# Riverside Neighborhood Park

Located in the SE ¼ of Section 33, T5N, R1E
La Center, Washington

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**If any cultural resources are discovered in the course of undertaking a development activity, construction shall stop immediately and the Office of Archeology and Historic Preservation in Olympia and the City of La Center Public Works Department shall be notified. Failure to comply with these requirements may constitute a Class C felony, subject to imprisonment and/or fine.**

UTILITY COMPANY AND EMERGENCY CONTACTS:

| | |
|---|---|
| City of La Center | (360) 263-2782 |
| La Center Public Works | (360) 263-2745 |
| La Center Police Dept | (360) 263-7665 |
| CenturyLink (Keith Meisner) | (360) 699-3720 |
| Comcast (Michelle Janson-Moe) | (360) 316-1051 |
| Clark County Fire & Rescue | (360) 887-4609 |
| Clark Public Utilities (Electric) | (360) 992-8558 |
| Clark Public Utilities (Water) | (360) 992-8022 |
| Clark Regional Wastewater District | (360) 993-8810 |
| NW Natural Gas | (360) 571-5465 |
| Utility Locates | (800) 424-5555 |

CLARK PUBLIC UTILITIES - WATER SERVICES
DEVELOPER INSTALLED WATER MATERIAL LIST

| INSTALLED WATER ITEM | MATERIAL | QUANTITY | UNITS |
|---|---|---|---|
| *8" WATER MAIN* | | *9* | *LF* |
| *2" WATER SERVICE LINE* | | *600* | *LF* |

*NOTES:*

1. *PIPE MATERIAL ABBREVIATIONS:*
   - *PVC - POLYVINYL CHLORIDE PIPE*
   - *DIP - DUCTILE IRON PIPE*
2. *QUANTITIES LISTED WITHIN THIS TABLE ARE NOT FOR BIDDING PURPOSES, BUT FOR USE BY CLARK PUBLIC UTILTITIES TO DETERMINE THE INSTALLED WATER SYSTEM VALUE*

**CLARK PUBLIC UTILITIES - WATER**

UTILITY WORK ORDER NO. _____

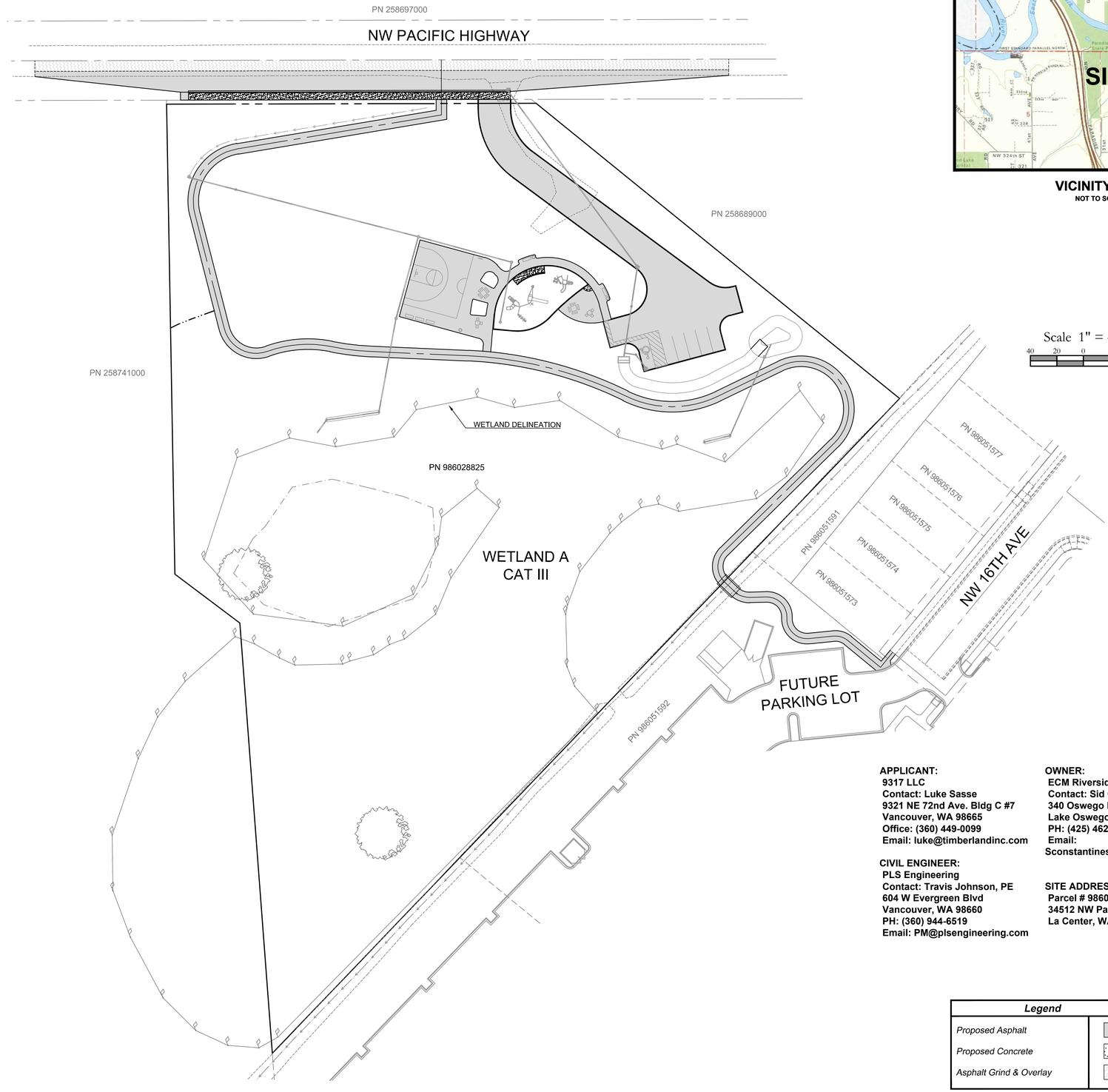
SIGNED BY _____ DATE _____

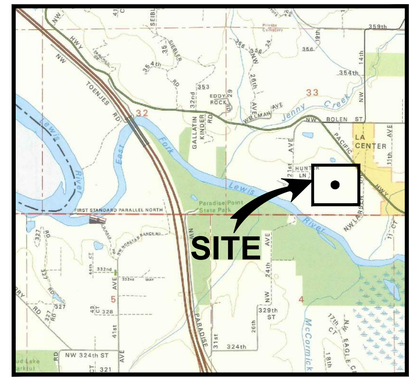
**CLARK COUNTY FIRE & RESCUE**

SIGNED BY _____ DATE _____

**City of La Center**

City Engineer _____ Date _____




**VICINITY MAP**
NOT TO SCALE

**APPLICANT:**
**9317 LLC**
**Contact: Luke Sasse**
**9321 NE 72nd Ave. Bldg C #7**
**Vancouver, WA 98665**
**Office: (360) 449-0099**
**Email: luke@timberlandinc.com**

**OWNER:**
**ECM Riverside, LLC**
**Contact: Sid Constantinescu**
**340 Oswego Point Drive #208**
**Lake Oswego, OR 97034**
**PH: (425) 462-6372**
**Email: Sconstantinescu@paccrestrealty.com**

**CIVIL ENGINEER:**
**PLS Engineering**
**Contact: Travis Johnson, PE**
**604 W Evergreen Blvd**
**Vancouver, WA 98660**
**PH: (360) 944-6519**
**Email: PM@plsengineering.com**

**SITE ADDRESS:**
**Parcel # 986028-825**
**34512 NW Pacific Hwy**
**La Center, WA 98629**

| *Legend* | |
|---|---|
| *Proposed Asphalt* | |
| *Proposed Concrete* | |
| *Asphalt Grind & Overlay* | |

811 Know what's **below.** **Call** before you dig.

PLS ENGINEERING
Engineering - Surveying - Planning | 604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539

Cover Sheet For:
Riverside Neighborhood Park
A Site Located In The City Of La Center , Washington

Revisions
1 2 3 4 5 6

TRAVIS G. JOHNSON
STATE OF WASHINGTON
23929
REGISTERED
PROFESSIONAL ENGINEER
7-1-21

Project No. 2641
SCALE: H: 1"=40' V: N/A
DESIGNED BY: MJM
DRAFTED BY: MJM
REVIEWED BY: TJG

1
29

## EXISTING CONDITIONS LEGEND

### LINETYPES

- ST — ST — STORM SEWER LINE
- OHP — OHP — OVER HEAD POWER LINE
- W — W — WATER LINE LOCATE
- SS — SS — SANITARY SEWER PIPE
- T — T — TELECOMM UTILITY
- E — E — UNDERGROUND ELECTRIC
- FENCE
- CENTERLINE
- RIGHT OF WAY
- EDGE OF PAVEMENT
- CURB LINE
- EDGE OF GRAVEL
- SIDEWALK
- PAVEMENT STRIPING
- LOT LINE
- PROPERTY BOUNDARY
- 100 — CONTOUR LINE

### SYMBOLS

- CATCH BASIN
- STORM MANHOLE
- CURB INLET
- FIRE HYDRANT
- WATER VALVE
- SAN SEWER MH
- UTILITY POLE
- EXTG WELL
- TEL PEDESTAL
- GUY WIRE
- MB — MAILBOX
- EXTG TREES

## PROPOSED LINETYPE & HATCHING LEGEND

### LINETYPES

- EDGE OF PAVEMENT
- CURB LINE
- PROPOSED SIDEWALK
- EDGE OF GRAVEL
- PAVEMENT SAWCUT
- SETBACK
- LOT LINE
- STORM LINE
- RD — RD — STORM ROOF DRAIN
- WATER MAIN LINE
- WATER SERVICE LINE
- SAN SEWER LATERAL
- SAN SEWER MAIN
- ROAD CENTERLINE
- RIGHT-OF-WAY
- EASEMENT LINE
- RETAINING WALL
- 100 — CONTOUR LINE
- DRAINAGE FLOW LINE

### SYMBOLS

- CATCH BASIN
- OVERFLOW DRAIN
- AREA DRAIN W/SUMP
- ROOF DRAIN
- SANITARY CLEANOUT
- SANITARY MANHOLE
- FIRE HYDRANT
- WATER METER
- WATER BACKFLOW DEVICE
- TEE W/TB
- GATE VALVE
- CAP W/TB
- WATER BEND W/TB

| Legend | |
|---|---|
| Proposed Asphalt | |
| Proposed Concrete | |
| Asphalt Grind & Overlay | |

## GENERAL NOTES

**APPLICANT:**
9317 LLC
Contact: Luke Sasse
9321 NE 72nd Ave. Bldg C # 7
Vancouver, WA 98665
Office (360) 449-0099
Email: luke@timberlandinc.com

**OWNER:**
ECM Riverside, LLC
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PLS Engineering
Contact: Travis Johnson, PE
2008 C Street
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PH: (360) 944-6519
travis@plsengineering.com

**SITE ADDRESS:**
Parcel # 986028-825
34512 NW Pacific Hwy
La Center, WA 98629

**GENERAL CONSTRUCTION NOTES:**

A minimum of two (2) full business days prior to beginning construction, the Contractor shall call 1-800-424-5555 (Northwest Utility Notification Center) for location mark-up of existing utilities.

All construction, materials, and workmanship shall conform to the latest standards and practices of the City of La Center and the most recent Edition of the "Standard Specifications for Road, Bridge, and Municipal Construction" as prepared by WSDOT and APWA.

If any cultural resources are discovered in the course of undertaking a development activity, construction shall stop immediately and the Office of Archeology and Historic Preservation in Olympia and the City of La Center Public Works Department shall be notified. Failure to comply with these requirements may constitute a Class C felony, subject to imprisonment and/or fine.

Existing utilities shown are based on the topographic survey by PLS Engineering and available utility records from the City of La Center. Actual utilities, shall be field verified as far as location and depth.

Disprepancies between these drawings and actual field conditions should be reported to the engineer who will address the resolution of such discrepancies. Work done by the contractor after discovery of discrepancies is completed at the contractor's risk.

The contractor shall keep a legible approved set of plans on the project site at all times.

Any significant deviations from the plans will require approval from the project engineer and the City of La Center.

The contractor shall perform all work necessary to complete this project in accordance with the plans including such incidentals as may be necessary to meet applicable agency requirements.

The contractor shall maintain full compliance with all safety and pollution regulations as applicable to the project.

The contractor may be required to provide flagging, signs, and other traffic control devices for safe access onto public streets and for utility work in public right-of-way. All such devices shall conform to the standards established in the latest adopted edition of the "Manual on Uniform Traffic Control Devices (MUTCD)" published by the US Department of Transportation and the modifications to the MUTCD for streets and highways for the State of Washington.

Any curb, gutter, sidewalk, or asphalt in City right-of-way damaged during construction shall be repaired to City of La Center standards.

If any survey monuments or property corner markers are compromised, they shall be replaced, and a new survey boundary shall be recorded.

Boundary and topographic information provided by the owner. Exact location of existing infrastructure to be verified by Contractor.

Existing utilities shown on the plans are based on available information, and no guarantee is implied as to location accuracy and the existence or nonexistence of other utilities. Contractor shall field locate all existing utilities prior to construction.

All pavement shall be straight cut prior to paving. Existing pavement shall be removed as necessary to provide a smooth transition for both ride and drainage.

Contractor shall report all damages immediately to the project engineer at (360) 944-6519 or contact the inspector on the job. Any damage to structures in the public right-of-way will need to be repaired to the City of La Center standards.

Any significant deviations from the plans will require a request from the applicant's engineer and approval by the City's engineer and City inspector.

The applicant may be required to provide flagging, signs, and other traffic control devices for safe truck access onto public streets. All such devices shall conform to the standards established in the latest adopted edition of the "Manual on Uniform Traffic Control Devices"(MUTCD) published by the U.S. Department of Transportation and the Modifications to the MUTCD for Streets and Highways for the State of Washington.

The property owner/developer shall be responsible for obtaining all applicable permits including but not limited to permits for hydrostatic tests and dewatering discharges prior to commencing construction.

A City of La Center grading permit is required prior to beginning construction activities.

Survey Monuments shall be placed at all street intersections. Per LCMC, the monuments shall be brasss and will be housed inside monument boxes.

## SITE GRADING AND PAVING

Vegetation should be cleared and topsoil stripped from areas identified for structural facilities and site grading. Vegetation, other organic material, and debris should be removed from the site. Stripped topsoil should also be removed or used only as landscape fill in nonstructural areas with slopes less than 25 percent. The stripping depth is anticipated to vary from approximately 6 to 12 inches in proposed development areas. Stripped topsoil should be stockpiled prior to removal or placed in a separate designated location away from other material. The post-construction maximum depth of topsoil or landscaped fill placed or spread at any location onsite should not six inches (6").

Site grading activities should be performed in accordance with requirements specified in the most current version of the International Building Code (IBC), Chapter 18 and Appendix J, subject to any exceptions identified by the project geotechnical engineer.

All excavations should be made in accordance with applicable Federal and State Occupational Safety and Health Administration regulations.

For general site grading; contour lines, spot elevations and general drainage flow defined by slopes and swales have been shown. The elevations shown are minimum elevations required to promote drainage in a controlled drainage pattern. Any deviation from this grading plan shall first be coordinated with the Engineer.

Contractor shall comply with all City of La Center requirements such as; a drainage erosion control plan, a schedule of construction operations and any other pertinent data relative to site earth work.

The Contractor shall notify the City of La Center Public Works five (5) business days prior to starting any grubbing, grading or stockpiling work.

Exposed subgrade soils on areas to receive structural fill should be scarified to a depth of 8 inches.

A geotechnical engineer shall be consulted regarding any placement of structural fill. Contractor shall follow recommendations provided by the geotechnical engineer as to structural fill material, placement, and compaction

All work to be completed within the City of La Center right-of-way shall conform to City requirements.

All deleterious materials generated during site grading and strippings not utilized in the final ground cover operation shall be hauled from the site to a contractor provided legal and permitted waste/dump site.

All surfaces shall be graded smooth and free of irregularities that might accumulate surface water.

All grading operations and disturbed surface stabilization shall be in accordance with the project Grading and Erosion Control Plans.

The contractor shall remove all silt and debris resulting from this work which has been deposited in drainage facilities, roadways and other areas immediately after each rainfall event. The cost incurred for any necessary remedial action shall be payable by the contractor.

Best management practices (BMP) shall be employed at all times to the maximum extent practicable to prevent damage by sedimentation, erosion or dust to streams, water courses, natural areas and the property of others.

## EROSION AND SEDIMENT CONTROL

See City of La Center Standard Plan ER-1A and ER-1B for standard City erosion prevention and sediment control notes. Those requirements apply to this project in addition to the below requirements.

A Stormwater Pollution Prevention Plan (SWPPP) was prepared for the site by Soil and Water Technologies, Inc. The Certified Erosion & Sediment Colntrol Lead (CESCL( for the project is Seth Chandlee and can be contacted at (360) 281-5406.

Erosion control methods shall comply with the Stormwater Management Manual for Western Washington, Volume 2 and this plan.

Approval of this Erosion and Sediment Control (ESC) plan does not constitute an approval of permanent road or drainage design.

The contractor shall obtain approval from the City of La Center prior to any discharge of construction dewatering groundwater to the City's storm sewer or sanitary sewer.

Any groundwater discharged to the surface or to the storm sewer from construction dewatering shall meet the water quality requirements of the State of Washington.

The implementation of these ESC plans and the construction, maintenance, replacement, and upgrading of these ESC facilities is the responsibility of the contractor until all construction is completed and approved, and vegetation is established.

The ESC facilities show on this plan must be constructed and approved by the City of La Center prior to all clearing and grading activities. ESC facilities shall be constructed in such a manner as to ensure that sediment and sediment laden water do not enter the drainage system, roadways, or violate applicable water standards.

Care should be taken to not disturb more area than needed for construction requirements. All disturbed soils surfaces are to be stabilized. Stabilization of disturbed soil areas will consist of: hydroseeding or handseeding, mulching, placing of erosion control blankets or plastic in landscaping soil areas. It will also consist of paving and concrete work in driving, parking and sidewalk areas. All seeded areas are to be fertilized, watered and maintained to enhance the immediate regrowth of vegetation.

Material stockpiles are to be protected from precipitation by the following means:

- Temporary - cover piles with tarps or plastic sheeting weighted with tires, lumber or concrete blocks.
- Permanent - cover piles with tarps or plastic, or reseed. Perimeter areas around piles are to be surrounded with erosion control filter fabric fences until soils surface is stabilized with reseeding.

The ESC facilities shall be inspected daily by the contractor and maintained as necessary to ensure continuous functioning. Inspection and maintenance shall include, but not be limited to:

- Verifying that all areas are graded such that all runoff is directed to a sedimentation trap facility before discharging to surface.
- Removal of trapped silts at silt barriers, silt traps, or points of accumulation.
- Additional protective measures, as required, due to job site conditions.
- Stabilized construction entrances installed at the beginning of construction and maintained for the duration of the project. Monitoring of vehicles leaving the site to minimize transmission of loose soils to the public roadways.
- If sediment is transported onto a road surface, the surface is to be cleaned thoroughly at the end of each day.

The ESC facilities on inactive sites shall be inspected and maintained a minimum of once a month or within the 24 hours following a storm event.

At no time shall more than one foot of sediment be allowed to accumulate within a trapped catch basin. All catch basins and conveyance lines shall be cleaned prior to paving. The cleaning operation shall not flush sediment laden water into the downstream system.

This sedimentation and erosion control plan is intended to by utilized as a guide to control the transportation of loose soils from the property that cause water quality and nuisance problems outside of the construction area.

Depending upon the Contractor's construction practices, some portions of the proposed erosion control plan may be varied according to the job site condition. All changes to the plan must be reviewed and approved by the Engineer prior to adjustment.

## WATER SYSTEM CONSTRUCTION NOTES

Water system construction, materials, and workmanship for pipes 4" diameter and larger shall conform to the most current version of the "Standard Specifications for Road, Bridge & Municipal Construction" prepared by the WSDOT/APWA, and the standards and practices of Clark PUD. City of La Center details and notes are included as part of these plans.

## SANITARY SEWER CONSTRUCTION NOTES

Sanitary sewer construction, materials, and workmanship for pipes 4" diameter and larger shall conform to the most current version of the "Standard Specifications for Road, Bridge & Municipal Construction" prepared by the WSDOT/APWA, and the standards and practices of the City of La Center. City of La Center details and notes are included as part of these plans.

Know what's **below.** **Call** before you dig.

ENGINEERING | PLS

General Notes & Legends For:

# Riverside Neighborhood Park

A Site Located In The City Of La Center , Washington

Engineering - Surveying - Planning | 604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539

Revisions

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|

TRAVIS G. JOHNSON — STATE OF WASHINGTON — 23923 — REGISTERED PROFESSIONAL ENGINEER

7-1-21

| | |
|---|---|
| Project No. 2641 | |
| SCALE: | H: N/A<br>V: N/A |
| DESIGNED BY: | MJM |
| DRAFTED BY: | MJM |
| REVIEWED BY: | TJG |

2

29

LEGEND:

- WV — WATER VALVE
- FIRE HYDRANT
- WM — WATER METER
- ST — STORM SEWER MANHOLE
- CB — CATCH BASIN
- AD — AREA DRAIN
- S — SANITARY SEWER MANHOLE
- TSB — TRAFFIC SIGNAL BOX
- POWER POLE
- GUY ANCHOR
- LIGHT POLE
- T — TRANSFORMER
- GV — GAS VALVE
- SIGN
- MB — MAIL BOX
- B — BOLLARD
- EDGE OF CONCRETE
- 5 FOOT INTERVAL CONTOUR
- 1 FOOT INTERVAL CONTOUR
- PAINT STRIPE
- ELECTRIC LOCATE
- GAS LOCATE
- TELEPHONE LOCATE
- INDICATES MONUMENT FOUND

258741-000
ZONE: MDR-16 & UH-10
USE: SINGLE FAMILY RESIDENCE

258697-000
ZONE: MDR-16 & UH-10
USE: VACANT LAND

PROPERTY BOUNDARY (TYP)

EXTG SIGN (TYP)

EXTG GAS VALVE (TYP)

N01°52'26"W 275.51'

EXTG SURFACE DRAINAGE FLOW DIRECTION (TYP)

24" DWY

EXTG GRAVEL ROAD

NW PACIFIC HWY

986028-825
ZONE: MDR-16 & UH-10
USE: VACANT LAND

N00°27'23"W 61.35'

EXTG POND

WETLAND DELNEATION

WETLAND BUFFER

WETLAND A
CAT III

110'

30'

300'

230'

EXTG 60' ROW

EXTG 23.5' ROADWAY

S01°40'56"W 336.27'

EXTG HOUSE

258702-000
ZONE: MDR-16 & UH-10
USE: VACANT LAND

N48°16'11"E 325.97'

OREGON WHITE OAK

EXTG 6" CULVERT

EXTG WELL TO BE ABANDONED

258689-000
ZONE: MDR-16 & UH-10
USE: SINGLE FAMILY RESIDENCE

EXTG STRUCTURE

N01°59'50"E 148.80'

N83°38'21"W 684.75'

986051-594
ZONE: MDR-16 & UH-10
USE: VACANT LAND

986051-592
ZONE: MDR-16 & UH-10
USE: VACANT LAND

986051-591
ZONE: MDR-16 & UH-10
USE: VACANT LAND

N83°38'21"W 200.66'

S01°40'56"W 25.91'

S88°29'58"E 4.66'

986051-573
986051-574
986051-575
986051-576
986051-577
986051-578
986051-579
986051-580
986051-581
986051-582

EXTG FIRE HYDRANT

EXTG FIRE HYDRANT

W 16TH AVE

Scale 1" = 40'

40 20 0 40

811 Know what's **below.** **Call** before you dig.

Existing Conditions For:

# Riverside Neighborhood Park

A Site Located In The City Of La Center , Washington


PLS ENGINEERING
Engineering - Surveying - Planning | 604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539


