

OPERATIONS AND MAINTENANCE PLAN FOR PAINTED HILLS PLANNED RESIDENTIAL DEVELOPMENT FLOOD CONTROL SYSTEM & PLAT AMENITIES

Abbreviations

- PRD – Planned Residential Development
- HOA – Homeowner’s Association
- C.E.- Contracted Entity
- COSV- City of Spokane Valley
- OHWM- Ordinary High Water Mark
- AHJ- Agency Having Jurisdiction
- OSHA- Occupational Safety and Health Administration

Owner: Black Realty Inc.; or HOA as created via the Washington Secretary of State.

Party(s) responsible for Operations & Maintenance:

- 1) Black Realty Inc. until the formation of an HOA is complete.
- 2) Painted Hills PRD Homeowners Assn.
- 3) Contracted Maintenance Entity
- 4) Community Oversight – per CFR 65.6(a)(12) the City of Spokane Valley (COSV) Manager or designee, and Spokane County Manager or designee (offsite facilities) will be responsible for assuring that the maintenance activities are accomplished based on the governing jurisdictional boundary.

Parent Parcel Number(s)-COSV: 45336.9191, 45334.0106, .0108, .0109, .0110, .0113, .0114, .9135, 44040.9144

LOCATED IN SECTION 33 & 34, T25N, R44E & SECTION 4, T24N, R44E, W.M.
SPOKANE COUNTY, WASHINGTON

The above parent parcels contain the Painted Hills PRD flood control drainage system.

The residential lot owners, commercial property owners and multi-family property owners of Painted Hills PRD, are benefitting from these flood control facilities. The homeowner’s association of this project, which is comprised of residential, multi-family and commercial lot owners, is responsible for (details described later):

- The continued operations and maintenance, including repair and replacement as needed, of these facilities, see PRD Flood Control Plans.
- Providing funds to finance the continued operation and maintenance of these facilities,
- The administration of this agreement with each property owner within the PRD being bound by this agreement and with the responsibilities to be shared equally between each Painted Hills PRD property owner, (see fee schedule for applicable percentages) or contracted entity.
- Establishing a maintenance committee and designating an HOA member to be responsible for the administration of this plan,
- Providing an annual report each October to Spokane Valley Public Works describing the general status of the sinking fund account, and

- Providing an annual report each October to Spokane Valley Public Works describing specific inspections, findings and maintenance performed, see checklist.

This operations and maintenance plan runs with the land and is binding upon the Painted Hills PRD Homeowners Association property owners, their heirs, successors and assigns.

The parties mentioned above are primarily responsible for all operations and maintenance of facilities mentioned herein and the administration of this plan.

Offsite Parcel Number(s)-County: 45336.9108 (Gustin Ditch), 45343.9052 (Triangle Pond)
 LOCATED IN SECTION 34, T25N, R44E, W.M.
 SPOKANE COUNTY, WASHINGTON

The above offsite County parcels are also a part of the Painted Hills PRD flood control drainage system.

The residential lot owners, commercial property owners and multi-family property owners of Painted Hills PRD, are benefitting from these flood control facilities. The homeowner's association of this project, which is comprised of residential, multi-family and commercial lot owners, is responsible for (details described later):

- The continued operations and maintenance, including repair and replacement as needed, of these facilities, see Gustin Pipe Plan set.
- Providing funds to finance the continued operation and maintenance of these facilities,
- The administration of this agreement with each property owner within the PRD being bound by this agreement and with the responsibilities to be shared equally between each Painted Hills PRD property owner, (see fee schedule for applicable percentages) or contracted entity.
- Establishing a maintenance committee and designating an HOA member to be responsible for the administration of this plan,
- Providing an annual report each October to Spokane County Public Works describing the general status of the sinking fund account, and
- Providing an annual report each October to Spokane County Public Works describing specific inspections, findings and maintenance performed, see checklist.

This operations and maintenance plan runs with the land and is binding upon the Painted Hills PRD Homeowners Association property owners, their heirs, successors and assigns until such time as the Gustin property (Parcel No. 45344.9108) develops and then the owner of that parcel will assume responsibility for this plan. Parcel No. 45343.9052 (triangle pond) is covered by a storm drainage easement granted to Spokane County as recorded in Book 659 Page 1803.

Spokane County assumes no responsibility at all for any operations or maintenance of the facilities mentioned herein or the administration of this plan. Spokane County and the City of Spokane Valley and their authorized agents are granted access rights for routine inspection and emergency repairs, but in doing so incur no responsibility to perform these functions at any time.

1.00 PURPOSE

This plan is to provide:

1. General operations and maintenance responsibilities for the facilities described herein, and
2. Cost estimates of the assessments to be paid by each property owner mentioned herein for the funding of this maintenance.

2.00 GENERAL OPERATIONAL CHARACTERISTICS

Parent Parcel(s) Drainage Facilities-COSV

The Painted Hills PRD flood control drainage and existing Chester Creek system is intended to collect and discharge stormwater runoff generated by upstream basins and stormwater from adjacent properties as is identified on FEMA panel (53063C0751D, effective date July 6, 2010) as compensatory storage or pass through storm flows. The PRD drainage facilities consist of a box culvert under Thorpe Road with a concrete channel, headwall and trash rack, two 48" pipe mainlines between the box culvert and discharge facility with another concrete headwall and trash rack at the outlet, WSDOT catch basins/manholes, a bio-infiltration swale, settling pond with two 48" pipe outlets, headwall and trash rack (upstream, and downstream), and a infiltration field/pond with associated drywells that receives runoff from the settling pond. The system also includes 4-18" cross culverts under Madison Road that connect easterly of to the two 48" pipe mainlines.

A portion of stormwater runoff from the upstream basins south of the project flows in the Chester Creek channel under Thorpe Road continuing northwesterly under Dishman-Mica Road. This channel is also a part of the system and will need to be maintained in conjunction with the City of Spokane Valley

The remainder of stormwater runoff from upstream basins south of the project flows under Thorpe Road via the PRD box culvert then flows into the pipe system, through the grassed bio-infiltration swale and into settling pond, until discharging into the infiltration pond at the north end of the site where the flow is stored and infiltrated into the ground.

Stormwater runoff from upstream basins east of the project flows under Madison Road into 18" culverts and outfalls into the two easterly 48" pipelines via WSDOT catch basins/manholes.

It is important to provide adequate maintenance activities to ensure that the flood control facilities remain silt and debris free, as this silt and debris will affect their performance. Additionally, vegetation must be maintained to prevent erosion of the system. Maintenance details are discussed below in Section 3.0.

Offsite Parcel(s) Drainage Facilities- County

The offsite County triangular pond located to the east of the Painted Hills project site (off of 40th Avenue and west of Hwy. 27) is a part of the Whipple Consulting Engineers (WCE) Gustin Pipe Plan set. This triangular pond and Gustin ditch are part of the County's existing stormwater and floodplain system. The improvements to this existing County storm system includes the addition of a 36" storm pipe running parallel and within the existing Gustin Ditch, stormwater drywells, and a gravel access/maintenance road to the pond bottom.

The existing Gustin Ditch (Parcel No. 45344.9108) is intended to collect and discharge stormwater runoff into the triangle pond (Parcel No. 45343.9052) that is generated by upstream basins and from adjacent properties as is identified on FEMA panel (53063C0751D, effective date July 6, 2010).

It is important to provide adequate maintenance activities to ensure that the flood control facilities remain silt and debris free, as this silt and debris will affect their performance. Additionally, vegetation must be maintained to prevent erosion of the system. Maintenance details are discussed below in Section 3.0.

