Standard Form No. 5 Drainage and Stormwater Treatment Scope Approval Form

Prior to starting a development plan and before the first drainage submittal, a Drainage and Stormwater Treatment Scope Approval Form must be submitted for review and signed by the City Engineer. A signed form shall also be included in every drainage submittal as Attachment A. This Scope Approval Form is for City requirements only. Values may be approximate. The City encourages supporting calculations and figures to be attached.

Project Information	
Project name:	KFMU Redevelopment
Project location:	2955 Village Dr., Steamboat Springs, CO 80487
Developer name/contact info:	Sunscope LLC, 1897 Hunters Dr, Steamboat Springs ,CO 80487 Attn: Sunny Partovi
Drainage engineer name/contact info:	Ryan Spaustat, ryans@landmark-co.com, (970) 819-2742
Application Type:	Development Plan
Proposed Land Use:	Residential

Project Site Parameters	
Total parcel area (acres):	1.29 acres (56,008 sq. ft.)
Disturbed area (acres):	1.29 acres (56,008 sq. ft.)
Existing impervious area (acres, if applicable):	0.43 acres (18,633 sq. ft.)
Proposed new impervious area (acres):	0.28 acres (12,107 sq. ft.)
Proposed total impervious area (acres):	0.71 (30,740 sq. ft.)
Proposed number of project outfalls:	1
Number of additional parking spaces:	0
Description and site percentage of existing cover/land use(s):	5,591 sq. ft. building (10%) 13,042 sq. ft. asphalt pavement (23%) 37,375 sq. ft. grass & undeveloped lot (67%)
Description and site percentage of proposed cover/land use(s): (Denotes TOTAL post-project land uses, including existing totals)	16,230 sq. ft. building (29%) 14,510 sq. ft. asphalt pavement (26%) 25,268 sq. ft. grass & undeveloped lot (45%)
Expected maximum proposed conveyance gradient (%):	3%
Description of size (acres) and cover/land use(s) of offsite areas draining to the site	N/A

Type of Study Required:

☒ Drainage Letter
☐ Final Drainage Study
☐ Conceptual Drainage Study
☒ Stormwater Quality Plan

Hydrologic Evaluation:

☒ Rational Method ☐ CUHP/SWMM ☐ HEC-HMS ☐ Other_____

Project Drainage	
Number of subbasins to be evaluated:	1
Presence of pass through flow (circle):	YES (NO)
Description of proposed stormwater conveyance on site:	Site runoff travels via sheet flows across grassed areas, bare ground, roof tops, asphalt, and concrete surfaces. Runoff generally flows across the site in a southwesterly direction and into grass swales which convey runoff into the on-site bio-retention basin. There is minimal conveyance infrastructure on-site, limited to downspout connections and culverts (see *Proposed Drainage Conditions Exhibit*).
Project includes roadway conveyance as part of design evaluation (circle):	YES (NO)
Description of conveyance of site runoff downstream of site, identify any infrastructure noted in Stormwater Master Plan noted as lacking capacity for minor or major storm event:	Stormwater primarily leaves the site via the bio-retention basin outfall. Runoff is directed into the existing drainage way which crosses the western property boundary and flows onto the adjacent parcel. Runoff from the site ultimately discharges into the Yampa River. Due to the maintenance of historic flows through the use of detention, no downstream infrastructure is lacking capacity for the minor and/or major storm events per Master Drainage Study (SEH, 2013).
Detention expected onsite (circle):	(YES) NO
Presence of Floodway or Floodplain on site (circle):	YES (NO)
Anticipated modification of Floodway or Floodplain proposed (circle):	YES (NO)
Describe culvert or storm sewer conveyance evaluative method:	AutoCAD Hydraflow Express extension and Storm and Sanitary Sewer Analysis

Permanent Stormwater Treatment Facility Design Standard (check all that apply with only one standard per tributary basin):

☒ WQCV Standard ☐ TSS Standard ☐ Infiltration Standard

☐ Constrained Redevelopment WQCV Standard

☐ Constrained Redevelopment TSS Standard

☐ Constrained Redevelopment Infiltration Standard

☐ Does not Require Permanent Stormwater Treatment (attach Exclusion Tracking Form)