Revisions

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| | | | | | |

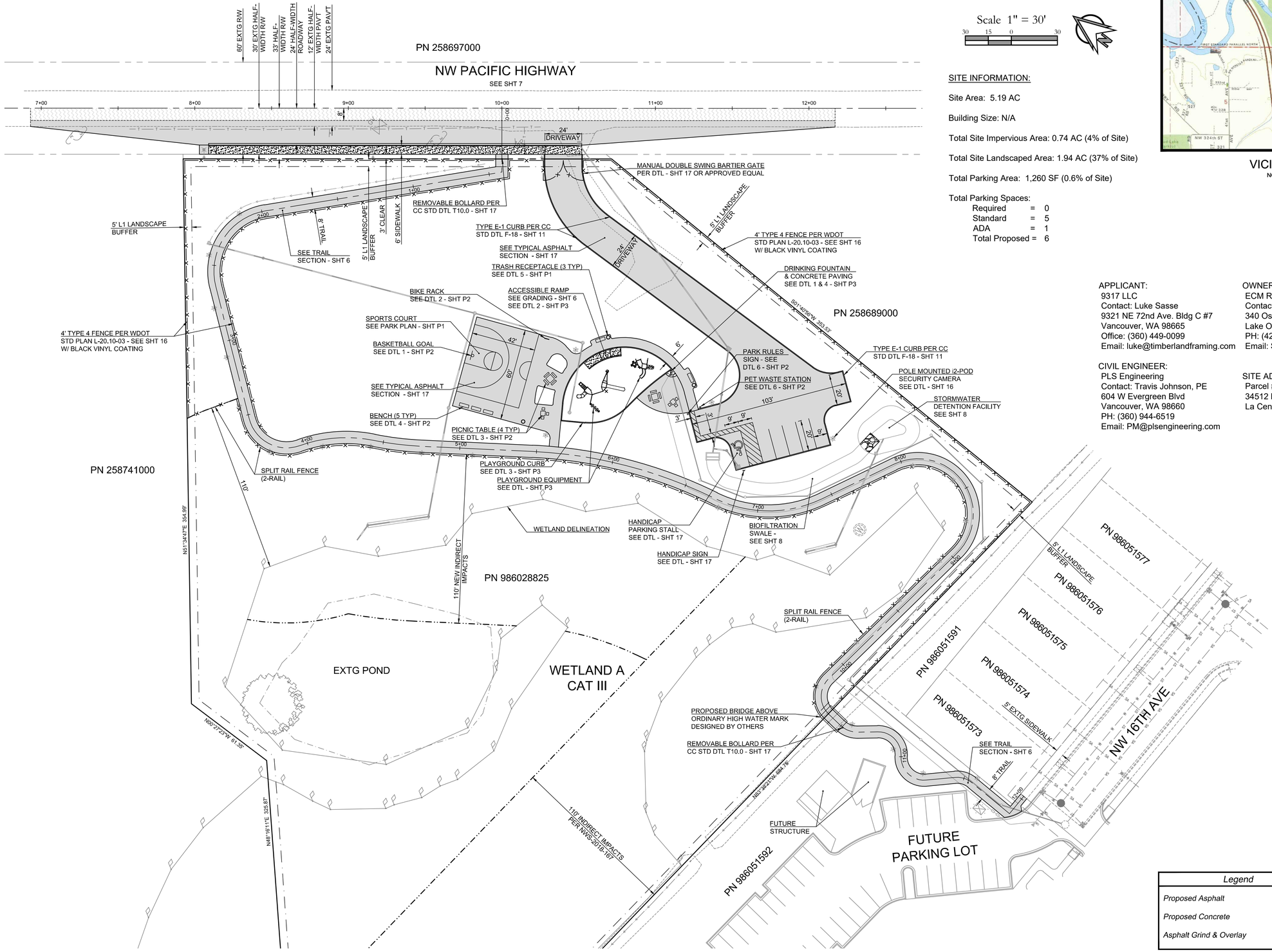
TRAVIS G. JOHNSON — STATE OF WASHINGTON — 23929 — REGISTERED PROFESSIONAL ENGINEER

7-1-21

| | |
|---|---|
| Project No. | 2641 |
| SCALE: | H: N/A V: N/A |
| DESIGNED BY: | MJM |
| DRAFTED BY: | MJM |
| REVIEWED BY: | TJG |

# Riverside Neighborhood Park

Located in the SE ¼ of Section 33, T5N, R1E
La Center, Washington




Scale 1" = 30'

30 15 0 30

SITE INFORMATION:

Site Area: 5.19 AC

Building Size: N/A

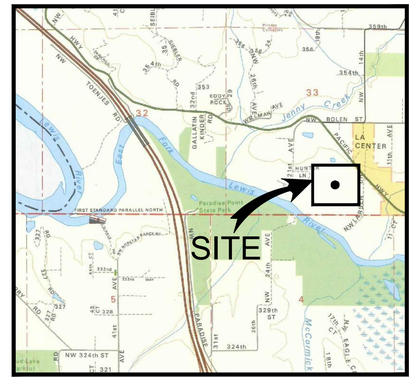
Total Site Impervious Area: 0.74 AC (4% of Site)

Total Site Landscaped Area: 1.94 AC (37% of Site)

Total Parking Area: 1,260 SF (0.6% of Site)

Total Parking Spaces:

| | | |
|---|---|---|
| Required | = | 0 |
| Standard | = | 5 |
| ADA | = | 1 |
| Total Proposed | = | 6 |




VICINITY MAP
NOT TO SCALE

APPLICANT:
9317 LLC
Contact: Luke Sasse
9321 NE 72nd Ave. Bldg C #7
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Office: (360) 449-0099
Email: luke@timberlandframing.com

OWNER:
ECM Riverside, LLC
Contact: Sid Constantinescu
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Lake Oswego, OR 97034
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CIVIL ENGINEER:
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Contact: Travis Johnson, PE
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SITE ADDRESS:
Parcel # 986028-825
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La Center, WA 98629

| Legend | |
|---|---|
| Proposed Asphalt | |
| Proposed Concrete | |
| Asphalt Grind & Overlay | |

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PLS ENGINEERING

Site Plan For:

Riverside Neighborhood Park

A Site Located In The City Of La Center , Washington

Engineering - Surveying - Planning | 604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539

Revisions

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| | | | | | |

TRAVIS G. JOHNSON
STATE OF WASHINGTON
13929
REGISTERED
PROFESSIONAL ENGINEER
7-1-21

| | |
|---|---|
| Project No. | 2641 |
| SCALE: | H: 1"=30' V: N/A |
| DESIGNED BY: | MJM |
| DRAFTED BY: | MJM |
| REVIEWED BY: | TJG |

PN 258697000

NW PACIFIC HIGHWAY
SEE SHT 7

CONSTRUCTION ENTRANCE
PER COLC STD DTL ER-2 - SHT 13

EXTG CONTOUR
(TYP)

FILTER FABRIC FENCE PER
COLC STD DTL ER-3 - SHT 13

PROPOSED CONTOUR
(TYP)

PROPERTY LINE (TYP)

INLET PROTECTION PER
COL STD DTL ER-4 - SHT 13
(TYP)

PN 258689000

STORMWATER
DETENTION FACILITY
SEE SHT 8

1' BERM

FILTER FABRIC FENCE PER
COLC STD DTL ER-3 - SHT 13

SLOPE PROTECTION AS NEEDED
PER COLC STD DTL ER-7 - SHT 13

WETLAND BUFFER

PN 258741000

FILTER FABRIC FENCE PER
COLC STD DTL ER-3 - SHT 13

BIOFILTRATION SWALE
SEE SHT 8

WETLAND
DELINIATION
LINE

WETLAND A
CAT III

PN 986028825

MATCH LINE STA 8+34.00 - SEE SHEET 6

Scale 1" = 20'
20 10 0 20

## NOTES:

1. CONTRACTOR SHALL FOLLOW ANY RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL ENGINEERING REPORT.
2. CONTRACTOR SHALL COMPLY WITH LCMC 18.320 FOR EROSION CONTROL.
3. MAXIMUM RUNNING SLOPE OF TRAIL SHALL BE 1:20
4. SEE CROSS SECTIONS ((#)) - SHT 6

## GRADING SPOT ELEVATION ABBREVIATIONS

*TC = TOP OF CURB ELEVATION*
*FG = FINISH GRADE AT TOP OF PAV'T OR EXTERNAL TO BLDG*
*SW = FINISH GRADE FOR SIDEWALK*
*EG = EXTG GRADE AT EDGE OF PAV'T (FOR REFERENCE)*

## UNADJUSTED VOLUMES

APPROXIMATE AREAS OF CUT = 3,100 CY

APPROXIMATE AREAS OF FILL = 9,600 CY

| Legend | |
|---|---|
| Proposed Asphalt | |
| Proposed Concrete | |
| Asphalt Grind & Overlay | |

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PLS ENGINEERING

# Riverside Neighborhood Park

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Grading & Erosion Control Plan For:

Engineering - Surveying - Planning | 604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539

Revisions

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|

TRAVIS G. JOHNSON
STATE OF WASHINGTON
23929
REGISTERED
PROFESSIONAL ENGINEER
7-1-21

| | |
|---|---|
| Project No. 2641 | |
| SCALE: | H: 1"=20'<br>V: N/A |
| DESIGNED BY: | MJM |
| DRAFTED BY: | MJM |
| REVIEWED BY: | TJG |

5
29

## NOTES:

1. CONTRACTOR SHALL FOLLOW ANY RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL ENGINEERING REPORT.
2. CONTRACTOR SHALL COMPLY WITH LCMC 18.320 FOR EROSION CONTROL.
3. MAXIMUM RUNNING SLOPE OF TRAIL SHALL BE 1:20
4. SEE CROSS SECTIONS ((#)) - THIS SHEET

## GRADING SPOT ELEVATION ABBREVIATIONS

*TC = TOP OF CURB ELEVATION*
*FG = FINISH GRADE AT TOP OF PAV'T OR EXTERNAL TO BLDG*
*SW = FINISH GRADE FOR SIDEWALK*
*EG = EXTG GRADE AT EDGE OF PAV'T (FOR REFERENCE)*

## UNADJUSTED VOLUMES

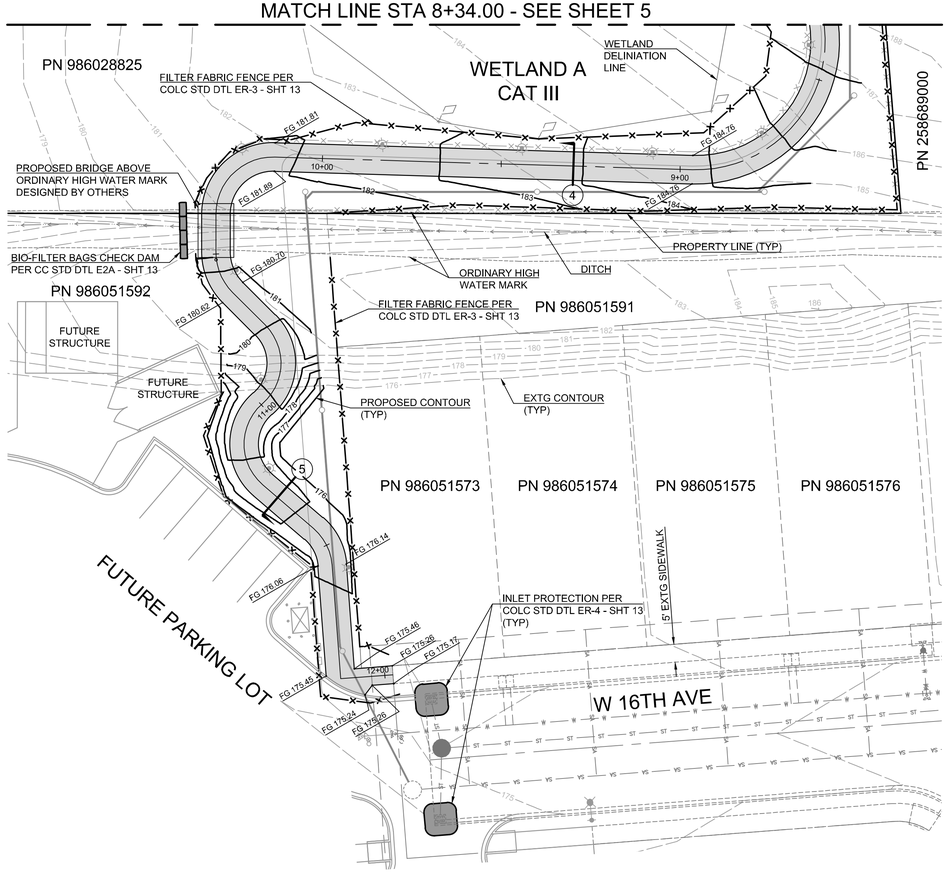
APPROXIMATE AREAS OF CUT = 3,100 CY

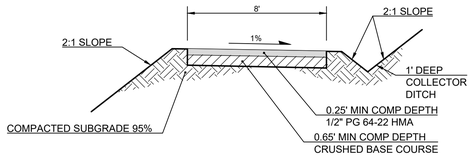
APPROXIMATE AREAS OF FILL = 9,600 CY

N

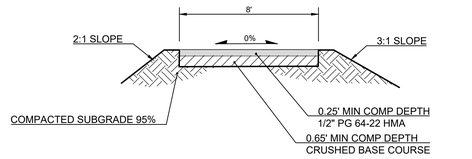
Scale 1" = 20'

20 10 0 20

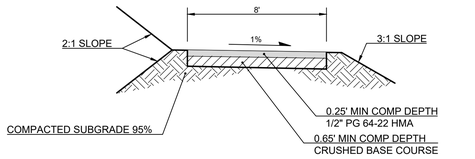


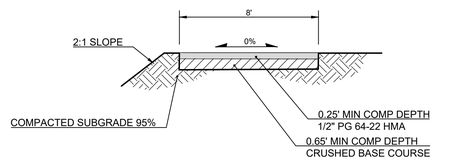

TRAIL SECTION 1 STA 0+30 TO 2+40
NTS



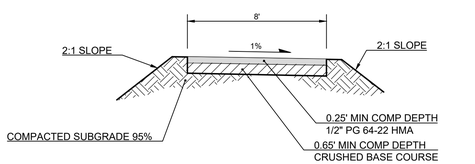

TRAIL SECTION 2 STA 2+45 TO 3+60
NTS




TRAIL SECTION 3 STA 3+65 TO 8+40
NTS




TRAIL SECTION 4 STA 8+45 TO 10+35
NTS




TRAIL SECTION 5 STA 10+50 TO 11+80
NTS

| Legend | |
|---|---|
| *Proposed Asphalt* | |
| *Proposed Concrete* | |
| *Asphalt Grind & Overlay* | |

811 Know what's **below.** **Call** before you dig.

ENGINEERING
PLS

Grading & Erosion Control Plan For:

# Riverside Neighborhood Park

A Site Located In The City Of La Center , Washington

Engineering - Surveying - Planning | 604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539

Revisions

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|

TRAVIS G. JOHNSON — STATE OF WASHINGTON — 23929 — REGISTERED PROFESSIONAL ENGINEER

7-1-21

Project No. 2641

SCALE: H: 1"=20' V: N/A

| | |
|---|---|
| DESIGNED BY: | MJM |
| DRAFTED BY: | MJM |
| REVIEWED BY: | TJG |

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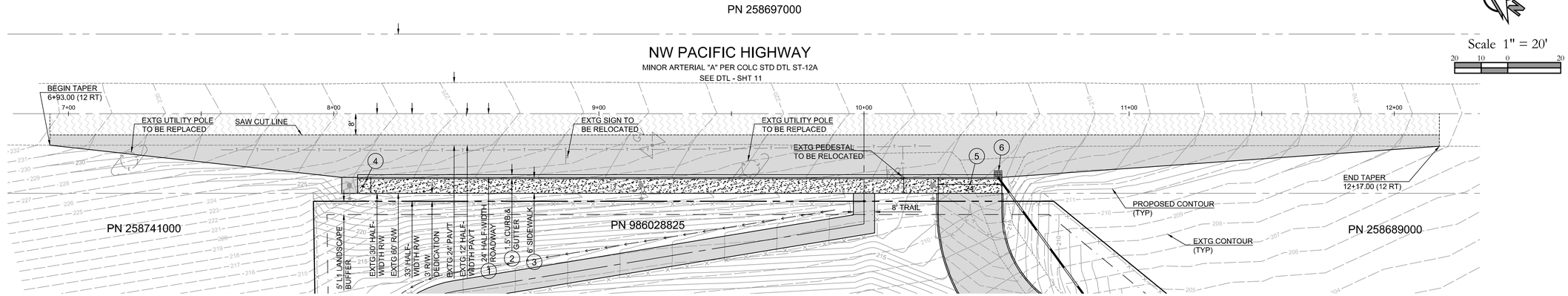
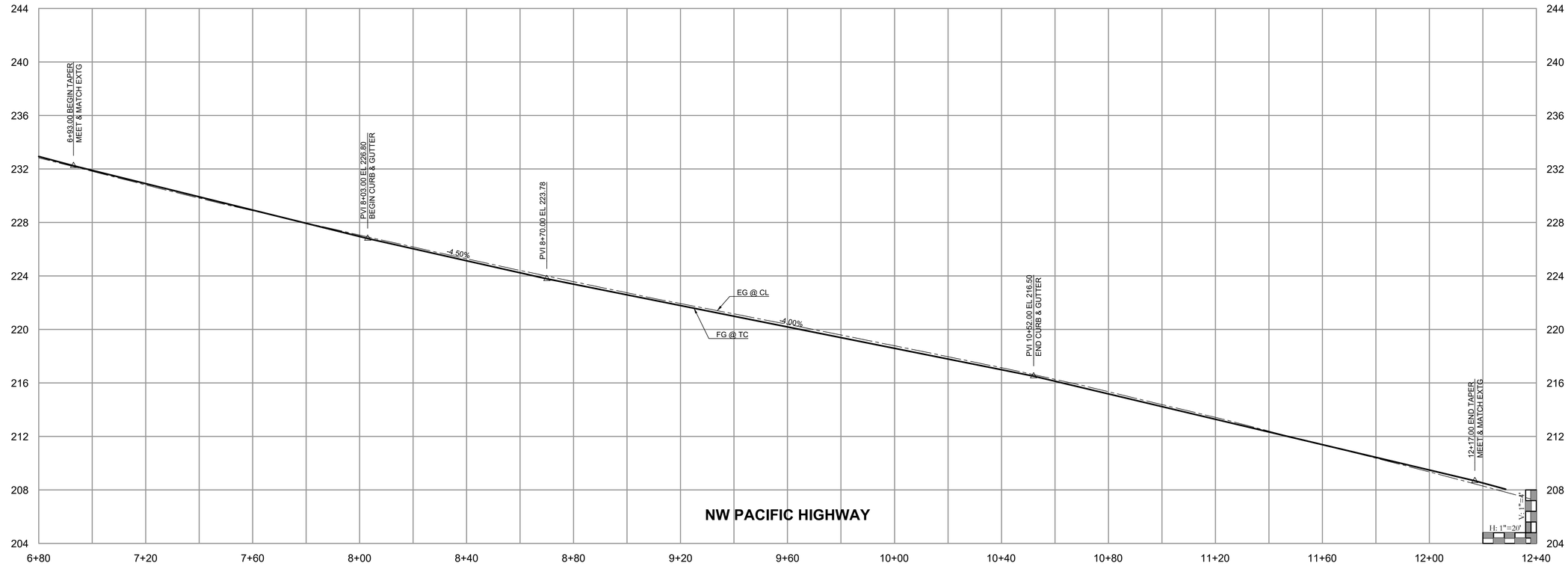
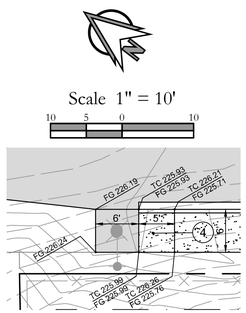
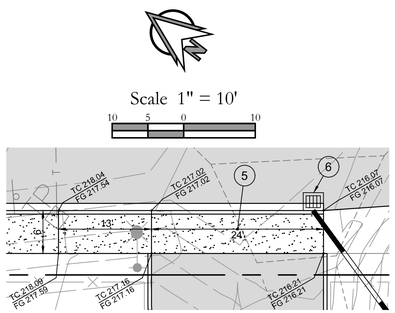


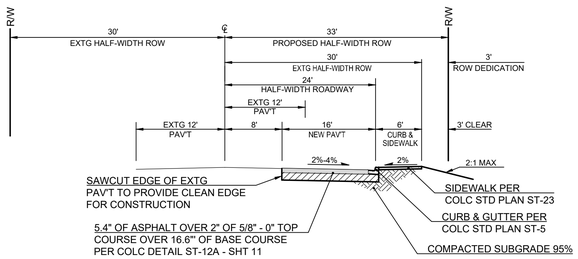

DETAIL A




DETAIL B

STREET, SITE, & STORM KEY NOTES:

1. TYPICAL NW PACIFIC HIGHWAY ROADWAY SECTION
   MINOR ARTERIAL "A" PER COLC STD PLAN ST-12A - SEE SHT 11
   SAW CUT AND WIDEN ROADWAY PER SECTION DETAIL - THIS SHEET
2. CURB & GUTTER PER COLC STD PLAN ST-5 - SEE SHT 11
3. SIDEWALK PER COLC STD PLAN ST-23 - SEE SHT 11
4. CONCRETE PEDESTRIAN RAMPS TO BE INSTALLED AT TIME OF CONSTRUCTION
   SEE DETAIL A FOR GRADES
5. 10+40.00 (24' RT) CONCRETE DRIVEWAY DROP PER COLC STD PLAN ST-3 - SEE SHT 11
   SEE DETAIL B FOR GRADES
6. 10+50.50 (24' RT) STM CB 1 PER COLC STD PLAN SM-5 - SEE SHT 10
   GRATE 216.07
   10" IE 214.07 OUT(SW)




NW PACIFIC HIGHWAY
Minor Arterial "A" (ST-12A - SEE SHT 11)
NTS

811 Know what's below. Call before you dig.

NW Pacific Highway Plan & Profile For:

# Riverside Neighborhood Park

A Site Located In The City Of La Center , Washington


ENGINEERING | PLS
Engineering - Surveying - Planning | 604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539


Revisions

| | |
|---|---|
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |

TRAVIS G. JOHNSON
STATE OF WASHINGTON
23929
REGISTERED
PROFESSIONAL ENGINEER
7-1-21

| | |
|---|---|
| Project No. | 2641 |
| SCALE: | H: 1"=20'<br>V: 1"=4' |
| DESIGNED BY: | MJM |
| DRAFTED BY: | MJM |
| REVIEWED BY: | TJG |

Scale 1" = 30'

30 15 0 30

PN 258697000

NW PACIFIC HIGHWAY
SEE SHT 7

33' HALF-WIDTH R/W
24' HALF-WIDTH ROADWAY

7+00 8+00 9+00 10+00 10+00 11+00 12+00

STM CB 1 PER COLC STD PLAN SM-5 - SEE SHT 10
GRATE 216.07
10" IE 212.57 OUT (S)

COLLECTOR DITCH
SEE TRAIL SECTION 1 - SHT 6

STM CB 4 PER COLC STD PLAN SM-9 - SEE SHT 10
TOP OF GRATE 209.37
BOTTOM OF GRATE 207.99
10" IE 206.50 OUT (SE)

37 LF 10" CPP (ST)
@ S=0.2568

STM CO 3 PER DTL - SHT 9
TOP 198.98
10" IE 197.00 IN (NW)
10" IE 197.00 OUT (SE)

8' TRAIL

8' SIDEWALK

24' DRIVEWAY

164 LF 10" CPP (ST)
@ S=0.1107

DRINKING FOUNTAIN
SEE DTL - SHT X
FG 193.95
4" IE 188.96

PN 258689000

STM CB 2 PER COLC STD PLAN SM-5 - SEE SHT 10
GRATE 196.92
10" IE 194.42 IN (N)
10" IE 194.42 OUT (SW)

STM AREA DRAIN 3
PER DTL - SHT 9
TOP 192.80
10" IE 191.07 IN (SW)
10" IE 191.07 OUT (NW)

142 LF 10" CPP (ST)
@ S=0.0432

STM AREA DRAIN 1 PER DTL - SHT 9
TOP 192.39
10" IE 190.86 IN (NW)
10" IE 190.86 IN (SE)
10" IE 190.86 OUT (SW)

73 LF 10" CPP (ST)
@ S=0.0029

64 LF 10" CPP (ST)
@ S=0.0028

30 LF 10" CPP (ST)
@ S=0.0970

STM CO 1 PER DTL - SHT 9
TOP 194.67
10" IE 191.51 IN (NE)
10" IE 191.51 OUT (SW)

38 LF 10" CPP (ST)
@ S=0.0029

STORMWATER
DETENTION FACILITY
SEE SHT 9

FLOW CONTROL
STRUCTURE
SEE SHT 9

STM CO 2
SEE SHT 9

STM CB 3
SEE SHT 9

STM AREA DRAIN 2 PER DTL - SHT 9
TOP 192.69
10" IE 190.68 IN (NE)
10" IE 190.68 OUT (SW)

46 LF 10" CPP (ST)
@ S=0.0028

71 LF 4" PVC (S)
@ S=0.0352

SAN CO 4
TOP 189.26
4" IE 183.22

45 LF 4" PVC (S)
@ S=0.0450

SAN CO 5
TOP 186.82
4" IE 181.21

PN 258741000

72 LF 10" CPP (ST)
@ S=0.1344

STM AREA DRAIN 4
PER DTL - SHT 9
TOP 194.93
10" IE 191.20 OUT (NE)

STM CO 4 PER DTL - SHT 9
TOP 183.00
10" IE 181.00 IN (NE)
10" IE 181.00 OUT (NW)

12 LF 6" PVC (ST)
@ S=0.1667

FLOW SPREADER PER DTL - SHT 9
W/ 40 LF 10" PERF (ST) @ S=0.0000

OUTLET IE 178.00

STM CO 5 PER DTL - SHT 9
TOP 183.00
10" IE 181.00 IN (SW)
6" IE 180.00 OUT (W)

SAN CO 1
TOP 191.82
4" IE 186.46

30 LF 4" PVC (S)
@ S=0.0200

BIOFILTRATION SWALE
& FLOW SPREADER
SEE SHT 9

SAN CO 2
TOP 191.44
4" IE 185.83

42 LF 4" PVC (S)
@ S=0.0200

574 LF 2" POLY (W)

88 LF 4" PVC (S)
@ S=0.0200

SAN CO 3
TOP 190.48
4" IE 184.99

FLOW SPREADER
SEE SHT 9

37 LF 4" PVC (S)
@ S=0.0450

SAN CO 6
TOP 184.83
4" IE 179.55

63 LF 4" PVC (S)
@ S=0.0250

PN 986028825

WETLAND DELINEATION

WETLAND A
CAT III

65 LF 4" PVC (S)
@ S=0.0250

SAN CO 7
TOP 183.27
4" IE 177.96

SAN CO 8
TOP 181.56
4" IE 176.34

61 LF 4" PVC (S)
@ S=0.0800

SAN CO 9
TOP 175.94
4" IE 171.45

68 LF 4" PVC (S)
@ S=0.0200

SAN CO 10
TOP 175.68
4" IE 170.10

PN 986051577
PN 986051576
PN 986051575
PN 986051574
PN 986051573
PN 986051591
PN 986051592

5' EXTG SIDEWALK

W 16TH AVE

8' TRAIL

FUTURE
STRUCTURE

FUTURE
PARKING LOT

43 LF 4" PVC (S)
@ S=0.0200

STD 2" RPBA
PER CPU STD
DTL 21W - SHT 14

2" WATER SERVICE W/ METER
PER CPU STD DTL 2W - SHT 14

26 LF 2" POLY (W)

STD BO ASSY
PER CPU STD
DTL 6W - SHT 15

EXTG SAN MH
TOP 174.79
4" IE 169.23 IN (NW)
EXTG 8" IE 168.73 OUT (E)

9 LF 8" PVC C-900(W)
REMOVE EXTG CAP & CONNECT
TO EXTG 8" WATER MAIN

CONSTRUCTION NOTES:

1. WATER LINES AND SANITARY SEWER LINES SHALL MAINTAIN 18" VERTICAL SEPARATION. SANITARY SEWER TO BE KEPT BELOW WATER LINES.
2. ALL SANITARY SEWER CLEANOUTS SHALL BE PER COLC STD PLAN SS-14 - SHT 12.
3. CORE EXTG SAN MH PER COLC STD PLAN SS-9 - SHT 12.
4. ALL MECHANICALLY RESTRAINED JOINTS TO BE RESTRAINED PER CPU STANDARD DETAILS - SHT 15.

| Legend | |
|---|---|
| Proposed Asphalt | |
| Proposed Concrete | |
| Asphalt Grind & Overlay | |

Know what's **below.** **Call** before you dig.

