



# SOUTH BETHLEHEM EASTERN GATEWAY

DESIGN DEVELOPMENT & IMPLEMENTATION REPORT - 1/20/15

Prepared by



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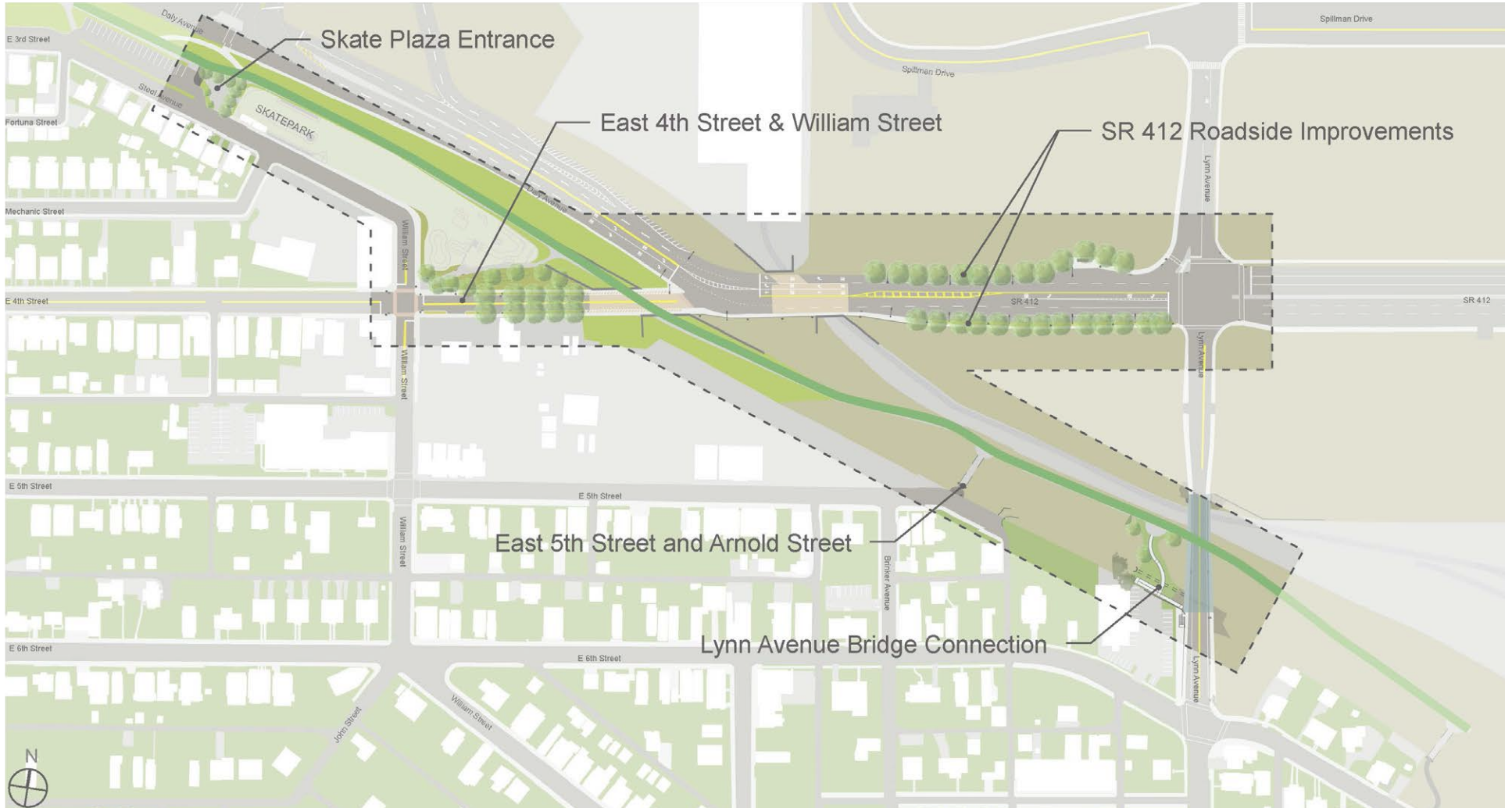
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# South Bethlehem Eastern Gateway | Introduction



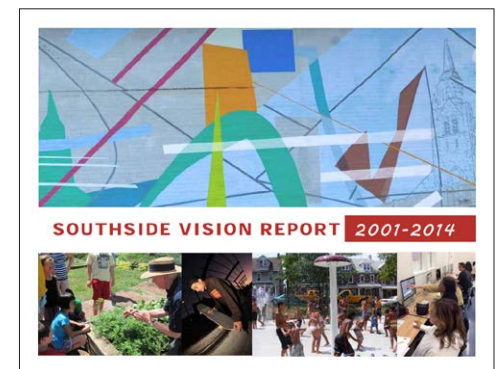
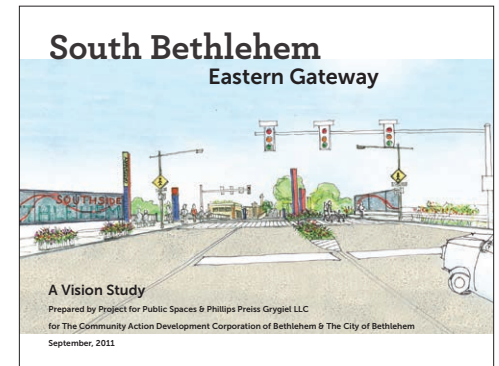
# 1

## Summary

South Bethlehem has experienced transformational change over the last 15 years that can largely be attributed to a shared community vision implemented through both targeted and long range planning. An overall neighborhood plan, the South Side Vision 2014 Plan, was completed in partnership between the City of Bethlehem and the Community Action Development Corporation of Bethlehem in 2002 and is key to this transformation. Through that partnership and the Vision 2014 Plan, more targeted planning efforts were concentrated in the Eastern Gateway section of South Bethlehem. The Eastern Gateway is at the heart of much of the South Side's transition. It is just south of the Sands Casino, west of the industrial redevelopment of the prior Bethlehem Steel Commerce Center, abutting the South Bethlehem Greenway and the SkatePlaza and is literally the South Side's new front door. The South Bethlehem

Eastern Gateway is recognized as a high priority area for targeted redevelopment in Bethlehem.

Working closely with the Bethlehem Planning Bureau, the community and project stakeholders, a team led by the RBA group has developed a number of design recommendations that further the goals advocated in the Vision Study. Work includes a comprehensive review of the local real estate market and recommendations for improved office, retail and residential development within the Eastern Gateway as well as detailed designs for Gateway improvements and Greenway connections. This report outlines the development of these initiatives.







# 2

## Planning and Development

Recognizing the need to meet both short and long term development goals, the City outlined several tasks to direct planning efforts for the Eastern Gateway. These tasks included a real estate market analysis, urban design and site planning considerations, zoning code reviews and a comprehensive acquisition and development plan. Specifically, the consultant team performed the following:

- Conducted a peer review of market analysis performed to date, in order to validate key findings.
- Performed a real estate supply/demand analysis to quantify and identify unmet demand for low income and market rate housing, supportive local retail (e.g., supermarket), and dining establishments. The analysis

also examined the resultant employment opportunities from one or more redevelopment scenarios, along with fiscal implications (e.g., net tax revenues and added services costs).

- Performed a development and operating pro forma analyses, utilizing current, local construction cost inputs, required return rate metrics and market demand factors to demonstrate financial viability to the development community for each of four development parcels: A, B, C/D and E.
- Prepared conceptual site development plans for each of four development parcels: A, B, C/D and E complete with professionally rendered graphic presentation materials.

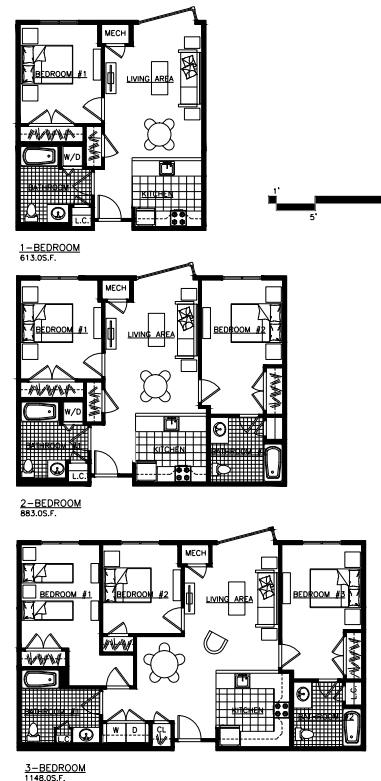
- Met with Client and stakeholders (developers, property owners, etc.) to review research, analyses and recommendations.