3.00 MAINTENANCE REQUIREMENTS AND SCHEDULES

All inspections and repairs are to be performed by or directly overseen by qualified professionals and personnel (contracted entity) per this schedule and following major events. Maintenance tasks are to be performed soon after the need is identified and before the facility is to perform unless otherwise agreed to by the City or County for offsite drainage facilities. Repairs or replacements are to be completed immediately upon their identification unless otherwise agreed to by the City or County. Only qualified individuals may enter confined spaces and all OSHA rules must be followed. Major repairs or reconstruction will need to be designed, approved, and inspected by professional engineers and the City of Spokane Valley or Spokane County for applicable offsite facilities.

Parent Parcel(s) Drainage Facilities-COSV

The drainage facilities consist of several elements including: box culverts, existing Chester Creek channel, storm drain mainline, culverts, outlet structure, bio-infiltration swale, inlet structure, infiltration pond and associated drywells, manholes, catch basins, access roads, headwalls with trash racks, fencing, and plant material. These elements are located as shown on the attached exhibit. The following describes these facilities and the minimum required maintenance.

A comprehensive visual inspection of the complete PRD flood control drainage facilities should be conducted twice a year. More frequent inspections for various elements may be required as described below. For long duration storms, greater than 24 hours, the drainage facilities should be inspected during the storm event to identify any developing problems and safely correct them before they become major problems. Signs shall be posted notifying all residents to look for “potential” problems and to notify the homeowners’ association of those observations.

In general, it is important to provide adequate maintenance activities to ensure that the vegetated areas and structures remain silt, dirt and debris free because accumulations of these will affect the facilities function for stormwater storage volume as well as the ability of the drywells and pond bottom to discharge stormwater. Should these facilities silt up or become clogged, the flood control system will not function as intended putting the PRD at risk of flooding. Therefore, periodic maintenance is a must.

Irrigation of Drainage Facilities-COSV

The Painted Hills PRD Homeowner’s Association and qualified personnel (contracted entity) shall ensure that all drainage facilities are properly irrigated on a regular schedule to maintain and promote healthy vegetation. Proper irrigation of vegetation is imperative to help to prevent erosion of channels, slopes, and swale and pond bottoms. Personnel shall be careful not to overwater or erosion or excessive saturation may result. This includes the roadside swales and/or landscape strip along Dishman Mica Road, Thorpe Road, and Madison Road.

Box Culvert-COSV:

There are three box culvert crossings adjoining the project site; two are under Thorpe Road and one is under Dishman Mica Road. These box culverts are within the public road right of way and will be maintained by the agency having jurisdiction (AHJ) of the roadway. Any problems noticed while inspecting or maintaining other elements of the system should be reported to the AHJ.

LOCATION	AGENCY HAVING JURISDICTION (AHJ)
Thorpe Rd near Madison Rd-Proposed	City of Spokane Valley
Thorpe Rd near Dishman-Mica Rd-Existing	City of Spokane Valley
Dishman-Mica Rd-Existing	City of Spokane Valley

Chester Creek-COSV:

In addition to the instructions listed below, see Appendix B, Chester Creek, Operation & Maintenance Manual from “Geotechnical Evaluation, Levee Evaluation and Certification, 4403 South Dishman-Mica Road, Spokane County, Washington” prepared by Inland Pacific Engineering Company Project No. 14-037, dated February 12, 2015, Revised August 29, 2016. As part of the project, stream buffer mitigation impact areas are also necessary due to grading operations (fill) within the Chester Creek buffer area. Maintenance of the required buffer mitigation areas are essential to restore and enhance the disturbed riparian areas that provide a natural cover and provide food for native species; this will be accomplished by re-establishing vegetation and by noxious weed control/reduction, and providing adequate irrigation for healthy vegetative growth. For the complete report, including the planting schedule and guidelines for planting and maintaining healthy vegetation in these mitigated areas, see the Biological Evaluation, Critical Areas Report, and Habitat Management Plan for Painted Hills completed Larry Dawes of Biology Soil & Water, Inc. provided in the Appendix (dated 02/28/19). It should be noted, that some maintenance items listed below are taken directly from the above-mentioned report; mitigation requirements listed below are also required for a minimum of five years if performance goals are met, or until performance goals are met following the 5-year minimum requirement. The Performance goals are listed in the maintenance items below, and the City of Spokane Valley and Larry Dawes of Biology Soil & Water, Inc (or other professional Biologist) will determine if these goals have been satisfied after 5-years. Annual maintenance of the mitigation areas should still continue after the required performance goals are met, to ensure healthy vegetative growth and provide erosion control; however, the required amount of vegetation and monitoring reports will not be stipulated or required by the City of Spokane Valley.

Chester Creek extends across the southwest corner of the site from Thorpe Road northwesterly for approximately 900 feet where it crosses under Dishman-Mica Road. The creek carries seasonal flows from the foothills to the south. The site is protected from flood flows by an existing levee along the northerly side of the creek and along the north side of Dishman-Mica Rd to Wilbur Rd. The intent of the Painted Hills PRD fill project is to fill on the landward (north easterly) side existing levee, which will provide further protection from flooding on the interior landward side of the painted Hills Development. After the project is filled, the creek channel will need to be maintained to ensure flood carrying capacity is not diminished. Maintenance of the channel, up to the Ordinary High Water Mark (OHWM) shall be the responsibility of the City of Spokane Valley, while maintenance above the (OHWM) including obtaining permits to perform the maintenance, shall be the responsibility of the Painted Hills PRD Homeowner’s Association in coordination with the City of Spokane Valley.

Maintenance items (above the OHWM) include:

- Regular mowing, grass should be kept at 3 inches or more in height but shall not exceed 12 inches, with the last mowing occurring to allow 8-10 inches of growth prior to winter
- Removing trash, debris, noxious weeds plus items that reduce the amount of vegetative cover,
- Removing any starts of woody vegetation that appear in the channel side slopes. Only native grasses shall be used in the channel,

- Repairing any holes caused by burrowing animals and human activity such as utility work, ORV's or vandalism on the channel side slopes, traps for burrowing animals shall be used if required,
- Inspecting the channel side slopes making sure there are no breaches or breaks or erosion and check for root and tree start invasion. Immediately repair with a sandy loess soil, compacted in place, or bentonite type soil, and follow up after the storm event with seeding or sodding the repair and more substantial maintenance activities if needed,
- Repairing mowing damage,
- Removing and replacing of the native grass and underlying soil if it becomes degraded to the extent that the grass is not healthy and/or wilted,
- Annually inspecting all mitigation areas to ensure re-establishment of vegetation in compliance with the Biological Evaluation Report mentioned above,
- Annually Inspecting the mitigation areas for noxious weed in the Spring to determine if the previous year's weed control measures were adequate, and to make preparations for the current year accordingly,
- Filling out the levee checklist and include the checklist in the annual report to the City.
- Providing adequate irrigation for all required vegetative growth, especially for the Chester Creek stream buffer mitigation impact areas,
- Performance Goal-Ensuring herbaceous vegetations reaches 80% areal cover with native grasses after five years, (year 1=20%, year 2=30%, year 3=50%, & year 5=80%) for buffer mitigation areas,
- Performance Goal -Ensuring a 100% survival of tree and shrub plantings and 80% survival every year after for five years until performance goals are met for buffer mitigation areas,
- Notifying the City of Spokane Valley (COSV) immediately if any observed functionality of the mitigation areas is failing (unhealthy looking or wilting vegetation),

Storm Drain Mainline, Concrete Channel, Headwalls, and Trash Rack, and Outlet Pipes -COSV:

The storm drain mainline consists of 5,251 linear feet of 48" pipe from the downstream end of the new box culvert at Thorpe Rd and Madison Rd, running parallel to Madison Rd and ending at the bio-infiltration swale at the north end of the site. The bio-infiltration swale further outlets to the settling pond that discharges to the large infiltration pond through (2)-48" outlet pipes that have concrete headwalls and trash racks on the upstream and downstream side of the outlet pipes. The pipes need to be maintained to prevent sediment and trash build-up in the bio-infiltration swale and the infiltration field/pond and associated drywells. The concrete channel and associated headwalls and trash racks located downstream of the Thorpe Road box culvert also needs to be inspected for physical integrity to prevent a breach/leak in the channel or headwall and to ensure no obstructions are blocking the passage for stormwater, and to prevent unauthorized entry into the storm system. Maintenance of the storm drain mainline shall be the responsibility of the Painted Hills PRD Homeowner's Association and/or the contracted entity (C.E.).

