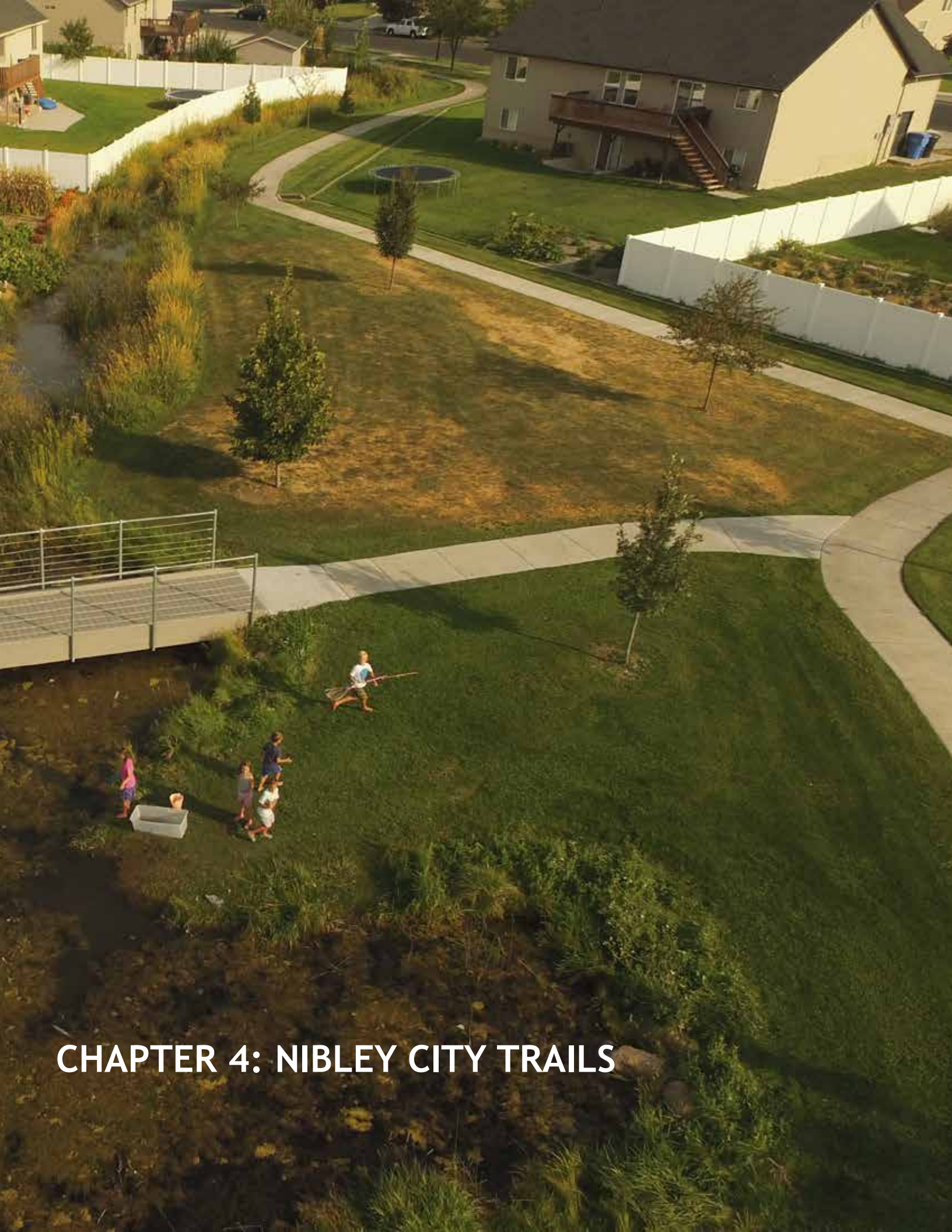