## Urban Design and Zoning Considerations

In keeping with the objectives laid out in the Vision Plan, urban designs were required to:

- Ensure that redevelopment promotes local values and meets local needs.
- Provide high quality public spaces to complement the SkatePlaza and the Greenway.
- Encourage uses that are economically viable and based on market realities.
- Ensure that redevelopment promotes local values and meets local needs.
- Ensure land use mix is compatible with parking supply.
- Develop an identity and create a sense of arrival.
- Promote alternative transportation connections to Bethlehem destinations.

In order to accomplish these goals, the consultant team first undertook a thorough review of the City of Bethlehem's Zoning Ordinance (Ordinance 2012-21), made effective in August 2012. This review was used to inform conceptual site development plans including architectural layout as well as massing alternatives. Plans were developed to determine the "best fit" for built elements within each parcel. Simultaneously, design concepts for enhancing the public right of way were developed and evaluated alongside the proposed architectural interventions. These concepts include introducing traffic calming measures, trees and lighting in amenity strips, new open spaces and bold environmental graphics (these recommendations are further described in Section 3 of this report).



Floorplans of Proposed Apartments

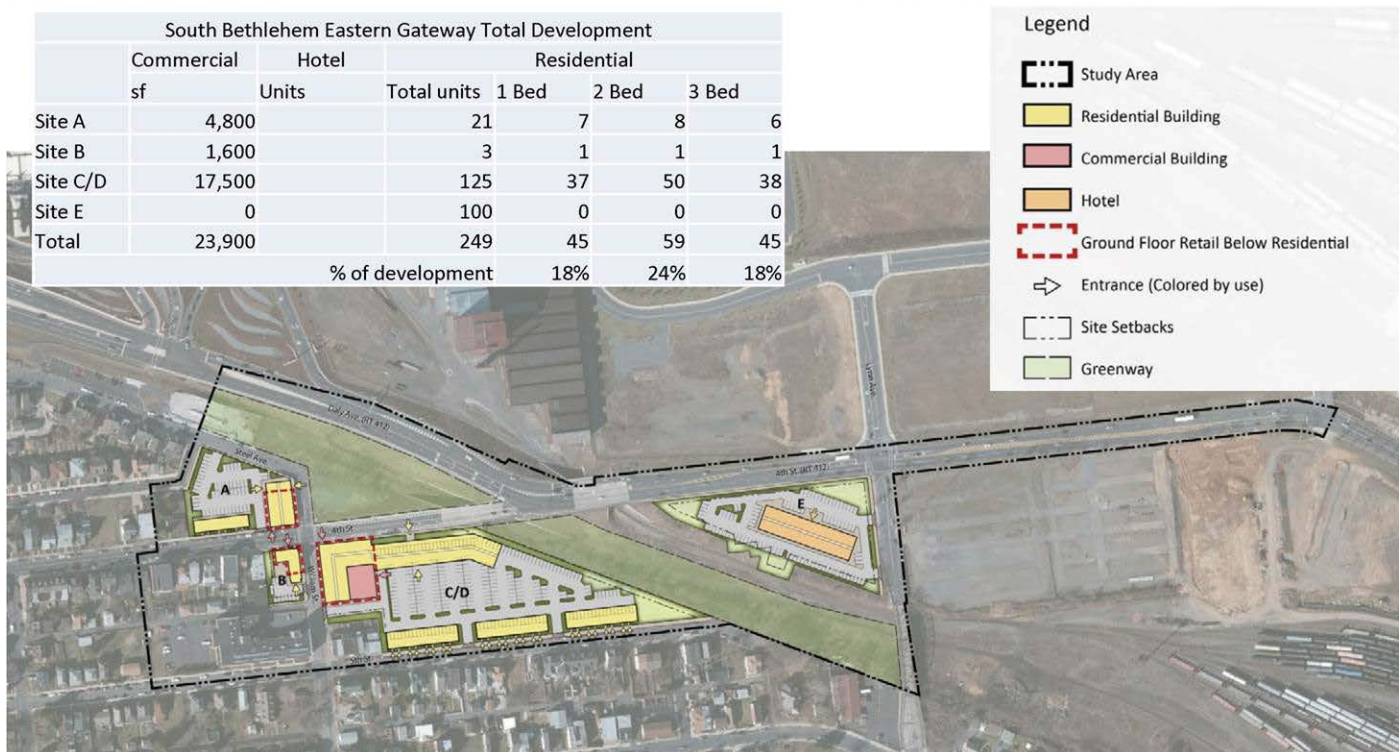


# South Bethlehem Eastern Gateway | Real Estate Market Analysis



Location of Development Parcels

South Bethlehem Eastern Gateway Total Development						
	Commercial	Hotel	Residential			
	sf	Units	Total units	1 Bed	2 Bed	
Site A	4,800		21	7	8	6
Site B	1,600		3	1	1	1
Site C/D	17,500		125	37	50	38
Site E	0		100	0	0	0
<b>Total</b>	<b>23,900</b>		<b>249</b>	<b>45</b>	<b>59</b>	<b>45</b>
			<b>% of development</b>	<b>18%</b>	<b>24%</b>	<b>18%</b>



Test for Fit Plan

## Acquisition and Development

Potential funding sources for land acquisition and redevelopment were investigated including loans, grants, and tax abatement or tax credit programs. These funding sources were developed into a matrix including the requirements and terms for each source. The consultant team, in coordination with the Eastern Gateway Committee, also used findings from socio-economic research, zoning and urban design studies to develop an RFQ with the goal of helping the City team with parties interested and capable of developing the Eastern Gateway into a thriving urban community.



View facing east of existing conditions on East 4th St.





View facing east of proposed conditions on East 4th St.



# South Bethlehem Eastern Gateway | Gateway Design



Gateway Area Improvements

# 3

## Gateway Improvements In The Right-Of-Way

Following thorough review of previous studies, existing conditions and sites surveys, the design team worked with the Eastern Gateway Committee and project stakeholders to develop an overall schematic design approach for the Gateway areas within the City owned Right-of-Way. The design incorporates curb realignments, landscape plantings, lighting, sidewalks and environmental graphics. Several key projects of this design have been targeted for further development by the Committee and City officials. These projects are at various stages of development ranging from concept design to final construction. Throughout the development process proposals have been vetted by stakeholders including the local community, property owners, City departments and PennDOT.

At present, funding is not available to construct all of the recommendations developed to the contract document level. In some instances, interim plans have been developed to accommodate temporary concerns in a manner that allows for future realization of the completed design. In all cases where plans impact current property owners, they have been consulted and designs have been developed to incorporate their concerns.

## SR 412 - PennDOT Reconstruction

The consultant team led the Eastern Gateway Committee in a review of plans developed by PennDOT for the expansion of SR412 leading up to the E4th Street/SR412 overpass. PennDOT agreed to adopt a number of the Committee's design recommendations including additional canopy trees and provisions for pedestrian lighting to emphasize the feeling of entry into the Gateway area.

