

The city of Boulder Greenways System is comprised of a series of corridors along riparian areas including Boulder Creek and its 14 tributaries, which provide an opportunity to integrate multiple objectives, including habitat protection, water quality enhancement, storm drainage and floodplain management, alternative transportation routes for pedestrians and bicyclists, recreation and cultural resources. In order to maximize the overlap of objectives and to coordinate projects along the Greenways, identification of projects for the 2013–2018 Greenways Capital Improvement Program is done as a team effort, combining input from Flood Utilities, Transportation, Parks and Recreation, Water Quality and Environmental Services, Planning and Open Space and Mountain Parks.

The Greenways CIP follows an opportunistic approach, contributing funding toward projects that are being completed by other departments or private development in order to meet the various objectives of the Greenways Program. The Greenways CIP also looks to leverage funds with outside agencies in order to move projects forward that meet more than one objective of the Greenways Program, but may not be the highest priority when evaluating any one particular objective. Projects included in the Greenways CIP are typically called out in the Greenways Master Plan and are projects that Greenways staff can take the lead in coordinating.



Funding Overview

The total 2013 Greenways capital budget is \$345,000, with \$105,000 in the operating budget. Greenways projects are funded from the Transportation Fund, Stormwater and Flood Management Utility Fund, and the Lottery Fund. Annual funding distribution for the Greenways Capital Program for 2013–2014 is as follows:

- Transportation: \$97,500
- Flood Utility: \$97,500
- Lottery Fund: \$150,000

Starting in 2015, the Lottery contribution is expected to be reduced to \$125,441, based on Greenways receiving 15% of the city's funding allocation, with a projection of total Lottery proceeds being \$836,275.



Accomplishments and Highlights

Projects Completed in 2012

- *Fourmile Broadway to Violet (Violet Crossing):* Flood improvements and a multi-use path connection between Broadway and Violet along Fourmile Canyon Creek were completed in conjunction with a private development in April 2012. Greenways and Flood Utilities provided funding contributions toward this project.
- *Fourmile 26th to 28th Streets:* A multi-use path connection along Fourmile Canyon Creek from 26th to 28th Streets through the Elks Park is expected to be constructed during the summer of 2012. This project is funded by Safe Routes to Schools, with Greenways funds contributing toward habitat improvements.



New multi-use path constructed in conjunction with the Violet Crossing development

Projects Expected for Completion in 2013

- *Goose Creek Restoration Project:* A Feasibility Report was completed in February 2011 by the U.S. Army Corps of Engineers for a Section 206 Restoration grant for Goose Creek between Foothills Highway and the confluence of Boulder Creek. Federal funding for the design and construction of this project has been allocated for 2012. The city's 35% funding match is being met by credits from city owned real estate.

Projects Starting in 2013, but Not Completed

All of the following projects will be in the design phase during 2013. All projects include flood mitigation, multi-use paths and bicycle and pedestrian underpasses.

- Wonderland Creek Foothills to 30th
- Wonderland Creek (28th Street underpass) Kalmia to Winding Trail
- Fourmile Canyon Creek at 19th Street
- Fourmile Canyon Creek Upland to Violet.

Highlights of 2013–2018 Projects

The focus of the 2013–2018 Greenways CIP is on flood mitigation, bicycle and pedestrian multi-use paths and underpasses, and habitat and water quality improvements along the Fourmile and Wonderland Creek corridors.

In addition to the projects along Fourmile Canyon Creek and Wonderland Creek, possible habitat restoration projects during the next few years include:



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In addition to the projects along Fourmile Canyon Creek and Wonderland Creek, possible habitat restoration projects during the next few years include:



- Stream bank restoration along Boulder Creek at Eben Fine Park
- Confluence of Bear Creek and Boulder Creek at Foothills Community Hospital
- Dry Creek habitat improvements through Flatirons Golf Course
- Goose Creek, railroad to 47th Street tree plantings
- Fish Passage enhancement projects in association with Fishing is Fun grants
- South Boulder Creek minimum stream flow
- Removal of Russian Olive trees east of 75th Street along Boulder Creek.



Goose Creek restoration project will begin in 2012.

During 2011, a conceptual design for a stream bank restoration plan in Eben G. Fine Park was initiated. A design consultant was hired and two public open houses were held to solicit input and comments. The conceptual design was reviewed by the Greenways Advisory Committee and the Parks and Recreation Advisory Board. Greenways also partnered with the Open Space and Mountain Parks Department during 2010–2011 to construct a fence along Fourmile Canyon Creek between 28th Street and the Pleasantview Soccer fields in order to preserve habitat and water quality.