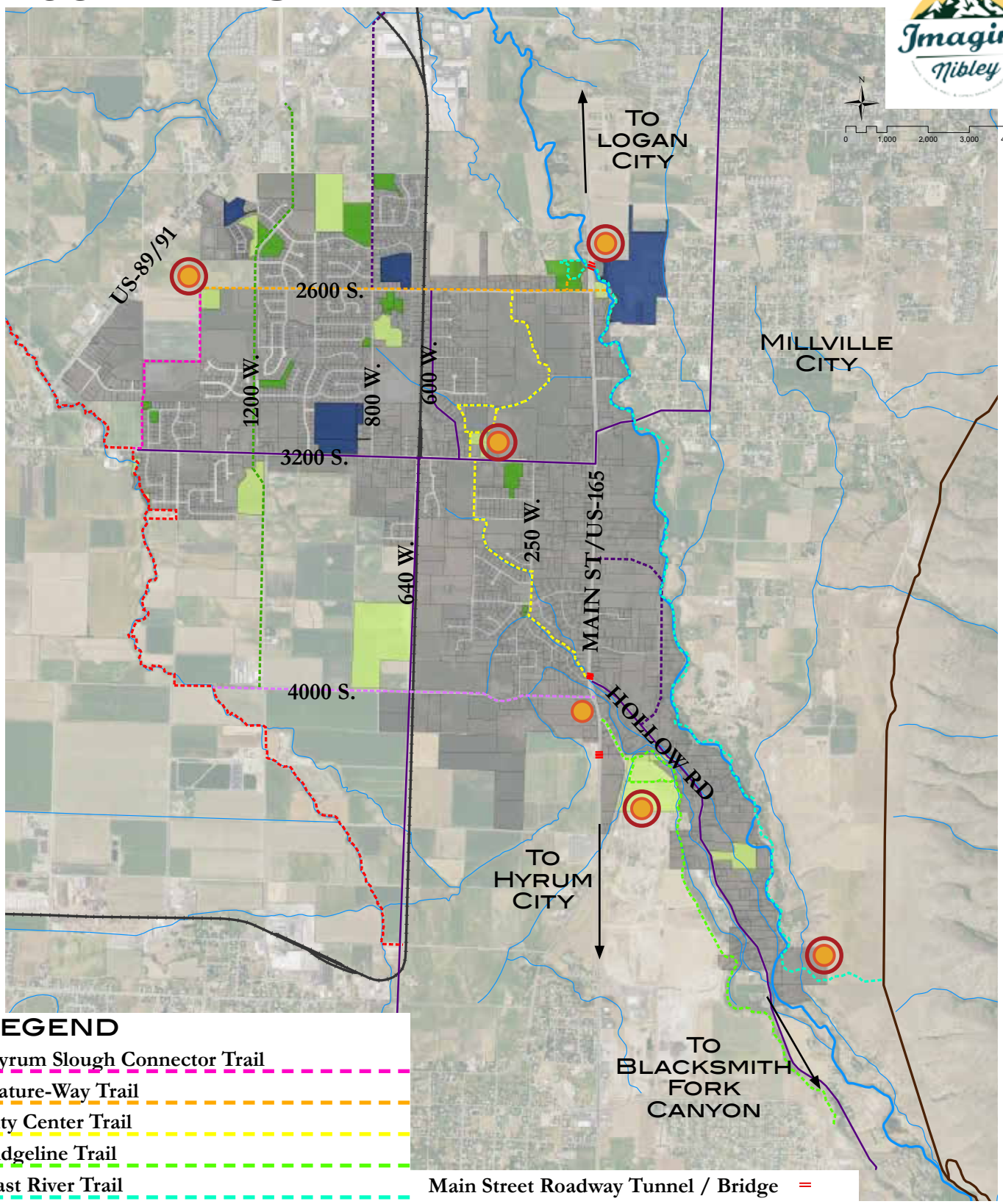