PennDOT selected a mixed planting of varied small and large trees for use along the majority of the SR412 Corridor. In contrast, RBA's landscape architects proposed a row of matching Zelkova trees to be planted at equal spacing along either side of the roadway between Lynn Avenue west to E4th Street. This is intended to create a more formal sense of arrival as one reaches the turn-off from SR412 onto E4th Street. The proposed Zelkova trees will

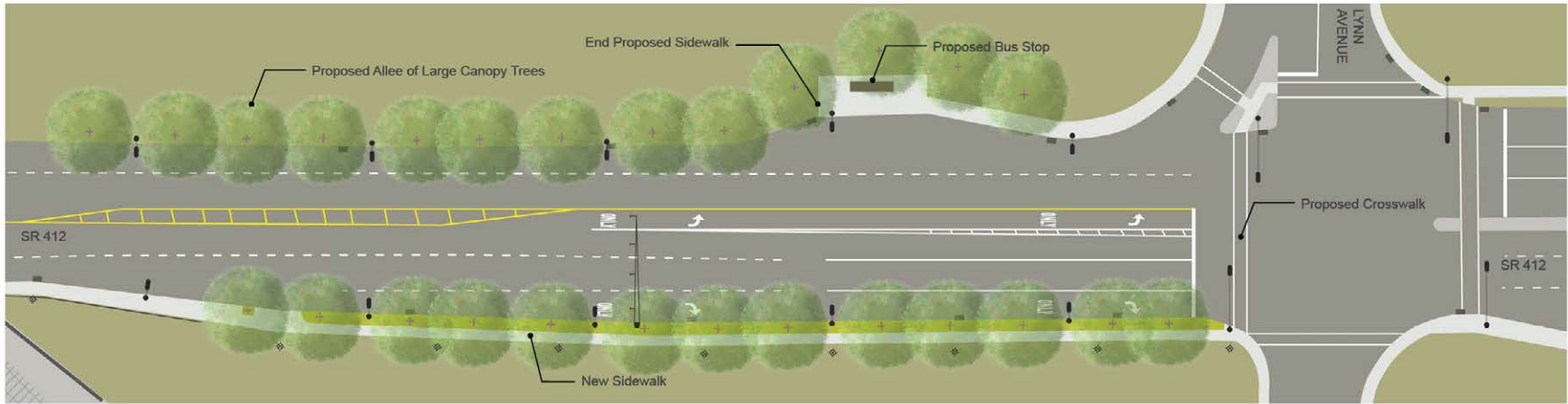
eventually provide a large canopy with a vase-like branching structure reaching out over the sidewalk and roadway.

New acorn style pedestrian scale path lights are proposed along the sidewalk on the south side of SR 412 between Lynn and E4th Street. These lights are intended to draw ones attention to the south and, working in conjunction with proposed monumental signage, accentuate views of the South Bethlehem gateway neighborhood beyond. Although a sidewalk had proposed along the roadway on the north side of the PennDOT improvements, there is not a current need for one at this location. There is no sidewalk connection at points further west up to the vehicular entry at the Sands Casino. Further, a sidewalk here might encourage pedestrians to continue west along the north side of SR412 and try to cross SR412 at

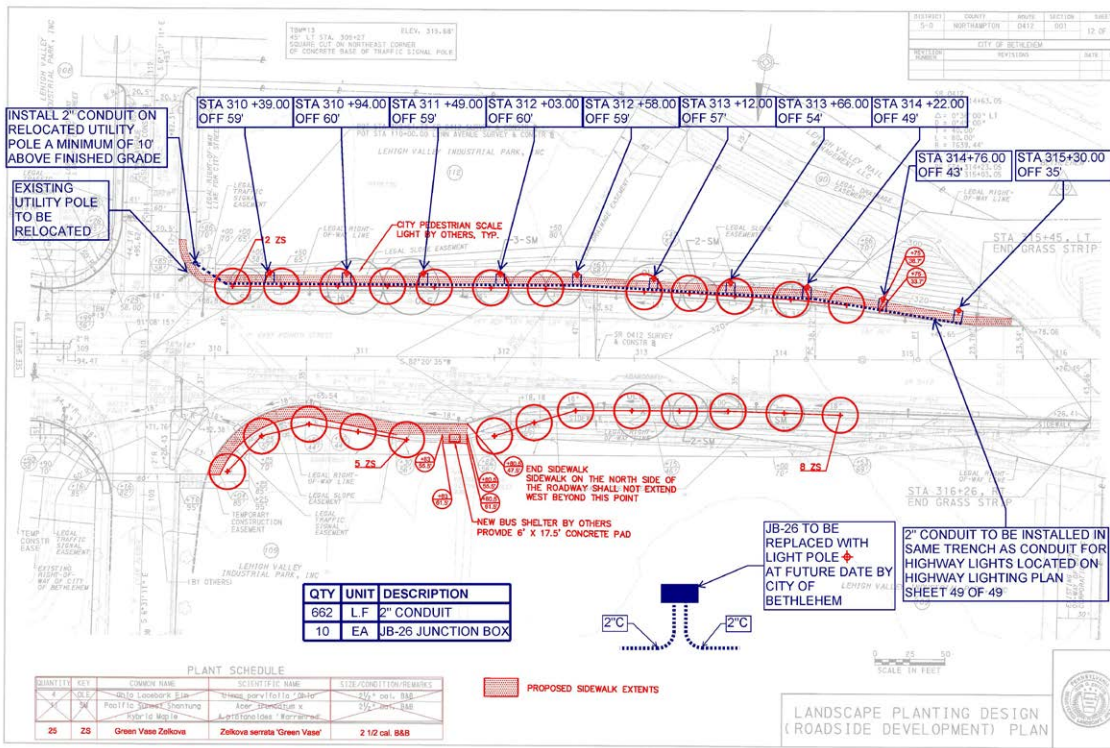
the intersection of E4th and SR412 which is an unmarked/unsignalized location. The consultant team recommended removing this section of sidewalk from the scope of work. If future development requires pedestrian access along this section of roadway, circulation should be provided in a manner that does not invite crossing at the E4th SR412 intersection or walking along the roadway shoulder.

The tree planting, pedestrian scale lighting and monumental signs are also proposed to continue along the south side of SR412 up to the Greenway/E4th Street Bridge, however that work is beyond the construction limits of PennDOT's current project. Provisions for a future bus shelter on the north side of SR412 are also included. The design team considered the possibility of installing a custom shelter at this location, but ultimately a standard





Proposed Improvements Along SR 412



Revisions to PennDOT Contract Set

LANta shelter was recommended for this location with custom shelters reserved for installation along E4th Street.

Provisions for a signalized crossing at the west side of Lynn Avenue at the intersection of SR412 were not included with the PennDOT plans. Prior to reconstruction, a signalized crossing existing at this location and the consultant team recommends replacing it as part of the proposed improvements. PennDOT noted that they were agreement with this recommendation.

## Environmental Graphics

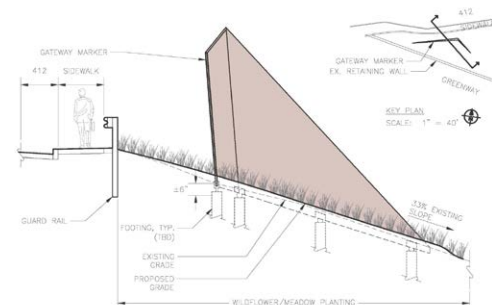
Environmental graphics consultants Cloud Gehshan Associates led a conceptual design effort for signature elements in the landscape that, in conjunction with other improvements, would signal arrival to the Eastern Gateway neighborhood. Multiple design options were developed for consideration. Ultimately the Committee selected as the preferred option a series of large sculptural monuments. These pieces are proposed along the SR412 right of way as well as within private property at two locations. The signs proposed within private property would require further review by property owners and easements would need to be in place for final installation.

The signs are designed as repeating elements in the landscape that lead to and create a sense of arrival at the Eastern Gateway. On approach to the intersection of SR412 and E4th

Street, the monuments increase in size and visibility. They begin with a smaller piece at the intersection of SR412 and Lynn Avenue and increase to monumentally scaled panels serving as colorful beacons leading over the Greenway bridge to the Eastern Gateway neighborhood beyond. As envisioned, they would be constructed of angular steel panels that appear to protrude from the ground. At the intersection of SR412 and E4th, the signs are proposed to figuratively and literally wrap the Greenway overpass. The design concept includes panels mounted below the bridge with an artistic integral lighting element casting a pattern of light through the panel onto the Greenway path below.