PLS ENGINEERING

Stormwater & Utility Plan For:

# Riverside Neighborhood Park

A Site Located In The City Of La Center , Washington

Engineering - Surveying - Planning | 604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539

Revisions

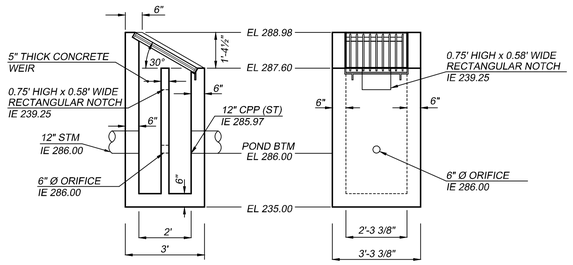
| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|

TRAVIS G. JOHNSON
STATE OF WASHINGTON
23929
REGISTERED
PROFESSIONAL ENGINEER
7-1-21

| | |
|---|---|
| Project No. 2641 | |
| SCALE: | H: 1"=30' V: N/A |
| DESIGNED BY: | MJM |
| DRAFTED BY: | MJM |
| REVIEWED BY: | TJG |

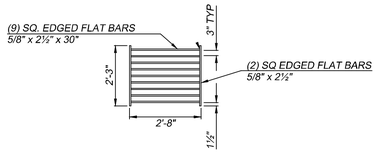
8

29



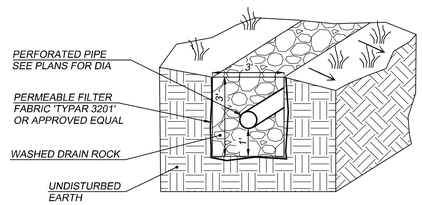

## Control Structure - Ditch Inlet

PER COLC STD PLAN SM-9 - SHT 10 NTS



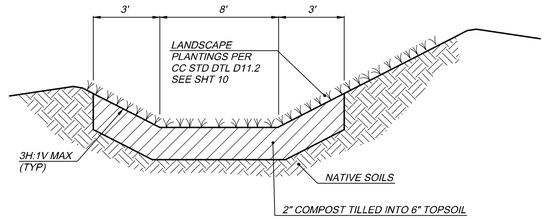

## Control Structure Grate

NTS




## Flow Spreader Detail

NTS

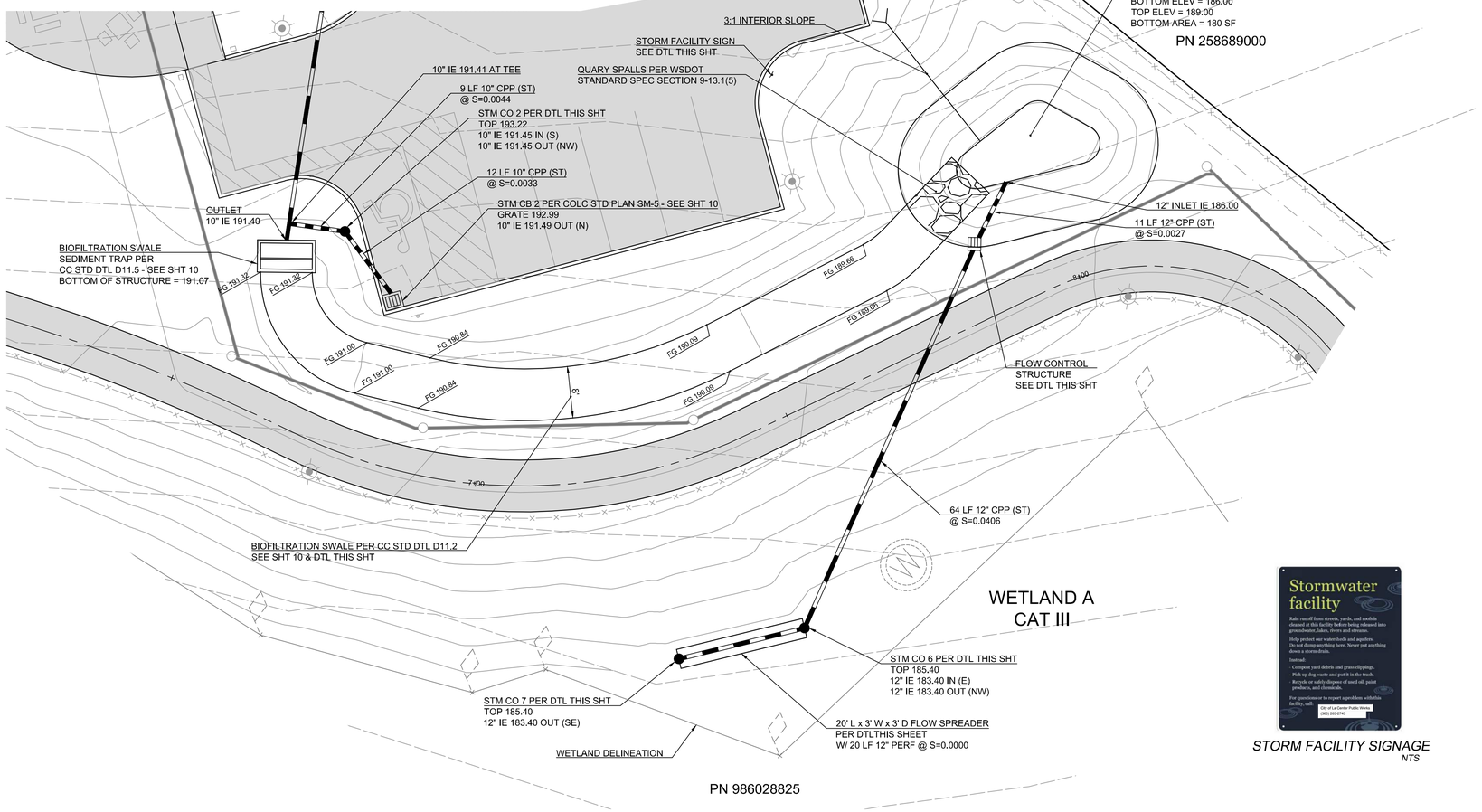



## Bioretention Facility Typical Section

NTS

Scale 1" = 10'

10 5 0 10

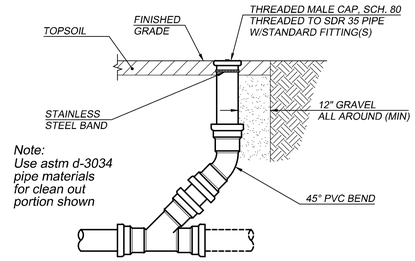



PN 986028825



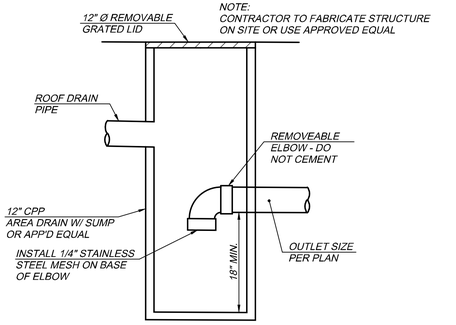

## STORM FACILITY SIGNAGE

NTS




## Clean Out in Ground Detail

(Stormwater) NTS




## Area Drain w/ Sump

NTS

| Legend | |
|---|---|
| Proposed Asphalt | |
| Proposed Concrete | |
| Asphalt Grind & Overlay | |

811 Know what's **below.** **Call** before you dig.

ENGINEERING | PLS

# Riverside Neighborhood Park

A Site Located In The City Of La Center , Washington

Engineering - Surveying - Planning | 604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539

Stormwater Details For:

Revisions

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| | | | | | |

TRAVIS G. JOHNSON — STATE OF WASHINGTON — 23929 — REGISTERED PROFESSIONAL ENGINEER

7-1-21

| | |
|---|---|
| Project No. 2641 | |
| SCALE: | H: 1"=10' V: N/A |
| DESIGNED BY: | MJM |
| DRAFTED BY: | MJM |
| REVIEWED BY: | TJG |

1. ALL MATERIALS, WORKMANSHIP AND INSTALLATION OF STORM SEWERS SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE "CITY OF LA CENTER ENGINEERING STANDARDS FOR PUBLIC WORKS CONSTRUCTION" AND THE LATEST EDITION OF THE "WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION", HEREINAFTER REFERRED TO AS THE "STANDARD SPECIFICATIONS", PREPARED BY THE WASHINGTON STATE CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION (APWA) AND THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION, EXCEPT AS NOTED HEREIN OR ON THE STANDARD PLANS.
2. THE CONTRACTOR IS TO VERIFY ALL INVERT AND TOP ELEVATIONS OF EXISTING STORM SEWERS, CENTERLINE AND TOP OF CURB ELEVATIONS, AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.
3. ALL STORM SEWER CONSTRUCTION IS SUBJECT TO INSPECTION, AND APPROVAL, PRIOR TO COVER BY THE CITY OF LA CENTER. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION. A PRE-CONSTRUCTION MEETING IS REQUIRED PRIOR BEGINNING OF THE CONSTRUCTION.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION AND TO NOTIFY THE ENGINEER OF ANY POTENTIAL CONFLICTS. THE CONTRACTOR SHALL DIG TEST HOLES OVER ALL EXISTING UTILITIES PRIOR TO CONSTUCTION TO DETERMINE THEIR EXACT LOCATION. CALL 1-800-424-5555, (NORTHWEST UTILITY NOTIFICATION CENTER), FOR MARK-UP OF EXISTING UTILITIES, A MINIMUM OF 2 WORKING DAYS PRIOR TO START OF CONSTRUCTION.
5. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER AND/OR CONTRACTOR TO PROCURE ALL APPLICABLE PERMITS, LICENSES AND CERTIFICATES RELATIVE TO THE TRADES TO COMPLETE THE PROJECT AND FOR THE USE OF SUCH WORK WHEN COMPLETED. COMPLIANCE SHALL BE AT ALL LEVELS, FEDERAL, STATE AND CITY, RELATING TO THE PERFORMANCE OF THIS WORK.
6. THE CONTRACTOR SHALL OBTAIN ALL OFFSITE CONSTRUCTION EASEMENTS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THAT ALL OFFSITE UTILITIES EASEMENTS HAVE BEEN OBTAINED BY THE OWNER PRIOR TO THE COMMENCEMENT OF ANY OFFSITE CONSTRUCTION.
7. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE PUBLIC WORKS DEPARTMENT THAT MUST BE APPROVED BY THE PUBLIC WORKS DEPARTMENT PRIOR TO CONSTRUCTION.
8. ALL CATCH BASINS AND CURB INLETS SHALL BE STENCILED AS FOLLOWS: "DUMP NO WASTE-DRAINS TO STREAM".
9. SIGNS THAT READ: "WATER QUALITY FILTER-PLEASE LEAVE VEGETATED" SHALL BE INSTALLED EVERY 50 FEET ON FENCE OR POSTS ALONG WATER QUALITY BIOFILTRATION SYSTEMS.
10. VEGETATION IN BIOFILTRATION SYSTEMS SHALL BECOME FULLY ESTABLISHED PRIOR TO COMMENCING WITH INSTALLATION OF A.C. PAVEMENT FOR ALL AREAS DRAINING INTO THE WATER QUALITY SYSTEM. VEGETATION IN BIOFILTRATION SYSTEMS TO BE THE FOLLOWING GRASS SEED MIX (PROPORTIONS GIVEN BY WEIGHT):

    40% REDTOP BENTGRASS, 30% RED FESCUE, 20% TALL FESCUE, 5% PERENNIAL RYE, 5% RUSSIAN WILDRYE.
11. PIPES OVER 12" DIA. SHALL HAVE A CHILD PROTECTION DEVICE AT INFLUENT END.
12. ALL STORM MANHOLES INSTALLED WITHIN AN EASEMENT OR OUTSIDE THE CITY RIGHT-OF-WAY SHALL HAVE LOCKING LID COVERS.
13. MATERIAL CERTIFICATION FOR ALL STORM MANHOLES, CATCHBASINS, AND CURB INLETS SHALL BE PROVIDED TO THE CITY INSPECTOR.
14. ALL ROOF AND LOWPOINT DRAINS TO BE DIRECTED TO APPROVED DRAINAGE PER PLANS.
15. ALL TRENCH BACKFILLING WILL CONFORM TO STANDARD DETAIL SS-4. PIPE BEDDING WILL CONFORM TO STANDARD DETAIL SS-5.
16. ALL STORM SEWER CLEANOUTS WILL MEET THE REQUIREMENTS OF STANDARD DETAIL SS-14.

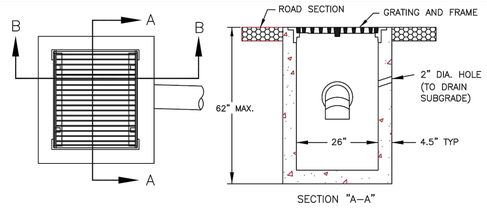
## GENERAL STORMWATER NOTES

PLAN # SM-1

CITY OF LA CENTER APPROVED

Bart Stapp, PE 7/23/09
CITY ENGINEER DATE

| REVISIONS: | DATE: | DRAWN: | DESIGNED: |
|---|---|---|---|
| | | | |




NOTES:

1. LATERALS WILL BE CONSTRUCTED TO ENTER THE BASIN PERPENDICULAR TO THE BASIN WALL. THE LATERAL WILL ENTER ONLY AT THE FRONT OR SIDE OF THE BASIN WITH NO LATERALS ALLOWED TO ENTER THE CATCH BASIN AT THE CORNERS. IF NEEDED, A BEND MAY BE USED AS THE FIRST SECTION OF PIPE OUTSIDE THE BASIN WALL. THE MAXIMUM BEND ALLOWED IS 45 DEGREES.
2. ALL REINFORCED STEEL SHALL HAVE A 1-1/2" CLEAR COVER UNLESS OTHERWISE NOTED, AND SHALL BE GRADE 40 OR GRADE 60 (ASTM A-615).
3. ANY PROTRUDING ENDS OF PIPES SHALL BE TRIMMED FLUSH WITH THE INSIDE WALLS AND GROUTED.
4. THE METAL FRAME AND GRATE SHALL BE SET TO A SLOPE TO CONFORM TO THE PARTICULAR DRAINAGE PROBLEM.
5. ELBOW SECTION SHALL BE REMOVABLE FOR MAINTENANCE PURPOSES USING A BALL AND SPIGOT JOINT.

## CATCH BASIN

PLAN # SM-5

CITY OF LA CENTER APPROVED

Bart Stapp, PE 7/23/09
CITY ENGINEER DATE

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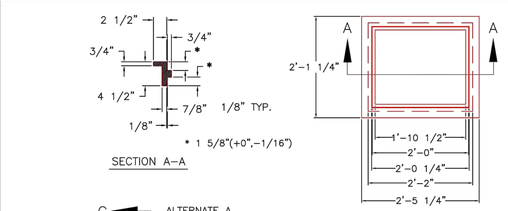


NOTES:

1. WELDING NOT PERMITTED.
2. USE VANED GRATE WHERE LONGITUDINAL SLOPE EXCEEDS 4%.
3. SEATING OF GRATE SHALL BE ACCOMPLISHED BY ONE OF THE FOLLOWING:
    - ALTERNATE A SHALL BE 8 PADS 1-1/2" x 3/4" x 1/8" INTEGRALLY CAST WITH THE GRATE.
    - ALTERNATE B SHALL BE A MACHINED SURFACE OUTSIDE A 17" CIRCLE, BOTTOM ONLY.

| DIMENSIONS | | | |
|---|---|---|---|
| W1 & W2 | T | R | D |
| 1" MIN 1-3/4" MAX | 1-3/4" | 26" | 1-5/8" |
| 1" MIN 1-3/4" MAX | 1-1/2" | 21" | 2-3/4" |

## HERRINGBONE GRATE DETAIL

PLAN # SM-7

CITY OF LA CENTER APPROVED

Bart Stapp, PE 7/23/09
CITY ENGINEER DATE

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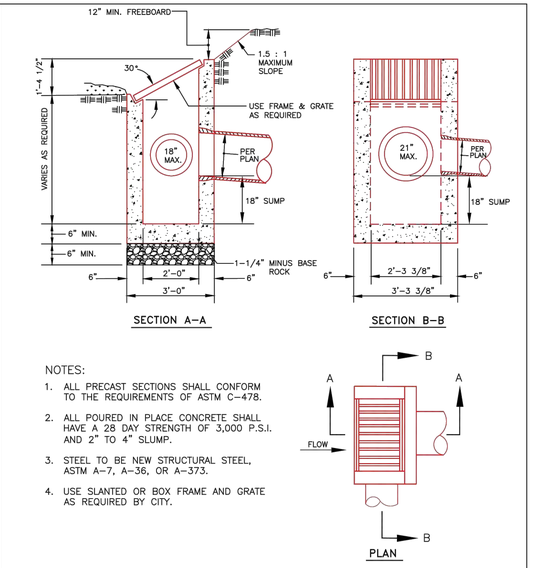


NOTES:

1. ALL PRECAST SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478.
2. ALL POURED IN PLACE CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 3,000 P.S.I. AND 2" TO 4" SLUMP.
3. STEEL TO BE NEW STRUCTURAL STEEL, ASTM A-7, A-36, OR A-373.
4. USE SLANTED OR BOX FRAME AND GRATE AS REQUIRED BY CITY.

## SLOPED FIELD INLET

PLAN # SM-9

CITY OF LA CENTER APPROVED

Bart Stapp, PE 7/23/09
CITY ENGINEER DATE

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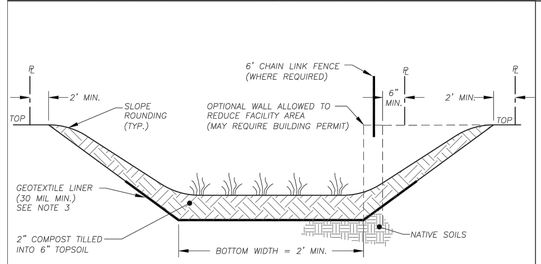


NOTE:
IF BIOFILTRATION SWALE IS INSTALLED DURING A PERIOD OF WET WEATHER, IT CAN BE ESTABLISHED BY SODDING. SINCE SOD IS NOT AVAILABLE IN RECOMMENDED GRASSES, IT SHOULD BE OVER SOWN WITH A RECOMMENDED MIX AT THE BEGINNING OF THE GROWING SEASON. IT IS RECOMMENDED TO INSTALL A SOD THAT IS A MIX OF CREEPING FESCUE AND HARD & SHEEP FESCUES.

NOTES:

1. THE DESIGN OF WATER QUALITY FACILITIES SHALL MEET THE STANDARD AS SET FORTH IN CCC 40.386 AND CCSWM.
2. SOD SHALL BE LAID PERPENDICULAR TO SLOPE FROM BOTTOM TO TOP, WITH JOINTS STAGGERED.
3. FOR NATIVE SOILS WITH CLASSIFICATIONS A-1-a, A-1-b, A-3, A-2-4, AND A-2-5 AS DEFINED IN AASHTO SPEC. M145, INSTALL A 30 MIL GOETEXTILE LINER OR EQUIVALENT WITH PERMEABILITY RATE OF (LESS THAN) 2.4 INCHES/HOUR.
4. SWALE LONGITUDINAL SLOPE: 1%-2.5% MAX. UNDERDRAINS REQUIRED FOR SLOPES LESS THAN 1.5%, SEE STD. DETAIL D11.3.
5. SWALE SHALL HAVE A VIABLE STAND OF VEGETATION APPROVED BY THE COUNTY INSPECTOR PRIOR TO PAVING.
6. FOR LOW-GROWING TURF SEED MIX, SEE TABLE 8.2 IN CCSWM, BOOK 2 - BMP DESIGN.
7. FOR WET AREA SEED MIX, SEE TABLE 8.4 IN CCSWM, BOOK 2 - BMP DESIGN.

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DWG: D11.2.DWG

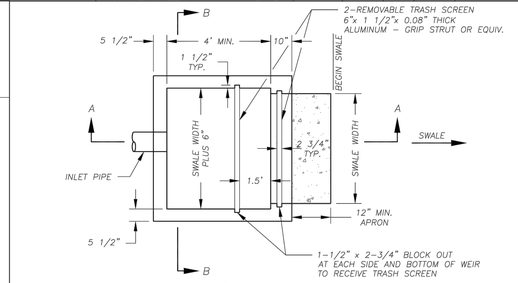
Department of Public Works
CLARK COUNTY WASHINGTON
proud past, promising future

TYPICAL BIOFILTRATION SWALE SECTION

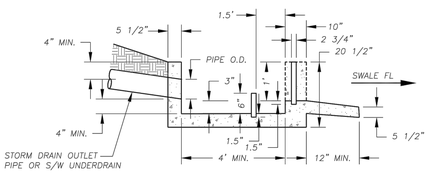
APPROVED
COUNTY ENGINEER

01/07/16
DATE

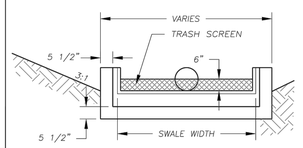
STANDARD DETAIL D11.2
DESIGNED
DRAWN
DATE 01/30/15




PLAN VIEW




SECTION A-A




SECTION B-B

NOTE:

1. ALL CONCRETE SHALL BE 3000 PSI.
2. STRUCTURE CAN BE USED AS AN AFFECTIVE TEMPORARY EROSION CONTROL SEDIMENTATION TRAP DURING SITE GRADING.
3. TRASH SCREEN CAN BE LINED WITH FILTER FABRIC FOR SEDIMENT REMOVAL.
4. SEDIMENTATION TRAP IS REQUIRED WITH ALL SWALES, UNLESS OMISSION APPROVED BY REVIEWING AUTHORITY.