CHAPTER 4: NIBLEY CITY TRAILS

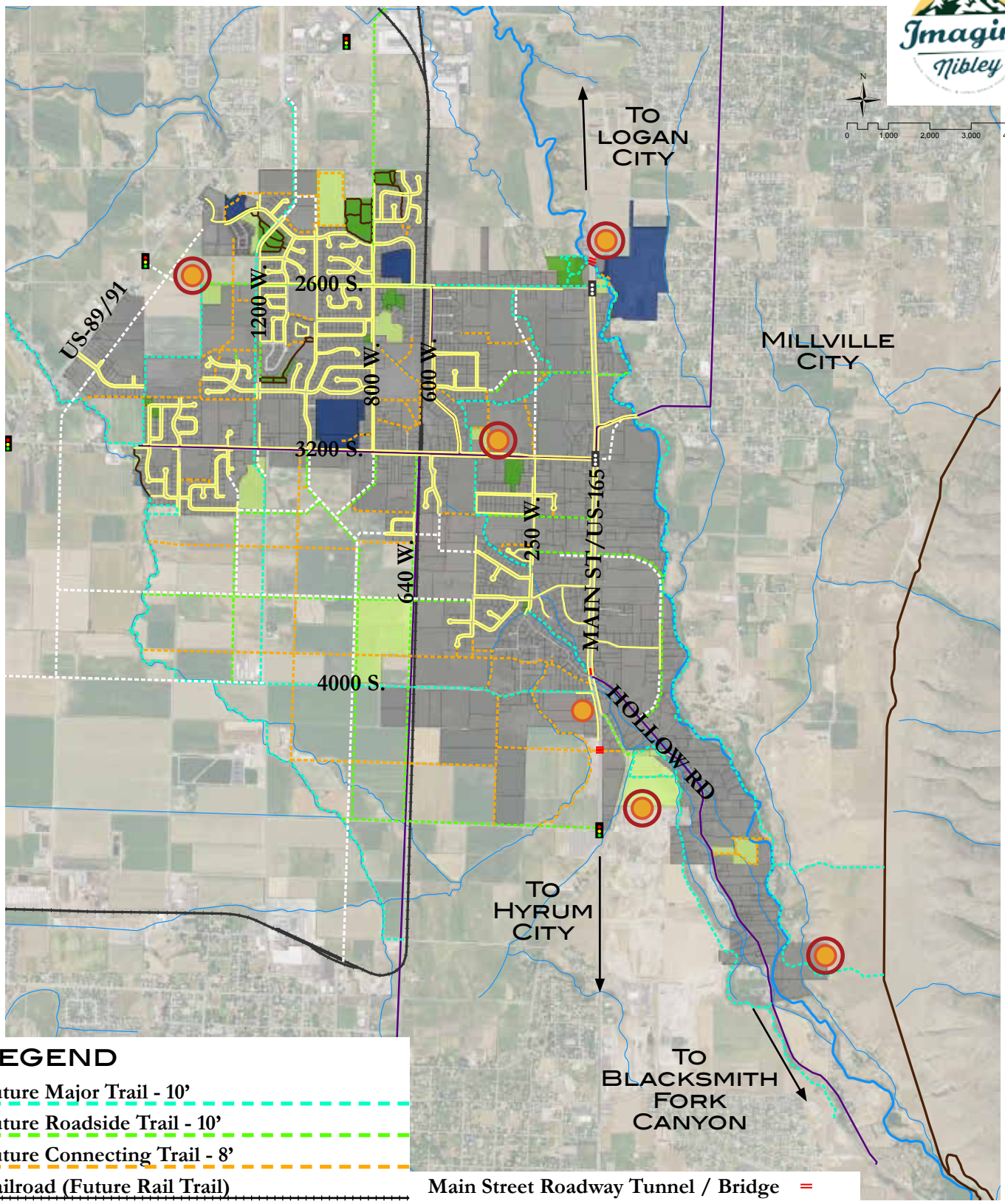
MAJOR TRAILS MAP



LEGEND

- Hyrum Slough Connector Trail
- Nature-Way Trail
- City Center Trail
- Ridgeline Trail
- East River Trail
- 4000 South Trail
- Hyrum Slough Extension Trail
- 1200 West Trail
- Railroad (Future Rail Trail)
- Future Trailhead
- Existing Trailhead
- Main Street Roadway Tunnel / Bridge
- Existing Shared-Use Roadway
- Bonneville Shoreline Trail
- Water Way
- Future Park
- Existing Park
- School

TRAILS MAP



LEGEND

- Future Major Trail - 10'
- Future Roadside Trail - 10'
- Future Connecting Trail - 8'
- Railroad (Future Rail Trail)
- Future Roads
- Existing Shared-Use Roadway
- Existing Park Pathway
- Existing Sidewalk
- Future Trailhead
- Existing Trailhead
- Main Street Roadway Tunnel / Bridge
- Bonneville Shoreline Trail
- Blacksmith Fork River
- Canal/Stream
- Future Park
- Existing Park
- School

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TRAILS 2017

BACKGROUND & ISSUES

Although sidewalks are frequent along Nibley City roadways, few trails (as defined by a two-way path with 8-ft or more of surfacing) currently exist in Nibley. The Hyrum Slough Trail is the only existing trail of this width. Currently, ordinances do not require that developers construct trails, although there is an ordinance in place that requires the construction of a 5-ft sidewalk from the end of cul-de-sac roadways to the end of the subdivision, with the intent of the sidewalk connecting to another public right-of-way. This ordinance has only been implemented a handful of times in the City since its adoption in 2016.

The previous Parks & Trails Master Plan does not show trails spaced sufficiently close to produce the desired degree of connectivity. This plan recommends the construction of a trail system that would offer pedestrian/bicycle intersections at a frequency of at least 660-ft. With the adoption of this new master plan, it is necessary to revise City ordinances to enforce its completion.

TRAILS 2027

One of the most frequently raised concerns during the public input portion of this project was that the City add more trails and create an integrated and highly-connected internal trail network with safe external access to neighboring cities, as well as to the mountains and rivers. The trail network shown on the Trails Map has been developed with these goals in mind.