Maintenance items include:

- Annually inspecting the pipe openings on each end to ensure there is no blockage or damage to the ends,
- Every three years or after substantial storm runoff, performing a TV inspection of the pipe looking for blockages, damage, etc., visual inspection can be made at pipe manhole locations by authorized maintenance personnel,
- Removing sediment build-up from the pipe,
- Repairing any sections of damaged pipe,
- Visually inspecting twice a year the concrete channel, headwalls, and trash racks for damage or

corrosion that would compromise the trash rack integrity.

- Prior to each rainy season (August or September), inspecting each trash racks ensuring that there is no debris present,
- Following large storm events or rapid snow melt events performing a visual inspection and remove any deleterious debris and trash,
- Instructing those performing other maintenance functions on the system to report any observed damage to the trash rack.

Catch Basins-COSV:

The mainline pipe system has WSDOT Type II catch basins at pipe junctions and angle points. Along Madison Road there are catch basins connected by pipe to the mainline pipe system to drain overflow from the roadside swales. Catch basins need to be maintained to prevent blockage of flow within the system. Contact a professional or have the contracted entity remove the debris, trash and sediment buildup, such as AAA Sweeping LLC. HOMEOWNERS ARE NOT TO ENTER THE MANHOLES/CATCH BASINS. Maintenance of the catch basins shall be the responsibility of the Painted Hills PRD Homeowner's Association or the C.E.

Maintenance items include:

- During routine landscape maintenance of roadside swales, removing any debris from catch basin grates,
- Annually inspecting catch basins for trash and sediment build-up and removing trash,
- When sediment build-up fills ½ the depth of the sump (about 1 foot), removing the sediment,
- Annually inspecting catch basin grates and lids to ensure they are properly seated and are structurally sound,
- Every five years, inspecting the structure walls to ensure the concrete walls are in good condition and the joints remain sealed,
- Instructing those performing other maintenance functions on the system to report any missing lids or grates.

Cross Culverts (Flap Gates)-COSV:

The cross culverts consist of 18" CMP pipe crossing under Madison Road flowing from east to west in four locations. The culverts connect into WSDOT Type II catch basins on the 48" storm drain mainline. The cross culverts need to be maintained to prevent the reduction of seasonal flows within the pipes. The reduction in flow may be caused by sediment or trash build-up within the pipe or obstruction of the pipe entrance on the east side of Madison Rd. Maintenance of the cross culverts from the inlet up to, but not including the flap gates shall be the responsibility the City of Spokane Valley. However, the flap gates shall be the responsibility of the of the Painted Hills PRD Homeowner's Association or the C.E.

Maintenance items include:

- Annually inspecting the flap gates to ensure proper operation,
- Every three years performing a TV inspection of the flap gates looking for blockages, damage, corrosion, etc., and notifying the City of Spokane Valley if the pipes themselves need maintenance,
- Removing sediment build-up from the flap gates,
- Repairing any sections or components of the flap gates.

Bio-infiltration Swale/Channel, Roadside Swales, and Settling Pond-COSV:

The bio-infiltration swale/channel consists of a grass lined channel approximately 320 feet long with a 6-foot bottom width and 2:1 side slopes and approximately 6-feet in depth. The swale needs to be maintained to perform the function of removing any remaining contaminants including fugitive silts prior to storm water entering the infiltration pond, with adequate irrigation provided for vegetation establishment. Following the bio-infiltration channel is a settling pond to further reduce the sediment loading in the infiltration pond. The settling pond then discharges to the large infiltration pond through (2)-48” outlet pipes with headwalls and trash racks (see the Stormdrain Mainline Section on page 6 of this report for inclusion of the outlet pipes, headwalls and trash racks). Additionally, roadside swales along Dishman Mica Road, Thorpe Road, and Madison Road, require similar maintenance as the bio-infiltration swale/channel that includes removing any sediment buildup or debris from the swales, and adequately irrigating the swale to promote a healthy growth of grass. Maintenance of the bio-infiltration swale, roadside swales, and settling pond shall be the responsibility of the Painted Hills PRD Homeowner’s Association or the C.E.

Maintenance items include:

- Annually inspecting the bio-infiltration swale/channel bottom and side slopes to ensure there is a covering of grass, grass can be mowed no shorter than 8 to 10 inches, once annually,
- Annually inspecting the settling pond bottom and side slopes to ensure there is a covering of grass, grass can be mowed no shorter than 8 to 10 inches,
- Removing accumulations of sediment that bury the grass cover for the channel, swales, and pond,
- Reseeding any bare or dead areas of grass for the channel, swales, and pond,
- Removing any noxious weeds within the channel, swales, and pond (spraying is acceptable),
- Providing adequate irrigation for the bio-infiltration channel, swale, and pond (including side slopes),
- Annually inspecting the roadside swale bottoms and side slopes to ensure there is a covering of grass, grass should be mowed in the same manner as residential home yards

Infiltration Field/Pond and Associated Drywells-COSV:

As previously mentioned, the infiltration pond receives runoff from the settling pond through (2)-48” outlet pipes. The infiltration pond is comprised of 48-double depth drywells, and the drywells need to be maintained to prevent or reduce sediment buildup in the drywell barrel so as to not reduce infiltration into the surrounding ground. The infiltration field/pond bottom also needs to remain free of debris and sediment build-up as it is the first point of infiltration. The Maintenance of the drywells and infiltration pond shall be the responsibility of the Painted Hills PRD Homeowner’s Association or the C.E.

Maintenance items include:

- Visually inspecting twice a year the inside of the drywell barrel(s) by removing the grate to look into the structure. Have all debris and trash removed. Sediment must be removed before buildup reaches the bottom of the lowest slot out of the drywell in the barrel wall. Contact a professional to remove the debris, trash and sediment buildup. HOMEOWNERS ARE NOT TO ENTER THE DRYWELL, as these drywells are 12-feet in depth with no internal ladder system.
- Removing accumulations of sediment that bury the grass cover,

Fencing-COSV:

The fencing of various system elements needs to be maintained to restrict access to those elements and to protect the public. Maintenance of the fencing shall be the responsibility of the Painted Hills PRD Homeowner's Association or the C.E.

Maintenance items include:

- Visually inspect twice a year the entire fencing system for damaged fence fabric, posts, gates, signs, etc.
- Prior to each rainy season (August or September), inspecting each access point ensuring that locks and gates are functional.
- Instructing those performing other maintenance functions on the system to report any observed breaches or damage to the fencing.