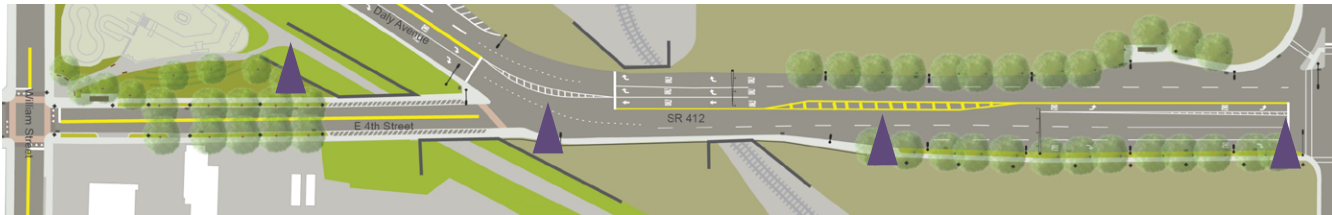
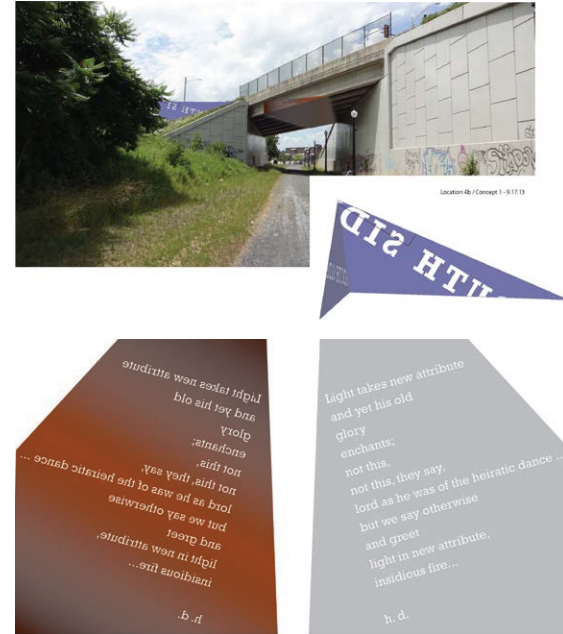


View on East 4th St. Facing West Towards Williams St.





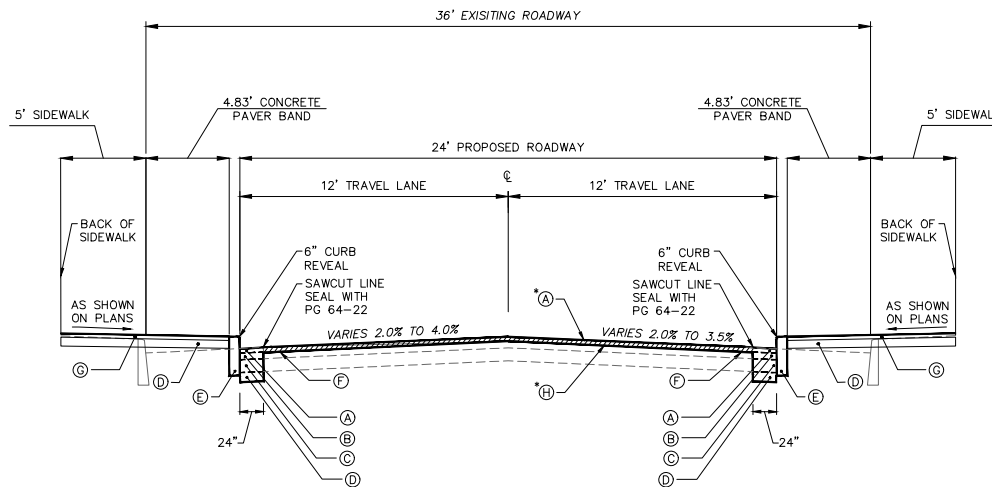
View from Daly Avenue Facing West Towards East 4th St.



← POSSIBLE MONUMENT LOCATIONS →  
 ADJACENT TO NEW PENNDOT SIDEWALK /  
 LOCATION WOULD BE OUTSIDE R.O.W. ON  
 LVIP PROPERTY

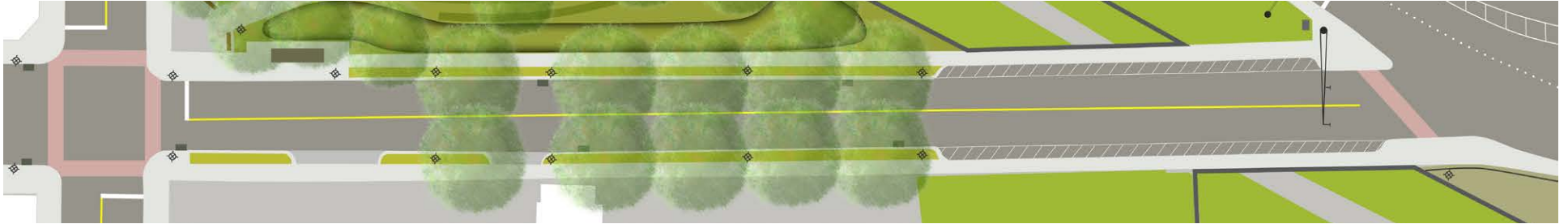
## E4th Street Reconstruction

A major component of the overall Gateway design is the streetscape leading from the Greenway overpass to the intersection of E4th Street and William Street. Based on available funding and overall impact, proposed improvements for this section of roadway have been developed into final construction plans. The proposed design narrows the existing cartway and makes use of the current striped shoulder for the planting of trees, pedestrian lighting and a bus shelter in a new raised amenity strip. Complete contract documents have been vetted by City Engineering in preparation for bidding. Although this section of roadway is currently owned by PennDOT, negotiations are currently underway to transfer ownership to the city and clear the way for construction to commence.

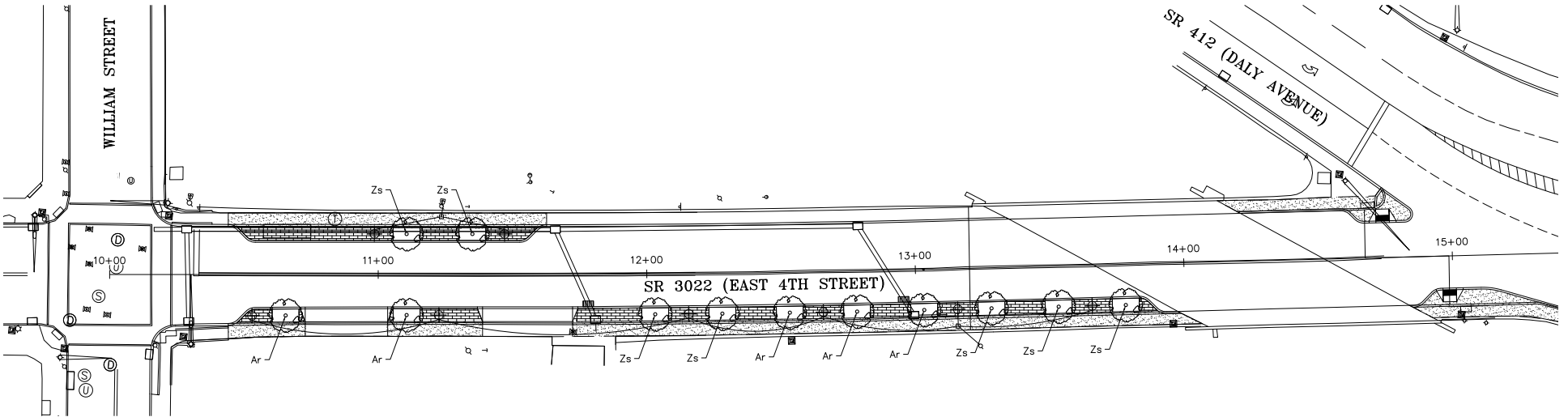


East 4th Street.- Section





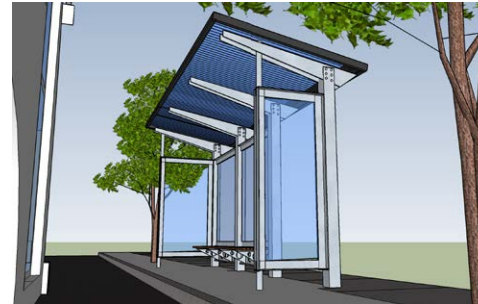
East 4th Street. - Concept Plan



East 4th Street. - Landscape Plan

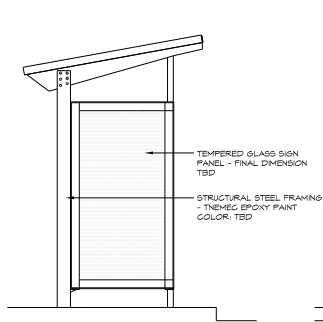
## Bus Shelter

A new bus shelter, styled after a nearby shelter designed by Lehigh University students, is proposed as part of the E4th Street improvements. The ADA compliant steel and glass structure includes wood bench seating with decorative detail, a lit double sided advertisement panel and tinted polycarbonate roof panels. Shelter details and specifications were developed following design review of various options presented to the Eastern Gateway Committee, City officials and LANta. The shelter was designed in coordination with industry manufacturers as a prototype model that can be fabricated with various modifications to suit other locations in the Eastern Gateway and beyond into South Bethlehem.