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DWG: D11.5.DWG

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BIOFILTRATION SWALE SEDIMENTATION TRAP

APPROVED
COUNTY ENGINEER

01/07/16
DATE

STANDARD DETAIL D11.5
DESIGNED
DRAWN
DATE 01/30/15

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Stormwater Details For:

# Riverside Neighborhood Park

A Site Located In The City Of La Center, Washington

Engineering - Surveying - Planning | 604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539

Revisions

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
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TRAVIS G. JOHNSON
STATE OF WASHINGTON
24929
REGISTERED PROFESSIONAL ENGINEER
6-15-21

| | |
|---|---|
| Project No. 2641 | |
| SCALE: | H: N/A<br>V: N/A |
| DESIGNED BY: | MJM |
| DRAFTED BY: | MJM |
| REVIEWED BY: | TJG |

10
29

1. MATERIALS AND CONSTRUCTION METHODS SHALL BE IN CONFORMANCE WITH THE "CITY OFLA CENTER STANDARDS" AND THE LATEST EDITION OF THE "WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE & MUNICIPAL CONSTRUCTION" AS PREPARED BY WSDOT AND THE WASHINGTON STATE CHAPTER OF THE APWA.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION AND TO NOTIFY THE ENGINEER OF ANY POTENTIAL CONFLICTS. THE CONTRACTOR SHALL DIG TEST HOLES OVER ALL EXISTING UTILITIES PRIOR TO CONSTUCTION TO DETERMINE THEIR EXACT LOCATION. CALL 1-800-424-5555, (NORTHWEST UTILTY NOTIFICATION CENTER), FOR MARK-UP OF EXISTING UTILITIES, A MINIMUM OF 2 WORKING DAYS PRIOR TO START OF CONSTRUCTION.
3. THE CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR TWO WORKING DAYS PRIOR TO THE START OF CONSTRUCTION, AND APPROVAL OF THE CONSTRUCTION WILL BE BY THE CITY PUBLIC WORKS DEPARTMENT.
4. AN APPROVED TRAFFIC CONTROL PLAN WILL BE REQUIRED PRIOR TO THE START OF CONSTRUCTION WITHIN A CITY OR COUNTY RIGHT-OF-WAY.
5. COMPACTION SHALL BE AS FOLLOWS:
   -SUBGRADE SHALL BE COMPACTED TO A DEPTH OF 6" AT 95% OF THE RELATIVE DRY DENSITY.
   -ASPHALT CONCRETE SHALL BE COMPACTED TO 95% OF THE MAXIMUM RELATIVE DENSITY.
   -CRUSHED ROCK SHALL BE COMPACTED TO 95% STANDARD DENSITY.
6. STREET SIGNS SHALL BE INSTALLED BY THE DEVELOPER. THE CITY WILL PROVIDE STREET SIGNS TO THE DEVELOPER.
7. THE DEVELOPER SHALL BE RESPONSIBLE FOR PROVIDING ALL CROSSWALK SIGNS, CENTERLINE STRIPING, AND CURB RETURN PAINTING. ALL PERMANENT STRIPING TO BE THERMOPLASTIC.
8. THE DEVELOPER SHALL BE RESPONSIBLE FOR THE COST OR PROPORTIONAL SHARE OF THE STREET LIGHT INSTALLATION.
9. MAIL BOXES SHALL HAVE 12" MINIMUM CLEARANCE FROM THE BACK OF THE SIDEWALK.
10. A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED WITH THE CITY PRIOR TO BEGINNING OF CONSTRUCTION.
11. TRENCH BACKFILL REQUIREMENTS WILL BE PER STANDARD DETAIL SS-4 AND ST17 - ST19. PIPE BEDDING REQUIREMENTS WILL BE PER STANDARD DETAIL SS-5.
12. ALL WATER SYSTEM IMPROVEMENTS WILL BE APPROVED BY CLARK PUBLIC UTILITIES PRIOR TO THE START OF CONSTRUCTION.
13. ALL SIGNING AND STRIPING WILL MEET THE REQUIREMENTS OF THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (MUTCD), AS AMENDED BY WSDOT.

## STREETS & SIDEWALKS GENERAL NOTES

PLAN # ST-1

CITY OF LA CENTER APPROVED

Bart Stapp, PE 7/23/09

CITY ENGINEER DATE

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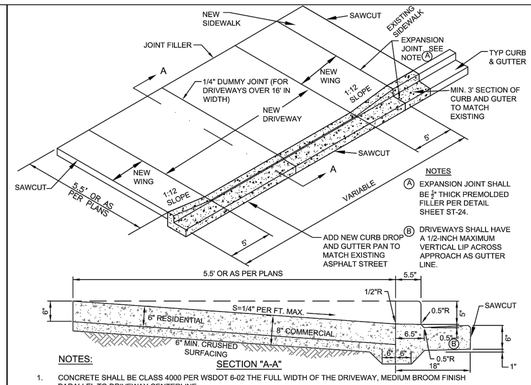


NOTES
- (A) EXPANSION JOINT SHALL BE ½" THICK PREMOLDED FILLER PER DETAIL SHEET ST-24.
- (B) DRIVEWAYS SHALL HAVE A 1/2-INCH MAXIMUM VERTICAL LIP ACROSS APPROACH AS GUTTER LINE.

NOTES:
1. CONCRETE SHALL BE CLASS 4000 PER WSDOT 6-02 THE FULL WIDTH OF THE DRIVEWAY, MEDIUM BROOM FINISH PARALLEL TO DRIVEWAY CENTERLINE.
2. TO BE USED FOR SIDEWALK ADJACENT TO CURB ONLY.
3. ALL JOINTS SHALL BE FINISHED WITH A 1/4" RADIUS EDGE UNLESS OTHERWISE NOTED.
4. DRIVEWAYS EXCEEDING 15' IN TOTAL WIDTH SHALL HAVE ADDITIONAL LONGITUDINAL JOINTS AS DIRECTED. 1-1/2" DEEP CUT JOINT SPACING SHALL NOT EXCEED 15'.
5. COMMERCIAL DRIVEWAYS REQUIRE REINFORCING STEEL (6x6-W2.9xW2.9 WWF, MIN)
6. ALL EXISTING EDGES OF S/W, AND CURB AND GUTTER SHALL BE SAW CUT WHEN CONSTRUCTING NEW DRIVEWAY.
7. COMPACT SUBGRADE TO 95 % OF MAXIMUM DENSITY.
8. EXISTING CURB SHALL BE REMOVED TO EXISTING JOINT OR SAWCUT SUCH THAT A MINIMUM OF 3' SECTION OF CURB WILL BE CONSTRUCTED ADJACENT TO THE NEW DRIVEWAY WING.
9. RESIDENTIAL DRIVEWAY LOCATION SHALL BE A MINIMUM OF 5' FROM THE PROPERTY LINE.
10. RESIDENTIAL DRIVEWAY WIDTH CAN NOT EXCEED 40% OF TOTAL LOT FRONTAGE. THE MAXIMUM RESIDENTIAL DRIVEWAY WIDTH IS 22' FOR TWO CAR GARAGES (MINIMUM LOT FRONTAGE OF 62.5') & 30' FOR THREE CAR GARAGES (MINIMUM LOT FRONTAGE OF 75').
11. 6" OF CRUSHED SURFACING PER WSDOT 9-03.9(3) SHALL BE USED UNDER DRIVEWAY AND SIDEWALK
12. WHEN CUTTING EXISTING CURB AND GUTTER TO PLACE DRIVEWAY, THE CURB AND GUTTER WILL BE REPLACED TO MATCH EXISTING CURB. FOR THE NEW DRIVEWAY NEW CURB DROP AND GUTTER MUST BE CONSTRUCTED TO CONNECT TO THE EXISTING STREET SECTION. CONTRACTOR IS RESPONSIBLE FOR COMPLETING NEW CURB, DRIVWAY, AND SIDEWALK TO EXPANSION JOINTS.
13. DRIVEWAY WINGS SHALL HAVE A MAXIMUM SLOPE OF 1:12. IF A 1:12 SLOPE CANNOT BE ACHIEVED WITHIN 15' DUE TO THE SLOPE OF THE ROAD, THE WING LENGTH WILL BE 15' REGARDLESS OF THE RESULTING SLOPE.

## RESIDENTIAL/COMMERCIAL DRIVEWAY (WITHOUT PLANTER STRIP)

PLAN # ST-3

CITY OF LA CENTER APPROVED

Anthony Pecoraro 4/3/17

CITY ENGINEER DATE

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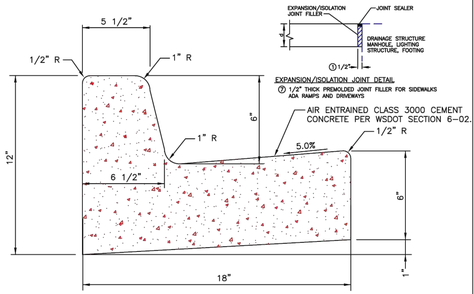
| 2 | 1/9/13 | ALC | ALC |
| 3 | 7/18/13 | ALC | ALC |
| 4 | 4/3/17 | ALC | ALC |




NOTES:
1. CURB AND GUTTER CUTS FOR DRIVEWAYS SHALL NOT BE DONE UNTIL ISSUANCE OF BUILDING AND OR RIGHT-OF-WAY PERMIT.
2. CURB AND GUTTER REPLACEMENT SECTIONS WILL BE REPLACED AS ONE CONTINUOUS UNIT, MONOLITHIC, AS THE DETAIL DEPICTS.
3. CONTRACTION JOINTS SHALL BE PLACED EVERY 15'.
4. CONCRETE SHALL BE AIR ENTRAINED CLASS 3000 CEMENT PER WSDOT SPECIFICATION 6-02 EXCEPT AT DRIVEWAYS WHERE CONCRETE WILL BE CLASS 4000.
5. USE CURB & GUTTER ON ALL NEW ROADS.
6. PROVIDE A 15' TRANSITION BETWEEN EXISTING CURBS AND NEW CURB AND GUTTERS WHERE REQUIRED.
7. INSTALL EXPANSION JOINT PER THIS DETAIL AT 60' ALONG LENGTH OF THE CURB AND GUTTER. THE EXPANSION JOINT SHALL BE PLACED AT THE SAME LOCATION OF THE SIDEWALK EXPANSION JOINT WHEN THE CURB IS ADJACENT TO THE SIDEWALK.

## CURB & GUTTER DETAIL

PLAN # ST-5

CITY OF LA CENTER APPROVED

TONY COOPER 9/22/10

CITY ENGINEER DATE

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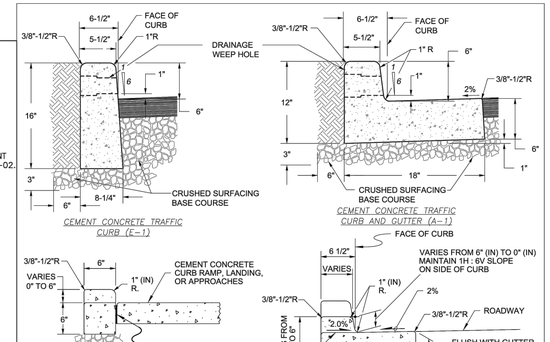


NOTES
1. CONCRETE SHALL BE CLASS 3000 MIN.
2. CURBS ADJACENT TO PAVEMENT OR SIDEWALK TO HAVE EXPANSION AND/OR CONTROL JOINTS TO MATCH EXISTING PATTERNS.
3. EXPANSION JOINTS TO BE PROVIDED AT THE BEGINNING AND END OF CURB RETURNS, ALL CHANGES IN DIRECTION, COLD JOINTS WITH EXISTING CURB, DRAINAGE STRUCTURES, AND DRIVEWAYS. SEE STD. DETAIL F31 FOR JOINTS.
4. CONTROL JOINTS TO BE PLACED AT 15' MAXIMUM SPACING. SEE STD. DETAIL F31.
5. CRUSHED SURFACING BASE COURSE SHALL BE TO SUBGRADE OF STREET SECTION OR MIN. 3" THICK, WHICHEVER IS GREATER, AND SHALL EXTEND 6" BEHIND BACK OF CURB. THE SUBGRADE AND CRUSHED SURFACING MATERIALS SHALL BE COMPACTED TO 95% MAX DRY DENSITY.
6. DRAINAGE WEEP HOLES TO BE 3" I.D. PLASTIC PIPE WITH COUPLING. FINISH PIPE END FLUSH WITH FACE OF CURB.
7. DRAINAGE WEEP HOLES THROUGH EXISTING CURBS SHALL BE CORE DRILLED.
8. CURB TO BE BRUSH FINISHED. WHEN POURING NEW CURBS ADJACENT TO EXISTING, ALL EXISTING EDGES SHALL BE SAWCUT.

DWG: F18.DWG

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CLARK COUNTY WASHINGTON
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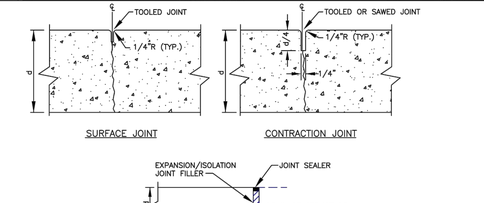
CONCRETE CURBS

APPROVED

COUNTY ENGINEER 01/26/16 DATE

STANDARD F18 DETAIL

DESIGNED DRAWN DATE: 01/26/16




CONVENTIONAL CONSTRUCTION

| AASHTO SOIL TYPE | ASPHALT THICKNESS | BASE ROCK THICKNESS |
|---|---|---|
| A-1 | 0.45' | 0.45' |
| A-2 | 0.45' | 0.45' |
| A-3 | 0.45' | 0.55' |
| A-4 | 0.45' | 0.65' |
| A-5 | 0.45' | 1.15' |
| A-6 | 0.45' | 1.55' |
| A-7 | 0.50' | 2.05' |
| OTHER | NO SECTION | ESTIMATED |

THICK ASPHALT CONSTRUCTION

| AASHTO SOIL TYPE | ASPHALT THICKNESS | BASE ROCK THICKNESS |
|---|---|---|
| A-1 | 0.52' | 0.25' |
| A-2 | 0.52' | 0.25' |
| A-3 | 0.55' | 0.25' |
| A-4 | 0.62' | 0.25' |
| A-5 | 0.72' | 0.25' |
| A-6 | 0.82' | 0.25' |
| A-7 | 1.00' | 0.25' |
| OTHER | NO SECTION | ESTIMATED |

NOTES:
1. WIDER SIDEWALKS MAY BE REQUIRED BY REVIEWING AUTHORITY UNDER CERTAIN CIRCUMSTANCES.
2. SUBGRADE REINFORCEMENT GEOTEXTILES SHALL BE INSTALLED OVER A-6 AND A-7 SOILS PRIOR TO CONSTRUCTING THE BASE AND SURFACING.
3. ASPHALT SURFACE FOR ALL ROADS SHALL BE CLASS ½" PG 64-22 HMA PER WSDOT STANDARD SPECIFICATIONS.
4. THE PAVEMENT STRUCTURE THICKNESSES IDENTIFIED FOR THESE SOIL TYPES ARE REQUIRED UNLESS A SITE SPECIFIC PAVEMENT DESIGN IS DONE. THE TOTAL PAVEMENT STRUCTURE SHALL NOT EXCEED 2.5 FEET.
4. EITHER CONVENTIONAL OR THICK ASPHALT CONSTRUCTION IS ALLOWED.
5. BASE ROCK SECTION SHALL BE TWO (2) INCHES OF 5/8"- 0" TOP COURSE, OVER REMAINING DEPTH OF BASE COURSE PER WSDOT STANDARD SPECIFICATION SECTION 9-03.9(3). TOTAL BASE ROCK SECTION THICKNESS AS INDICATED IN THE TABLES.

## MINOR ARTERIAL "A"

PLAN # ST-12A

CITY OF LA CENTER APPROVED

TONY COOPER 8/23/16

CITY ENGINEER DATE

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SHOULDER ROCK:
1. 0.50 FT. MINIMUM DEPTH (1 1/4" MINUS) CRUSHED ROCK. (CITY APPROVED MATERIAL).
2. COMPACTED TO 95% OF MAXIMUM DENSITY. SEE TRENCH ZONE.
3. ROCK SHALL EXTEND FROM E.O.P. TO THE BACK OF TRENCH AT APPROX. .05 FT./FT. SLOPE.

LAWN & LANDSCAPE AREAS:
1. A CITY APPROVED TOP SOIL SHALL BE PLACED 0.50 FT. IN DEPTH.
2. AREA TO BE RESTORED TO MATCH EXISTING.

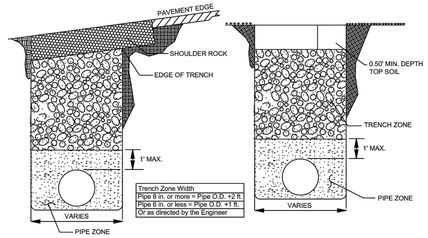
TRENCH ZONE:

WHERE THE DISTANCE FROM E.O.T. TO E.O.P. IS LESS THAN OR EQUAL TO THE DEPTH OF THE TRENCH; THESE CONDITIONS SHALL APPLY:

1. GRANULAR BACKFILL AS APPROVED BY LOCAL AGENCY OR W.S.D.O.T. SPECIFICATIONS FOR GRANULAR BACKFILL COMPACTED TO 95% OF MAXIMUM DENSITY IN THE TRENCH ZONE USING METHOD C COMPACTION AS PER SECTION 2-03.3 (14)C.
2. NATIVE MATERIAL MAY BE USED IF APPROVED PRIOR TO CONSTRUCTION.
3. TRENCH ZONE WIDTH – SEE BELOW.
4. SHOULDER ROCK AR LANDSCAPED SECTIONS AS APPLICABLE.

PIPE ZONE:
1. PIPE ZONE MATERIAL OPTIONAL, OR AS SPECIFIED BY UTILITY OWNER AND APPROVED BY THE CITY.
2. 1.0 FT. MAXIMUM FROM TOP OF THE PIPE.

CONDITIONS:
1. A COPY OF THE ROW PERMIT AND REQUIREMENTS SHALL BE ON THE JOB SITE AT ALL TIMES.
2. THE PERMIT HOLDER SHALL BE RESPONSIBLE FOR ALL RESTORATION AND MAINTENCE OF DITCHES, SHOULDERS, DRIVEWAYS, LANDSCAPING, ECT.
3. CALL CITY AT 263-7665 TWENTY-FOUR HOURS PRIOR TO COMMENCING WORK.




## ROADWAY SHOULDER AND LANDSCAPE OPEN CUT UTILITY TRENCH BACKFILL DETAIL

PLAN # ST-19

CITY OF LA CENTER APPROVED

Bart Stapp, PE 9/28/10

CITY ENGINEER DATE

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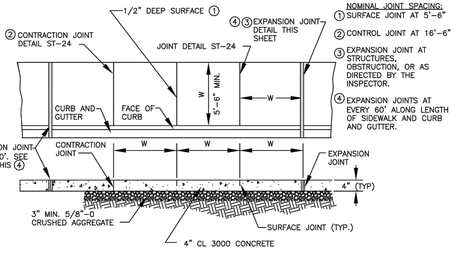


NOTES:
1. CONCRETE SHALL BE 3000 PSI MIN. (CL 3000), 3 1/2" SLUMP (MAX.).
2. COMPACT SUBGRADE AND AGGREGATE TO 95% OF MAXIMUM DRY DENSITY (3" MIN.).
3. FINISH SHALL BE MEDIUM BROOM PERPENDICULAR TO PEDESTRIAN TRAFFIC UNLESS OTHERWISE DIRECTED.
4. IN EXISTING SIDEWALK AREAS MATCH 2" SMOOTH FINISH BORDER AROUND EACH SIDEWALK PANEL IF PRESENT.
5. IF REPLACING EXISTING SIDEWALK THAT IS LESS THAN 5'-6" IN WIDTH THE MINIMUM WIDTH SHALL BE 5'.
6. ALL EXISTING EDGES SHALL BE SAWCUT.
7. CROSS SLOPE OF PLANTER STRIP SHALL BE 2% (TYP.) AND 4:1 (MAX.).
8. PLANTER STRIP IS REQUIRED ONLY FOR MAJOR AND SECONDARY ARTERIALS.

## SIDEWALK DETAIL

PLAN # ST-23

CITY OF LA CENTER APPROVED

TONY COOPER 9/28/10

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| 1 | 9/28/10 | BES | BES |
| 2 | 7/17/13 | ALC | ALC |




NOTES:
1. CONTRACTION JOINTS MAY BE USED IN PLACE OF SURFACE JOINTS.
2. CONSTRUCTION COLD JOINTS MAY BE USED IN PLACE OF CONTRACTION JOINTS.
3. CONCRETE PAVEMENT LOAD TRANSFER REQUIREMENTS ACROSS JOINTS SHALL BE DETERMINED BY PCC PAVEMENT DESIGN.
4. PARALLEL JOINTS SHALL BE SEPARATED BY A MINIMUM OF 2'.

## CONCRETE JOINTS DETAIL

PLAN # ST-24

CITY OF LA CENTER APPROVED

TONY COOPER 7/17/13

CITY ENGINEER DATE

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Transportation Details For:

# Riverside Neighborhood Park

A Site Located In The City Of La Center, Washington

Engineering - Surveying - Planning | 604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539

Revisions

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| | | | | | |

TRAVIS G. JOHNSON STATE OF WASHINGTON 24929 REGISTERED PROFESSIONAL ENGINEER 6-15-21

Project No. 2641

| SCALE: | H: N/A V: N/A |
|---|---|
| DESIGNED BY: | MJM |
| DRAFTED BY: | MJM |
| REVIEWED BY: | TJG |

11 / 29

## SANITARY SEWER GENERAL NOTES:

1. ALL MATERIALS, WORKMANSHIP AND INSTALLATION OF SANITARY SEWERS SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE "CITY OF LA CENTER STANDARDS" AND THE LATEST EDITION OF THE "WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION", HEREINAFTER REFERRED TO AS THE "STANDARD SPECIFICATIONS", PREPARED BY THE WASHINGTON STATE CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION (APWA) AND THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION, EXCEPT AS NOTED HEREIN OR ON THE STANDARD PLANS.
2. ALL SANITARY SEWER CONSTRUCTION IS SUBJECT TO INSPECTION, AND APPROVAL, PRIOR TO COVER BY THE CITY OF LA CENTER. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION. A PRE-CONSTRUCTION MEETING IS REQUIRED PRIOR BEGINNING OF THE CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION AND TO NOTIFY THE ENGINEER OF ANY POTENTIAL CONFLICTS. THE CONTRACTOR SHALL DIG TEST HOLES OVER ALL EXISTING UTILITIES PRIOR TO CONSTUCTION TO DETERMINE THEIR EXACT LOCATION. CALL 1-800-424-5555, (NORTHWEST UTILITY NOTIFICATION CENTER), FOR MARK-UP OF EXISTING UTILITIES, A MINIMUM OF 2 WORKING DAYS PRIOR TO START OF CONSTRUCTION.
4. ALL PIPE AND FITTINGS SHALL CONFORM TO LCMC 13.10.150 AND THE FOLLOWING:
   A. POLYVINYLCHLORIDE (PVC) SEWER PIPE 15" DIAMETER OR LESS SHALL CONFORM TO ASTM D3034, SDR 35. PVC PIPE 18" DIAMETER AND LARGER SHALL CONFORM TO ASTM F 679. ALL PVC PIPE SHALL HAVE AN INTEGRAL BELL GASKETED JOINT WITH ELASTOMERIC GASKET AND SHALL BE FURNISHED IN 12-1/2 FOOT LAYING LENGTHS.
   B. DUCTILE IRON (DI) PIPE SHALL CONFORM TO ANSI A21.51 OR AWWA C-151, WITH PUSH-ON JOINTS, UNLESS OTHERWISE NOTED.
5. MANHOLES, CLEANOUTS, SERVICE LATERAL CONNECTIONS, TRENCH EXCAVATION, PIPE BEDDING AND STREET RESTORATION, AND APPURTENANCES SHALL CONFORM TO THE DETAILS SHOWN ON THE STANDARD PLANS. ALL OTHER CONSTRUCTION SHALL CONFORM TO THE LATEST STANDARD DETAILS CONTAINED IN THE WSDOT "STANDARD PLANS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION".
6. ALL SANITARY MANHOLES INSTALLED WITHIN AN EASEMENT OR OUTSIDE THE CITY RIGHT-OF-WAY SHALL HAVE LOCKING LID COVERS AND EXTEND ONE FOOT (1') ABOVE GRADE.
7. THE CONTRACTOR SHALL OBTAIN A RIGHT-OF-WAY PERMIT FOR WORK WITHIN THE PUBLIC RIGHT OF WAY. THE CONTRACTOR SHALL SUBMIT AN APPROVED TRAFFIC CONTROL PLAN. INSIDE THE CITY THIS PLAN SHALL BE APPROVED BY THE CITY OF LA CENTER PUBLIC WORKS DIRECTOR OR DESIGNEE AND OUTSIDE THE CITY IT SHALL BE APPROVED BY THE CLARK COUNTY TRAFFIC ENGINEER (360-397-2446). APPROVAL SHALL BE OBTAINED PRIOR TO BEGINNING CONSTRUCTION.
8. ALL PIPES SHALL BE PLUGGED AT THE END OF EACH WORKING DAY.
9. ALL TRENCHES SHALL BE FILLED AND COMPACTED UP TIGHT AT THE END OF EACH WORKING DAY.
10. A CLEANOUT OR MANHOLE IS REQUIRED AT THE END OF ALL LINES.
11. PRE-PAVEMENT AS-BUILTS ARE REQUIRED.

| GENERAL SANITARY SEWER NOTES | PLAN # |
|---|---|
| CITY OF LA CENTER APPROVED — Bart Stapp, PE 7/23/09 — CITY ENGINEER — DATE | SS-1 |

| REVISIONS: | DATE: | DRAWN: | DESIGNED: |
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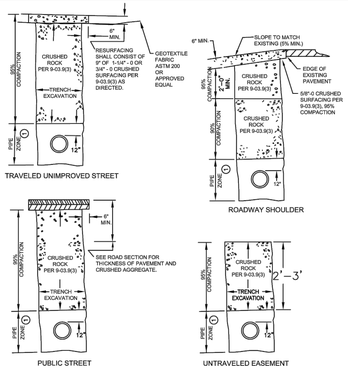


NOTES:

1. FOR PIPE ZONE BEDDING, BACKFILL AND COMPACTION REQUIREMENTS, SEE SS-5.
2. COMPACTION PERCENTAGES REFER TO RELATIVE DRY DENSITY AS DETERMINED ACCORDING TO STANDARD SPECIFICATIONS SECTION 2-03.3(14)D.
3. CONTRACTOR MAY USE UP TO 2-1/2" OF 5/8" - 0 OR 3/4" - 0 CRUSHED AGGREGATE IN LIEU OF 1-1/4" - 0 BASE ROCK UNDER SURFACING FOR LEVELING COURSE.
4. ALL EXISTING PAVED SURFACES SHALL BE SAW CUT A MINIMUM OF 6" OUTSIDE OF EDGE OF TRENCH TO PROVIDE A NEAT STRAIGHT EDGE.
5. THE EDGES OF ALL EXISTING ASPHALT SURFACES SHALL BE CLEANED AND A TACK COAT SHALL BE APPLIED. A JOINT SEALER SHALL BE APPLIED AND SHALL CONFORM TO WSDOT STANDARD SPECIFICATIONS, (9-04). ALL JOINTS WILL BE SEALED AND SANDED.
6. ALL BACKFILL SHALL BE MECHANICALLY COMPACTED IN LIFTS WHICH IN NO CASE EXCEED 12" LOOSE.