Project Permanent Stormwater Treatment	
Justification of choice of proposed design standard, including how the site meets the constrained redevelopment standard, infiltration test results, etc.:	Proposed improvements require detention to maintain historic discharge rates and water quality treatment due to the increased impervious surface area.
Concept-level permanent stormwater treatment facility design details (type, location of facilities, proprietary structure selection, treatment train concept, etc.):	One bio-retention basin will treat the WQCV and also provide adequate detention for the 5-year and 100-year storms.
Proposed LID measures to reduce runoff volume:	Grassed Swale (GS) & Bio-retention Basin (RG)
Will treatment evaluation include off-site, pass through flow (circle):	YES (NO)

Approvals

Ryan Spaustat	5/23/2021	(970) 819-2742
Prepared By: (Insert drainage engineer name & firm)	Date	Phone number

Approved By:

Printed Name: City Engineer	Date

NORTH

20 0 20 40

1" = 40

LEGEND:

- PROPERTY BOUNDARY
- ADJ. PROPERTY BOUNDARY
- EASEMENT
- CENTERLINE
- FOUND MONUMENT
- FOUND SECTION CORNER
- BUILDING
- ROOF LINE/OVERHANG
- FENCE
- MAJOR CONTOUR (6800)
- MINOR CONTOUR
- ASPHALT
- CONCRETE
- GRAVEL
- CONIF. AND DECID. TREE

EXISTING SURFACE CONDITIONS

ROOF (90% IMP.): 5,591 SF
ASPHALT (100% IMP.): 13,042 SF
LANDSCAPE (2% IMP.): 37,375 SF

NET IMPERVIOUSNESS: 34%

DRAINAGE BASIN LIMITS
DESIGN POINT

PROJECT:	2136-022	NO.	DATE:	BY:	DESCRIPTION:
DATE:	5/23/2022				
DRAWN BY:	PN				
CHECKED BY:	RS				

LANDMARK CONSULTANTS, INC.
CIVIL ENGINEERS | SURVEYORS
141 9th Street ~ P.O. Box 774943
Steamboat Springs, Colorado 80477
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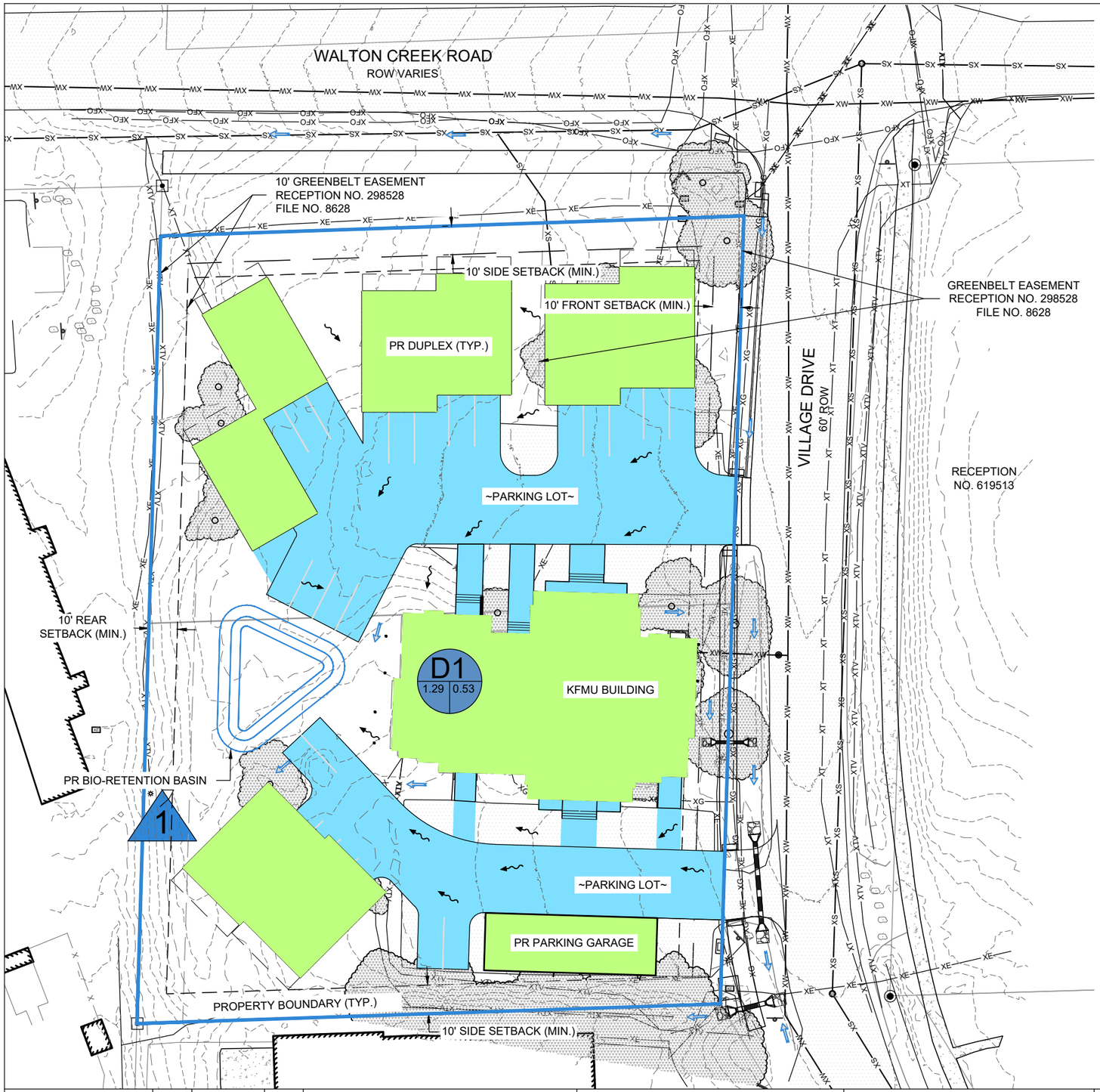
KFMU Redevelopment
FIGURE 3
IMPERVIOUS SURFACE EXHIBIT
EXISTING CONDITIONS

