors, Construction Management Consultants on board, co-located with staff
- Currently at 60% level of design



# Previously Reported/Monitored Top Risks

- Third party approvals – Cities, WSDOT, FHWA
- Timely ROW acquisition for construction
- **Uncertainty with Federal funding**
- **Construction market conditions – price escalation, labor shortages ongoing**
- Differing site and underground utility conditions



# Cost Estimates\* (YOE\$)

- ST2 cost estimate (2005): up to \$2.4B
  - Start of revenue service 2023
- Preliminary Engineering estimate (2015): \$2.1B
  - Start of revenue service 4Q 2023
- Preliminary Engineering *re-estimated* (2016): \$2.4B\*\*
- Final Design 60% estimate (2017): \$2.9B
  - Start of revenue service mid-2024

\*All estimates include assigned costs for light rail vehicles and Operations and Maintenance Facility

\*\*Estimate used in FTA/ST risk assessment (Feb 2017)

# ST2 Cost Estimate vs Current 60% Cost Estimate

	ST2 Estimate	60% Estimate	Variance (60% to ST2)	% Change (60% to ST2)
ST PHASE	(YOE\$, M)	(YOE\$, M)	(YOE\$, M)	%
Administration	\$100.4	\$95.0	(\$5.4)	-5%
Preliminary Engineering	\$61.5	\$22.7	(\$38.9)	-63%
Final Design	\$147.7	\$126.9	(\$20.8)	-14%
Right of Way	\$134.8	\$235.7	\$101.0	75%
Construction	\$1,367.0	\$1,878.5	\$511.5	37%
Construction - OMFE	\$184.2	\$184.2	\$0.0	0%
Construction Services	\$116.5	\$111.5	(\$5.0)	-4%
Third Parties	\$0.0	\$17.3	\$17.3	N/A
Vehicles	\$169.0	\$169.0	\$0.0	0%
Unallocated Ctg. For Const.	\$137.1	\$93.9	(\$43.1)	-31%
<b>Total (excludes finance charges)</b>	<b>\$2,418.2</b>	<b>\$2,934.8</b>	<b>\$516.6</b>	<b>21%</b>

Note: 60% estimate does not include \$19.8M spent prior to entry to project development.



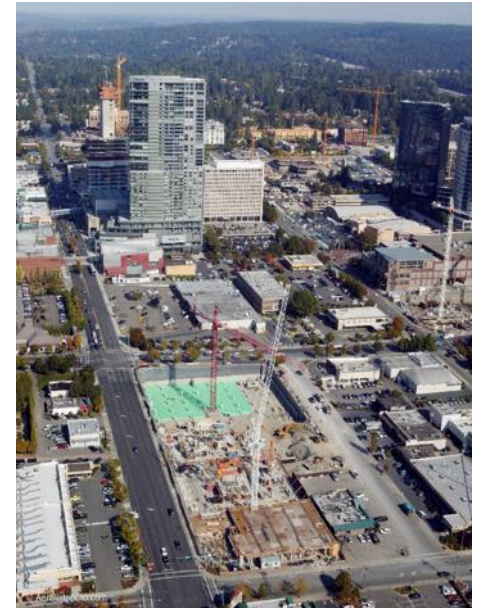
# Major Factors Increasing Cost Estimates

- Real Estate Acquisition / Market Conditions
- Construction Market Conditions
- Design Evolution/Scope Changes
- General Contractor/Construction Manager Contracting



# Real Estate Acquisitions / Market Conditions

- Number of needed properties has increased
- Appraisals are 44% higher than 2014 → **20-25% higher than anticipated escalation**
- Relocation is difficult → limited supply of comparable properties



# Construction Market Conditions

- Saturated market & labor shortages
- Not a “buyer’s market”, multiple contracts to pursue
- Public work less preferred for contractors in this overheated market
- Material and commodity price escalation continues
- Current market risk influences pricing
- Other regional public agencies experiencing overheated market impacts on cost



Ellen M. Banner / The Seattle Times

# Design Evolution/Scope Changes

- Transit integration – better bus transfer facilities with partner agencies
- Changes in 3<sup>rd</sup> party requirements, evolving codes/regulations
- ST3 integration (BRT, 130<sup>th</sup> Station)
- Trees – approx. \$32 million more in landscaping costs



# Design Evolution/Scope Changes

- Design provisions to minimize construction disruption
  - Temporary noise walls
  - Temporary traffic control
  - Temporary parking