Trails proposed in this plan have been lumped into three categories: major trails, roadside trails and connecting trails. "Major Trails" are like the freeways of the trail system and provide a continuous through-route connecting users to major attractions. These "Major Trail" routes may follow alongside existing or proposed roadways and function as a two-way wide sidewalk, or may be located away from roads in their own right-of-way, or may be a hybrid of both. It is expected that the City will take an active role in constructing portions of these projects with some participation from private developers where possible.

"Major Trails" will be named and branded so that the public can easily self-navigate through the system. "Connecting Trails" will not be through-trails but will run over shorter stretches and frequently tee into other trails. These trails are intended to provide greater connectivity between "Major Trails" and individual neighborhoods or between "Major Trails" and other features such as parks or schools. It is expected that the construction of these trails would be primarily development-driven with selective participation from the City on "Connecting Trail" projects in already-developed areas. It is expected that "Major Trails" might be groomed for winter use as there is currently demand in the City for Nordic skiing, snow-shoeing, and winter cycling(see survey).

"Roadside trails" are those that will be constructed concurrently with roadway improvements. Although these trail projects will mostly be driven by development, these trails could also be installed as part of municipal roadway reconstruction projects. "Roadside Trail" locations have been planned to coincide with arterials and collectors shown in the Transportation Master Plan.

CROSS SECTIONS

A cross-section has been developed based on nationally accepted guidelines from the National Association of City Transportation Officials (NACTO) and American Association of State Highway Transportation Officials (AASHTO). Trail rights-of-way should accommodate a trail travel surface of 8 to 10-ft in width, and 2-ft on either side for shoulders, clear zone and shy distance. Additional room may be needed for grading slopes and stormwater management. (See cross-section graphic on pg. 41)

Throughout this plan, a 14-ft right-of-way width for major trails and a 12-ft right-of-way for connecting trails has been assumed and is recommended as a standard dedication width for all trails; however, that number could increase across steep terrain and areas where stormwater management might be a concern. Through parks or other highly-trafficked portions of these trails, additional landscaping may be required for aesthetic purposes. If desired, guidelines follow in the next section.

TRAIL CORRIDOR LANDSCAPING

Trail cross-sections require a 2-ft minimum landscaping buffer on either side of the trail ROW (paved section and two foot gravel shoulder on either side). Landscaping recommendations are for the different widths of buffers. Where planting buffers measure 8-ft or greater, use the following levels to determine the level of maintenance required for the project.

PLANT TYPE	2-ft buffer	4-ft buffer	6-ft buffer	8-ft buffer
Perennials	X	X	X	X
Ornamental Grasses	X	X	X	X
Shrubs		X	X	X
Columnar Trees (12-ft max width)			X	X
Turf Grass			X	X
Deciduous Trees (8-10' underneath limb)				X

- **Level 1 -**
  - Deciduous trees planted along one side of the corridor every 30-ft on center.
  - Turf grass planted along trail corridor and underneath trees.
- **Level 2 -**
  - Deciduous trees planted along one side of the corridor every 30-ft on center.
  - Shrubs planted every 20-ft (block average)
  - Decorative crushed rock used for mulch with weed barrier underneath.
- **Level 3 -**
  - Deciduous, native trees planted along one side of the corridor every 30-ft on center.
  - Low water-use shrubs planted every 10-ft (block average)
  - Low water-use perennial blocks planted between shrubs.
  - Shredded bark mulch used for mulch.

SIDEWALKS

As part of this planning effort, all sidewalks in the City were inventoried. As a general policy, it is recommended that sidewalks be added to public roadways where they are lacking. These sidewalks could be added as standalone projects or as part of larger roadway reconstruction efforts. Many rights-of-way are already of sufficient width to accommodate sidewalks, others will require land acquisitions.

Some sidewalk construction and major trail construction efforts could be combined, such as in the case of the Nature Way Trail running along 2600 South and the City Center Trail that features portions running along 250 East. The City has recently established a fund for ongoing sidewalk construction projects. This fund could be tapped for construction of such dual-purpose roadside trail segments.

TRAIL SIGNS

Wayfinding, including trail signs, is critical to the usability of any trail system. Trail users are always on the go and may be moving quickly if running, biking, roller blading, skateboarding, etc. Trail signs with language and icons are just as important as signs for streets and highways. People want to know their location, directions to their destination, and distances to their destinations. They also like to stop once in a while to learn about something new in the area. Signs tie into the branding of the park system and help residents and users develop familiarity. It is recommended that Nibley use its Nibley City Parks and Rec logo on all trail signs to develop a common theme and brand among trail users.

There are four major types of trail signs: Street/Parking Trail Signs, Trail Head Signs, Trail Signs (including intersections) and Interpretative Signs.