The Greenways habitat crew also works closely with Parks and Open Space maintenance staff on collaborative projects as part of the operations budget. In addition, the Urban Drainage and Flood Control District completes maintenance projects along the major drainageways. In 2012 this includes the repair of a drop structure in Boulder Creek at 55th Street, which will reinforce a sanitary sewer line and allow for fish passage. Stream bank erosion will also be addressed. A second Urban Drainage maintenance project is under design along Fourmile Canyon Creek upstream of Broadway. This project will include the construction of a sediment trap and selective thinning of vegetation.

Relationship to Guiding Principles and Prioritization

Greenways projects address many of the CIP guiding principles. Greenways projects are identified in multiple master plans and meet the community sustainability goals. Most of the Greenways projects leverage outside or interdepartmental funding. Greenways habitat improvements seek to be sustainable and are intended to reduce the future maintenance required.

The Greenways CIP has been developed within the context of and is consistent with the Boulder Valley Comprehensive Plan (BVCP), the Transportation Master Plan (TMP), the major drainageway plans, the Comprehensive Flood and Stormwater Master Plan and the Greenways Master Plan. The Greenways Master Plan was updated in 2011 to reflect improvements that had been completed, and adopted changes that have been made in other master plans, city policies and ordinances that affect the Greenways Program since the last Master Plan update in 2001. Information from other



existing master plans for seven additional tributaries was also incorporated into the Greenways Master Plan update. Future opportunities will also be coordinated with the Open Space and Mountain Park's Grassland Plan and Visitor Master Plan and Trail Study Area plans where appropriate.

Transportation and flood utility projects were identified from the Transportation Master Plan, and the major drainageway plans, and intra-departmental meetings were held to determine project priorities and timing. Private development activities were also evaluated. Many of the Greenways projects shown in the CIP are being designed and constructed in coordination with major flood or transportation improvements. The Greenways funding associated with these projects focuses on habitat restoration, water quality improvements and trail connections. In addition to leveraging funding with the Transportation and Flood Utilities budgets, funding for Greenways projects is also available through the Urban Drainage and Flood Control District and Federal Transportation funds.

Deferred Projects, Changes and Unfunded Needs

Since the Greenways Program is opportunistic, taking advantage of projects that are funded through other departments, there are no unfunded needs.

The Wonderland Creek from Foothills to 30th Street was granted Federal Transportation Improvement Program (TIP) funds in the amount of \$2 million (2012–2014). Additional TIP funding was recently granted for the Wonderland Creek at 28th Street project in the amount of \$900,000 (2013–2014). This has made it possible to move Greenways and Flood Utilities funding previously shown in 2016 and 2017 from this project to the Fourmile Upland to Violet project.

On-going discussions have occurred related to the operating budget of the Greenways program being reflected in the CIP budget. As part of the 2012 budget, the operating portion of the Greenways program has been reallocated from the CIP to the operating budget in both Transportation and Utilities.

Greenways Advisory Committee

The Greenways Advisory Committee recommended (5–0) to the City Planning Board and the City Council to approve the proposed Greenways Capital Improvement Program (CIP), with the modification already being recommended by the Budget Office that the Greenways project administration be moved from a separate line item into the relevant capital projects.



Circle Boulder by Bicycle Greenways event

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Table 7-1: 2013-2018 Funding Summary By Department