Access Roads/Parking Pads-COSV:

The access roads/parking pads to various system elements need to be maintained to allow maintenance vehicles access to those elements for periodic maintenance and emergency repairs to protect the public. Maintenance of the access roads/parking pads shall be the responsibility of the Painted Hills PRD Homeowner's Association or the C.E.

Maintenance items include:

- Visually inspecting annually, the entire access road/parking pad system for rutting, potholes, etc. Regrade and repair with additional aggregate as needed.
- Removing vegetation from the aggregate surface.
- Instructing those performing other maintenance functions on the system to report any observed damage to the access roads/parking pads.

Interior Asphalt Pathway, exterior Asphalt Pathway, and Concrete Sidewalk-COSV:

The interior asphalt pathway, the exterior asphalt pathway (Madison Road & Dishman Mica Road), and concrete sidewalk (Dishman Mica Road & Thorpe Road) that provide pedestrian access around and through the project site need to be maintained to allow safe pedestrian travel. Maintenance of the asphalt pathways and concrete sidewalk shall be the responsibility of the Painted Hills PRD Homeowner's Association or the C.E.

Maintenance items include:

- Visually inspecting annually, the entire pathway and sidewalk for rutting, potholes, cracking of concrete or tree root intrusion, and repair or replace with additional asphalt or concrete as needed.
- Removing vegetation or debris from the surface.
- Instructing those performing other maintenance functions on the system to report any observed damage to the asphalt pathway or concrete sidewalk.

Offsite Parcel(s) Drainage Facilities-County

The existing Gustin Ditch (Parcel No. 45344.9108) is intended to collect and discharge stormwater runoff into the triangle pond (Parcel No. 45343.9052) that is generated by upstream basins and stormwater from adjacent properties as is identified on FEMA panel (53063C0751D, effective date July 6, 2010). Currently, stormwater runoff from the upstream basins is routed under Hwy 27 through a 36" culvert into

the Gustin Ditch where the storm water flows to the west to the exiting pond. The improved drainage system will consist of a 36" conveyance pipe running parallel and within the existing Gustin Ditch (Parcel No. 45344.9108) to intercept the upstream basin stormwater. This existing flow will continue to discharge to the existing triangle pond (Parcel No. 45343.9052) through the 36" storm outlet pipe. The triangle pond will also have 18- stormwater drywells and a gravel road installed to provide access for maintenance to the pond and stormwater drywells. These existing flows normally infiltrate into the existing pond bottom, however, during larger storms the stormwater will overflow into the drywells and infiltrate into the ground. The additional stormwater capacity provided by the drywells will capture and eliminate the existing FEMA designated 100-Year Storm Event that would have theoretically continue to West if these drywells were not installed.

A visual inspection of the drainage facilities should be conducted twice a year. For long duration storms, greater than 24 hours, the drainage facilities should be inspected during the storm event to identify any developing problems and safely correct them before they become major problems. It is important to provide adequate maintenance activities to ensure that the drainage facilities remain silt and dirt free, as this silt and dirt will affect their performance. Additionally, vegetation must be maintained to prevent erosion of ditch and/or pond sides and to prevent flow restrictions within the ditch and/or pond from the build-up of dead vegetation and tree and shrub invasion. Maintenance details are further discussed below.

Gustin Ditch with Pipe and Catch Basins-County:

The 36" PVC pipe needs to be maintained to ensure there is no debris or vegetation blocking the flow of stormwater through the pipe. The pipe mainline has two 12" PVC cross culverts near the end of the pipe mainline to further capture runoff from overland flow from the Gustin Ditch Property (Parcel No. 45344.9108). The ditch needs to be maintained to ensure a strong, healthy, dense vegetative cover and that it is free of debris. Maintenance of the ditch and outfall shall be the responsibility of the Painted Hills PRD Homeowner's Association until such time as the Gustin property (Parcel No. 45344.9108) is developed. At that time the owner(s) of the new development shall assume responsibility for maintenance of the ditch and levee.

Maintenance items include:

- Regular mowing, grass should be kept at 3 inches or more in height but shall not exceed 12 inches, with the last mowing occurring to allow 8-10 inches of growth prior to winter,
- Removing trash, debris, noxious weeds plus items that reduce the amount of vegetative cover,
- Removing any starts of woody vegetation that appear in the ditch. Only native grasses shall be used to repair at removal areas,
- Repairing any holes caused by burrowing animals and human activity such as utility work, ORV's or vandalism on the ditch side slopes,
- Inspecting the ditch side slopes, and bottom making sure there are no breaches or breaks or erosion and check for root and tree start invasion. Immediately repair with a sandy loess soil, compacted in place and follow up after the storm event with seeding of the repair with native grasses and more substantial maintenance activities if needed,
- Repairing mowing damage,
- Removal and replacement of the grass and underlying soil if it becomes contaminated to the extent that the grass is not healthy.
- Annually inspecting the pipe openings on each end to ensure there is no blockage or damage to the ends,
- Every three years or after substantial storm runoff, performing a TV inspection of the pipe(s) looking for blockages, damage, etc., visual inspection can be made at pipe manhole locations by

- authorized maintenance personnel,
- Removing sediment build-up from the pipe,
- Repairing any sections of damaged pipe.

Catch Basins-County:

The Gustin Ditch pipe system has County Manholes (48" and 72" diameter) at pipe junctions and angle points. Catch basins need to be maintained to prevent blockage of flow within the system. Contact a professional or have the contracted entity remove the debris, trash and sediment buildup, such as AAA Sweeping LLC. **HOMEOWNERS ARE NOT TO ENTER THE MANHOLES/CATCH BASINS.** Maintenance of the catch basins shall be the responsibility of the Painted Hills PRD Homeowner's Association or the C.E.

Maintenance items include:

- During routine landscape maintenance of roadside swales, removing any debris from catch basin grates,
- Annually inspecting catch basins for trash and sediment build-up and removing trash,
- When sediment build-up fills ½ the depth of the sump (about 1 foot), removing the sediment,
- Annually inspecting catch basin grates and lids to ensure they are properly seated and are structurally sound,
- Every five years, inspecting the structure walls to ensure the concrete walls are in good condition and the joints remain sealed,
- Instructing those performing other maintenance functions on the system to report any missing lids or grates.

Triangle Pond & Drywells-County:

The pond bottom needs to be maintained to ensure there is no debris, vegetation or sediment preventing the infiltration of storm water through the bottom of the non-irrigated pond. Also, that no debris, vegetation or sediment buildup rise to a level that would allow it to enter into the drywells. Drywells need to be maintained to prevent or reduce sediment buildup in the drywell barrel that would reduce infiltration into the surrounding ground. Maintenance of the pond and drywells shall be the responsibility of the Painted Hills PRD Homeowner's Association until such time as the Gustin property (Parcel No. 45344.9108) is developed. At that time the owner(s) of the new development shall assume responsibility for maintenance.

Maintenance items include:

- Periodically visually inspect the grate and remove any deleterious debris and trash.
- Biennially visually inspect the inside of the drywell barrel(s) by removing the grate to look into the structure. Have all debris and trash removed. Sediment must be removed before buildup reaches the bottom of the lowest slot out of the drywell in the barrel wall. Contact a professional to vacuum out the debris, trash and sediment buildup. **HOMEOWNERS ARE NOT TO ENTER THE DRYWELLS.**

Fencing-County:

The fencing around the triangle pond needs to be maintained to restrict access to those elements and to protect the public. Maintenance of the fencing shall be the responsibility of the Painted Hills PRD Homeowner's Association or the C.E.