| TYPICAL TRENCH BACKFILL | PLAN # |
|---|---|
| CITY OF LA CENTER APPROVED — Bart Stapp, PE 7/23/09 — CITY ENGINEER — DATE | SS-4 |

| REVISIONS: | DATE: | DRAWN: | DESIGNED: |
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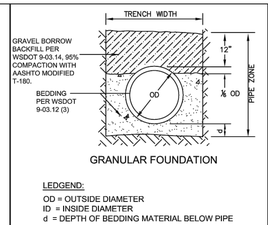
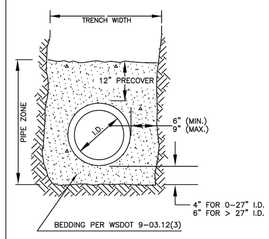



LEDGEND:
OD = OUTSIDE DIAMETER
ID = INSIDE DIAMETER
d = DEPTH OF BEDDING MATERIAL BELOW PIPE

| DEPTH OF BEDDING MATERIAL BELOW PIPE | |
|---|---|
| ID | d (min) |
| 18" & SMALLER | 6" |
| LARGER THAN 18" | 8" |

RIGID PIPE




NOTES:

1. WHERE DIRECTED BY THE PUBLIC WORKS DIRECTOR, GRANULAR TRENCH FOUNDATIO STABILIZATION SHALL BE PLACED PRIOR TO PLACEMENT OF THE BEDDING. SIZE AND DEPTH ARE DEPENDENT ON SOIL CONDITIONS.
2. BEDDING AND BACKFILL MATERIALS IN THE PIPE ZONE SHALL BE COMPACTED AS SPECIFIED PRIOR TO BACKFILLING THE REMAINDER OF THE TRENCH.
3. FOR ROCK AND OTHER INCOMPRESSIBLE MATERIALS, THE TRENCH SHALL BE OVER EXCAVATED A MINIMUM OF 6" AND REFILLED WITH GRANULAR MATERIALS AS DIRECTED BY THE PUBLIC WORKS DIRECTOR.
4. IMPORTED GRANULAR MATERIAL SHALL BE USED FOR UTILITY TRENCH BACKFILL. THE CONTACTOR SHALL NOTIFY THE ENGINEER AT LEAST 72 HOURS PRIOR TO USE. THE PUBLIC WORKS DIRECTOR MAY APPROVE, REJECT OR REQUIRE LABORATORY TESTING OF THE MATERIAL.
5. TRENCH WIDTH SHALL NOT EXCEED ONE AND ONE-HALF THE INSIDE DIAMETER OF THE PIPE PLUS 18" AT THE TOP OF THE PIPE ZONE.
6. APPROVAL FOR SUCH ALTERNATE MATERIALS WILL BE GRANTEDUPON CONFIRMATION BY TEST OF ITS COMPLIANCE WITH THESE REQUIREMENTS.
7. ALTERNATIVE PRE-COVER MATERIALS ARE ALLOWABLE FROM PIPE CENTERLINE TO ONE FOOT ABOVE THE TOP OF THE PIPE FOR FLEXIBLE PIPE. ALTERNATE PRE-COVER MATERIALS MUST BE PREAPPROVED BY THE INSPECTOR AND MAY BE SAND, CRUSHER SCREENINGS, GRAVEL, OR OTHER CLEAN GRANULAR MATERIAL CONTAINING NO ROCK LARGER THAN 1-1/4" IN LENGTH.

| PIPE BEDDING (RIGID AND FLEXIBLE PIPE) | PLAN # |
|---|---|
| CITY OF LA CENTER APPROVED — Bart Stapp, PE 7/23/09 — CITY ENGINEER — DATE | SS-5 |

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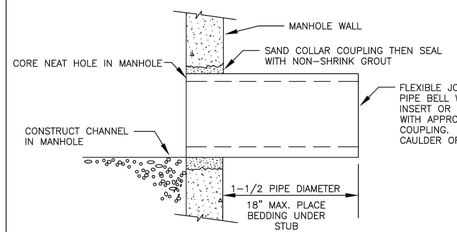


FOUR TYPES OF CONNECTIONS APPROVED:

1. CONCRETE PIPE, GROUTED WITH NON-SHRINK GROUT.
2. APPROVED EXPANSION TYPE RUBBER BOOT; KOR-N-SEAL OR SEALTITE, (NO FLEX JOINT REQUIRED).
3. GPK PVC EPOXY-SAND COATED MANHOLE ADAPTOR, GROUTED WITH NON-SHRINK GROUT.
4. JOHN MANSVILLE GASKETED SLEEVE TRANSITE COUPLING - CLASS 100, GROUTED WITH NON-SHRINK GROUT AND SEALED WITH NON-HARDENING NEOPRENE, SILCONE OR BUTYL RUBBER WATERPROOF CAULK NEXT TO GASKET - BOTH SIDES OF MANHOLE.

NOTES:

1. CENTER STUB OR SLEEVE IN HOLE W/2" GROUTED SPACE ALL AROUND. CORE HOLE 4" LARGER THAN O.D. OF STUB OR SLEEVE.
2. STANDARD GROUT WILL NOT BE ACCEPTED AS A SUBSITUTE FOR NON-SHRINK GROUT. NON-SHRINK GROUT SHALL BE FIVE STAR, SIKA 212, EUCO N-5 OR AS APPROVED.
3. STUB-OUTS INSTALLED FOR FUTURE EXTENSION ARE TO BE PLUGGED AT BOTH ENDS AND MARKED.

| MANHOLE CONNECTION DETAILS | PLAN # |
|---|---|
| CITY OF LA CENTER APPROVED — Bart Stapp, PE 7/23/09 — CITY ENGINEER — DATE | SS-9 |

| REVISIONS: | DATE: | DRAWN: | DESIGNED: |
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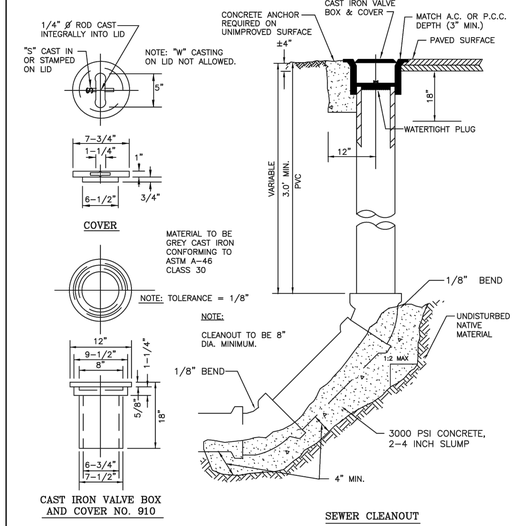


| STANDARD SEWER CLEANOUT | PLAN # |
|---|---|
| CITY OF LA CENTER APPROVED — Bart Stapp, PE 7/23/09 — CITY ENGINEER — DATE | SS-14 |

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Know what's **below.** **Call** before you dig.

Sewer Details For:
# Riverside Neighborhood Park
A Site Located In The City Of La Center , Washington

PLS ENGINEERING
Engineering - Surveying - Planning | 604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539

Revisions

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TRAVIS G. JOHNSON — STATE OF WASHINGTON — 22929 — REGISTERED PROFESSIONAL ENGINEER
6-15-21

Project No. 2641

| SCALE: | H: N/A V: N/A |
|---|---|
| DESIGNED BY: | MJM |
| DRAFTED BY: | MJM |
| REVIEWED BY: | TJG |

12
29

## EROSION CONTROL GENERAL NOTES I

1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE AND IN WORKING CONDITION PRIOR TO ANY LAND DISTURBING ACTIVITY CAUSED BY CLEARING OR GRADING. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE APPROVED BY THE CITY PRIOR TO THE COMMENCEMENT OF WORK. THE CONTRACTOR SHALL CALL FOR AN ON-SITE INSPECTION WHEN EROSION AND SEDIMENT CONTROL MEASURES ARE IN PLACE AND PRIOR TO COMMENCEMENT OF WORK.

2. THE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE SITED, DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS IN THE CITY OF LA CENTER ENGINEERING STANDARDS FOR PUBLIC WORKS CONSTRUCTION.

3. THE DEVELOPER IS RESPONSIBLE FOR MAINTAINING EROSION PREVENTION AND SEDIMENT CONTROL MEASURES DURING AND AFTER INSTALLATION OF ALL UTILITY WORK ASSOCIATED WITH UTILITY TRENCHES.

4. PRIOR TO ANY SITE EXCAVATION, ALL STORM DRAINAGE INLETS SHALL BE PROTECTED DOWN SLOPE FROM ANY DISTURBED OR CONSTRUCTION AREAS PER THE STANDARD DETAILS TO PREVENT SEDIMENT FROM ENTERING THE STORM DRAINAGE SYSTEM PRIOR TO PERMANENT STABILIZATION OF THE DISTURBED AREAS. CLEAN THE FILTER FABRIC AS NECESSARY TO MAINTAIN DRAINAGE. REMOVE FILTER AND CLEAN CATCH BASINS FOLLOWING COMPLETION OF SITEWORK.

5. THE CONTRACTOR SHALL NOT ALLOW SEDIMENT OR DEBRIS TO ENTER NEW OR EXISTING PIPES, CATCH BASINS OR INFILTRATION SYSTEMS.

6. NEWLY CONSTRUCTED OR MODIFIED INLETS AND CATCH BASINS ARE TO BE PROTECTED IMMEDIATELY UPON INSTALLATION.

7. TEMPORARY SEEDING AND MULCHING OF FILL SLOPES AND DIVERSION DIKES SHALL BE COMPLETED WITHIN ONE WEEK AFTER ROUGH GRADING.

8. ALL EXPOSED AND UNWORKED SOILS SHALL BE STABILIZED BY THE APPROPRIATE BEST MANAGEMENT PRACTICES (BMPs). DURING THE PERIOD FROM OCTOBER 1 TO APRIL 30 NO SOIL SHALL BE EXPOSED FOR MORE THAN TWO (2) DAYS. FROM MAY 1 TO SEPTEMBER 30 NO SOIL SHALL BE EXPOSED FOR MORE THAN SEVEN (7) DAYS.

9. MATERIAL STOCKPILES ARE TO BE PROTECTED BY THE FOLLOWING MEANS:
   - –TEMPORARY: COVER PILES WITH TARPS OR PLASTIC SHEETING WEIGHTED WITH CONCRETE BLOCKS, LUMBER OR TIRES.
   - –PERMANENT: COVER PILES WITH TARPS OR PLASTIC, OR RESEED. PERIMETER AREAS AROUND PILES ARE TO BE SURROUNDED WITH EROSION CONTROL FILTER FABRIC FENCES UNTIL SOIL SURFACE IS STABILIZED WITH RESEEDING.

10. THE CONTRACTOR SHALL MAINTAIN ON SITE A WRITTEN DAILY LOG OF EROSION CONTROL BMP MAINTENANCE.

11. IF THE CITY INSPECTOR OR ENGINEER HAS EVIDENCE OF POOR CONSTRUCTION PRACTICES OR IMPROPER EROSION PREVENTION BMPs, CITATIONS AND/OR A STOP WORK ORDER SHALL BE ISSUED UNTIL PROPER MEASURES HAVE BEEN TAKEN AND APPROVED BY THE CITY OF LA CENTER. IF THE BMPs APPLIED TO A SITE ARE INSUFFICIENT TO PREVENT SEDIMENT FROM REACHING WATER BODIES, ADJACENT PROPERTIES, OR PUBLIC RIGHT-OF-WAY, THEN THE CITY SHALL REQUIRE ADDITIONAL BMPs.

12. ALTERNATIVE BMP'S NOT SHOWN IN THESE DETAILS ARE ACCEPTABLE PROVIDED THEY ARE PART OF ECOLOGY'S WESTERN WASHINGTON STORMWATER MANAGEMENT MANUAL AND THE CITY ENGINEER REVIEWS AND APPROVES THE ALTERNATIVE BMP'S AS PART OF THE EROSION CONTROL PLAN PRIOR TO THE START OF CONSTRUCTION.

CITY OF LA CENTER APPROVED

Barb Shpp, PE 7/23/09

CITY ENGINEER DATE

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PLAN # ER-1A

## EROSION CONTROL GENERAL NOTES II

13. PROVIDE A 12-INCH DEEP PAD OF CRUSHED ROCK FOR A DISTANCE OF 100 FEET INTO THE SITE FOR ALL ACCESS POINTS UTILIZED BY CONSTRUCTION EQUIPMENT AND TRUCKS. WIDTH OF THE PAD SHALL BE A MINIMUM OF 20 FEET. ALL TRUCKS LEAVING THE SITE SHALL EGRESS ACROSS THE PAD. ACCUMULATED SOIL SHALL BE PERIODICALLY REMOVED, OR ADDITIONAL ROCK SHALL BE PLACED UPON THE PAD SURFACE. ROCK SHALL BE CLEAN 4 INCH TO 8 INCH QUARRY SPALLS. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

14. PAVEMENT SWEEPING AND SHOVELING IS REQUIRED. WASHING THE PAVEMENT INTO THE STORM SYSTEM IS NOT PERMITTED.

15. AT SITES WITH LESS THAN 1 ACRE OF EXPOSED SOIL, PAD LENGTH MAY BE REDUCED TO 50 FEET. SINGLE FAMILY LOT ENTRANCES MAY HAVE THE PAD LENGTH REDUCED TO 20 FEET.

16. INSTALL SEDIMENT FENCE IN ACCORDANCE WITH DETAIL ER-3 PRIOR TO BUILDING CONSTRUCTION AND/OR EXCAVATION TO PREVENT SILT INTRUSION UPON ADJACENT LOTS. IF CONSTRUCTION OCCURS SIMULTANEOUSLY ON ADJACENT LOTS AND THE LOTS HAVE THE SAME OWNER DURING CONSTRUCTION, THE SILT FENCE ALONG THE COMMON LOT LINE MAY BE ELIMINATED.

17. CONSTRUCTION ROADS AND PARKING AREAS SHALL BE STABILIZED WHEREVER THEY ARE CONSTRUCTED, WHETHER PERMANENT OR TEMPORARY, FOR THE USE OF CONSTRUCTION TRAFFIC.

18. MAINTAIN AND REMOVE ALL SEDIMENT CONTROLS AS SPECIFIED IN THE STANDARD DETAILS. THE CONTRACTOR SHALL REMOVE ALL ACCUMULATED SEDIMENT FROM THE CATCH BASINS, DRYWELLS, UTILITY TRENCHES AND STORM PIPES PRIOR TO ACCEPTANCE BY THE CITY.

19. SEDIMENT CONTROL BMPs SHALL BE INSPECTED WEEKLY AND AFTER ANY STORM EVENT PRODUCING RUNOFF. THE INSPECTION FREQUENCY FOR STABILIZED, INACTIVE SITES SHALL BE ONCE EVERY TWO WEEKS OR MORE FREQUENTLY AS DETERMINED BY THE LOCAL PERMITTING AUTHORITY BASED ON THE LEVEL OF SOIL STABILITY AND POTENTIAL FOR ADVERSE ENVIRONMENTAL IMPACTS.

20. ALL TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER SITE STABILIZATION IS ACHIEVED OR AFTER TEMPORARY BMPs ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON SITE. DISTURBED SOIL AREAS RESULTING FROM REMOVAL SHALL BE PERMANENTLY STABILIZED.

21. IN AREAS SUBJECT TO SURFACE AND AIR MOVEMENT OF DUST ONE OR MORE OF THE FOLLOWING PREVENTATIVE MEASURES SHALL BE TAKEN FOR DUST CONTROL:
   - –MINIMIZE THE PERIOD OF SOIL EXPOSURE THROUGH THE USE OF TEMPORARY GROUND COVER AND OTHER TEMPORARY STABILIZATION PRACTICES.
   - –SPRINKLE THE SITE WITH WATER UNTIL THE SURFACE IS WET.
   - –SPRAY EXPOSED SOIL AREAS WITH A DUST PALLIATIVE. NOTE: USE OF PETROLEUM PRODUCTS OR POTENTIALLY HAZARDOUS MATERIALS ARE PROHIBITED

22. EXPOSED SURFACES THAT WILL NOT BE BROUGHT TO FINAL GRADING OR GIVEN A PERMANENT COVER TREATMENT WITHIN 30 DAYS OF THE EXPOSURE SHALL HAVE SEED MIX AND MULCH PLACED TO STABILIZE THE SOIL AND REDUCE EROSION SEDIMENTATION. SEEDED AREAS SHALL BE CHECKED REGULARLY TO ASSURE A GOOD STAND OF GRASS IS BEING MAINTAINED. AREAS THAT FAIL TO ESTABLISH VEGETATION COVER ADEQUATE TO PREVENT EROSION WILL BE RESEEDED AS SOON AS SUCH AREAS ARE IDENTIFIED.

23. APPLY AN APPROVED TEMPORARY SEEDING MIXTURE TO THE PREPARED SEED BED AT A RATE OF 120 LBS/ACRE. NOTE: "HYDROSEEDING" APPLICATIONS WITH APPROVED SEED-MULCH-FERTILIZER MIXTURES MAY ALSO BE USED.

CITY OF LA CENTER APPROVED

Barb Shpp, PE 7/23/09

CITY ENGINEER DATE

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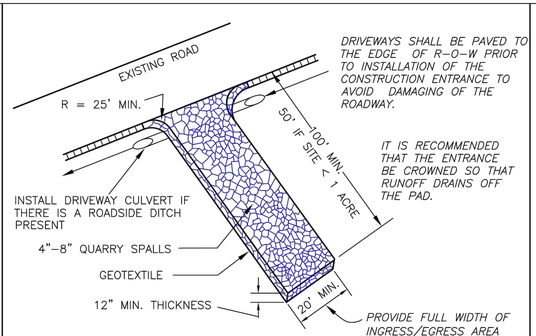
PLAN # ER-1B

## STANDARD CONSTRUCTION ENTRANCE




NOTES:

1. IF THE ENTRANCE SITS ON A SLOPE, PLACE A FILTER FABRIC FENCE DOWN GRADIENT.
2. TOP DRESS THE PAD WITH CLEAN 3" MINUS ROCK WHEN THE CONSTRUCTION ENTRANCE BECOMES CLOGGED WITH SEDIMENTS.
3. ANY SEDIMENT CARRIED FROM THE SITE ONTO THE STREET SHALL BE CLEANED UP IMMEDIATELY.
4. IF EQUIPMENT TRAVELS EXTENSIVELY ON UNSTABILIZED ROADS ON THE SITE, A TIRE AND VEHICLE UNDERCARRIAGE WASH NEAR THE ENTRANCE WILL BE NEEDED. PERFORM WASHING ON CRUSHED ROCK. WASH WATER WILL REQUIRE TREATMENT IN A SEDIMENT POND OR TRAP.

CITY OF LA CENTER APPROVED

Barb Shpp, PE 7/23/09

CITY ENGINEER DATE

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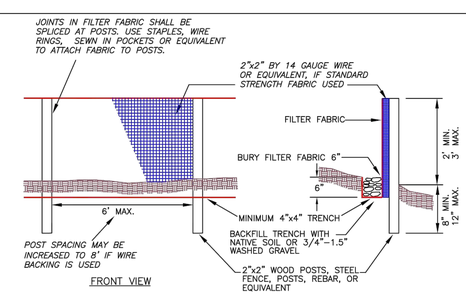
PLAN # ER-2

## FILTER FABRIC FENCE




NOTE: FILTER FABRIC FENCES SHALL BE INSTALLED ALONG CONTOUR WHENEVER POSSIBLE

MAINTENANCE STANDARDS:

1. SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
2. IF CONCENTRATED FLOWS ARE EVIDENT UPHILL OF THE FENCE, THEY MUST BE INTERCEPTED AND CONVEYED TO A SEDIMENT POND.
3. IT IS IMPORTANT TO CHECK THE UPHILL SIDE OF THE FENCE FOR SIGNS OF THE FENCE CLOGGING AND ACTING AS A BARRIER TO FLOW AND THEN CAUSING CHANNELIZATION OF FLOWS PARALLEL TO THE FENCE. IF THIS OCCURS, REPLACE THE FENCE OR REMOVE THE TRAPPED SEDIMENT.
4. SEDIMENT DEPOSITS SHALL EITHER BE REMOVED WHEN THE DEPOSIT REACHES APPROXIMATELY ONE-THIRD THE HEIGHT OF THE SILT FENCE, OR A SECOND SILT FENCE SHALL BE INSTALLED.
5. SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED IMMEDIATELY.
6. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.

CITY OF LA CENTER APPROVED

Barb Shpp, PE 7/23/09

CITY ENGINEER DATE

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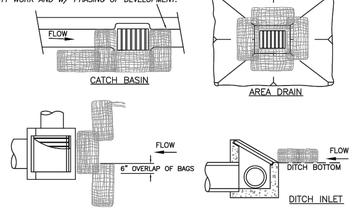
PLAN # ER-3

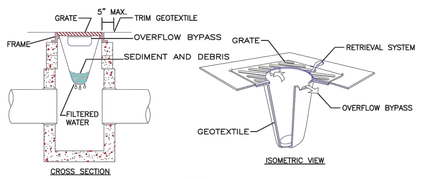
## INLET PROTECTION

BIO-FILTER BAGS OR STRAW WATTLES MAY BE USED SHORT TERM W/ UTILITY WORK AND W/ PHASING OF DEVELOPMENT.




NOTES:

1. ADDITIONAL MEASURES MUST BE CONSIDERED DEPENDING ON SOIL TYPE.
2. BIO-FILTER BAGS SHOULD BE STAKED WHERE APPLICABLE USING (2) 1"x2" WOODEN STAKES OR APPROVED EQUAL PER BAG.
3. STRAW WATTLES MUST BE STABILIZED BY ATTACHING WIRE CLIPS TO THE CATCH BASIN PER MANUFACTURER'S SPECIFICATIONS.
4. INLET PROTECTION MUST BE REGULARLY INSPECTED BY THE EROSION CONTROL INDIVIDUAL TO INSURE PROPER PLACEMENT/FUNCTION AND MAINTENANCE.




FILTER BAG

NOTES:

1. SIZE THE BELOW GRATE INLET DEVICE (BGID) FOR THE STORM WATER STRUCTURE IT WILL SERVICE.
2. THE REMOVAL SYSTEM MUST ALLOW REMOVAL OF THE BGID WITHOUT SPILLING THE COLLECTED MATERIAL.
3. THE BGID SHALL HAVE A BUILT-IN HIGH-FLOW RELIEF SYSTEM (OVERFLOW BYPASS).
4. THE CONTRACTOR SHALL INSPECT THE BAG AFTER EACH STORM EVENT AND AT REGULAR INTERVALS.
5. THE FILTER BAG SHALL BE CLEANED OR REPLACED WHEN THE BAG BECOMES HALF FULL.

CITY OF LA CENTER APPROVED

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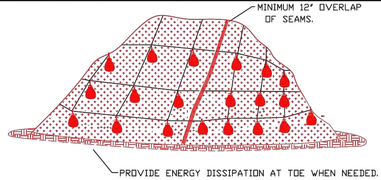
PLAN # ER-4

## PLASTIC SHEETING




PLASTIC SHEETING

NOTES:

1. PLASTIC SHEETING IS USED TO PROVIDE IMMEDIATE PROTECTION TO SLOPES AND STOCKPILES.
2. DO NOT USE PLASTIC COVERING UPSLOPE OF AREAS SUCH AS STEEP AND/OR UNSTABLE SLOPES THAT MIGHT BE ADVERSELY AFFECTED BY CONCENTRATED RUNOFF.
3. WHEN POSSIBLE, INSTALL AN INTERCEPTOR DIKE AT THE TOP OF THE PLASTIC TO DIVERT FLOWS AWAY FROM THE PLASTIC.
4. TOE-IN THE TOP OF THE SHEETING IN A 6"x6" TRENCH BACKFILLED WITH COMPACTED NATIVE MATERIAL.
5. INSTALL A GRAVEL BERM, RIPRAP, OR OTHER SUITABLE PROTECTION AT THE TOP OF THE SLOPE IN ORDER TO DISSIPATE RUNOFF VELOCITY.
6. ANCHOR THE PLASTIC USING SANDBAGS OR OTHER SUITABLE TETHERED ANCHOR SYSTEM SPACED ON A 10' GRID SPACING IN ALL DIRECTIONS.
7. OVERLAP SEAMS 1-2', TAPE, ROLL AND STAKE THE SEAMS AND THEN WEIGH DOWN THE ENTIRE LENGTH.
8. PROVIDE ENERGY DISSIPATION AT TOE WHEN NEEDED.
9. REPLACE TORN SHEETS AND REPAIR OPEN SEAMS. COMPLETELY REMOVE AND REPLACE PLASTIC WHEN IT BEGINS TO DETERIORATE.