1. Street and Parking Trail Signs – street trail signs will serve one major function indicating to drivers the location of the trail parking. Trail users sometimes drive to the trailhead to meet up with other walkers, runners, bikers and trail users or to begin using the trail. Usually only one parking sign is needed.

2. Trailhead Signs – trailhead signs should include a map of the entire trail system, major streets, rivers and streams, a current location dot and essential information for trail users. Some of the essential trailhead information may include: trail system mileages, trail user rules (dogs, right

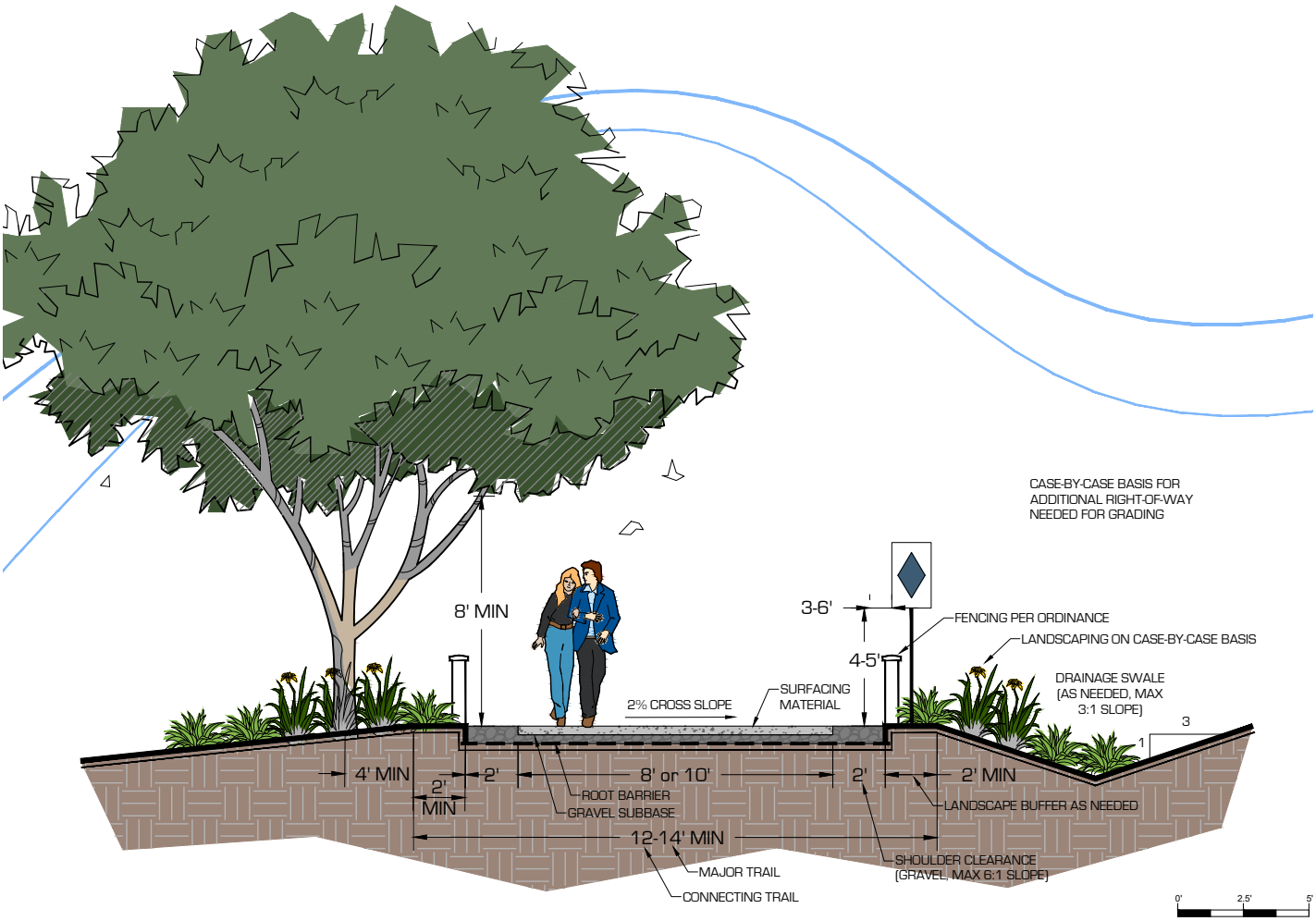
of way, trail service, etc). Trailhead signs should be located at the following locations: parking lots, beginning and end of trails, and trail access points at streets.