Maintenance items include:

- Visually inspect twice a year the entire fencing system for damaged fence fabric, posts, gates, signs, etc.
- Prior to each rainy season (August or September), inspecting each access point ensuring that locks and gates are functional.
- Instructing those performing other maintenance functions on the system to report any observed breaches or damage to the fencing.

Access Roads/Parking Pads-County:

The access roads/parking pads to the triangle pond need to be maintained to allow maintenance vehicles access to those elements for periodic maintenance and emergency repairs to protect the public. Maintenance of the access roads/parking pads shall be the responsibility of the Painted Hills PRD Homeowner's Association or the C.E.

Maintenance items include:

- Visually inspecting annually, the entire access road/parking pad system for rutting, potholes, etc. Regrade and repair with additional aggregate as needed.
- Removing vegetation from the aggregate surface.
- Instructing those performing other maintenance functions on the system to report any observed damage to the access roads/parking pads.

4.00 SINKING FUNDS

A sinking fund is an account that is set up to receive regular deposits which are to be used for paying off future costs and debts. The sinking fund monies will be used to pay for planned and unplanned operation and maintenance costs along with certain future replacement costs for the storm drainage facilities. The sinking fund calculation should be revised as necessary to account for actual expenses and changes in rates.

In setting up the fund, first the future replacement costs are estimated and then they are converted to annual costs (or deposits) by the following calculations. These calculations assume that the inflation rate is 3% (for estimating the future replacement costs), the typical interest rate is 2% (for estimating the annual costs) and the number of years before replacement is 20 (expect for buffer mitigation area replacement. Equations and guidance for using other rates and years can be found in Appendix A.

- 1) Estimate the value that the item will have in the future when it is time to replace it using the following equation:

$$FV = PV * 1.8061, \text{ where: } \begin{array}{l} FV = \text{future value} \\ PV = \text{present value} \end{array}$$

- 2) Estimate how much money will need to be deposited each year in a bank account in order to have enough money accumulated in time to pay for the replacement using the following equation.

$$A = FV * 0.0412, \text{ where: } A = \text{annual payment (or deposit)}$$

$$FV = \text{future value (from step 1, above)}$$

Sinking Fund Calculation Results:

The developer shall provide \$95,000 to initiate the set-up of maintenance funds, and provide for one year of maintenance.

The following values are the results of the calculations which are shown on the following page. The fund calculations shall be updated once the actual cost of operation and maintenance items are contracted. As contracts are renewed, the costs shall be adjusted accordingly.

Annual cost for regular operation and maintenance	\$152,392
Annual cost for replacements	\$76,979
Total annual costs	\$229,370
Total monthly costs (= total annual costs /12)	\$19,114.18
*Number of units (SF lots +MF lots) +(Commercial)	596+(18,400sf/100SF)=615
Monthly cost per lot (= total monthly costs /# lots)	\$31.08
Total annual cost per lot/unit	\$372.96

*Note: Number of units is based on 255-single family lots, 49 cottage units/lots, 240 apartment units, 52 mixed use apartment units, and 18,400 square feet of commercial building area divided by 1,000 square feet (for an equivalent unit/lot).

Sinking Fund Calculations-Parent Parcel(s)-COSV

REGULAR OPERATION AND MAINTENANCE COSTS-COSV

<u>Description</u>	<u>Units</u>	<u>Annual</u> <u>Quantity</u> x	<u>Unit</u> <u>Price</u> =	<u>Annual</u> <u>Cost</u>
Comprehensive System Inspection	EA	2	\$1,000	\$2,000
Drywell Cleaning	EA	48	\$500	\$24,000
Catch Basin Cleaning	EA	23	\$300	\$6,900
Mowing Channel Embankments	EA	4	\$2,000	\$8,000
Mowing Roadside Swales	EA	4	\$2,000	\$8,000
Debris Removal – culverts, catch basins, bio-swale, channels, drywells, manholes	EA	4	\$2,000	\$8,000
Channel/Trash Rack Inspection	EA	9	\$500	\$4,500
Pipeline TV Inspection – mainline, culverts, (3 years)	LF	5,750	\$3	\$17,250
Manhole/Catch Basin Inspection	EA	23	\$100	\$2,300
Fence, Access Road, Parking Area, Sign Maintenance	EA	1	\$500	\$500
Swale & Pond Reseeding/Noxious Weed Removal	EA	1	\$500	\$500
Reseeding/Noxious Weed Removal for buffer mitigation area	EA	1	\$5,000	\$5,000
1 st Year Monitoring Report + ASBUILT Report	LS	1	\$6,500	\$6,500
Annual Monitoring Report (after 1 st year)	LS	1	\$1,000	\$1,000
Annual Report Preparation	EA	1	\$1,500	\$1,500
Contingency	LS	1	20%	\$19,190
			<u>Total</u>	<u>\$115,140</u>

REPLACEMENT COSTS-Parent Parcel(s)-COSV(for more information on calculations in this table see Appendix A)

	<u>Units</u>	<u>Quantity x</u>	<u>Unit</u> Price =	<u>Present</u> <u>Value,</u> PV	<u>n</u>	<u>Inflation</u> <u>Rate, i₁</u>	<u>Future</u> <u>Value, FV</u>	<u>Interest</u> <u>Rate, i₂</u>	<u>Annual</u> <u>Payment,</u> <u>A</u>
Drywell (48) (25%)	EA	12	\$10,000	\$120,000	20	0.03	\$216,733	0.02	\$8,920
48" ADS N-12 HDPE pipeline (5,251) (25%)	LF	1313	\$150	\$196,913	20	0.03	\$355,646	0.02	\$14,637
48" ADS N-12 HDPE culvert pipes (120 LF) (100%)	LF	120	\$150	\$18,000	20	0.03	\$32,510	0.02	\$1,338
24" CMP pipeline (136) (100%)	LF	136	\$70	\$9,520	20	0.03	\$17,194	0.02	\$708
18" PS46 ASTM F679 PVC (pipeline-future) (40) (100%)	LF	40	\$40	\$1,600	20	0.03	\$2,890	0.02	\$119
15" Perforated HDPE (underdrain) (40) (100%)	LF	40	\$30	\$1,200	20	0.03	\$2,167	0.02	\$89
12" SDR-35 ASTM D3034 PVC pipe to mainline(44)	LF	44	\$24	\$1,056	20	0.03	\$1,907	0.02	\$78
12" CMP pipe to outfall (119) (100%)	LF	119	\$30	\$3,570	20	0.03	\$6,448	0.02	\$265
WSDOT Catch basin, Type II (12)	EA	2	\$4,500	\$9,000	20	0.03	\$16,255	0.02	\$669
Catch basin, Type I (12)	EA	2	\$1,500	\$3,000	20	0.03	\$5,418	0.02	\$223
Infiltration & Settling Pond -seeding (189,644+7,172)+ Roadsides Swale Seeding (49,187) + Landscape Strip Seeding (2,471)	SF	248474	\$0.10	\$24,847	20	0.03	\$44,877	0.02	\$1,847
Trash Racks (8) (100%)	EA	8	\$2,000	\$16,000	20	0.03	\$28,898	0.02	\$1,189
Signs (4) (25%)	EA	1	\$200	\$200	20	0.03	\$361	0.02	\$15
Buffer Mitigation Area (25%) of total cost of Vegetation	LS	5	\$6,785	\$33,925	5	0.03	\$39,328	0.02	\$7,557
2" Asphalt pathway (9702 LF interior + 2,482 LF Madision Rd+ 822 LF Dishm. Rd)	SY	14501	\$10	\$145,013	20	0.03	\$261,910	0.02	\$10,779
6" CSTC Access Rd (1,113 LF) (25%)	CY	2087	\$40	\$83,480	20	0.03	\$150,774	0.02	\$6,205
Fencing (132 LF)	LF	132	\$35	\$4,620	20	0.03	\$8,344	0.02	\$343
PC Concrete Sidewalk (Dishm.-356 LF+ 1356 LF Thorpe)	SY	991	\$36	\$35,664	20	0.03	\$64,413	0.02	\$2,651
								Total	\$57,635