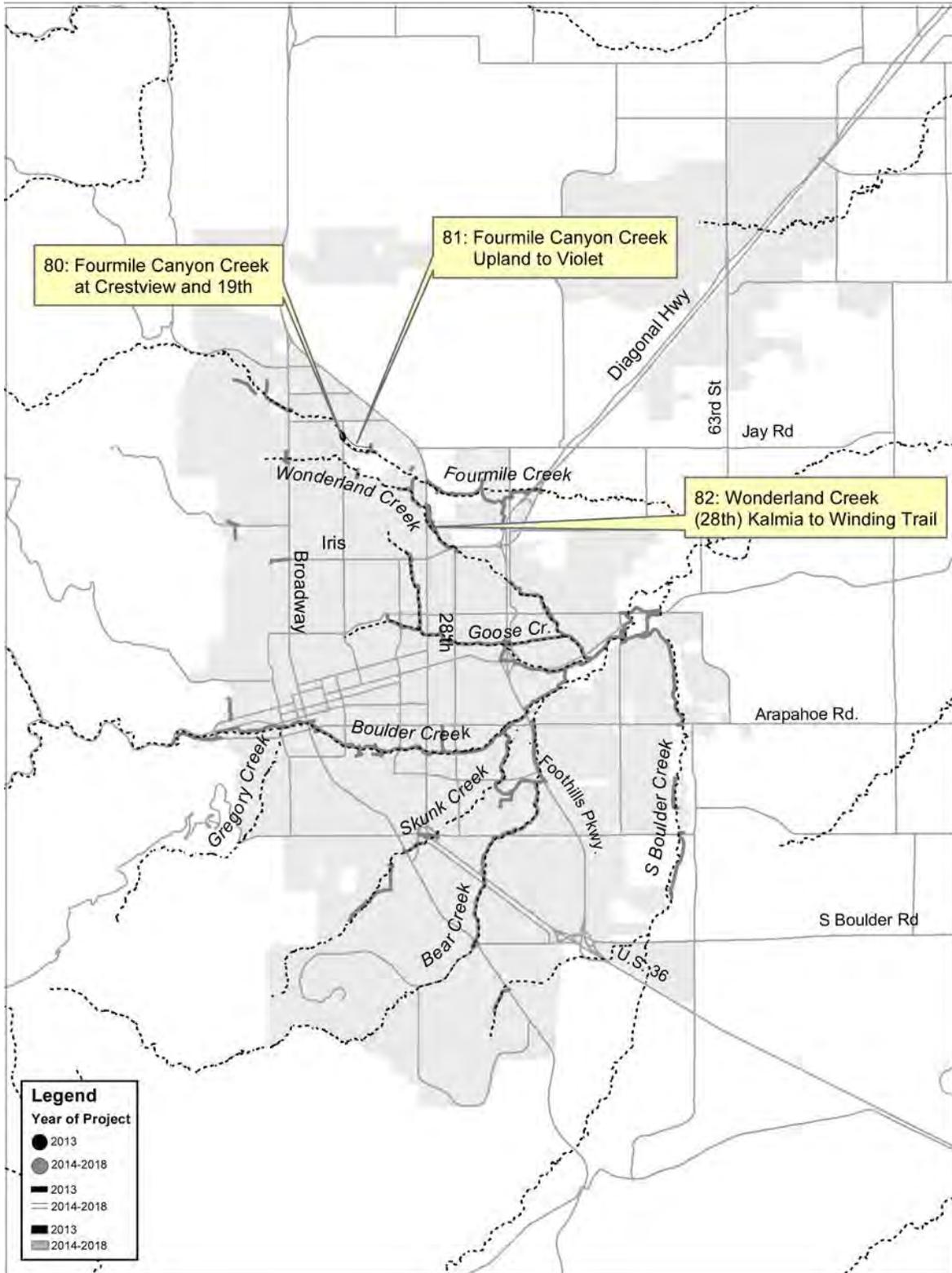
PUBLIC WORKS - GREENWAYS

	Estimated Total Cost	2013 Approved	2014 Projected	2015 Projected	2016 Projected	2017 Projected	2018 Projected	2013 - 2018 Total	Previously Allocated Funding	Unfunded Amount
Existing Facility - Enhancements / Upgrades										
Fourmile Canyon Creek at Crestview & 19th	\$ 1,500,000	\$ 295,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 295,000	\$ 390,000	\$ -
Wonderland Creek (28th) Kalmia to Winding Trail	5,465,000	-	295,000	270,441	-	-	-	565,441	-	-
Fourmile Canyon Creek Upland to Violet	3,500,000	-	-	-	270,441	270,441	270,441	811,323	-	200,000
Subtotal	\$ 10,465,000	\$ 295,000	\$ 295,000	\$ 270,441	\$ 270,441	\$ 270,441	\$ 270,441	\$ 1,671,764	\$ 390,000	\$ 200,000
On-Going Projects										
Miscellaneous Water Quality, Restoration and Trail Improvements	\$ -	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 300,000	\$ -	\$ -
Subtotal	\$ -	\$ 50,000	\$ 300,000	\$ -	\$ -					
Total	\$ 10,465,000	\$ 345,000	\$ 345,000	\$ 320,441	\$ 320,441	\$ 320,441	\$ 320,441	\$ 1,971,764	\$ 390,000	\$ 200,000



Capital Improvements Program 2013 – 2018

Public Works/Greenways Program





Project Name: Fourmile Canyon Creek at Crestview & 19th

Project at a Glance

Project Type: Existing Facility – Enhancements / Upgrades
Department: PW/ Greenways **Subcommunity:** North Boulder
Funding Source: Tributary Greenways **BVCPArea:** Area I
Project Number: **Map Number:** 80
CEAP Required: Yes **CEAP Status:** yes

Project Description

Project includes improvements to Fourmile Canyon Creek, flood mitigation, environmental restoration and off-street trail connections. These improvements will be done in conjunction with work being done by the Flood Utilities Division, Transportation Division and the Parks Department.