3. Trail Signs – are located on the trails at key locations. The trail signs provide distances, trail name and basic directions at trail intersections. Trail signs should be simple, inexpensive and placed at a maximum distance of every two miles. They should also be placed at trail access points if no trailhead sign is placed and at all intersections.
4. Interpretative Signs – are special signs to be used at specific locations and places. Interpretative signs provide historical or scientific information about places. They can be used to teach the public about the history of places, science of a river, etc. Interpretive signs should go in locations with space to stop, rest and gather as a small group. Nibley City should consider using new interactive technology, such as QR codes. For example, a trail user could scan a code at Morgan Farm and video could be displayed on a smart phone about the history of the farm.

PROPOSED TRAIL SIGN

MAJOR & CONNECTING TRAIL CROSS-SECTION

Scale 1”=5’



GOALS

1. Construct the following trails by 2027 with at least gravel surfacing to provide a near continuous loop around the City's perimeter and access to the mountains:
   - City Center Trail
   - Nature Way Trail
   - Hyrum Slough Connector Trail
   - 4000 South Trail
   - Ridgeline Trail
   - East River Trail (Phase 1)
2. Ensure safety on the public trail system.
3. Ensure ADA-accessibility at all major trailheads and along major trails.
4. Establish effective and efficient strategies for long-term maintenance.
5. Guarantee general pedestrian-connectivity between new developments.

STRATEGIES

1. Allocate first-available funding to preserve the rights-of-way of 2027 trails, then construct trails later. Right-of-way concerns specific to each trail can be found beginning on page 44.
2. Look for cost savings in the initial build of construction:
   - Nibley City may consider building all 2027 trails initially of an 8-ft gravel cross-section with the intention of later upgrading to 10-ft asphalt or concrete surfacing. Or if the gravel surfacing is cost prohibitive the City may consider simply clearing and rough grading a pathway.
   - Require developers to complete the full cross-section of any segment of trail planned through or around the proposed development and to surface the trail with asphalt. If the development contains a roadside trail, developers should finish trail with concrete.
   - Perhaps the City builds-out only the most crucial segments of the 2027 trails. Possible reductions could be as follows:
     - **City Center Trail:** Construct from 3200 South to 2965 S and then northeast along the canal to 2900 South.
     - **Nature Way Trail:** Construct from SR-165 to Nibley Elementary School.
     - **Hyrum Slough Connector Trail:** Construct from Hyrum Slough Trail to the West stub-out of 2980 South (Nibley Parkway).
     - **4000 South Trail:** Construct from 1200 West to 280 West
     - **Ridgeline Trail:** Construct trail from Johnson road to Hollow Road across old gravel pit property and Nibley City property fronting Hollow Road.
     - **East River Trail:** Construct from High School to 2900 South.
3. Design with safety and accessibility in mind:
   - When feasible, trail designers should be required to design trails and trailheads to ADA standards for cross and longitudinal slope and provide railings and landings where required. All designs should also be coordinated with local law enforcement to ensure that trails will be patrol-able and discourage crime. Establishing a public perception that the trail system is safe will be crucial if the City wants the system to be used.
   - Consider revising City engineering standards for intersection crossing treatments outlined in NACTO's "Urban Bikeway Design Guide", including such features as pedestrian bulb-outs, pedestrian-refuge medians, leading pedestrian intervals at signals, enhanced pavement markings and signage.

4. Modify ordinances to require trail construction at time of subdivision:
    - It is recommended that a provision be added to the current City subdivision ordinance that would require that developers construct any trail shown on the master plan on their property to the cross-sectional standards included in this plan and to surface with asphalt or in the case of road-side trails, concrete. To provide flexibility to developers in establishing subdivision layouts, it would be advisable to include a provision allowing them to provide a functionally equal alternative to the exact trail position shown on the Trails map, pending approval by the Planning Commission and City Council.
    - In order to offset the cost to the developer of constructing these additional trails, the City may consider allowing smaller lot sizes within the development. See Chapter 6 "Open Space" Strategy #1 for a more detailed discussion of a potential of an Open Space Preservation Fund and/or TDR overlay zone ordinance.
5. The Public Works department should develop the most effective internal department strategies based on available human and mechanical resources to address the following:
    - Trail sweeping
    - Trail edging
    - Mowing of vegetation on adjacent shoulders
    - General weed control
    - Tree and shrub pruning
    - Snow and ice removal
    - Graffiti control
    - Trash removal
    - Trail drainage control
    - Trail signage repair
    - Trail re-surfacing
6. To guarantee pedestrian connectivity between developments, the City may consider adopting one of the following strategies by ordinance:
    - Prohibit cul-de-sacs, except in circumstances required by topography or intersections with unusual features.
    - Allow cul-de-sacs, but continue to require a trail out of the end of the cul-de-sac.
    - Require the maintenance of a certain connectivity index within and between developments. A connectivity index is a metric used for measuring the number of intersections per a given unit of area.
    - Limit the maximum block size or street segment length before reaching another intersection (660-ft, or an 1/8-mile suggested).
    - Prohibit leapfrog development by requiring that development occur in a contiguous manner adjoining existing infrastructure. This allows for more efficient land use and infrastructure patterns and protects the City fiscally by ensuring that it will not accumulate infrastructure maintenance responsibilities that are disproportionate to its tax base.
7. Revise engineering standards for 60-ft, 66-ft & 80-ft roadway cross-sections to provide an option for a 10-ft concrete sidewalk to function as a two-way trail. Generate an engineering standard detail for 8-ft and 10-ft wide trails with independent rights-of-way. Provide an option for gravel surfacing and an option for asphalt.