Notes:

n = number of years to replacement

LS means Lump Sum, EA means Each, SY means square yard, LF means Linear Feet, CY means Cubic Yards

Quantity x is based on either a complete replacement (100%) or assumed 25% of the total rounded to the nearest whole number

Sinking Fund Calculations-Offsite Parcel(s)-County

REGULAR OPERATION AND MAINTENANCE COSTS-COUNTY

<u>Description</u>	<u>Units</u>	<u>Annual</u> <u>Quantity</u> x	<u>Unit</u> <u>Price</u> =	<u>Annual</u> <u>Cost</u>
<u>Comprehensive System Inspection</u>	EA	2	\$500	\$1,000
<u>Drywell Cleaning</u>	EA	18	\$500	\$9,000
<u>Manhole Cleaning</u>	EA	9	\$300	\$2,700
<u>Mowing Ditch Embankments</u>	EA	4	\$2,000	\$8,000
<u>Debris Removal – culverts, catch basins, pond ditch, drywells, manholes</u>	EA	4	\$1,000	\$4,000
<u>Pipeline TV Inspection – mainline, culverts</u>	LF	1,481	\$3	\$4,443
<u>Manhole Inspection</u>	EA	9	\$100	\$900
<u>Fence, Access Road, Parking Area, Sign Maintenance</u>	EA	1	\$500	\$500
<u>Pond Reseeding/Noxious Weed Removal</u>	EA	1	\$500	\$500
<u>Contingency</u>	LS	1	20%	\$6,209
			<u>Total</u>	<u>\$37,252</u>

REPLACEMENT COSTS Offsite Parcel(s)-County (for more information on calculations in this table see Appendix A)

	<u>Units</u>	<u>Quantity x</u>	<u>Unit Price</u> =	<u>Present Value, PV</u>	<u>n</u>	<u>Inflation Rate, i₁</u>	<u>Future Value, FV</u>	<u>Interest Rate, i₂</u>	<u>Annual Payment, A</u>
Drywell (12) (25%)	EA	12	\$10,000	\$120,000	20	0.03	\$216,733	0.02	\$8,920
36" PS46 ASTM F679 PVC pipeline (1441) (25%)	LF	361	\$150	\$54,150	20	0.03	\$97,801	0.02	\$4,025
12" SDR-35 ASTM D3034 PVC pipeline (136) (100%)	LF	136	\$70	\$9,520	20	0.03	\$17,194	0.02	\$708
Type I -48-County Manhole	EA	2	\$4,500	\$9,000	20	0.03	\$16,255	0.02	\$669
72" County Manhole	EA	5	\$7,500	\$37,500	20	0.03	\$67,729	0.02	\$2,788
Triangle Pond-seeding (17,060 SF) (100%)	SF	17060	\$0.10	\$1,706	20	0.03	\$3,081	0.02	\$127
Signs (4) (25%)	EA	1	\$200	\$200	20	0.03	\$361	0.02	\$15
6" CSTC Access Rd (770 LF) (25%)	CY	214	\$40	\$8,556	20	0.03	\$15,452	0.02	\$636
Fencing (560 LF) (100%)	LF	560	\$35	\$19,600	20	0.03	\$35,400	0.02	\$1,457
								Total	\$19,344

IN WITNESS WHEREOF, the undersigned has reviewed the above information and determined it to be appropriate for the improvements proposed for this plan and has caused this instrument to be executed on this _____ day of _____, 20____.

Signature: _____

Name (print): _____

Title: _____

STATE OF WASHINGTON)
COUNTY OF SPOKANE)
CITY OF SPOKANE VALLEY) ss

I certify that I know or have satisfactory evidence that _____ is/are the individual(s) who personally appeared before me, and who acknowledged that he/she/they executed and signed this instrument and acknowledged it to be his/her/their free and voluntary act for the uses and purposes mentioned in this instrument.

Dated this _____ date of _____, 20____.

NOTARY PUBLIC
In and for the State of Washington,
Residing at _____
My appointment expires: _____

Appendix A

The future replacement costs can be estimated and then converted to annual costs (or deposits) by the following calculations.

- 1) Estimate the value that the item will have in the future when it is time to replace it using an assumed (best estimate) inflation rate and the following equation:

$$FV = PV * (1+i_1)^n, \text{ where:}$$

FV = future value

i_1 = inflation rate

PV = present value

n = number of years to replacement

Example values for the factor: $(1+i)^n$

		n, years			
		5	10	15	20
i_1	0.02	1.1041	1.2190	1.3459	1.4859
	0.03	1.1593	1.3439	1.5580	1.8061
	0.04	1.2167	1.4802	1.8009	2.1911
	0.05	1.2763	1.6289	2.0789	2.6533

- 2) Estimate how much money will need to be deposited each year in a bank account in order to have enough money accumulated in time to pay for the replacement using an assumed (best estimate) interest rate and the following equation:

$$A = FV * i_2 / [(1+i_2)^n - 1], \text{ where:}$$

A = annual payment

i_2 = interest rate

FV = future value

n = number of years to replacement

Example values for the factor: $i_2 / [(1+i_2)^n - 1]$

		n, years			
		5	10	15	20
i_2	0.02	0.1922	0.0913	0.0578	0.0412
	0.03	0.1884	0.0872	0.0538	0.0372
	0.04	0.1846	0.0833	0.0499	0.0336
	0.05	0.1810	0.0795	0.0463	0.0302

Appendix B – Chester Creek Channel, Operation & Maintenance Manual

Modified from “Geotechnical Evaluation, Levee Evaluation and Certification, 4403 South Dishman-Mica Road, Spokane County, Washington” prepared by Inland Pacific Engineering Company Project No. 14-037, dated February 12, 2015, Revised August 29, 2016.

**CHESTER CREEK CHANNEL ABOVE THE
ORDINARY HIGH WATER MARK**

**OPERATION & MAINTENANCE
MANUAL**

FOR

OPERATION AND MAINTENANCE

Painted Hills PRD Homeowners Association

IPEC Project No. 14-037
WCE Project # 13-1166

Updated January 2020

By

Inland Pacific Engineering Company
3012 North Sullivan Road
Building S-5, Suite C
Spokane Valley, WA 99216

&

Whipple Consulting Engineers
21 S Pines Road
Spokane Valley, WA 99206

1.00 PURPOSE

This Operations and Maintenance manual is intended to provide general operations and maintenance guidelines for the Chester Creek channel located at 4403 South Dishman-Mica Road in Spokane County, Washington. The intent of the Painted Hills PRD project is to fill on the landward (north easterly) side existing levee, which will provide further protection from flooding on the interior landward side of the painted Hills Development. This O & M has been amended from the original Chester Creek Levee O & M provided by Inland Pacific Engineering Company. After the project is filled, the creek channel will need to be maintained to ensure flood carrying capacity is maintained. Maintenance of the channel, up to the Ordinary High Water Mark (OHWM) shall be the responsibility of the City of Spokane Valley. Maintenance above the (OHWM) including obtaining permits to perform the maintenance, shall be the responsibility of the Painted Hills PRD Homeowner's Association in coordination with the City of Spokane Valley. This general maintenance for the Chester Creek channel is inclusive whether in or out of Spokane County public road rights-of-ways. Implementation of these guidelines will ensure that the channel's flood carrying capacity is maintained.

