Job No.: PXI-01
Date: May 2021
To: City of Sisters
From: Jennifer VanCamp, PE

Harper Houf Peterson Righellis Inc.
ENGINEERS ◆ PLANNERS
LANDSCAPE ARCHITECTS ◆ SURVEYORS

RE: **The Woodlands**
Preliminary Stormwater Design Memo

The purpose of this memorandum is to summarize the preliminary stormwater design within the Public ROW for The Woodlands project.

A 25-year design storm intensity for the City of Sisters is 2.8 inches/hour and an infiltration rate of 5.95 in/hr was assumed for this project. The private stormwater infiltration facilities are designed to contain and infiltrate the 100-year design storm intensity of 3.5 inches/hour.

For preliminary stormwater analysis purposes, a representative 100-LF sample roadway section was analyzed. The numbering sequence corresponds to the roadway typical sections shown in the plan sheets.

Public ROW Improvements

(1) W Barclay Drive (full asphalt roadway section)

Proposed Roadside Infiltration Facility Requirements:

- Minimum 4.0’ Wide x Minimum 2.0’ Depth Rock Facility per City of Sisters (COS) Standard Detail 3-13.

(2) Santiam Highway (US20)

No Stormwater improvements are anticipated.

(3) N Pine Street

Proposed 8.0’ AC Path Infiltration Facility Requirements:

2.0’ total width, assumed to be:

- 1.0’ Width x 2” Depth Rock Shoulder
- 1.0’ Width x 2” Depth Dirt Area

A 2.0’ wide section (of either rock or dirt) will accommodate the runoff generated from the new 8.0’ AC path. As noted above, it is assumed the path will have approximately 1.0’ of rock shoulder and the adjacent natural ground will complete the required 2.0’ width section.

(4) Residential Local Street B - East

Proposed Roadside Infiltration Facility Requirements:

- Minimum 5.0’ Wide x Minimum 0.5’ Depth Rock Facility per COS Standard Detail 3-13.

(4) Residential Local Street B - West

Proposed Sidewalk Infiltration Facility Requirements:

- Minimum 3.75’ Wide x Minimum 1.33’ (16”) Depth Rock Facility per COS Standard Detail 3-14.

(5) Neighborhood Route Street E

Proposed Roadside Infiltration Facility Requirements:

- Minimum 4.0’ Wide x Minimum 0.75’ Depth Rock Facility per COS Standard Detail 3-13.

(6) Commercial / Industrial Local Street C

Proposed Roadside Infiltration Facility Requirements:

- Minimum 3.0’ Wide x Minimum 1.25’ Depth Rock Facility per COS Standard Detail 3-13.

(7) Residential Local Street A

Proposed Roadside Infiltration Facility Requirements:

- Minimum 5.0’ Wide x Minimum 0.5’ Depth Rock Facility per COS Standard Detail 3-13.

(8) Residential Local Street D & Street F

Proposed Roadside Infiltration Facility Requirements:

- Minimum 3.0’ Wide x Minimum 1.0’ Depth Rock Facility per COS Standard Detail 3-13.

Private Improvement Options

Proposed Private Alley Roadside Infiltration Options (Designed for 100-year Storm Event)

(9) Alley 5 – 28’ Full Alley (20’ shed roadway section) and 8’ Parking

Proposed Roadside Infiltration Facility Requirements (Located within Parking Bays):

- Minimum 3.5’ Wide x Minimum 1.25’ Depth Rock Facility per COS Standard Detail 3-13 & 3-14.

(10) Alley 1-4 Option A – 18’ Half Alley (10’ crown roadway section), 8’ Parking and Drainage from Half of the Adjacent Townhome Lot Areas.

Proposed Roadside Infiltration Facility Requirements (Located within Parking Bays):

- Minimum 5.0’ Wide x Minimum 2.3’ Depth Rock Facility per COS Standard Detail 3-13 & 3-14.

(10) Alley 1-4 Option B – 36’ Full Alley (20’ shed roadway section) and 8’ Parking on Each Side

Proposed Roadside Infiltration Facility Requirements (Located within Parking Bays):

- Minimum 4.0’ Wide x Minimum 1.5’ Depth Rock Facility per COS Standard Detail 3-13 & 3-14.

(10) Alley 1-4 Option C – 36’ Full Alley (20’ shed roadway section), 8’ Parking on Each Side and Drainage from Half of the Adjacent Townhome/Cottage Lot Areas on Each Side.

Proposed Roadside Infiltration Facility Requirements (Located within Parking Bays):

- Minimum 6.5’ Wide x Minimum 3.5’ Depth Rock Facility per COS Standard Detail 3-13 & 3-14.

Private Drywell:

Full Alley Paved width and Half of Property Areas on Each Side

- Maximum 0.25 Acres (10,890 SF) Impervious Area to Each 100 – Cubic Yard Drywell (Approximately 6 Lots and Adjacent Alley)

Proposed Individual Lot

Drainage from Half of the Individual Townhome Lot Area.

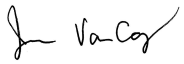
Proposed Individual Lot Swale/Depression Requirements:

- Minimum 100 SF Area and Minimum 0.5' Depth Swale/Depression (Assumes Approx. 1,050 SF Impervious Area)

Drainage calculations (hydrographs) of the above analysis are included for reference.

Our final construction plans will reflect the above preliminary stormwater design requirements for the proposed infiltration facilities associated with The Woodlands. If you have any questions or need further information, please contact me at your convenience.

Respectfully,



Jennifer VanCamp, PE