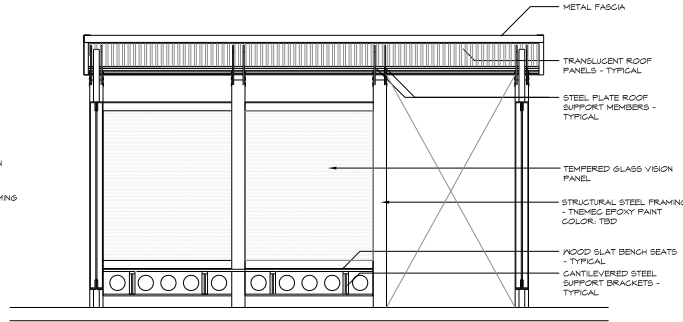


Views of Proposed Bus Shelter

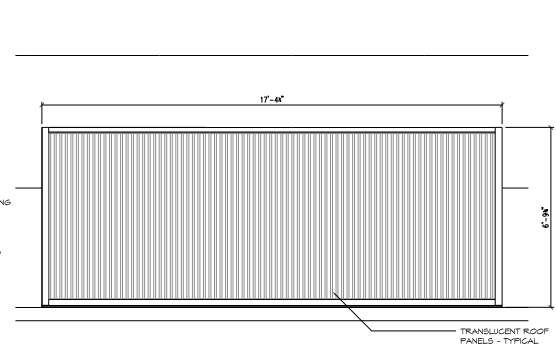




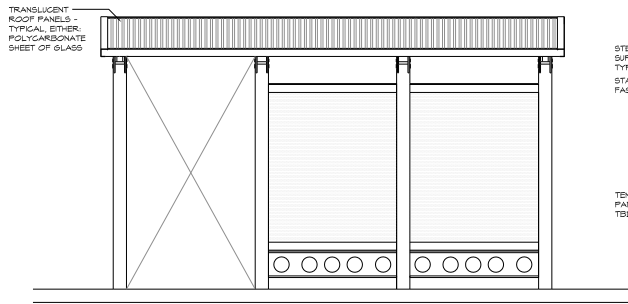
**1**  
A.100 **SIDE ELEVATION**  
SCALE: 1/2" = 1'-0"



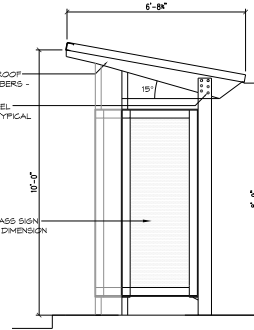
**2**  
A.100 **FRONT ELEVATION**  
SCALE: 1/2" = 1'-0"



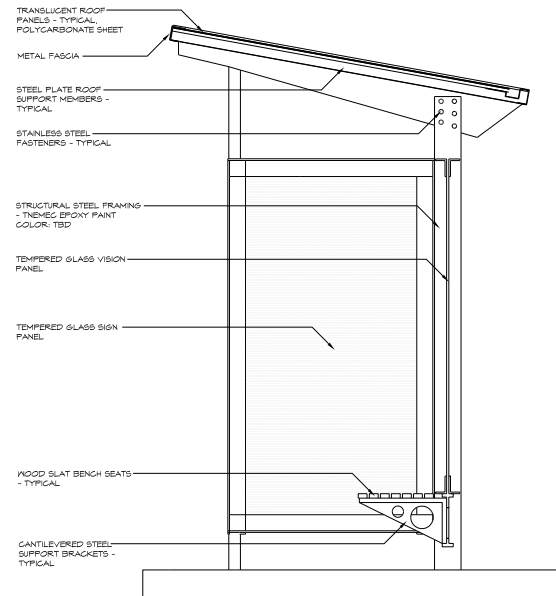
**3**  
A.100 **ROOF PLAN**  
SCALE: 1/2" = 1'-0"



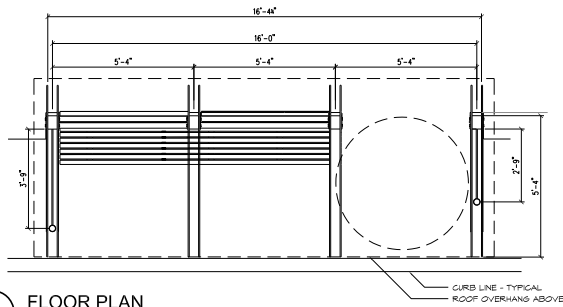
**4**  
A.100 **REAR ELEVATION**  
SCALE: 1/2" = 1'-0"



**5**  
A.100 **SIDE ELEVATION**  
SCALE: 1/2" = 1'-0"



**7**  
A.100 **SECTION**  
SCALE: 1" = 1'-0"



**6**  
A.100 **FLOOR PLAN**  
SCALE: 1/2" = 1'-0"

**GENERAL NOTES:**  
ALL METAL TO BE STEEL WITH EPOXY, TYPICAL PAINT FINISH - COLOR TBD  
ALL GLASS TO BE TEMPERED SAFETY GLASS.  
SIGNAGE PANEL DESIGN TBD



# 4

## Greenway Connections

Following review of potential Greenway access locations recommended in the Vision Study, the project team developed conceptual plans and magnitude of cost estimates for preferred connections to the Greenway within the Gateway area.

## Planning of Greenway Connections

Following review of potential Greenway access locations recommended in the Vision Study, the project team developed conceptual plans and magnitude of cost estimates for preferred connections to the Greenway within the Gateway area. Possible future greenway connections for commuters between Bethlehem, Hellertown and future L.V.I.P. development along S.R. 412 were also considered and incorporated into the concepts.





Greenway Access and Circulation

## The SkatePlaza Patio

A design for the entrance to the popular Bethlehem SkatePlaza was developed by the consultant's landscape architects and architects with input from the community and the Eastern Gateway Committee. More than just an entrance to the SkatePlaza, the space serves as both a connection to the Greenway and resting point along it. "The Patio" includes a structure constructed from recycled shipping containers that houses a concession stand, public restrooms, drinking fountains and shade canopy. "The Patio" also provides seating areas, permeable pavement, rain gardens and canopy trees. Construction was completed in December of 2014.