CITY OF LA CENTER APPROVED

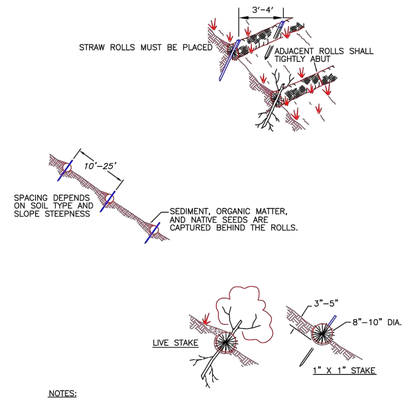
Barb Shpp, PE 7/23/09

CITY ENGINEER DATE

| REVISIONS: | DATE: | DRAWN: | DESIGNED: |
|---|---|---|---|
| | | | |

PLAN # ER-6

## STRAW WATTLES BARRIER




NOTES:

STRAW ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3"-5" DEEP, DUG ON CONTOUR. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.

STRAW WATTLES

CITY OF LA CENTER APPROVED

Anthony Peelroper 4-4-17

CITY ENGINEER DATE

| REVISIONS: | DATE: | DRAWN: | DESIGNED: |
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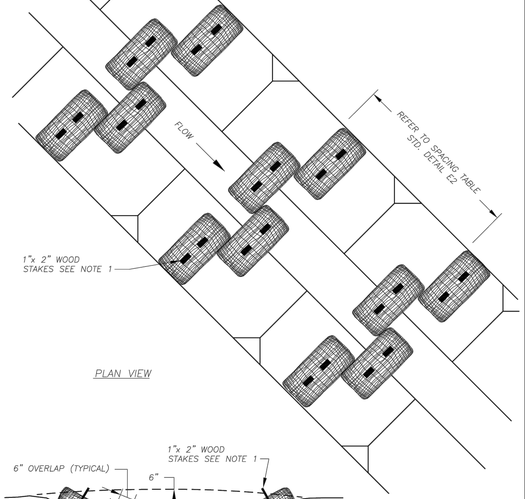
| | | | |

PLAN # ER-7




NOTES:

1. STAKING OF BAGS REQUIRED USING (2) 1"X2" WOOD STAKES OR APPROVED EQUAL PER BAG.
2. SURFACE MUST BE SMOOTH BEFORE APPLICATION.
3. SEE CHECK DAM NOTES STD. DETAIL E2.

| NO. | REVISIONS | DATE | BY |
|---|---|---|---|
| | | | |

DWG: E2a.DWG

Department of Public Works
CLARK COUNTY
WASHINGTON
proud past, promising future

BIO-FILTER BAGS
CHECK DAM

APPROVED

Peter Capell 5/23/08
COUNTY ENGINEER DATE

STANDARD E2a DETAIL

DESIGNED
DRAWN
DATE 05/23/08

Know what's **below.** **Call** before you dig.

811

ENGINEERING | PLS

Erosion Control Details For:

# Riverside Neighborhood Park

A Site Located In The City Of La Center , Washington

Engineering - Surveying - Planning | 604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539

Revisions

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
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TRAVIS G. JOHNSON
STATE OF WASHINGTON
21529
REGISTERED
PROFESSIONAL ENGINEER
6-15-21

Project No. 2641

SCALE: H: N/A V: N/A

| | |
|---|---|
| DESIGNED BY: | MJM |
| DRAFTED BY: | MJM |
| REVIEWED BY: | TJG |

13 / 29

1. PIPE FITTINGS SHALL BE GRAY-IRON OR DUCTILE IRON AND SHALL CONFORM TO AWWA STANDARD C110. DUCTILE IRON (COMPACT) FITTINGS CONFORMING TO AWWA STANDARD C153 MAY BE SUBSTITUTED IN LIEU OF AWWA C110 FITTINGS FOR FITTING SIZES 3-INCHES THROUGH 24-INCHES IN DIAMETER. FITTINGS SHALL BE MECHANICAL JOINT OR FLANGED AS REQUIRED AND SHOWN ON THE PLANS.

2. DUCTILE IRON AND GREY IRON MECHANICAL JOINT FITTINGS SHALL BE PRESSURE RATED FOR 350 PSI. DUCTILE IRON AND GREY IRON FLANGED JOINT FITTINGS SHALL BE PRESSURE RATED FOR 250 PSI.

3. FITTINGS SHALL BE MORTAR LINED AND SEAL COATED.

4. BELOW GROUND USE FLANGE ADAPTERS - THE FLANGE ADAPTER TO CONNECT PLAIN END PVC PIPE OR DIP TO FLANGED FITTINGS SHALL BE A DUCTILE IRON FITTING CONFORMING TO ANSI/AWWA C153/A21.53. FITTING SHALL BE MECHANICAL JOINT ON ONE END AND FLANGED ON THE OPPOSITE END.

5. DUCTILE IRON AND GREY IRON SOLID SLEEVES SHALL BE OF THE LONG BODY DESIGN AND BOTH ENDS MECHANICAL JOINT.

6. GASKETS FOR FLANGED JOINTS SHALL BE 1/8" THICK, FULL FACED WITH AT LEAST (3) BULB TYPE RIBS MOLDED INTO BOTH FACES.

7. MECHANICAL JOINT GASKETS SHALL BE STANDARD STYRENE BUTADIENE RUBBER (SBR) GASKETS

8. BOLTS AND NUTS SHALL BE CARBON STEEL AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 OR ASTM A193 GRADE B7 WITH ASTM A194 GRADE 2H HEAVY HEX NUTS.

9. GATE VALVES (4" TO 8") - GATE VALVES FOR BURIED SERVICE SHALL BE THE RESILIENT-SEAT TYPE, WITH AN IRON BODY, NON-RISING STEM, BOLTED BONNET, LEFT OPENING AND SHALL CONFORM TO AWWA STANDARD C509 AND C515. THE WEDGE SHALL BE TOTALLY ENCAPSULATED WITH RUBBER. ALL GATE VALVES SHALL BE RATED AT 250 PSI FOR AWWA SERVICE. THE INTERIOR AND EXTERIOR SHALL BE FUSION-BONDED EPOXY AND ALL COATINGS AND/OR LININGS SHALL CONFORM TO AWWA STANDARD C550 AND SHALL BE SUITABLE FOR POTABLE WATER SERVICE AND NSF CERTIFIED.

10. BUTTERFLY VALVES (10" AND LARGER) - BUTTERFLY VALVES SHALL BE SHORT BODY CLASS 250 VALVES CONFORMING TO THE REQUIREMENTS OF AWWA STANDARD C504. BUTTERFLY VALVES SHALL BE RUBBER SEATED AND TIGHT CLOSING. VALVE BODIES SHALL BE HIGH STRENGTH CAST IRON OR HIGH STRENGTH DUCTILE IRON. VALVE INTERIOR AND EXTERIOR SURFACES SHALL BE COATED WITH EPOXY IN ACCORDANCE WITH AWWA C504 AND SHALL BE SUITABLE FOR POTABLE WATER SERVICE AND NSF 61 CERTIFIED.

REVISED 04/17/2020

| FILE NAME | | FITTING & VALVE SPECIFICATIONS | Clark Public Utilities |
|---|---|---|---|
| 0-FV | | | |
| SHEET | 1 OF 1 | STANDARD DETAILS | |

**GENERAL INSTALLATION NOTES:**

1. INSTALL WATER MAIN WITH 3.0 FEET OF MINIMUM COVER UNLESS OTHERWISE NOTED. DEPTH MAY INCREASE AT UTILITY AND CULVERT CROSSINGS.
2. LOCATE WIRE SHALL BE COATED (BLUE INSULATED), NO. 14 GA. SOFT DRAWN SOLID COPPER. USE WATERPROOF CONNECTORS AT ALL WIRE SPLICES.
3. NEW AND REPAIRED WATER MAINS SHALL BE DISINFECTED PER AWWA C651 PRIOR TO BEING PLACED INTO SERVICE. CONNECTION TO AN EXISTING WATER MAIN MAY ONLY BE DONE AFTER PROPER DISINFECTION, TESTING, FLUSHING AND APPROVAL BY CPU.
4. WHENEVER A PIPE IS CUT AND NOT RECONNECTED, THE CUT ENDS SHALL BE CAPPED OR PLUGGED, AS DIRECTED BY THE CPU INSPECTOR.
5. ALL WATER SERVICES, BLOW-OFF ASSEMBLIES, AIR RELEASE VALVES, FIRE HYDRANT ASSEMBLIES, VALVE BOXES AND THRUST BLOCKING SHALL BE INSTALLED PER THE STANDARD SPECIFICATIONS AND DETAILS.
6. WATER MAINS BEING INSTALLED NEAR TELEPHONE/CABLE COMMUNICATIONS SHALL HAVE A MINIMUM 12" HORIZONTAL AND 6" VERTICAL CLEARANCE.
7. WATER MAINS BEING INSTALLED NEAR UNDERGROUND ELECTRICAL LINES SHALL HAVE A MINIMUM 60" HORIZONTAL AND 6" VERTICAL CLEARANCE.
8. REQUIRED SEPARATION BETWEEN WATER LINES AND SANITARY SEWER LINES SHALL BE AS FOLLOWS:

   **HORIZONTAL SEPARATIONS (PARALLEL)**
   A MINIMUM SEPARATION OF TEN (10) FEET (MEASURED EDGE TO EDGE) BETWEEN SANITARY SEWER LINES AND WATER LINES SHALL BE MAINTAINED WHENEVER POSSIBLE. WHEN CONDITIONS PREVENT THE MINIMUM TEN (10) FOOT HORIZONTAL SEPARATION THE ENGINEER SHALL BE NOTIFIED.

   **VERTICAL SEPARATION (PERPENDICULAR)**
   WATER LINES CROSSING SANITARY SEWER LINES SHALL BE LAID ABOVE THE SEWER LINES TO PROVIDE A SEPARATION OF AT LEAST 18" BETWEEN THE INVERT OF THE WATER PIPE AND THE CROWN OF THE SANITARY SEWER PIPE. A LENGTH OF WATER PIPE SHALL BE CENTERED AT THE POINT OF CROSSING AND SHALL BE THE LONGEST STANDARD LENGTH AVAILABLE FROM THE MANUFACTURER.
9. THE CONTRACTOR SHALL USE CONSTRUCTION METHODS THAT PROTECT THE PIPE INTERIORS, FITTINGS AND VALVES AGAINST CONTAMINATION.
10. ANY PIPE, FITTINGS OR VALVES THAT CANNOT BE DISINFECTED WITH THE MAIN LINE BY CHLORINE FOR 24 HOURS SHALL HAVE THE INTERIORS SWABBED WITH A 1% HYPOCHLORITE SOLUTION BEFORE INSTALLATION.
11. CONCRETE THRUST BLOCKS SHALL BE CONSTRUCTED AT ALL TEES, BENDS, DEAD ENDS AND WHERE INDICATED ON THE PLANS.
12. ALL MJ FITTINGS SHALL BE RESTRAINED USING MJ MECHANICAL RESTRAINT FOLLOWER GLANDS APPROPRIATE FOR THE PIPE MATERIAL.
13. 6" WATER PIPE LEADING TO FIRE HYDRANTS SHALL BE DIP AND SHALL BE ONE CONTINUOUS PIECE OF PIPE. IF THE RUN IS LONGER THAN ONE PIECE OF PIPE, THEN ALL PIPE JOINTS SHALL BE MECHANICALLY RESTRAINED WITH "FIELD-LOK" GASKETS OR OTHER CPU APPROVED RESTRAINTS.

REVISED 04/17/2020

| FILE NAME | | GENERAL INSTALLATION NOTES | Clark Public Utilities |
|---|---|---|---|
| 0-GI | | | |
| SHEET | 1 OF 1 | STANDARD DETAILS | |

**GENERAL NOTES:**

1. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE CLARK PUBLIC UTILITIES (CPU) WATER CONSTRUCTION SPECIFICATIONS, STANDARD DETAILS AND THE MOST CURRENT EDITION OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" PUBLISHED BY WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT).
2. A CPU WATER UTILITY INSPECTOR SHALL BE AT THE JOB SITE DURING CONSTRUCTION OF ALL WATER FACILITIES. CONTACT 360-992-8019 TWO WORKING DAYS PRIOR TO COMMENCING WORK.
3. WORK WITHIN COUNTY RIGHT-OF-WAY SHALL CONFORM WITH CLARK COUNTY PUBLIC WORKS UTILITY PERMIT REQUIREMENTS AND DETAILS. WORK WITHIN STATE RIGHT-OF-WAY SHALL CONFORM TO WSDOT UTILITY PERMIT REQUIREMENTS AND DETAILS.
4. VALVE SHALL BE 2" SQUARE OPERATING NUT OR AS SPECIFIED ON PLANS.
5. THE LOCATION OF THE UTILITIES SHALL BE VERIFIED IN ADVANCE TO ALLOW FOR ALIGNMENT ADJUSTMENTS. CALL UTILITY LOCATES TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION (1-800-424-5555).
6. ONLY TAPPING COMPANIES APPROVED BY CLARK PUBLIC UTILITIES SHALL BE USED TO MAKE ALL TAPS.
7. ACTUAL ROAD ALIGNMENTS MAY VARY FROM RIGHT-OF-WAY INDICATED. THE CONTRACTOR SHALL VERIFY THE PROPOSED PIPE ALIGNMENT AND REPORT DIFFERENCES TO THE CPU INSPECTOR. ALL ALIGNMENT CHANGES MUST BE APPROVED BY THE CPU INSPECTOR PRIOR TO INSTALLATION.
8. DRIVEWAYS DISTURBED BY CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR TO "LIKE" OR BETTER CONDITION. REFER TO PLAN FOR APPROXIMATE LOCATIONS AND TYPES.
9. CONTRACTOR SHALL VERIFY EXISTING UTILITY CULVERTS, CONDUITS AND LINE LOCATION PRIOR TO CONSTRUCTION. DUE TO FIELD CONDITIONS, THE CONTRACTOR SHALL FIELD ADJUST THE VERTICAL AND HORIZONTAL ALIGNMENT OF THE WATER MAIN TO CLEAR THE UTILITY IN CONFLICT AND PROVIDE THE MIN. 3.0 FEET OF COVER AS APPROVED BY THE CPU INSPECTOR. ALL CULVERTS WHICH ARE DISTURBED BY CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR IN ACCORDANCE WITH THE SPECIFICATIONS.
10. FENCES DISTURBED BY CONSTRUCTION SHALL BE RESTORED OR REPLACED BY THE CONTRACTOR TO "LIKE" OR BETTER CONDITION.
11. CONTRACTOR SHALL VERIFY EXISTING SIGN AND MAILBOX LOCATIONS PRIOR TO CONSTRUCTION. SIGNS & MAILBOXES THAT ARE DISTURBED BY CONSTRUCTION SHALL BE RELOCATED BACK FROM EDGE OF PAVEMENT, 1.0 FEET CLEAR OF WATER MAIN. ANY SIGNS OR MAILBOXES DAMAGED SHALL BE REPAIRED OR REPLACED AS PER THE SPECIFICATIONS.
12. THE LOCATIONS OF ALL EXISTING UTILITIES ARE FOR INFORMATIONAL PURPOSES ONLY. MANY LOCATIONS ARE PER SCHEMATIC RECORD DRAWINGS. THE CURRENT AND EXACT LOCATIONS OF FACILITIES MUST BE VERIFIED PRIOR TO CONSTRUCTION. THE CONTRACTOR PERFORMING THE WORK SHALL COMPLY WITH THE PROVISIONS OF FACILITIES AT LEAST 48 BUSINESS DAY HOURS PRIOR TO EXCAVATION. CALL 1-800-553-4344 FOR UTILITY LOCATE SERVICE.
13. THE WATER FACILITIES SHALL BECOME THE PROPERTY OF CLARK PUBLIC UTILITIES AFTER A SATISFACTORY BACTERIA AND PRESSURE TEST HAVE BEEN PERFORMED BY THE UTILITY. ALL MATERIALS AND WORKMANSHIP ARE SUBJECT TO A ONE YEAR WARRANTY, COMMENCING AT ACCEPTANCE OF FINAL TESTING. REPLACEMENT AND/OR REPAIRS OF DEFECTIVE MATERIALS SHALL BE THE DEVELOPERS/OWNERS RESPONSIBILITY.
14. WHEN ASBESTOS CONCRETE PIPE IS ENCOUNTERED, THE CONTRACTOR SHALL SUPPLY WORKERS WHO ARE CERTIFIED TO WORK ON ASBESTOS CONCRETE PIPE.
15. THE CONTRACTOR SHALL TRANSFER AND/OR ABANDON EXISTING SERVICES AS DIRECTED BY THE INSPECTOR.
16. THE INSTALLED WATER MAIN SHALL BE PRESSURE TESTED AT A MINIMUM OF 200 PSI OR 1.5 TIMES THE WORKING PRESSURE, WHICHEVER IS GREATER. THE TEST WILL BE PERFORMED BY THE CLARK PUBLIC UTILITIES INSPECTOR. THE CONTRACTOR SHALL PROVIDE ASSISTANCE AS NEEDED.
17. THE INSTALLED WATER MAIN SHALL BE THOROUGHLY DISINFECTED AND FLUSHED IN ACCORDANCE WITH THE CLARK PUBLIC UTILITIES STANDARDS AND REQUIREMENTS. ONLY CLARK PUBLIC UTILITIES EMPLOYEES ARE PERMITTED TO FILL AND FLUSH THE WATER MAIN. THE CONTRACTOR SHALL PROVIDE ASSISTANCE AS NEEDED. IN AREAS WHERE THE DE-CHLORINATION OF FLUSHED WATER IS NOT POSSIBLE, THE CONTRACTOR SHALL PROVIDE WATER TRUCKS TO FLUSH INTO.
18. PRIOR TO ACCEPTING THE SYSTEM OR ALLOWING THE MAIN TO BE PUT IN SERVICE, A WATER SAMPLE SHALL BE TAKEN BY THE CLARK PUBLIC UTILITIES INSPECTOR AND A TEST PERFORMED BY AN ACCREDITED LAB TO INSURE NO HAZARD EXISTS.

REVISED 04/17/2020

| FILE NAME | | GENERAL NOTES | Clark Public Utilities |
|---|---|---|---|
| 0-GN | | | |
| SHEET | 1 OF 1 | STANDARD DETAILS | |

**MECHANICAL JOINT RESTRAINT SPECIFICATIONS**

1. MECHANICAL JOINT RESTRAINT SHALL BE ACCOMPLISHED BY A RESTRAINT DEVICE CONSISTING OF A FOLLOWER GLAND UTILIZING MULTIPLE GRIPPING WEDGES. GLAND BODY AND WEDGES SHALL BE DUCTILE IRON AND EPOXY COATED.
2. T-BOLTS AND NUTS SHALL BE HIGH STRENGTH LOW ALLOY STEEL T-BOLTS AND STEEL SHALL MEET AWWA C111 COMPOSITION SPECIFICATIONS.
3. RESTRAINT GLAND SHALL UTILIZE A STANDARD MECHANICAL JOINT GASKET.
4. THE FOLLOWING IS THE APPROVED LIST OF RESTRAINED JOINT SYSTEMS FOR MECHANICAL JOINTS AND DIP:
   - 4.1 "ROMAGRIP", ROMAC INDUSTRIES.
   - 4.2 "SERIES 1000 TUFGRIP", TYLER UNION.
   - 4.3 "MEGALUG", EBAA IRON, INC.
   - 4.4 APPROVED EQUIVALENT
5. THE FOLLOWING IS THE APPROVED LIST OF RESTRAINED JOINT SYSTEMS FOR MECHANICAL JOINTS AND PVC:
   - 5.1 "ROMAGRIP FOR PVC", ROMAC INDUSTRIES.
   - 5.2 "SERIES 2000 FOR PVC TUFGRIP", TYLER UNION.
   - 5.3 "MEGALUG SERIES 2000 PV", EBAA IRON, INC.
   - 5.4 APPROVED EQUIVALENT

**DUCTILE IRON PIPE RESTRAINED JOINT SPECIFICATIONS**

1. PIPE JOINT RESTRAINT FOR DIP SHALL BE ACCOMPLISHED WITH A PIPE BELL/SPIGOT INTEGRAL LOCK MECHANISM.
2. AS AN ALTERNATIVE AND WHERE ALLOWED BY CLARK PUBLIC UTILITIES, A BOLTLESS RESTRAINING GASKETS FOR DIP TYTON JOINT STYLE PIPE MAY BE USED. THE RESTRAINT GASKET SHALL BE A BOLTLESS GASKET WITH INTEGRAL RESTRAINING SYSTEM UTILIZING STAINLESS STEEL PARTS AND SHALL BE PRESSURE RATED FOR 350 PSI. THE GASKETS SHALL BE IN CONFORMANCE WITH ANSI/AWWA C111/A21.11 AND CERTIFIED TO NSF/ANSI 6. THE FOLLOWING IS THE APPROVED LIST OF DIP PIPE JOINT RESTRAINED GASKET SYSTEMS:
   - 2.1 "FIELD LOK 350 GASKET", U.S. PIPE AND FOUNDRY CO.
   - 2.2 "GRIPPER GASKET", GRIPPER GASKET LLC.
   - 2.3 APPROVED EQUIVALENT

**PVC PIPE RESTRAINED JOINT SPECIFICATIONS**

1. PVC PIPE JOINT RESTRAINT FOR MAY BE ACCOMPLISHED BY UTILIZING A PROPRIETARY PVC PIPE WHICH UTILIZES A PIPE BELL/SPIGOT INTEGRAL JOINT RESTRAINT MECHANISM. THE FOLLOWING IS THE APPROVED LIST OF PROPRIETARY PVC C-900 PIPE JOINT RESTRAINED SYSTEMS:
   - 1.1 "EAGLE LOC 900", JM EAGLE
   - 1.2 "CERTA-LOK C900/RJ", CERTAINTEED
   - 1.3 "DIAMOND LOK-21", DIAMOND PLASTICS INC.
   - 1.4 "RIEBERLOK" GASKET
   - 1.4 APPROVED EQUIVALENT
2. AS AN ALTERNATIVE, PVC PIPE MAY BE COUPLED TO CREATE A RESTRAINED JOINT BY UTILIZING A GREY IRON OR DUCTILE IRON MECHANICAL JOINT LONG PATTERN SLEEVE WITH A RESTRAINT FOLLOWER GLAND UTILIZING MULTIPLE GRIPPING WEDGES.

REVISED 04/17/2020

| FILE NAME | | MECHANICAL JOINT & PIPE JOINT RESTRAINT SPECIFICATIONS | Clark Public Utilities |
|---|---|---|---|
| 0-MJ | | | |
| SHEET | 1 OF 1 | STANDARD DETAILS | |

**EXISTING WATER SERVICES:**

THE CONTRACTOR SHALL TRANSFER, MOVE AND/OR ABANDON EXISTING WATER SERVICES AS DIRECTED BY THE CLARK PUBLIC UTILITIES INSPECTOR.

1. EXISTING WATER SERVICES TO BE ABANDONED SHALL BE EXCAVATED TO THE CORP. STOP AT THE WATER MAIN AND THE CORP STOP SHALL BE CLOSED. THE METER BOX SHALL BE REMOVED AND THE WATER SERVICE LINE CAN BE ABANDONED IN PLACE. THE EXISTING METER SHALL BE RETURNED TO CLARK PUBLIC UTILITIES WATER DEPT. ROAD REPAIR SHALL BE AS REQUIRED BY THE CLARK COUNTY RIGHT OF WAY PERMIT REQUIREMENTS.
2. WHEN AN EXISTING WATER SERVICE IS TO BE MOVED, THE CONTRACTOR SHALL EXPOSE A PORTION OF THE EXISTING WATER SERVICE SO THAT THE CLARK PUBLIC UTILITIES INSPECTOR CAN EVALUATE THE MATERIAL SIZE AND CONDITION OF THE EXISTING WATER SERVICE LINE.

THE INSPECTOR WILL DETERMINE WHETHER THE WATER SERVICE LINE CAN BE EXTENDED OR SHORTENED. IF THE INSPECTOR DETERMINES THE EXISTING WATER SERVICE LINE IS SUBSTANDARD, THEN A NEW POLYETHYLENE (PE) SERVICE LINE SHALL BE INSTALLED FROM THE WATER MAIN (MINIMUM SIZE 1" DIA).

ALL EXISTING WATER SERVICE LINES THAT ARE LESS THAN 1" DIAMETER SHALL BE CONSIDERED SUBSTANDARD AND SHALL BE REPLACED WITH A NEW 1", 1-1/2", OR 2" WATER SERVICE LINE PER CLARK PUBLIC UTILITIES STANDARDS.

**MAIN LINE PIPE MATERIAL:**

UNLESS OTHERWISE STATED ON THE PLAN, ALL MAIN LINE PIPE SHALL BE EITHER DUCTILE IRON PIPE (DIP), POLYVINYL CHLORIDE PIPE (PVC) OR HIGH-DENSITY POLYETHYLENE PIPE (HDPE). ALL PIPE SHALL BE SUITABLE FOR POTABLE WATER SERVICE IN ACCORDANCE WITH ANSI/NSF 61 STANDARDS.

A. DUCTILE IRON PIPE SHALL CONFORM TO ANSI A21.51 OR AWWA C151. USE PUSH-ON JOINTS EXCEPT WHERE OTHER JOINT TYPES ARE NOTED ON THE CONTRACT DRAWINGS. ALL DUCTILE IRON PIPE SHALL BE GAUGED FOR DIP 12" DIAMETER AND SMALLER. UNLESS SPECIFICALLY NOTED ON THE CONTRACT DRAWINGS, 3"-12" PIPE SHALL BE PRESSURE CLASS 350 AND PIPE SIZES GREATER THAN 12" DIAMETER SHALL BE THICKNESS CLASS 52.