TRAILS ORDINANCE SUMMARY TABLE

SUBJECT	DESCRIPTION
Require Trail Construction by Developers	Revise subdivision ordinance to require construction of trails as shown on Parks & Trails Master Plan with asphalt surfacing, or concrete in the case of roadside trails. If the location needs to be adjusted for layout, developer to provide a functionally equal alternative.
Require Density in Lieu of Park/Trail Construction	Revise subdivision ordinance to allow for higher densities where trail construction or park amenities will be required as shown on the Master Plan.
Require Connectivity & Walkability	Revise ordinances to protect connectivity by one of the following: prohibiting cul-de-sacs, requiring a trail at the end of a cul-de-sac, requiring neighborhoods to maintain a certain connectivity index, limiting the maximum block size or street segment to 660-ft, or prohibiting leapfrog development by requiring contiguous development adjacent established infrastructure.

PRIORITY 1 - CITY CENTER TRAIL

Location: running north and south from Hollow Road to 2600 South in between Main Street and 600 West.
Length: 2.5 miles
ROW: Although the majority of this proposed trail parallels existing waterways, almost all of this land is in private ownership, with the exception of a ¼-mile stretch across the southern boundary of the Cottages Planned Unit Development at 250 West and 3500 South. Ownership north of 3200 South is far less fragmented than to the south with ownership being concentrated in the hands of a handful of property owners. To the south the proposed alignment crosses property held by several dozen different owners. Almost the entirety of the area north of 3200 South is greenfield, while to the south most of the proposed trail alignment traverses existing development. Given its greenfield nature and concentrated ownership the land to the north of 3200 South will likely be easier to acquire and construct.
Summary: The City Center Trail is intended to provide non-motorized mobility to the east side of Nibley City connecting on the south to the 4000 South Trail and the Ridgeline Trail and connecting on the north to the Nature Way Trail. The portion of the trail south of 3200 South will pass through existing neighborhoods and along existing water channels after which it will continue north passing the Nibley City Building and then follow existing water courses to the northeast through what is planned to become the Nibley City Center at some future time. The trail north of 3200 South will pass through a markedly more urban, while the trail to the south will sport more natural scenery. This portion of the trail should be thouroughly coordinated with other plans for the City Center Park and for the City Center as a whole.

PRIORITY 2 - NATURE WAY TRAIL

Location: north side of 2600 South
Length: 1.75 miles
ROW: Much of this trail is located along public rights-of-way and thus has already been secured or may be secured through dedication. Additional dedications will be required across approximately 12 properties between SR-165 and 600 West. A ¼-mile dedication will also be needed between 1200 West and the proposed 2600 SW Park from one property owner.
Summary: The Nature Way Trail is primarily a roadside trail, which will front the north side of 2600 South. This will require widening the existing sidewalk from 600 West to 1200 West from 4-ft to 12-ft. This trail will serve to connect several major natural sites in the City, including the Blacksmith Fork River, the proposed Stokes Nature Center (to be located just northwest of the 2600 South & SR-165 intersection), Firefly Park, Discovery Park wetlands and access to 800 West, which leads to the Logan River Trail. Some side connecting trails will be required to bring these sites fully together as outlined in the complete "Trails Map". The trail will terminate at the proposed 2600 South Stormwater Park, which is intended for use as a dog park. Heading south from this park, users will find themselves on the south-running "Hyrum Slough Connector Trail". The City should consider partnering with Stokes Nature Center in the development of this trail across the Nature Center's Property.