Plan Rendering of SkatePlaza Patio Design





Rendered View of Shade Structure



Birdseye View of Skate Plaza



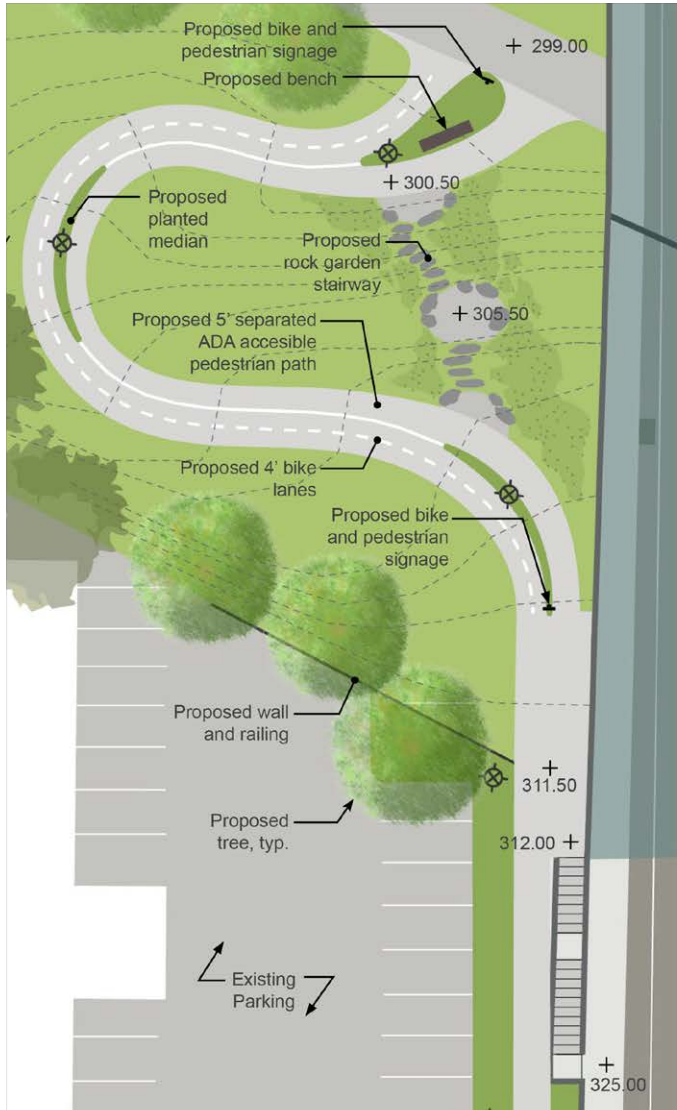


## Lynn Avenue Bridge Connector

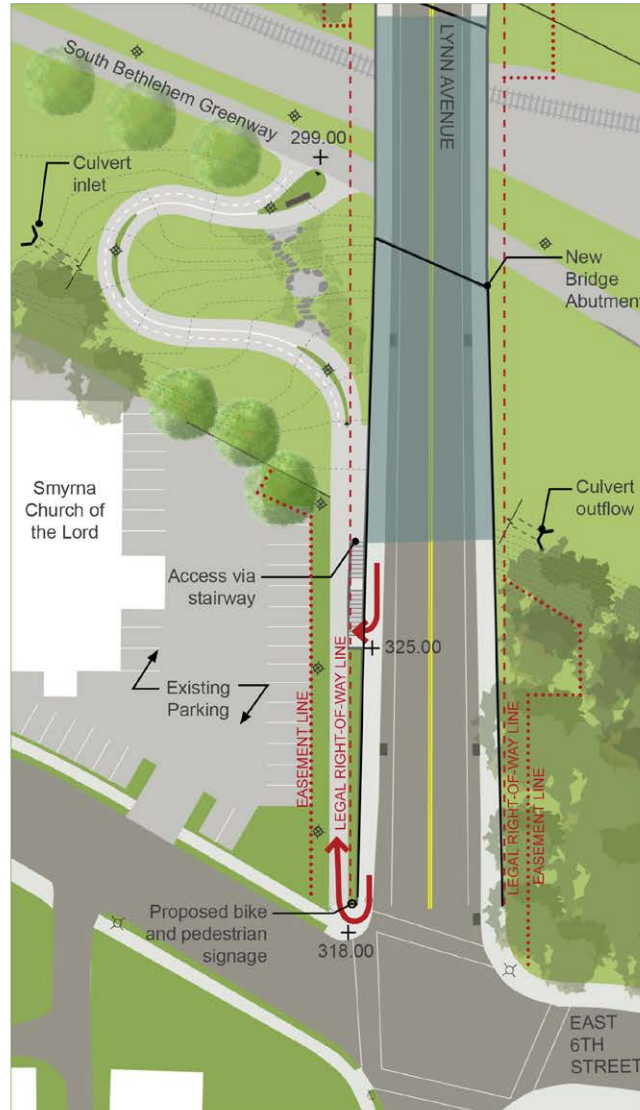
Lynn Avenue is an important corridor providing a potential Greenway connection to both the existing South Bethlehem neighborhood east of William Street as well as anticipated future developments along the SR412 corridor. Several concept designs for a connection at this location were developed and reviewed with the Committee and community. The preferred design was further developed with access via stairs from the proposed Lynn Avenue bridge as well as an ADA compliant route from the intersection of Lynn Avenue and East 6th Street. The connection is envisioned as an extension of the greenway and incorporates dedicated bicycle and walking paths, seating, lighting, planting areas and a naturalistic rock garden landscape.



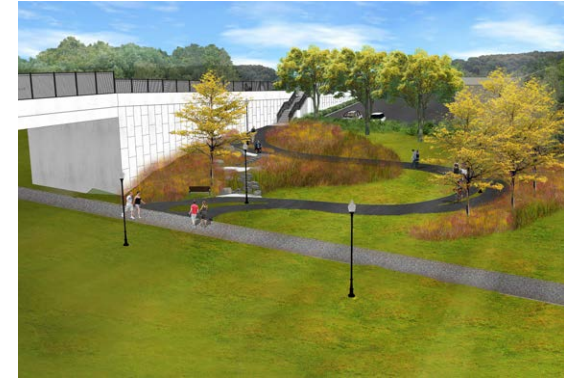
View of Ramp Connection Looking North from West Side of Bridge



Plan Enlargement



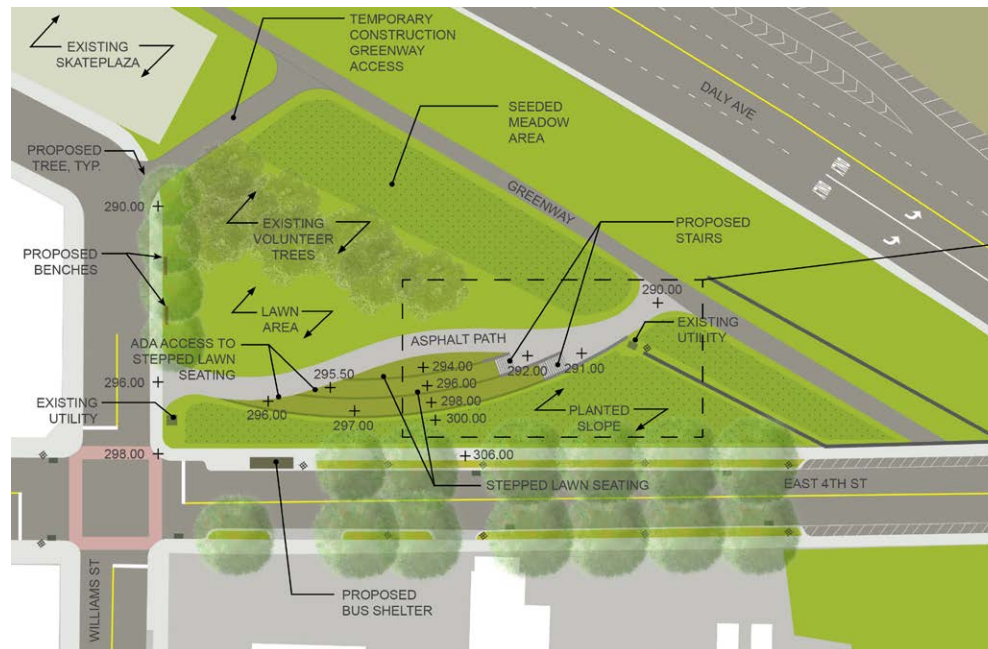
Plan View



Views of Ramp Connection Facing South

## East 4th St. and Williams St.

Final contract plans are in development for a new connection from the intersection of E4th Street and William Street. The connection is planned to serve as an access point the Greenway, as well an overlook to the future SkatePlaza expansion. The design also incorporates new soft seating areas, lighting, and temporary lawn and wildflower planting areas that will enhance the currently utilitarian lot until future phases of the SkatePlaza can be realized. A new streetscape along the East side of William St. is also included in the design, providing new street trees and backless benches that will improve the character of the intersection.