2.00 INTRODUCTION

The east side of the channel is typically at a 2.3:1 to 3:1 (H:V) slope. The land side of the channel is also at a 3:1 slope from the Dishman-Mica Road bridge to approximately 300 feet southeast. Between this point and Thorpe Road, the land side slope is much less and, in some areas, relatively level with the crest. As mentioned above, the intent of the Painted Hills PRD project is to fill on the landward (north easterly) side existing levee. This existing levee was constructed by the previous landowner for the development of the golf course on the property and we believe it was constructed in the early 1990's by the property owner.

3.00 GENERAL OPERATION AND MAINTENANCE

3.10 Operation – During flood periods, the creek channel side slopes above the (OHWM) should be patrolled to locate possible sand boils, unusual wetness of the landward slope, or breaches. The inspector may look for indications of sliding or sloughing, that scouring action is not occurring, that the channel is not being overtopped, and that no other conditions exist that might adversely affect the integrity of the channel side slopes. Any damage or observed issues below the (OHWM) should be reported to the City of Spokane Valley immediately.

- Boils – A boil is a condition where enough pressure is produced by high water levels so that water is piped through or under the channel bottom and channel side slopes with sufficient velocity to carry earthen materials to the landward side of the channel. If not controlled, these particles of earthen materials will be eroded from within the channel, causing subsidence to the channel section. The continuation of this process

may result in a break in the channel side slopes, allowing flood waters to flow over the crest or through the channel side slopes.

- Scour – Careful observation should be made of the creek channel side slopes to detect potential erosion due to current action. Careful observation at the locations of bridge structures should be made. In general, current velocities in Chester Creek are not expected to cause significant scouring.
- Creek Channel Topping – If the anticipated high-water level will exceed the top elevation of the channel, steps should be taken to provide emergency topping to raise the channel side slope above forecasted water levels. These steps could include sandbagging or hauling additional fill to raise the channel wall height.

3.11 A post-flood assessment of the creek channel side slopes above the (OHWM) should be completed within 24 hours of the event. The assessment should document any damage to the channel caused by flood waters. Any repairs necessary should then be completed after review and evaluation of options. Any damage or observed issues below the (OHWM) should be reported to the City of Spokane Valley immediately.

3.20 Maintenance – Maintenance activities for the creek channel above the (OHWM) are described in this section. Below is a maintenance description for each of the elements affecting channel conveyance performance.

- Inspections – channel inspection should include a visual inspection of the channel channel side slope at a minimum of every 12 months for signs of erosion or settlement. Preferably, the inspection should be completed in the fall prior to the rainy season. The inspections should include the following:
 - Unusual settlement, sloughing, or material loss of grade.
 - Caving on both the creekside and landside of the channel which might affect stability of the channel section.
 - Seepage or saturated areas that may be occurring.
 - Drainage in the creek is in good working condition facilities are not being clogged.
 - That the channel is shaped to drain properly to onsite Painted Hills PRD drainage facilities.
 - Ensuring that no unauthorized vehicles are located on the channel bottom and channel side slopes.
 - Rodent damage along the channel side slopes.
- Erosion Protection – The channel side slope vegetation is a grass cover. The grass should be mowed to a minimum height no shorter than 8 inches.

No trees should be growing on the creek channel bottom or side slopes. No excavations, structures, or other obstructions should be on the creek channel bottom or side slopes.

Remove accumulation of drift, grass clippings, or other objectionable materials from the creek channel side slopes.

Attached is a checklist for the annual or post-flood inspection.

**CHESTER CREEK CHANNEL
4403 SOUTH DISHMAN-MICA ROAD
SPOKANE COUNTY, WA**

CREEK CHANNEL CHECKLIST (ABOVE THE OHWM ONLY)

Date: _____

Item	Location and Description	Action
Has the creek channel side slopes settled or lost cross section?		
Has stream action caused any slope washing or scouring?		
Has there been any seepage or saturated areas?		
Has vegetation been maintained?		
Have weeds been removed? Dates?		
Condition of any riprap?		
Have there been any authorized or unauthorized encroachments?		
Have burrowing animals been exterminated/removed and the creek channel channel side slopes repaired?		
Is the creek channel free of obstructions and/or debris?		
Are there any areas where the creek is affecting the channel side slopes?		
Has there been any recent high-water events?		
Miscellaneous conditions: _____		