The first phase of the improvements at Crestview (19th to 22nd) includes carry over money of \$815,859 from flood and \$685,000 from Greenways (2011–2013) for a total project cost of \$1,500,000 as follows:

1. Planning: \$300,000 (2012–2013)
2. Acquisition: \$200,000 (2012–2013)
3. Construction: \$1,000,000 (2013–2014)

The project is anticipated to be completed in 2014.

Relationship to Guiding Principles

This project is listed in the Greenways Master Plan and the Transportation Master Plan and the Fourmile Canyon Creek and Wonderland Creek Flood Mitigation Plan and the North Boulder Subcommunity Plan.

Public Process Status, Issues

The CEAP for this project was reviewed by the Greenways Advisory Committee in Feb 2012 and Council in April 2012.

Relationship with Other Departments

All work along the Greenways is coordinated through the Greenways staff group that includes representatives from the Open Space Department, Parks and Recreation Department, Planning Department and Transportation and Utilities Divisions.

Change from Past CIP

Estimated Total Cost

Project Cost

Project Cost \$1,500,000

Total Project Cost \$1,500,000

Unfunded Amount

Unfunded Amount

Project Cost Total \$1,500,000

Funding Total (\$685,000)

Total Unfunded \$0

Capital Funding Plan

Funding Prior to 2013 \$390,000

Six Year Funding Plan

2013 \$295,000
 2014 \$0
 2015 \$0
 2016 \$0
 2017 \$0
 2018 \$0

Subtotal \$295,000

Total Funding Plan \$685,000



Fourmile Canyon Creek at Crestview & 19th continued

Additional Annual Operations and Maintenance

Additional Annual O&M: \$1,000 **Funding Source:**

Additional Annual O&M Description:

will be covered by existing maintenance budgets



Project Name: Fourmile Canyon Creek Upland to Violet

Project at a Glance

Project Type: Existing Facility – Enhancements / Upgrades
Department: PW/ Greenways **Subcommunity:** North Boulder
Funding Source: Tributary Greenways **BVCPArea:** Area I
Project Number: **Map Number:** 81
CEAP Required: Yes **CEAP Status:**

Project Description

Project includes improvements to Fourmile Canyon Creek from Upland to Violet, flood mitigation, environmental restoration and off-street trail connections. These improvements will be done in conjunction with work being done by the Flood Utilities Division, Transportation Division and the Parks Department.

There is \$2,500,000 from flood and \$811,323 from Greenways shown in the CIP in 2016–2018 for improvements along Fourmile between Upland and Violet. Based on very conceptual plans, this project is estimated to cost approximately \$3.5 million

- 1. Planning: \$900,000 (2012–2016)
 - 2. Acquisition: \$600,000 (2012–2016)
 - 3. Construction: \$2,000,000 (2018–2019)
- The project is anticipated to be completed in 2019.

Relationship to Guiding Principles

This project is listed in the Greenways Master Plan and the Transportation Master Plan and the Fourmile Canyon Creek and Wonderland Creek Flood Mitigation Plan and the North Boulder Subcommunity Plan.

Public Process Status, Issues

The CEAP for this project will be reviewed by the Greenways Advisory Committee.

Relationship with Other Departments

All work along the Greenways is coordinated through the Greenways staff group that includes representatives from the Open Space Department, Parks and Recreation Department, Planning Department and Transportation and Utilities Divisions.

Change from Past CIP



Fourmile Canyon Creek Upland to Violet continued

Estimated Total Cost

Project Cost

Project Cost \$3,500,000

Total Project Cost \$3,500,000

Unfunded Amount

Unfunded Amount

Project Cost Total \$3,500,000

Funding Total (\$811,323)

Total Unfunded \$200,000

Capital Funding Plan

Funding Prior to 2013 \$0

Six Year Funding Plan

2013 \$0

2014 \$0

2015 \$0

2016 \$270,441

2017 \$270,441

2018 \$270,441

Subtotal \$811,323

Total Funding Plan \$811,323

Additional Annual Operations and Maintenance

Additional Annual O&M: \$1,000 Funding Source:

Additional Annual O&M Description:

will be covered by existing maintenance budgets



Project Name: Miscellaneous Water Quality, Restoration and Trail Improvements

Project at a Glance

Project Type: On-Going Projects
Department: PW/ Greenways **Subcommunity:** System-wide
Funding Source: Tributary Greenways **BVCPArea:** System-wide
Project Number: **Map Number:** 0
CEAP Required: No **CEAP Status:**

Project Description

Miscellaneous water quality, habitat resoration and trail improvements projects.