Site Plan



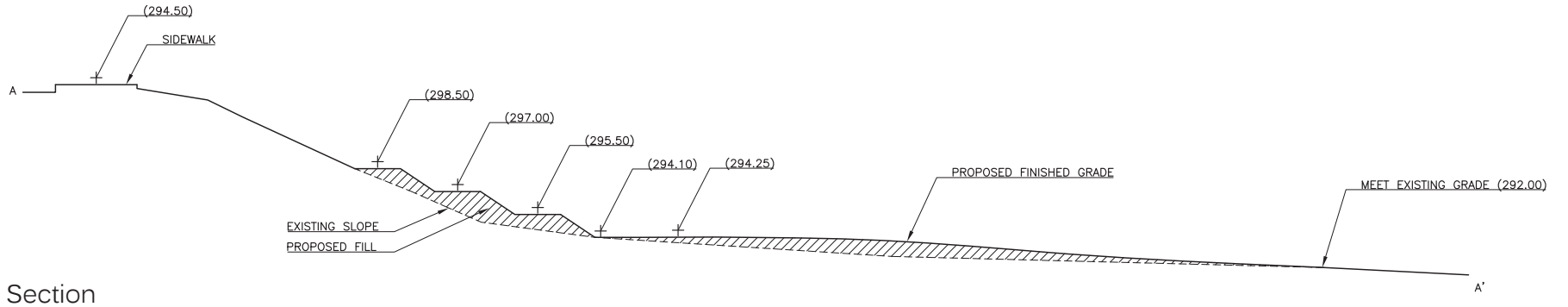
# South Bethlehem Eastern Gateway | Greenway Connections



Existing



Proposed



# 5

## Estimates

Cost information has been provided as order of magnitude estimates separated by project locations (as noted). Bids for work may vary significantly based on the final scope of work defined for each project.



Lynn Avenue Bridge Connector  
City of Bethlehem, PA

DESCRIPTION	UNIT	PRICE	QTY.	AMOUNT
<b>REMOVALS</b>				
Maintenance of Traffic	Lump Sum	\$ 5,000.00	1	\$ 5,000.00
Tree Protection	Each	\$ 215.00	3	\$ 645.00
Construction Fence 8' ht.	Linear Feet	\$ 31.00	600	\$ 18,600.00
Construction Signage	Each	\$ 500.00	1	\$ 500.00
Saw Cut Pavement	Linear Feet	\$ 8.50	120	\$ 1,020.00
Saw Cut Curbs and Walls	Linear Feet	\$ 28.00	5	\$ 140.00
Remove Reinforced Concrete (Retaining Wall)	Cubic Yard	\$ 200.00	18	\$ 3,600.00
Remove Chain Link Fence	Square Feet	\$ 2.42	120	\$ 290.40
Remove Steel Fence	Square Feet	\$ 5.77	50	\$ 288.50
Excavation	Cubic Yard	\$ 55.00	110	\$ 6,050.00
Earth Moving Operations	Cubic Yard	\$ 38.00	190	\$ 7,220.00
Select Fill	Cubic Yard	\$ 30.00	2500	\$ 75,000.00
Geotextile - Stabilization	Square Yard	\$ 10.00	50	\$ 500.00
Test Pits and Protection of Utilities	Lump Sum	\$ 2,000.00	1	\$ 2,000.00
Clear and Grub/ Tree Removal	Lump Sum	\$ 2,000.00	1	\$ 2,000.00
<b>EROSION CONTROL AND CONTAINMENT</b>				
Temporary Silt Control (Straw Bale or Silt Fence)	Linear Feet	\$ 14.50	275	\$ 3,987.50
<b>UTILITIES AND DRAINAGE</b>				
Clear Existing Storm Sewer Pipe	Linear Feet	\$ 17.00	67	\$ 1,139.00
Reinforced Concrete Pipe	Linear Feet	\$ 96.00	150	\$ 14,400.00
Broken Stone- Loose Measure	Cubic Yard	\$ 82.00	20	\$ 1,640.00
Culvert Endwall	Cubic Yard	\$ 1,000.00	3	\$ 3,000.00
<b>PAVEMENT &amp; CONCRETE</b>				
Full Depth Asphalt Pavement (including subbase)	Square Yard	\$ 52.00	300	\$ 15,600.00
Cement Concrete Pavement (including subbase)	Square Yard	\$ 92.00	175	\$ 16,100.00
Reinforced Concrete (Retaining Walls)	Cubic Yard	\$ 1,000.00	5	\$ 5,000.00
Reinforced Concrete (Steps)	Cubic Yard	\$ 1,000.00	7	\$ 7,000.00
Miscellaneous Concrete Footings	Cubic Yard	\$ 850.00	2	\$ 1,700.00
Stone Screenings Footpath	Cubic Yard	\$ 60.00	10	\$ 600.00
<b>SITE FURNISHINGS</b>				
Bench	Each	\$ 1,000.00	1	\$ 1,000.00
Litter/Recycling Receptacle	Each	\$ 1,200.00	2	\$ 2,400.00
Bike Rack	Each	\$ 1,380.00	1	\$ 1,380.00
Lighting	Each	\$ 10,000.00	6	\$ 60,000.00
Landscape Boulders	Each	\$ 1,000.00	10	\$ 10,000.00
<b>FENCE</b>				
Bridge Railing Modifications	Lump Sum	\$ 2,250.00	1	\$ 2,250.00
Handrail	Linear Feet	\$ 120.00	50	\$ 6,000.00
<b>BIKEWAYS</b>				
Greenway Sign 2.6 SF, two-sided	Each	\$ 600.00	4	\$ 2,400.00
Greenway Sign Post	Each	\$ 300.00	4	\$ 1,200.00
Thermal Plastic Striping	Linear Feet	\$ 2.00	1000	\$ 2,000.00
<b>LANDSCAPE WORK</b>				
Topsoil for Seeded Areas (6")	Cubic Yard	\$ 60.00	190	\$ 11,400.00
Construct Wildflower Meadow	Square Yard	\$ 10.00	1000	\$ 10,000.00
Trees	Each	\$ 1,000.00	7	\$ 7,000.00
Shrub and Groundcover Plantings	Lump Sum	\$ 30,000.00	1	\$ 30,000.00
Construct Wildflower Meadow	Square Yard	\$ 10.00	1000	\$ 10,000.00

Removals	\$	96,284.90
Erosion Control & Containment	\$	3,987.50
Utilities and Drainage	\$	20,179.00
Pavement and Concrete	\$	163,800.00
Site Furnishings	\$	64,780.00
Fence	\$	8,250.00
Bikeways	\$	3,600.00
Landscape Work	\$	21,400.00

**Subtotal \$ 382,281.40**

General Conditions	8.00%	\$ 30,582.51
Mobilization & Demobilization	4.00%	\$ 16,514.56
Design Contingency	15.00%	\$ 64,406.77
Construction Contingency	15.00%	\$ 74,067.79

**Total \$ 567,853.02**

# South Bethlehem Eastern Gateway | Estimates

## East 4 Street Connector City of Bethlehem, PA

DESCRIPTION	UNIT	PRICE	QTY.	AMOUNT
<b>REMOVALS</b>				
Maintenance of Traffic	Lump Sum	\$ 5,000.00	1	\$ 5,000.00
Clear and Grub	Lump Sum	\$ 5,000.00	1	\$ 5,000.00
Excavation	Cubic Yard	\$ 55.00	266	\$ 14,630.00
Construction Fence 8' ht.	Linear Feet	\$ 31.00	475	\$ 14,725.00
Construction Signage	Each	\$ 500.00	1	\$ 500.00
Saw Cut Concrete Side and Curbs	Linear Feet	\$ 28.00	12	\$ 336.00
Saw Cut Pavement	Linear Feet	\$ 8.50	150	\$ 1,275.00
Remove Concrete Curb	Cubic Yard	\$ 94.00	6	\$ 564.00
Remove Concrete Pavement	Cubic Yard	\$ 94.00	9	\$ 846.00
Earth Moving Operations	Cubic Yard	\$ 38.00	212	\$ 8,056.00
Select Fill	Cubic Yard	\$ 30.00	220	\$ 6,600.00
Geotextile - Stabilization	Square Yard	\$ 10.00	225	\$ 2,250.00
Test Pits and Protection of Utilities	Lump Sum	\$ 2,000.00	1	\$ 2,000.00
Tree Removals - 6"-12" Cal.	Each	\$ 300.00	20	\$ 6,000.00
Temporary Protective Tree Fencing	Lump Sum	\$ 2,000.00	1	\$ 2,000.00
<b>UTILITIES AND DRAINAGE</b>				
2" Direct Burial Conduit	Linear Foot	\$ 1.81	200	\$ 362.00
6 AWG Underground Cable, Copper, 2 Conductor	Linear Foot	\$ 1.92	400	\$ 768.00
Pole Foundation	Each	\$ 1,452.00	3	\$ 4,356.00
New C.O.B. Light Fixture and Pole (Acorn Lighting Fixture, 12'-9" Height)	Lump Sum	\$ 4,000.00	3	\$ 12,000.00
<b>PAVEMENT &amp; CONCRETE</b>				
Full Depth Asphalt Pavement (including subbase)	Square Yard	\$ 52.00	305	\$ 15,860.00
Concrete Curb	Cubic Yard	\$ 850.00	5	\$ 4,250.00
Cement Concrete Pavement (including subbase)	Square Yard	\$ 92.00	141	\$ 12,972.00
<b>SITE FURNISHINGS</b>				
Benches	Each	\$ 1,100.00	2	\$ 2,200.00
Lighting	Each	\$ 10,000.00	3	\$ 30,000.00
<b>BIKEWAYS</b>				
Greenway Sign 2.6 SF, two-sided	Each	\$ 600.00	2	\$ 1,200.00
Greenway Sign Post	Each	\$ 300.00	2	\$ 600.00
<b>LANDSCAPE WORK</b>				
Mulch	Square Yard	\$ 7.00	388	\$ 2,716.00
Topsoil for Seeded Areas(6")	Cubic Yard	\$ 110.00	212	\$ 23,320.00
Construct Lawn	Square Yard	\$ 8.50	650	\$ 5,525.00
Wildflower Establishment	Square Yard	\$ 10.00	725	\$ 7,250.00
Trees	Each	\$ 1,000.00	2	\$ 2,000.00
Understory Trees	Each	\$ 800.00	6	\$ 4,800.00
Shrubs and Grasses	Each	\$ 150.00	19	\$ 2,850.00