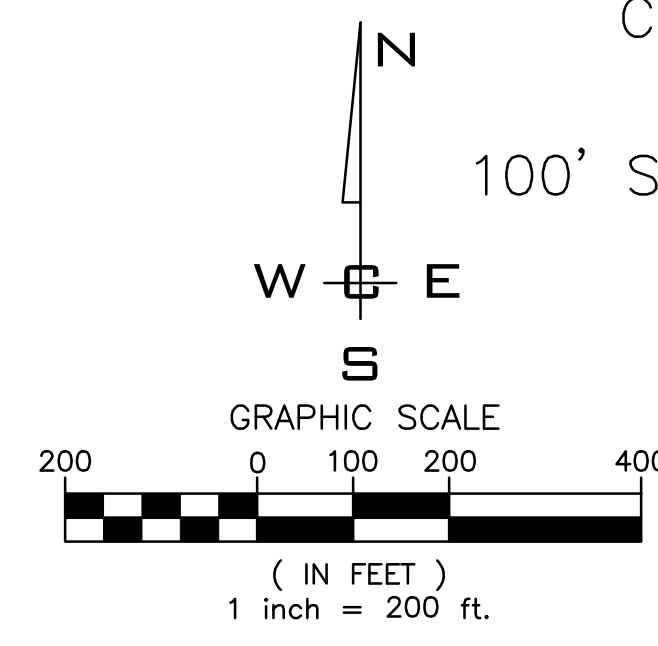
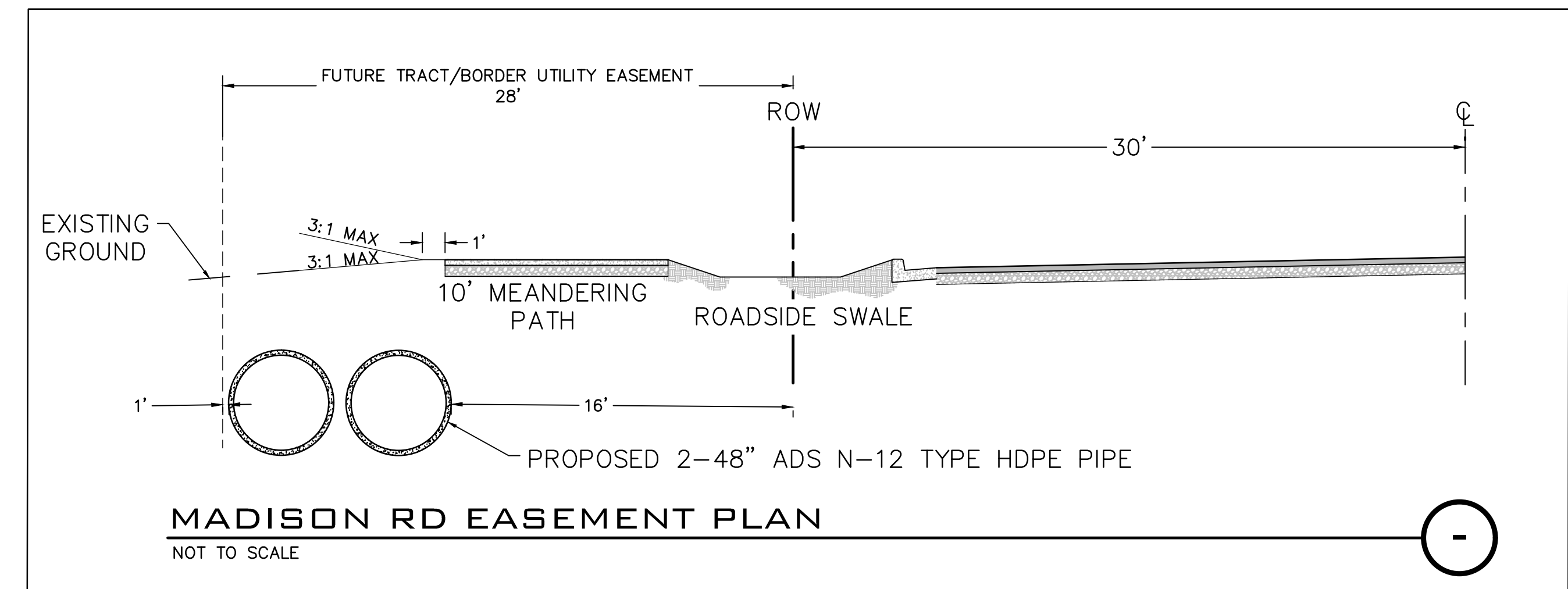
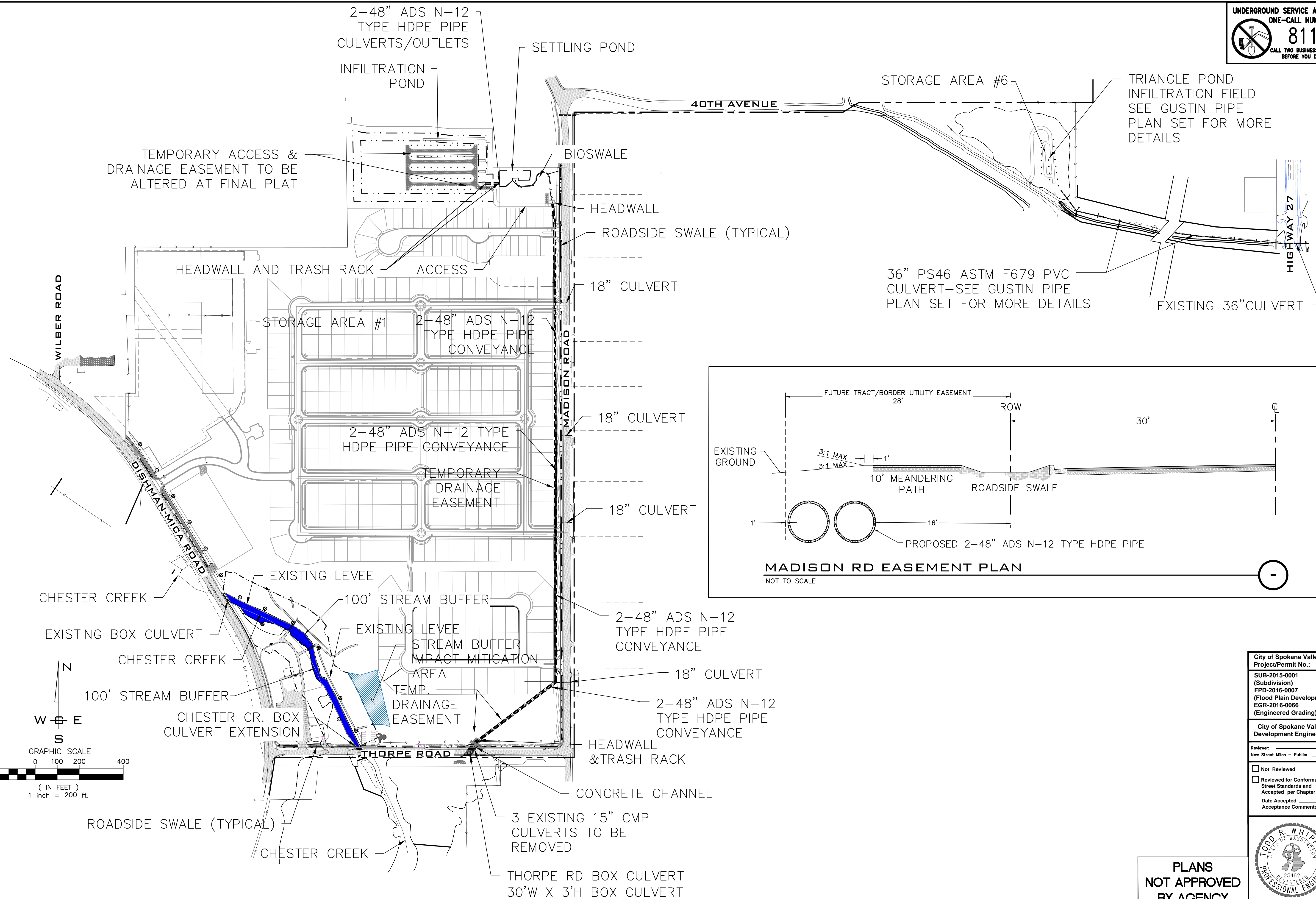
Note: Use additional sheets as necessary.

Signed: _____

Title: _____

Appendix C – Letter of Map Revision (LOMR)

To be inserted once completed.



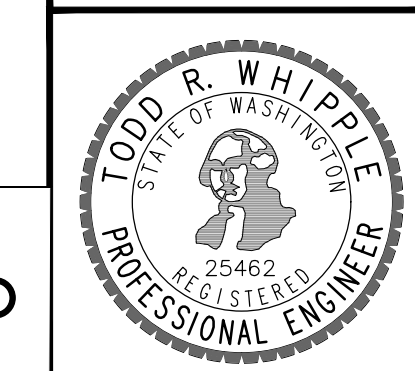
City of Spokane Valley
Project/Permit No.:
SUB-2015-0001
(Subdivision)
FPD-2016-0007
(Flood Plain Development)
EGR-2016-0066
(Engineered Grading)

City of Spokane Valley
Development Engineering

Reviewer:
New Street Miles - Public: _____

Not Reviewed
 Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2

Date Accepted _____
Acceptance Comments _____



PLANS NOT APPROVED BY AGENCY

DATUM: NAVD - 88
TBM S-5 OF THE SOUTH PONDEROSA SEWER PROJECT WITH AN ELEVATION OF 2005.87 (NAVD29)=2009.67 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

NO.	DATE	BY	REVISIONS
3	01-03-20	JMH	REVISED PLANS
2	08-14-18	JPP	REVISED PLANS
1	08-12-16	JPP	ORIGINAL PREPARATION

SCALE:
HORIZONTAL: 1" = 200'
VERTICAL: N/A

PROJ #: 13-1166
DATE: 04/20/20
DRAWN: JPP
REVIEWED: TRW

WCE
WHIPPLE CONSULTING ENGINEERS
2528 NORTH SULLIVAN ROAD
SPOKANE VALLEY, WA 99216
PH: 509-893-2617 FAX: 509-926-0227

- CIVIL
- STRUCTURAL
- SURVEYING
- TRAFFIC
- PLANNING
- LANDSCAPE
- OTHER

SPOKANE VALLEY PAINTED HILLS PRD SITE ELEMENT PLAN
DISHMAN-MICA RD.
SPOKANE VALLEY, WA

SHEET C1.3
JOB NUMBER 13-1166