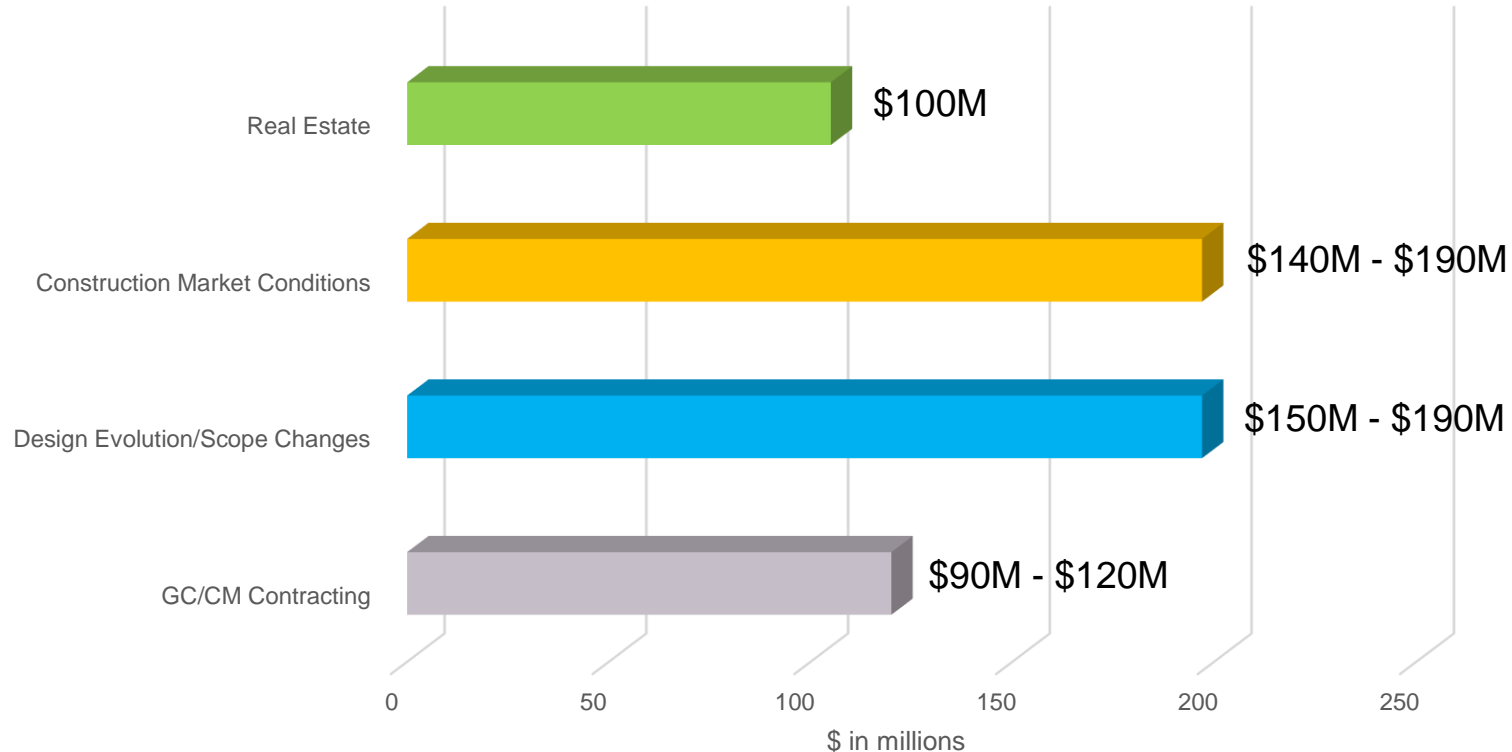


# GC/CM Contracting

- 5-10% initial higher cost than Design-Bid-Build (DBB) contracting
- Benefits include:
  - Contractor input into value engineering, constructability, scheduling, estimating
  - Reduces risks during construction
  - Typically requires less contingencies than DBB (subject to FTA concurrence)



# Cost Estimate Increases by Major Factors



# Snapshot of Building Cost Escalation 2015 - 2017

Description	Market Condition Percentage
Division 3 – Concrete	8%
Division 4 – Masonry	100%
Division 5 – Metals	30%
Division 7 – Thermal/Moisture Protection	45%
Division 8 – Openings (doors & windows)	40%
Division 9 – Finishes	35%
Division 14 – Conveying Systems (elevators & escalators)	350%
Division 31 – Earthwork	10%

Source: Hoffman Construction



# Construction Cost Escalation Example

## University of Washington Station

- Contract award to Hoffman 2011: \$141M
- Sound Transit Engineer's Estimate: \$143M
- Hoffman's current estimate if station bid and built today: \$248M



# What We Are Doing to Lower Costs

- Value Engineering
  - Brainstorming and analyzing multiple cost saving options
  - Engaging with jurisdictions, revisiting requirements
- Risk Assessment
  - Working with GC/CM contractors to identify and properly allocate risk for pricing
- Peer Review
  - Invited experts from Dallas and Portland
- Process results in new direction to design team



# Federal Funding Update

- Executive Branch Budget Proposals
- Congressional actions
- FFGA Process



# Next Steps

- ❑ Complete Cost Saving Idea Evaluation: 4Q 2017
- ❑ Incorporate cost saving ideas: 1Q 2018
- ❑ Prepare Revised Cost Estimates: 1Q - 2Q 2018
- ❑ Risk Assessment: 2Q 2018
- ❑ Secure land use permits/agreements with cities and WSDOT: 4Q 2017 - 1Q 2018
- ❑ Baseline Project (budget and schedule) and Execute FFGA: 3Q 2018
- ❑ Complete Design/Begin Construction: 4Q 2018

# Continuing Top Risks

- Uncertainty with Federal funding
- Construction market conditions – price escalation, labor shortages ongoing
- Time and cost of ROW acquisition for construction
- Third party approvals – Cities, WSDOT, FHWA
- Differing site and underground utility conditions

# Major Project Status

- ~\$7B of ST2 projects baselined, fully committed & trending within budget:
  - South 200<sup>th</sup>, Northgate, East Link Extensions
  - I-90 Two-Way Transit & HOV Operations (Stage 3)
  - Tacoma Trestle Track & Signal, Sounder Yard Expansion projects
  - Sounder South Expanded Service
  - Light Rail Vehicle Procurement
- ST2 projects not baselined, facing cost and schedule uncertainty:
  - Lynnwood, Federal Way Link Extensions
  - Tacoma Link Expansion
  - Sounder Maintenance Base, Sounder Access Improvement projects
- ST3 Program includes financial capacity for limited market fluctuations
  - Staff will continue monitoring and responding to potential cost impacts



Questions?