DESCRIPTION	AMOUNT
<b>E 4 Street</b>	
Removals	\$ 56,782.00
Utilities and Drainage	\$ 17,486.00
Pavement and Concrete	\$ 15,860.00
Site Furnishings	\$ 32,200.00
Bikeways	\$ 1,800.00
Landscape Work	\$ 48,461.00

**Subtotal \$ 172,589.00**

General Conditions 8.00% \$ 13,807.12  
 Mobilization & Demobilization 4.00% \$ 7,455.84  
 Construction Contingency 10.00% \$ 17,258.90

**Total \$ 211,110.86**

East 5 Street Connector  
City of Bethlehem, PA

DESCRIPTION	UNIT	PRICE	QTY.	AMOUNT
<b>REMOVALS</b>				
Tree Protection	Each	\$ 215.00	3	\$ 645.00
Construction Fence 8' ht.	Linear Feet	\$ 31.00	300	\$ 9,300.00
Construction Signage	Each	\$ 500.00	1	\$ 500.00
Saw Cut Curbs and Walls	Linear Feet	\$ 28.00	1	\$ 28.00
Remove Curb	Cubic Yard	\$ 94.00	0.75	\$ 70.50
Unclassified Excavation	Cubic Yard	\$ 55.00	30	\$ 1,650.00
Earth Moving Operations	Cubic Yard	\$ 38.00	150	\$ 5,700.00
Silt Fence	Linear Feet	\$ 8.50	65	\$ 552.50
Test Pits and Protection of Utilities	Lump Sum	\$ 2,000.00	1	\$ 2,000.00
<b>PAVEMENT &amp; CONCRETE</b>				
Full Depth Asphalt Pavement (including subbase)	Square Yard	\$ 52.00	83	\$ 4,316.00
Concrete Curb	Cubic Yard	\$ 850.00	1	\$ 850.00
Reinforced Concrete	Cubic Yard	\$ 1,000.00	38	\$ 38,000.00
Miscellaneous Concrete Footings	Cubic Yard	\$ 850.00	1	\$ 850.00
<b>SITE FURNISHINGS</b>				
Bench	Each	\$ 1,000.00	2	\$ 2,000.00
Litter Receptacle	Each	\$ 415.00	2	\$ 830.00
Bike Rack	Each	\$ 1,380.00	1	\$ 1,380.00
Lighting	Each	\$ 10,000.00	4	\$ 40,000.00
<b>FENCE</b>				
Steel Fence 4' Ht.	Linear Feet	\$ 150.00	120	\$ 18,000.00
<b>BIKEWAYS</b>				
Greenway Sign 2.6 SF, two-sided	Each	\$ 600.00	2	\$ 1,200.00
Greenway Sign Post	Each	\$ 300.00	2	\$ 600.00
<b>LANDSCAPE WORK</b>				
Topsoil for Planted Areas (6")	Cubic Yard	\$ 60.00	60	\$ 3,600.00
Plant Material	Square Yard	\$ 100.00	90	\$ 9,000.00
Planting	Square Yard	\$ 35.00	90	\$ 3,150.00
Mulch	Square Yard	\$ 7.00	90	\$ 630.00
Topsoil for Seeded Areas	Cubic Yard	\$ 60.00	120	\$ 7,200.00
Construct Wildflower Meadow	Square Yard	\$ 10.00	370	\$ 3,700.00

<b>E 5 Street</b>	
Removals	\$ 20,446.00
Pavement and Concrete	\$ 44,016.00
Site Furnishings	\$ 44,210.00
Fence	\$ 18,000.00
Bikeways	\$ 1,800.00
Landscape Work	\$ 27,280.00

<b>Subtotal</b>	<b>\$</b>	<b>155,752.00</b>
General Conditions	8.00% \$	12,460.16
Mobilization & Demobilization	4.00% \$	6,728.49
Design Contingency	15.00% \$	26,241.10
Construction Contingency	15.00% \$	30,177.26
<b>Total</b>	<b>\$</b>	<b>231,359.00</b>

Proposed Modification to S.R. 412 PennDOT Project  
 Pedestrian Lighting & Planting Revisions  
 City of Bethlehem, PA

<b>PEDESTRIAN LIGHTING</b>				
6 AWG Underground Cable, Copper, 2 Conductor	Linear Foot	\$ 1.92	2700	\$ 5,184.00
Pole Foundation	Each	\$ 1,452.17	10	\$ 14,521.70
New C.O.B. Light Fixture and Pole (Acorn Lighting Fixture, 12'-9" Height)	Each	\$ 4,000.00	10	\$ 40,000.00
<b>ROADSIDE DEVELOPMENT</b>				
Ohio Lacey Elm - (2 1/2" Cal. B&B) - (Remove From Contract)	Each	\$ 480.04	-4	\$ (1,920.16)
Pacific Sunset Shantung Hybrid Maple - (2 1/2" Cal. B&B) - (Remove From Contract)	Each	\$ 290.43	-11	\$ (3,194.73)
Green Vase Zelkova - (3 1/2" Cal. B&B)	Each	\$ 500.00	19	\$ 9,500.00

<b>DESCRIPTION</b>	<b>AMOUNT</b>
Pedestrian Lighting	\$ 59,705.70
Roadside Development	\$ (4,385.11)

	<b>Subtotal</b>	<b>\$</b>	<b>55,320.59</b>
General Conditions	8.00%	\$	<b>4,425.65</b>
Mobilization & Demobilization	4.00%	\$	<b>2,389.85</b>
Construction Contingency	10.00%	\$	<b>6,213.61</b>
	<b>Total</b>	<b>\$</b>	<b>68,349.70</b>



**Monumental Signage**  
City of Bethlehem, PA

DESCRIPTION	AMOUNT
<b><u>Site Mounted Custom Monumental Sign Structures</u></b> Freestanding Corten Structure Floating Painted Aluminum Side Stainless Standoff Hardware Concrete Foundations	\$317,200.00
<b><u>Landscaping</u></b> Lighting Earthwork Planting	\$40,000 \$5,000 \$7,000
<b><u>Other</u></b> Bridge/Structurally Mounted Panels Developed at Conceptual Level Only (Not Included in Estimate)	\$0

DESCRIPTION	AMOUNT
<b>Monumental Signage</b>	
Site Mounted Custom Monumental Sign Structures	\$317,300.00
Landscaping	\$52,000.00

	<b>Subtotal</b>	<b>\$369,000.00</b>
General Conditions	8.00% \$	<b>29,520.00</b>
Mobilization & Demobilization	4.00% \$	<b>15,940.80</b>
Design Contingency	15.00% \$	<b>62,169.12</b>
Construction Contingency	15.00% \$	<b>71,494.49</b>
	<b>Total</b>	<b>\$548,124.41</b>