B. POLYVINYL CHLORIDE (PVC) PRESSURE PIPE (4"-30"). USE UN-PLASTICIZED PVC PLASTIC PIPE WITH INTEGRAL BELL AND SPIGOT JOINTS. USE PUSH-ON JOINTS EXCEPT WHERE OTHER JOINT TYPES ARE NOTED ON THE CONTRACT DRAWINGS. PIPE SHALL MEET THE REQUIREMENTS OF DR 18, UNLESS OTHERWISE NOTED ON THE DRAWING. UNLESS SPECIFICALLY NOTED ON THE CONTRACT DRAWINGS, 4"-12" PIPE SHALL MEET THE REQUIREMENTS OF AWWA C900 AND 14"-30" PIPE SHALL MEET THE REQUIREMENTS OF AWWA C905.

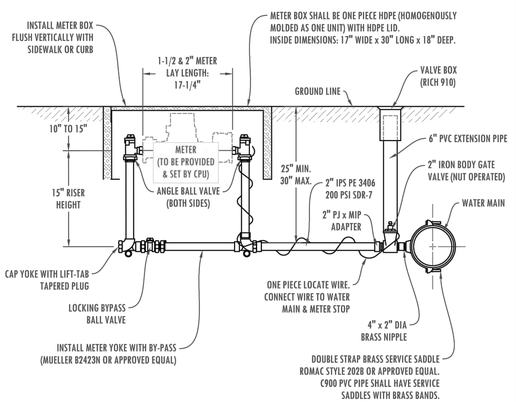
C. HIGH-DENSITY POLYETHYLENE PIPE (HDPE) SHALL BE BLACK WITH A MINIMUM OF TWO EQUALLY SPACED BLUE COLORED STRIPES EXTRUDED INTO THE OUTER SHELL IN CONFORMANCE WITH THE UNIFORM COLOR CODE (UCC). UNLESS OTHERWISE NOTED ON THE DRAWINGS, PIPE SHALL BE IRON PIPE SIZE (IPS) AND HAVE A WALL-THICKNESS DIMENSION RATIO (DR) OF 9. SMALL DIAMETER PIPE (3/4"-3"), SHALL CONFORM TO ANSI/AWWA C901 AND LARGE DIAMETER PIPE (4"-65") PIPE SHALL CONFORM TO ANSI/AWWA C906.

REVISED 04/17/2020

| FILE NAME | | MAIN LINE PIPE MATERIAL & EXISTING WATER SERVICE NOTES | Clark Public Utilities |
|---|---|---|---|
| 0-PM | | | |
| SHEET | 1 OF 1 | STANDARD DETAILS | |

**NOTES:**

1. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE CLARK PUBLIC UTILITIES (CPU) WATER CONSTRUCTION SPECIFICATIONS, STANDARD DETAILS AND THE LATEST EDITION OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" PUBLISHED BY WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT).
2. A WATER UTILITY INSPECTOR SHALL BE AT THE JOB SITE DURING CONSTRUCTION OF ALL WATER FACILITIES. CONTACT 360-992-8019 TWO (2) WORKING DAYS PRIOR TO COMMENCING WORK.
3. WORK WITHIN COUNTY RIGHT-OF-WAY SHALL CONFORM WITH CLARK COUNTY PUBLIC WORKS UTILITY PERMIT REQUIREMENTS AND DETAILS. WORK WITHIN STATE RIGHT-OF-WAY SHALL CONFORM TO WSDOT UTILITY PERMIT REQUIREMENTS AND DETAILS.
4. THE LOCATION OF THE UTILITIES SHALL BE VERIFIED IN ADVANCE TO ALLOW FOR ALIGNMENT ADJUSTMENTS. CALL UTILITY LOCATES TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION (1-800-553-4344).
5. A TAPPING COMPANY APPROVED BY CLARK PUBLIC UTILITIES SHALL BE USED TO MAKE ALL TAPS.
6. LOCATE WIRE SHALL BE COATED, NO. 14 GA. SOFT DRAWN SOLID COPPER.
7. NO CONNECTIONS WILL BE ALLOWED TO AN EXISTING SERVICE PRIOR TO AN APPROVED PURITY TEST. PURITY TEST SHALL PRECEDE PRESSURE TEST.
8. STUB SERVICES SHALL BE PRESSURE TESTED WITH THE MAIN LINE AND BE CAPABLE OF WITH-STANDING THE MAINS TEST PRESSURE.
9. ALL COMPRESSION FITTINGS TO HAVE STAINLESS STEEL INSERTS.




REVISED 04/17/2020

| FILE NAME | | 2" WATER SERVICE WITH 1-1/2" OR 2" WATER METER | Clark Public Utilities |
|---|---|---|---|
| 2W | | | |
| SHEET | 1 OF 1 | STANDARD DETAILS | |

Know what's **below.** **Call** before you dig.

ENGINEERING | PLS

Water Details For:

# Riverside Neighborhood Park

A Site Located In The City Of La Center , Washington

Engineering - Surveying - Planning | 604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539

Revisions

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| | | | | | |

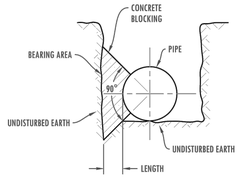
TRAVIS G. JOHNSON — STATE OF WASHINGTON — 22929 — REGISTERED PROFESSIONAL ENGINEER

6-15-21

Project No. 2641

| SCALE: | H: N/A V: N/A |
|---|---|
| DESIGNED BY: | MJM |
| DRAFTED BY: | MJM |
| REVIEWED BY: | TJG |

14 / 29




**THRUST BLOCK NOTES:**

1. CAST IN PLACE BLOCKING SHALL BE POURED WITHOUT DIRECT CONTACT TO THE PIPE OR FITTINGS.
2. PROTECTIVE MATERIAL SUCH AS PLASTIC OR APPROVED EQUAL SHALL BE PLACED BETWEEN THE CONCRETE AND PIPE OR FITTING.
3. BLOCKING SHALL BE DESIGNED FOR STATIC PRESSURE OF 200 PSI OR 1.5 TIMES THE WORKING PRESSURE, WHICHEVER IS GREATER.
4. CAST IN PLACE BLOCKING SHALL BE POURED AGAINST FIRM UNDISTURBED SOIL WITH MINIMUM BEARING PRESSURE OF 2,000 LB/SQ.FT.
5. CONCRETE FOR ALL BLOCKING SHALL HAVE A 28-DAY MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI.
6. CONCRETE BLOCKING FOR VERTICAL BENDS SHALL REQUIRE SITE SPECIFIC ENGINEERING DESIGN.
7. LAYOUT TO BE APPROVED BY THE INSPECTOR PRIOR TO AND AFTER CONCRETE PLACEMENT.
8. ALL THRUST BLOCKS SHALL BE PLACED IN CENTER OF TEE OR BEND.
9. THESE DETAILS IN NO WAY LIMIT THE SIZE OR LOCATION OF ADDITIONAL BLOCKING WHEN REQUESTED BY THE UTILITY.
10. THRUST BLOCKS ON WATER MAINS AND FITTINGS 12" OR LARGER SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER AND APPROVED BY CLARK PUBLIC UTILITIES PRIOR TO CONSTRUCTION.

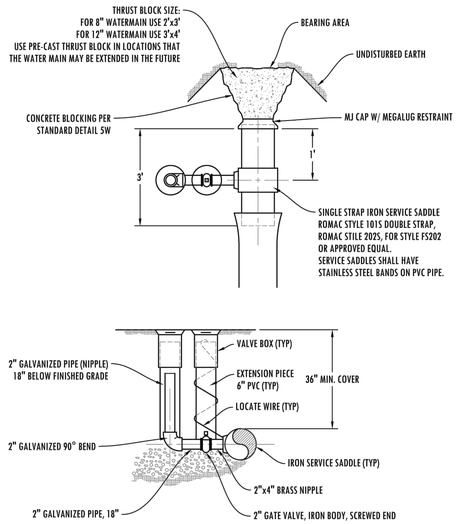
| PIPE SIZE | HORIZ. FITTINGS (BENDS) | BEARING AREA (SF) | MINIMUM BLOCK SIZE (FT.) | MINIMUM LENGTH OF BLOCKING (FT.-IN.) |
|---|---|---|---|---|
| 4" | TEE | 1.9 | 1.5' x 1.5' | 0'-6" |
| | 90° | 2.7 | 2.0' x 2.0' | 0'-6" |
| | 45° | 1.4 | 1.5' x 1.5' | 0'-6" |
| | 22-1/2° | 0.7 | 1.5' x 1.5' | 0'-6" |
| 6" | TEE | 2.8 | 2.0' x 2.0' | 0'-6" |
| | 90° | 4.0 | 2.0' x 2.0' | 0'-6" |
| | 45° | 2.2 | 1.5' x 1.5' | 0'-6" |
| | 22-1/2° | 1.1 | 1.5' x 1.5' | 0'-6" |
| | 11-1/4° | 0.8 | 1.5' x 1.5' | 0'-6" |
| 8" | TEE | 5.0 | 2.0' x 3.0' | 0'-8" |
| | 90° | 7.1 | 3.0' x 4.0' | 0'-8" |
| | 45° | 3.8 | 2.0' x 2.0' | 0'-6" |
| | 22-1/2° | 2.0 | 1.5' x 1.5' | 0'-6" |
| | 11-1/4° | 1.5 | 1.5' x 1.5' | 0'-6" |
| 10" | TEE | 7.9 | 3.0' x 4.0' | 0'-8" |
| | 90° | 11.1 | 3.0' x 4.0' | 0'-8" |
| | 45° | 6.0 | 3.0' x 4.0' | 0'-8" |
| | 22-1/2° | 3.1 | 2.0' x 2.0' | 0'-6" |
| | 11-1/4° | 2.3 | 2.0' x 2.0' | 0'-6" |
| 12" | TEE | 11.3 | 3.0' x 4.0' | 0'-8" |
| | 90° | 16.0 | 4.0' x 4.0' | 1'-0" |
| | 45° | 8.7 | 3.0' x 4.0' | 0'-8" |
| | 22-1/2° | 4.4 | 2.0' x 3.0' | 0'-8" |
| | 11-1/4° | 3.3 | 2.0' x 2.0' | 0'-6" |

TABLE ASSUMES SOIL BEARING OF 2,000 LB/SQ.FT AND DESIGN WORKING PRESSURE OF 200 PSI

REVISED 04/17/2020

| FILE NAME | | THRUST BLOCK |
|---|---|---|
| 5W | | |
| SHEET | 1 OF 1 | STANDARD DETAILS |

Clark Public Utilities



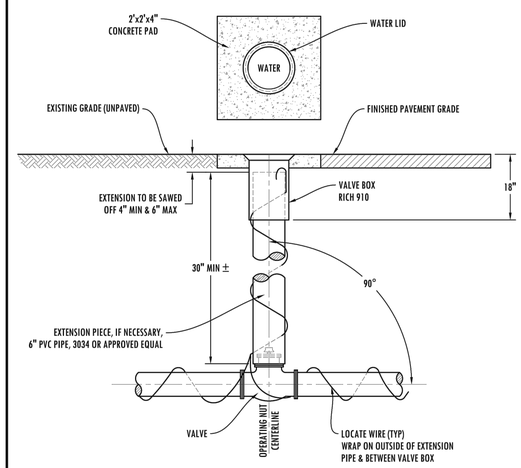

REVISED 04/17/2020

| FILE NAME | | STANDARD END BLOW-OFF ASSEMBLY |
|---|---|---|
| 6W | | |
| SHEET | 1 OF 1 | STANDARD DETAILS |

Clark Public Utilities

**NOTES:**

1. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE CLARK PUBLIC UTILITIES (CPU) WATER CONSTRUCTION SPECIFICATIONS, STANDARD DETAILS AND THE 2000 EDITION OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" PUBLISHED BY WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT).
2. LOCATE WIRE SHALL BE NON-COATED, NO. 14 GA. SOFT DRAWN SOLID COPPER.



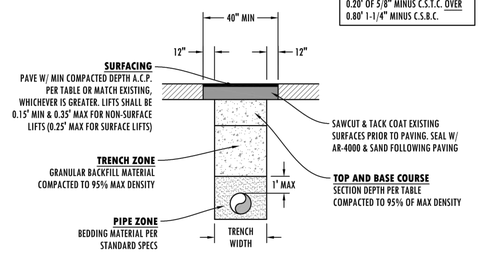

REVISED 04/17/2020

| FILE NAME | | STANDARD VALVE BOX ASSEMBLY |
|---|---|---|
| 8W | | |
| SHEET | 1 OF 1 | STANDARD DETAILS |

Clark Public Utilities

**TYPE 'C' PAVEMENT SECTION**

| |
|---|
| **TYPE 'C-1'** (COLLECTOR OR ARTERIAL) 0.50' A.C.P. OVER 0.80' OF 1-1/4" MINUS C.S.B.C. |
| **TYPE 'C-2'** (RESIDENTIAL) 0.35' A.C.P. OVER 0.20' OF 5/8" MINUS C.S.T.C. OVER 0.80' 1-1/4" MINUS C.S.B.C. |



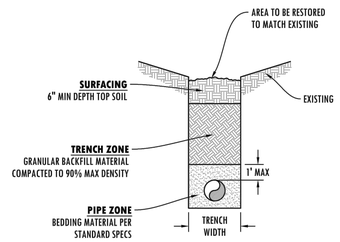

**TRENCHING NOTES:**

1. SEE CLARK COUNTY OR WSDOT UTILITY PERMIT, WHICHEVER IS APPLICABLE, FOR ADDITIONAL TRENCH BACKFILL AND SURFACING REQUIREMENTS.
2. NATIVE MATERIALS MAY BE SUBSTITUTED FOR IMPORTED GRANULAR MATERIAL PROVIDING IT IS PRE-APPROVED BY THE COUNTY ENGINEER OR AUTHORIZED REPRESENTATIVE.
3. TRENCH EXCAVATION, BEDDING, AND BACKFILL FOR WATER MAINS SHALL BE IN ACCORDANCE WITH SECTION 7-10 OF THE MOST CURRENT STANDARD SPECIFICATIONS. BED PIPE PER SUBSECTION 7-10.3(9) OF THE STANDARD SPECIFICATIONS.
4. IN THE TRENCH ZONE, USE METHOD C COMPACTION PER SECTION 2-03.3(14).

REVISED 04/17/2020

| FILE NAME | | ASPHALT CONCRETE PAVEMENT TYPE 'C1' & 'C2' RESTORATION |
|---|---|---|
| 12W | | |
| SHEET | 1 OF 1 | STANDARD DETAILS |

Clark Public Utilities




**TRENCHING NOTES:**

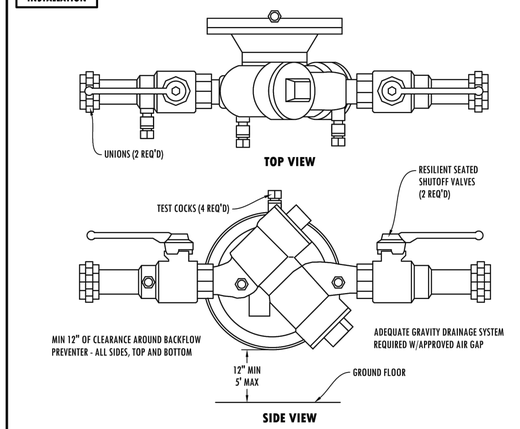
1. SEE CLARK COUNTY OR WSDOT UTILITY PERMIT, WHICHEVER IS APPLICABLE, FOR ADDITIONAL TRENCH BACKFILL AND SURFACING REQUIREMENTS.
2. NATIVE MATERIALS MAY BE SUBSTITUTED FOR IMPORTED GRANULAR MATERIAL PROVIDING IT IS PRE-APPROVED BY THE COUNTY ENGINEER OR AUTHORIZED REPRESENTATIVE.
3. TRENCH EXCAVATION, BEDDING, AND BACKFILL FOR WATER MAINS SHALL BE IN ACCORDANCE WITH SECTION 7-10 OF THE MOST CURRENT STANDARD SPECIFICATIONS. BED PIPE PER SUBSECTION 7-10.3(9) OF THE STANDARD SPECIFICATIONS.
4. IN THE TRENCH ZONE, USE METHOD C COMPACTION PER SECTION 2-03.3(14).

REVISED 04/17/2020

| FILE NAME | | NATIVE BACKFILL OUSTSIDE ROADWAY TYPE 'A' RESTORATION |
|---|---|---|
| 13W | | |
| SHEET | 1 OF 1 | STANDARD DETAILS |

Clark Public Utilities

**ABOVE GROUND INSTALLATION**




**NOTES:**

1. APPROVED REDUCED PRESSURE BACKFLOW ASSEMBLY TO BE INSTALLED ABOVE GROUND WITH MINIMUM CLEARANCES.
2. DESIGNED FOR BACK SIPHONAGE AND BACK PRESSURE.
3. TEST COCKS TO EITHER FACE OUTWARDS OR UPWARDS FROM ASSEMBLY.
4. DISINFECT, PRESSURE TEST AND THOROUGHLY FLUSH LINES PRIOR TO INSTALLATION OF BACKFLOW PREVENTER.
5. DO NOT INSTALL IN AN AREA SUBJECT TO FLOODING.
6. MUST BE PROTECTED FROM FREEZING CONDITIONS.
7. THE BACKFLOW ASSEMBLY SHALL BE A STATE APPROVED MODEL.
8. A PLUMBING PERMIT IS REQUIRED. PLEASE CONTACT YOUR LOCAL PLUMBING PERMIT CENTER.
9. MUST BE TESTED AFTER INSTALLATION AND YEARLY THEREAFTER BY A WASHINGTON STATE CERTIFIED BACKFLOW ASSEMBLY TESTER. TEST RESULTS SHALL BE SENT TO CLARK PUBLIC UTILITIES WATER SERVICES.
10. ABOVE GROUND INSTALLATION REQUIRED.

REVISED 04/17/2020

| FILE NAME | | STANDARD RPBA (REDUCED PRESSURE BACKFLOW ASSEMBLY) 2" & SMALLER |
|---|---|---|
| 21W | | |
| SHEET | 1 OF 1 | STANDARD DETAILS |

Clark Public Utilities

Know what's below. Call before you dig.

PLS ENGINEERING

# Riverside Neighborhood Park

A Site Located In The City Of La Center , Washington

Engineering - Surveying - Planning | 604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539

Water Details For:

Revisions

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|

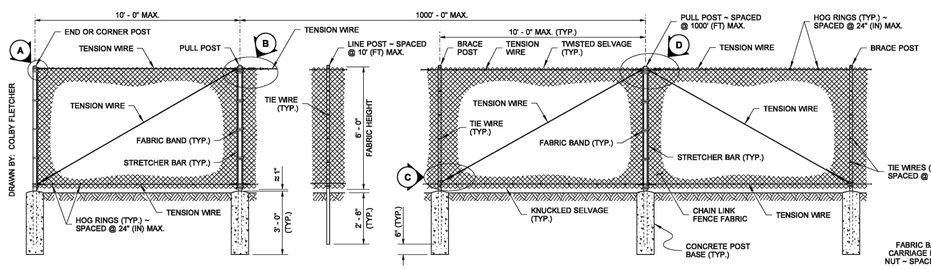
TRAVIS G. JOHNSON — STATE OF WASHINGTON — 24929 — REGISTERED PROFESSIONAL ENGINEER

6-15-21

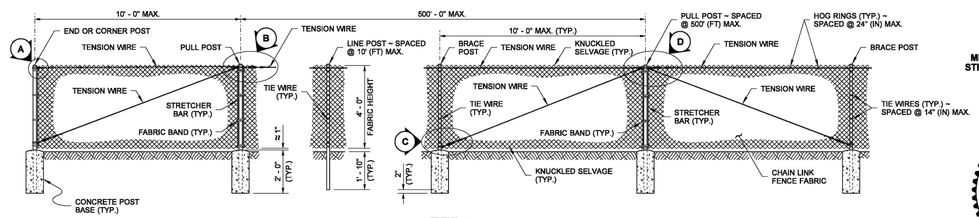
| | |
|---|---|
| Project No. | 2641 |
| SCALE: | H: N/A V: N/A |
| DESIGNED BY: | MJM |
| DRAFTED BY: | MJM |
| REVIEWED BY: | TJG |

15

29

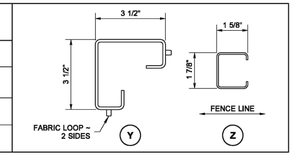



TYPE 3



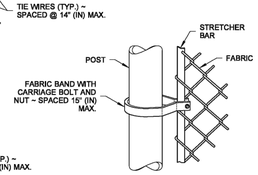

TYPE 4

| POST AND RAIL SPECIFICATIONS | | | |
|---|---|---|---|
| POST | PIPE | ROLL FORMED | |
| | NOM. SIZE (SCH. 40) I.D. | SECTION | WEIGHT (lb/ft) |
| END, CORNER, OR PULL POST | 2 1/2" DIAM. | (Y) | 5.10 |
| LINE OR BRACE POST | 2" DIAM. | (Z) | 1.85 |




**NOTES**

1. All concrete post bases shall be 10" (in) minimum diameter.
2. Along the top and bottom, using Hog Rings, fasten the Chain Link Fence Fabric to the Tension Wire within the limits of the first full fabric weave.
3. Details are illustrative and shall not limit hardware design or post selection of any particular fence type.
4. Fencing shall be used for security and boundary delineation only.




**METHOD OF FASTENING STRETCHER BAR TO POST**

EDWARD PATRICK BARRY — STATE OF WASHINGTON — 34363 — REGISTERED PROFESSIONAL ENGINEER

Barry, Ed
Jul 14 2015 11:14 AM

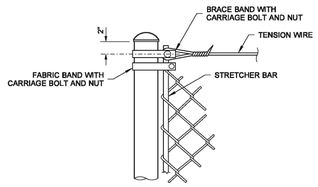
**CHAIN LINK FENCE TYPES 3 AND 4**

**STANDARD PLAN L-20.10-03**

SHEET 1 OF 2 SHEETS

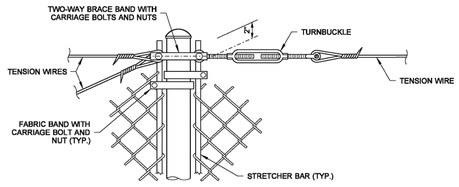
APPROVED FOR PUBLICATION
Carpenter, Jeff
Jul 14 2015 11:24 AM
STATE DESIGN ENGINEER
Washington State Department of Transportation

DRAWN BY: COLBY FLETCHER



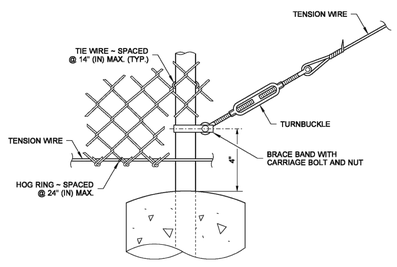

END OR CORNER POST

DETAIL (A)



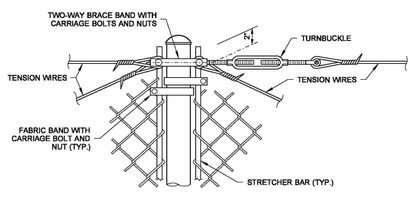

PULL POST (AT END OR CORNER)

DETAIL (B)




BRACE POST

DETAIL (C)




PULL POST (WITHIN RUN)

DETAIL (D)

EDWARD PATRICK BARRY — STATE OF WASHINGTON — 34363 — REGISTERED PROFESSIONAL ENGINEER

Barry, Ed
Jul 14 2015 11:14 AM

**CHAIN LINK FENCE TYPES 3 AND 4**

**STANDARD PLAN L-20.10-03**

SHEET 2 OF 2 SHEETS

APPROVED FOR PUBLICATION
Carpenter, Jeff
Jul 14 2015 11:25 AM
STATE DESIGN ENGINEER
Washington State Department of Transportation

SECURITY LINES US

i2-POD
1 Fixed Camera
1 Pan-Tilt-Zoom Camera

| POD Model | i4P | i4SIP | i2 | Satellite | HQ | |
|---|---|---|---|---|---|---|
| Devices | | | | | | |
| Network Video Recorder | | 1 | 1 (IP) | 0 | 1 | |
| Digital Video Recorder | 1 | | 1 (not IP) | 0 | | |
| Stationary Cameras | 1 | 3 | 1 | 1-4 | 0 | |
| Pan-Tilt-Zoom Cameras | 3 | 1 | 1 | 1 Optional | 0 | |
| | | | | | | |
| Dimensions | 17Lx15.5Wx17.5H | 17Lx17.5Wx15H | 17Lx15.5Wx15H | 12Lx14Wx16H max | | |
| Weight | 28lbs | 23lbs | 18lbs | 6lbs - 11lbs | | |
| Power | 110v | 110v | 110v/Opt. Solar | 110v/Opt. Solar | | |
| | | | | | | |
| Network Video Recorder | | | | | | |
| Channels | 16 IP, 32 IP | | | | | |
| Storage | ONVIF Profile, 4TB Standard, Optional 4TB – 12TB | | | | | |
| Recording Resolution | Max 4K | | | | | |
| Streaming Compression | H.264, JPEG | | | | | |
| Operating System | Linux | | | | | |
| User | 15 users (Admin, User1-User14) | | | | | |
| | | | | | | |
| Digital Video Recorder | | | | | | |
| Channels | 4 Standard, Optional 2 for Satellite POD | | | | | |
| Storage | 2TB Standard, Optional 4TB, 6TB, 8TB, 12TB | | | | | |
| Recording Resolution | 8MP, 4MP, 3MP, 2MP, 960H | | | | | |
| Streaming Compression | H.264, JPEG | | | | | |
| Operating System | Linux | | | | | |
| User | 15 Users [Admin, User1- User14) | | | | | |
| | | | | | | |
| Stationary Camera | | | | | | |
| Imaging Device | 1/3" Sony 2MP Progressive Scan CMOS | | | | | |
| Resolution | 1080P, 4MP | | | | | |
| Sensitivity | 0 lux IR on; .5 lux @ F1.6 (AGC On) | | | | | |
| IR LED | 24 Smart IR LEDs | | | | | |
| | | | | | | |
| Pan-Tilt-Zoom | | | | | | |
| Resolution | 1080P, 2MP | | | | | |
| Min Illumination | DSS Off: 1.0 lux color; 0.5 lux B/W DSS Max: .002 lux color; .001 lux B/W | | | | | |
| Digital Zoom | 120X Total: 12X Optical Zoom, 10X Digital | | | | | |
| | | | | | | |
| 5 Port Gigabyte Switch | | | | | | |
| Interface | 5 10/100/1000Mbps, Auto-Negotiation, Auto-MDI/MDIX Ports | | | | | |
| Standards and Protocols | IEEE 802.3i, 3u, 3a, 3x, 1p | | | | | |
| | | | | | | |
| Cellular Router | | | | | | |
| Sim Card Size | 2FF | | | | | |
| Max number of SSID | 16 | | | | | |
| Transmit Power | 2.4GHz, 5Ghz | | | | | |
| Throughput | 100Mbps | | | | | |
| VPN | PepVPN/SpeedFusion | | | | | |