This project is for an ongoing funding program. In 2013, this funding will be used to help fund stream bank restoration improvements along Boulder Creek at Eben Fine Park and a joint restoration project with the U.S. Army Corps along Goose Creek and potential proejects with Open Space along Boulder Creek and South Boulder Creek.

Relationship to Guiding Principles

These projects are listed in the Greenways Master Plan Update.

Public Process Status, Issues

Projects will be coordinated with Transportation, Utilities, Parks and Open Space or the developers of a property.

Relationship with Other Departments

Projects are developed with input from the City's Transportation, Utilities, Open Space, Parks Department, Boulder County and as well as through coordination with developers.

Change from Past CIP

Estimated Total Cost Unfunded Amount

Project Cost	Unfunded Amount
Project Cost	Project Cost Total
	Funding Total
Total Project Cost <input type="text"/>	Total Unfunded <input type="text"/>

Capital Funding Plan

Funding Prior to 2013

Six Year Funding Plan

2013	\$50,000
2014	\$50,000
2015	\$50,000
2016	\$50,000
2017	\$50,000
2018	\$50,000
Subtotal	\$300,000

Total Funding Plan

Additional Annual Operations and Maintenance

Additional Annual O&M: **Funding Source:**

Additional Annual O&M Description:

These projects are enhancements to existing conditions and will be maintained by the city's Greenways habitat maintenance crew and/or Parks and Open Space maintenance staff. Initial maintenance levels when the project is first constructed will be higher, but ultimatley these projects should require less maintenance than the current conditions dictate.



Project Name: Wonderland Creek (28th) Kalmia to Winding Trail

Project at a Glance

Project Type: Existing Facility – Enhancements / Upgrades
Department: PW/ Greenways **Subcommunity:** Crossroads
Funding Source: Tributary Greenways **BVCPArea:** Area I
Project Number: **Map Number:** 82
CEAP Required: Yes **CEAP Status:**

Project Description

Project includes improvements to Wonderland Creek, flood mitigation, environmental restoration, an bicycle and pedestrian underpass at 28th Street and off-street trail connections to Winding Trail Drive.

The Wonderland at 28th St (from Kalmia to Winding Trail) will begin with a CEAP and design in 2012. The total project cost is \$5,465,000, with \$565,441 from Greenways and \$4,000,000 from flood and \$900,000 from TIP distributed as follows:

- 1 Planning: \$960,000 (2012–2015)
- 2 Acquisition: \$200,000 (2013–2015)
- 3 Construction: \$4,305,000 (2015–2016)

Relationship to Guiding Principles

This project is listed in the Greenways Master Plan and the Transportation Master Plan and the Fourmile Canyon Creek and Wonderland Creek Flood Mitigation Plan and the North Boulder Subcommunity Plan.

Public Process Status, Issues

The CEAP for this project will be reviewed by the Greenways Advisory Committee.

Relationship with Other Departments

All work along the Greenways is coordinated through the Greenways staff group that includes representatives from the Open Space Department, Parks and Recreation Department, Planning Department and Transportation and Utilities Divisions.

Change from Past CIP

This project was moved up in the CIP as a result of receiving federal TIP funding

Estimated Total Cost

Project Cost

Project Cost \$5,465,000

Total Project Cost \$5,465,000

Unfunded Amount

Unfunded Amount

Project Cost Total \$5,465,000
 Funding Total (\$565,441)

Total Unfunded \$0

Capital Funding Plan

Funding Prior to 2013 \$0

Six Year Funding Plan

2013 \$0
 2014 \$295,000
 2015 \$270,441
 2016 \$0
 2017 \$0
 2018 \$0

Subtotal \$565,441

Total Funding Plan \$565,441



Wonderland Creek (28th) Kalmia to Winding Trail continued

Additional Annual Operations and Maintenance

Additional Annual O&M: \$1,000 **Funding Source:**

Additional Annual O&M Description:

will be covered by existing maintenance staff



- Stream bank restoration along Boulder Creek at Eben Fine Park
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Goose Creek restoration project will begin in 2012.

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The Greenways habitat crew also works closely with Parks and Open Space maintenance staff on collaborative projects as part of the operations budget. In addition, the Urban Drainage and Flood Control District completes maintenance projects along the major drainageways. In 2012 this includes the repair of a drop structure in Boulder Creek at 55th Street, which will reinforce a sanitary sewer line and allow for fish passage. Stream bank erosion will also be addressed. A second Urban Drainage maintenance project is under design along Fourmile Canyon Creek upstream of Broadway. This project will include the construction of a sediment trap and selective thinning of vegetation.

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