PRIORITY 3 - HYRUM SLOUGH CONNECTOR TRAIL

Location: west side of Nibley connecting Hyrum Slough and northwest neighborhoods
Size: 1.00 mile
ROW: Dedications from four large parcels will be required to complete this trail. Much of this right-of-way could potentially be constructed by industrial developers.
Summary: The Hyrum Slough Connector Trail may feature sections with independent rights-of-way and other sections that follow roadways, depending on the shape of development in this area. Being closer to Hwy 89/91, this trail may be able to include commercial and developer participation in order to construct. The trail is intended to connect the 2600 South Stormwater Park to the Hyrum Slough Trail and provide trail access to neighborhoods and commercial areas on Nibley's west side. The Hyrum Slough Trail currently terminates at approximately 2250 South, but the trail is intended to extend (as identified on the "Trails Map") along the existing Slough's corridor down into Hyrum or at least to 4000 South where it can then connect east to the proposed Regional Park and/or the potential future "rail trail" that will parallel 640 West.

PRIORITY 4 - 4000 South Trail

Location: running east and west along 4000 South from Main Street/ Hwy 165 to 1500 West. The second half of the trail will run north and south along 1200 West from 4000 South up to US 89/91 and will be completed at a later date.
Length: 1.7 miles
ROW: This will be a roadside trail following an existing public right-of-way, although additional dedications will be required on developers in order to bring the right-of-way to the width proposed in the City Transportation Master Plan.
Summary: This trail will form a crucial connection between the Hyrum Slough Trail (which may extend south one day to Hyrum City), the proposed Regional Park, the vision rail trail to Hyrum City, the proposed Schiess conservation easement and associated minor loop trail (at 4000 South and 640 West), the City Center Trail, the Ridgeline Trail and Hollow Road. As much of the route for this trail currently lies within the County's jurisdiction, their cooperation will be required should these portions of the trail be developed prior to annexation.

PRIORITY 5 - RIDGELINE TRAIL

Location: east side trail atop west ridge of Blacksmith Fork river valley
Size: 2.50 miles
ROW: Acquisitions will be required across the spent gravel pit parcels owned by Janice Sackett, across the Cache County Parcel, across five private properties fronting Hollow Road, across the Tuddenham farm, and across LeGrand Johnson's land fronting SR-101. The list of involved property owners could be reduced if the trail were re-routed around the parcels fronting Hollow Road.
Summary: The Ridgeline Trail connects Johnson Road and the proposed Old Gravel Pit Mountain Bike Park to SR-101 and Blacksmith Fork Canyon. Though this trail will parallel the East River Trail, it will provide dramatically different scenery as it will sit at the top of the west ridge of the Blacksmith Fork river valley, alternating between shaded woody portions and other offering scenic vistas. Access will be gained to the trail via the Gravel Pit Park, via a City owned parcel fronting Hollow Road and connecting to Gravel Pit Park, or from SR-101.

PRIORITY 6 - EAST RIVER TRAIL

Location: along Blacksmith Fork River on majority of east-side
Length: 4.3 miles
ROW: Right-of-way acquisition along this stretch will require coordination and acquisitions from approximately 35 different private land owners over roughly 4.5-miles. There is a ¼-mile stretch adjacent the USU Coyote farm where access could perhaps be granted by agreement. The north section from SR-165 and bordering Ridgeline High School's property is currently under construction.
Summary: In coordination with Millville City and Cache County, the East River Trail is intended to be a low-impact nature trail that will blend into its surrounding environment. Nibley City will begin construction of this trail from Riverhawk Park to 3100 South. Accordingly, impacts to banks and vegetation should be minimal. This trail will ultimately connect the part of Nibley west of SR-165 with the Bonneville Shoreline Trail and Blacksmith Fork Canyon on the east. The trail will be accessible from Riverhawk Park, the future Hollow Road Park, and the future Bonneville Shoreline Park. Additional accesses could be located between these parks at such locations as 250 East and 3700 South. Users continuing west out of Riverhawk Park via the proposed trail underpass under SR-165 will find themselves on the proposed "Nature Way" Trail. This trail will not follow any roadways and will require acquisition of its own independent right-of-way.

TRAIL CONSIDERATIONS BEYOND 2027

Although the City will be giving its focus to the construction of the 2027 trails, City officials should look for opportunities to acquire key rights-of-way. For other future trails via Regional Transportation Plan funding. It is also possible that any "Major Trails" paralleling major rights-of-way and other "Roadside Trails" could be eligible for construction dollars if built as part of a larger transportation project receiving Cache County Council of Governments (CCOG) funding.

Alternatively, Nibley may continue its revolving door fund used to purchase right-of-way for trail projects up-front and require that the monies be paid back at the time that construction dollars are allocated.

As Cache Valley grows and changes over time, a "Rail-to-Trail" project is recommended to serve as the central trail access through Nibley City if the current railroad is ever abandoned. Also, as opportunity arises the City should take adcantage to acquire right-of-way for the future 1200 West and Hyrum Slough Extension Trails.