SHEET
D.1
Of 2 Sheets

DRAWING FILENAME: P:\2136-022\Engineering\Drainage\Hydrology\2136-022-DRAIN.dwg LAYOUT NAME: EX DATE: May 23, 2022 - 4:44pm CAD OPERATOR: patrick
LIST OF XREFS: [2136-021-xBORDER-11x17] [xDRAIN_Leg] [2136-022-xBndy] [2136-022-xExist] [2136-022-xSite]



NORTH

20 0 20 40

1" = 40'

LEGEND:

- PROPERTY BOUNDARY
- ADJ. PROPERTY BOUNDARY
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- CENTERLINE
- FOUND MONUMENT
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- BUILDING
- ROOF LINE/OVERHANG
- FENCE
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- MINOR CONTOUR
- ASPHALT
- CONCRETE
- GRAVEL
- CONIF. AND DECID. TREE

PROPOSED SURFACE CONDITIONS

ROOF (90% IMP.): 16,230 SF
ASPHALT (100% IMP.): 14,510 SF
LANDSCAPING (2% IMP.): 25,268 SF

NET IMPERVIOUSNESS: 53%

DRAINAGE BASIN LIMITS
DESIGN POINT

DRAWING FILENAME: P:\2136-022\Engineering\Drainage\Hydrology\2136-022-DRAIN.dwg LAYOUT NAME: PR DATE: May 23, 2022 - 4:44pm CAD OPERATOR: patrick

LIST OF XREFS: [2136-021-xBORDER-1x17] [xDRAIN_Leg] [2136-022-xBndy] [2136-022-xExist] [2136-022-xSite]

PROJECT:	2136-022	NO.	DATE:	BY:	DESCRIPTION:
DATE:	5/23/2022				
DRAWN BY:	PN				
CHECKED BY:	RS				

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KFMU Redevelopment
FIGURE 4
IMPERVIOUS SURFACE EXHIBIT
PROPOSED CONDITIONS

SHEET
D.2
Of 2 Sheets