SECURITY LINES US

## i4p POD Mounts

POLE MOUNT

4 Bolts

Universal Stainless Steel Hose Clamp 47"x0.5"x0.25"

FLAT-WALL MOUNT

4 Bolts

Universal Stainless Steel Hose Clamp 47"x0.5"x0.25"

CORNER-WALL MOUNT

4 Bolts

Universal Stainless Steel Hose Clamp 47"x0.5"x0.25"

811 Know what's **below.** **Call** before you dig.

ENGINEERING | PLS

Miscellaneous Details For:

# Riverside Neighborhood Park

A Site Located In The City Of La Center , Washington

Engineering - Surveying - Planning | 604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539

Revisions

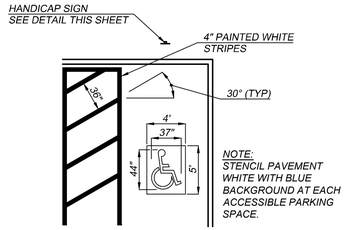
| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| | | | | | |

TRAVIS G. JOHNSON — STATE OF WASHINGTON — 22929 — REGISTERED PROFESSIONAL ENGINEER

6-15-21

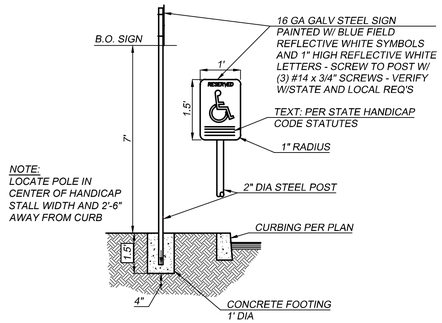
| | |
|---|---|
| Project No. | 2641 |
| SCALE: | H: N/A V: N/A |
| DESIGNED BY: | MJM |
| DRAFTED BY: | MJM |
| REVIEWED BY: | TJG |

16 / 29



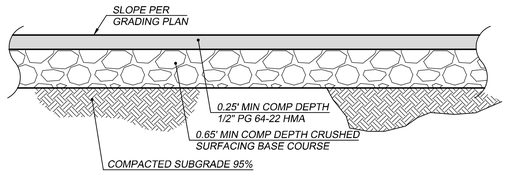

## Handicap Space

NTS




## Handicap Sign

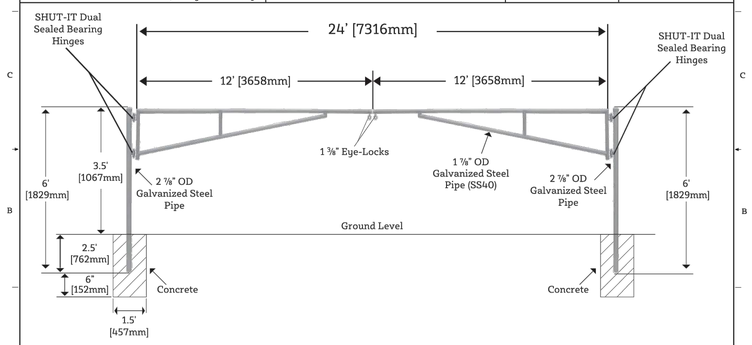
NTS




## Typical Asphalt Section

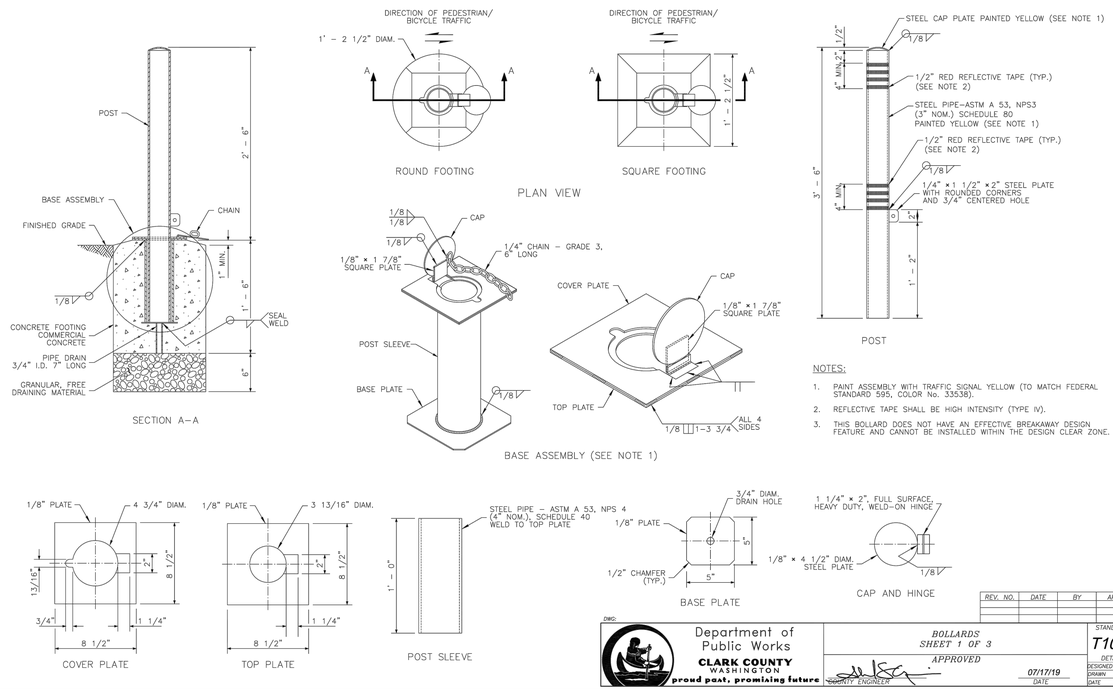
NTS

| Optional Swing Gate Barrier Receiver Post - 14030R | Optional Barrier Arm Gate & Post Safety Tape Kit | Single Gate Models: | Double Gate Models: |
|---|---|---|---|
| • Height: 6 ft.<br>• Galvanized Steel<br>• Diameter: 3 in. [2 ⅞ in. OD]<br>• 1 ⅝ in. Eye-Lock Loop | • Thickness: 8 Mil.<br>• MUTCD Compliant<br>• Red/White & Yellow<br>• Increases Visibility | 14010-10 \| 10 ft. | 14020-20 \| 20 ft. |
| | | 14010-12 \| 12 ft. | 14020-24 \| 24 ft. |
| | | 14010-14 \| 14 ft. | 14020-28 \| 28 ft. |
| | | 14010-15 \| 15 ft. | 14020-30 \| 30 ft. |
| | | 14010-16 \| 16 ft. | 14020-32 \| 32 ft. |
| | | 14010-20 \| 20 ft. | 14020-40 \| 40 ft. |




| Contact Information: | Manufacturer: | Part Number: | Product Description: | Product Specifications: |
|---|---|---|---|---|
| Web: www.TigerTeethStore.com<br>Phone: (800) 878-7829<br>Email: Sales@TigerTeethStore.com | Barrier Gate Brands™ | 14020-24 | SENTINEL 24 ft. Manual Double Swing Barrier Gate | • Width: 24 ft.<br>• Material: Galvanized Steel<br>• Installation Type: In-Ground<br>• Barrier Gate Type: Manual Double Swing Gate |

*BOLLARDS (SHEET 1 OF 3)*
*BOLLARD TYPE 1 - REMOVABLE*




NOTES:

1. PAINT ASSEMBLY WITH TRAFFIC SIGNAL YELLOW (TO MATCH FEDERAL STANDARD 595, COLOR No. 33538).
2. REFLECTIVE TAPE SHALL BE HIGH INTENSITY (TYPE IV).
3. THIS BOLLARD DOES NOT HAVE AN EFFECTIVE BREAKAWAY DESIGN FEATURE AND CANNOT BE INSTALLED WITHIN THE DESIGN CLEAR ZONE.

| REV. NO. | DATE | BY | APPR |
|---|---|---|---|
| | | | |

Department of Public Works
CLARK COUNTY
WASHINGTON
proud past, promising future

BOLLARDS
SHEET 1 OF 3

APPROVED

COUNTY ENGINEER

07/17/19
DATE

STANDARD T10.0
DETAIL
DESIGNED
DRAWN
DATE

Know what's below. Call before you dig.

PLS ENGINEERING

Miscellaneous Details For:

# Riverside Neighborhood Park

A Site Located In The City Of La Center , Washington

Engineering - Surveying - Planning | 604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539

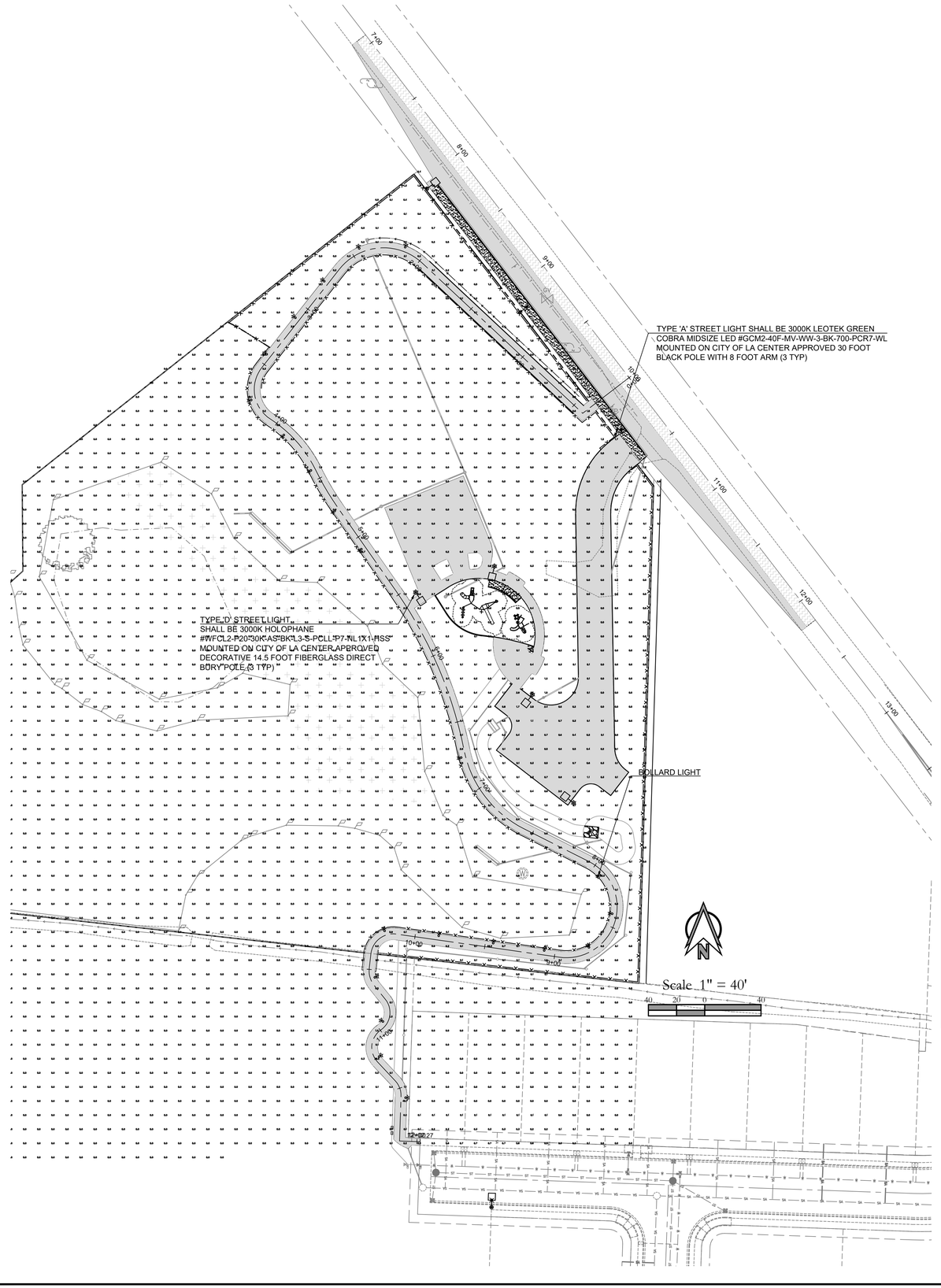
Revisions

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| | | | | | |

TRAVIS G. JOHNSON
STATE OF WASHINGTON
16-23929
REGISTERED PROFESSIONAL ENGINEER
6-15-21

| | |
|---|---|
| Project No. 2641 | |
| SCALE: | H: N/A<br>V: N/A |
| DESIGNED BY: | MJM |
| DRAFTED BY: | MJM |
| REVIEWED BY: | TJG |

17
29




HOLOPHANE
LEADER IN LIGHTING SOLUTIONS

Catalog Number: WFCL2-P20-30K-AS-HK-L3-S-P7-PCLL-HSS-NL1X1
Notes:
Type: D

## WFCL2
Utility Washington Series Luminaire
Full Cutoff LED2

**Mechanical**
- Heavy grade A360 cast aluminum (<1% copper)
- Tool-less access with a spring-loaded latch
- Hidden hinge door allowing the door to swing open and remain captive
- Optional internal or external NEMA twist lock photocontrol receptacle. Housing contains a tempered glass window to allow light to reach the cell for internal versions.
- Mount to slip-fitter that will accept 3" high by 2-7/8" to 3-1/8" O.D. pole tenon
- Decorative top cover contains stainless steel hinge which allows the door to swing open and remain
- Polyester powder coat paint to ensure maximum durability
- Finish meets 5,000-hour salt spray testing
- Holophane and RAL Classic finishes.

**Electrical**
- 4kV surge protection meets ANSI/IEEE C62.41.2 10KV/10kA.
- Standard SPD meets 10kV/5kA per ANSI C136.2-2015.
- 20KV Option meets 20kV/10kA per ANSI C136.2-2015.
- Quick disconnect connectors for ease of installation and maintenance.
- Three pole terminal block is standard, with optional prewired leads for ease of installation
- LED drivers meet maximum total harmonic distortion (THD) of 20%, >0.90 Power Factor (PF) and operate in ambient operating temperature to +40C. Electronic driver has an estimated minimum life of 100,000 hours at 25°C.

**Optical**
- IP65 rated optical compartment
- LED circuit board located in the top cover
- Asymmetric or Symmetric full cutoff distributions
- 2700K, 3000K, 4000K, and 5000K CCT
- 70CRI Standard

**Control Options**
- Field Adjustable Output (FAO) module - Onboard device that adjusts the light output and input wattage to meet site specific requirements. The ADJ model is preset at the factory to position number 8 (see chart).
- Wireless remote control for monitoring performance and/or maintenance of the system – ROAM
- Factory Programmed Driver (FPDxx) – Customize lumen output prior to manufacturing and still enables control leads so other options can also be used
- Long Life Photocontrols (PCLL) - 20 Year Life
- 4-wire photocontrol receptacles internally (P3, P7) or externally (P3E, P7E) mounted
- Port-night dimming (PND) enables luminaire to monitor and adjust 50% lumens based on season and geographic location, 8-day rolling average

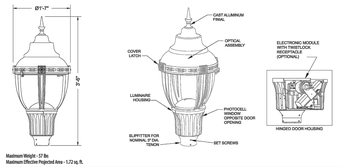
**Testing/Compliance**
- UL 1598 - Wet locations Safety Listing
- Suitable for ambient temperatures -40°C to 40°C
- DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check with the DLC Qualified Products List at www.designlights.org/QPL for updated list

**Manufacturing**
- Manufactured in Crawfordsville, Indiana, ARRA compliant
- 100% electrical testing on all luminaires before shipment
- Ten (10) years minimum experience in manufacturing LED based products

**Warranty**
5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_Conditions.aspx

**Note:** Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25°C.
Specifications subject to change without notice.

**DIMENSIONAL DATA**




Maximum Weight - 57 lbs
Maximum Effective Projected Area - 1.72 sq. ft.



## WFCL2
Utility Washington Series Luminaire Full Cutoff LED2

**ORDERING INFORMATION** Example: WFCL2 P20 30K AS GN L2 N P73

| Series | LED performance package | LED Color temperature | Voltage | Housing color | Optics | Finish |
|---|---|---|---|---|---|---|
| WFCL2 Utility Washington LED FCO | P10 1,500 nominal lumens (under 40K) | AM True amber 1,800K CCT | 120 120V AC | BK Black | L2 Type 2 distribution full cutoff | N None |
| P20 2,500 nominal lumens | 27K 2700K CCT | 30K 3000K CCT | HV Auto-sensing voltage (120 thru 277) 50/60 HZ | GR Gray | L3 Type 3 distribution full cutoff | R Ball |
| P30 3,500 nominal lumens | 30K 3000K CCT | 40K 4000K CCT | HI Auto-sensing voltage (347 thru 480) 50/60 HZ | GA Graphite | L4 Type 4 distribution full cutoff | S Spike |
| P40 4,500 nominal lumens | 50K 5000K CCT | | | GN Green | L5 Type 5 distribution full cutoff | |
| P50 11,500 nominal lumens | | | | PP Prime paint | | |
| | | | | WH White | | |
| | | | | BZ Bronze | | |
| | | | | TGC RAL Color color (tbd)** | | |
| | | | | CMC Custom color match | | |

**Options** (Order as separate catalog number on page 3 of 3)

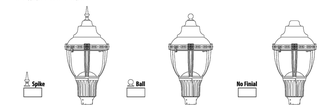
| | | | |
|---|---|---|---|
| AO | Field Adjustable Output | P3E | NEMA Twist Lock Dimming Photocontrol Receptacle - 3 PIN. Externally mounted |
| DE | ROAM Hardware Decafinish and DCM Factory Installed | P7E | NEMA Twist Lock Dimming Photocontrol Receptacle - 7 PIN. Externally mounted |
| FPDxx | Factory Programmed Driver | | |
| P3 | NEMA Twist Lock photocontrol receptacle - 3 PIN mounted on body | R4HE | ROAM Node (External) |
| P7 | NEMA Twist Lock Dimming photocontrol receptacle - 7 PIN receptacle only. | R4HE3 | 347V ROAM NODE (External) |
| PCS | DOL twistrelt photocontrol for solid-state lighting 120-277V | R4HE4 | 480V ROAM NODE (External) |
| P31 | DOL long life twistlock photocontrol for solid-state 63 | PSC | Shorting cap |
| P34 | DOL long life twistlock photocontrol for solid-state 347V | WL3 | House-side shield |
| P48 | DOL long life twistlock photocontrol for solid-state 480V | | |
| PND | Part-night dimming - down to 50% | | |

| | | | |
|---|---|---|---|
| CDV | 1.5 fc prewired leads | L30 | 30 ft prewired leads |
| L05 | 05 prewired leads | L50 | 50 ft prewired leads |
| L10 | 10 ft prewired leads | L20 | 20 ft prewired leads |
| L20 | 20 ft prewired leads | L25 | 25 ft prewired leads |
| L25 | 25 ft prewired leads | L30 | 30 ft prewired leads |
| L30 | 30 ft prewired leads | NL1X1 | NEMA Label 7' 1 1" |
| NL2X2 | NEMA Label 7' 2 2" | 20KV | 20kV/10kA surge protection |

**Accessories:** Order as separate catalog number.

| | |
|---|---|
| EXCL2KSSI | Field Accessory - Louvered house side shield (Qty 1) |
| EXCL3KSSI6 | Field Accessory - Louvered house side shield (Bulk Qty 10) |
| EXCL2SPD10KAS | 10kV/5kA Extreme surge 120-277V |
| EXCL2SPD10KAH | 10kV/5kA Extreme surge 480V |
| EXCL2SPD20KAS | 20kV/10kA Extreme surge 120-277VV |
| EXCL2SPD20KAH | 20kV/10kA Extreme surge 480V |

**FINIAL INFORMATION**
Mark Appropriate Box for Finial Options





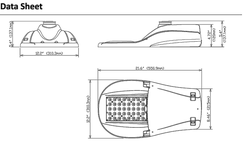

## 2 TYPE D LUMINAIRE
NO SCALE

LEOTEK
ELITE ENGINEERING

Project
Type A1
Catalog No. GCM2-40F-MV-WW-3-GY-700-PCR7-WL

## GreenCobra® Midsize LED Street Light
## GCM F-Series Specification Data Sheet

**Luminaire Data**
**Weight** 10 lbs [4.6 kg]
**EPA** 0.44 ft²




**Ordering Information**
Sample Catalog No. GCM1-30F-MV-NW-2-GY-700-PCR7-WL

| Product | LED Code | Voltage | Color Temperature | Distribution | Finish[1] | Drive Current[2] | Options |
|---|---|---|---|---|---|---|---|
| GCM1 30F@ 350 to 700mA | 30F | MV 120-277V | WW 3000K | 2 Type 2 | GY Gray | 350[3] 350mA | FDC[4] Fixed Drive Current |
| | | HV 347-480V | NW 4000K | 3 Type 3 | DB Dark Bronze | 530[3] 530mA | FAS[4] full Field Adjustability |
| GCM2 30F@ 700mA to 1A, 40F @ 700mA to 1A | 40F | | CW 5000K | | BK Black | 700 700mA 1A[5] | LPCR Less Photocontrol Receptacle |
| | | | | | | | PCR7 ANSI 7-wire Photo-control Receptacle |
| | | | | | | | PCR7-CR[6] Control Ready 7-wire PC Receptacle |
| | | | | | | | WL 4B Utility Wattage Label 4-Bolt Mounting Bracket |
| | | | | | | | RWG Rubber Wildlife Guard |
| | | | | | | | CF Coastal Paint Finish |

Notes:
1 Gray, Black and Dark Bronze standard, consult factory for other finishes.
2 Specified drive current code is the factory set maximum drive current. Field adjustable current selector enables standard dimming to lower wattage drive currents only. Consult factory if wattage limits require a special drive current.
3 350mA and 530mA drive current available with GCM1 only.
4 1A drive current available with GCM2 only.
5 Non-field adjustable, fixed drive current. Specify required drive current. Not available with PCR7-CR option.
6 The FPA option enables full field adjustability from the specified drive current code to all drive currents available. This option is not DLC qualified.
7 Field adjustable current selector included to enable standard dimming to lower wattage drive currents only. Field changeable connectors included to enable connection to PCR7 (wireless node dimming is disabled by default).
8 Control-ready wiring at factory for wireless node dimming. Default maximum drive current (700mA or 1A) must be specified.
9 Specify the CF Option for coastal installation. See warranty for details.
10 Flush mounted house side shield. Shield cuts light off at 1/2 mounting height behind luminaire.
11 Flush mounted cul-de-sac shield. Shield cuts light off at 1/2 mounting height behind luminaire and 1-1/2 mounting height on either side of luminaire.
12 Specify Color (GY, DB, BK)
13 Specify MV (120-277V) or HV (347V-480V)

**Accessories***

| | |
|---|---|
| HSSGCM* | House Side Shield, Snap-On* |
| CSSGCM* | Cut-Off-Sac Side Shield, Snap-On* |
| SPB[12] | Square Pole Horizontal Arm Bracket |
| RPB[12] | Round Pole Horizontal Arm Bracket |
| PTB[12] | Pole Top Tenon Horizontal Arm Bracket |
| WB[12] | Wall Horizontal Arm Bracket |
| BSK | Bird Deterrent Spider Kit |
| LLPC[13] | Long-Life Twist Lock Photocontrol |
| SC | Twist Lock Shorting Cap |

*Accessories are ordered separately and not to be included in the catalog number. For factory installed HSS, CSS specify as option in luminaire catalog number.

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## 1 TYPE A LUMINAIRE
NO SCALE

naturaled®

## Product Engineering Spec

| Product Spec | | | |
|---|---|---|---|
| Category | LED Bollard-Type 3 | PICTURE | |
| Item Code | 9386 | | |
| Stock Code | LED-FXBBLD18/42RT3/840/BZ | | |
| Mounting | Floor (3 bolt anchor) | | |
| Housing Color | Bronze | | |

| Electric Characteristics | | Photometric Characteristics | |
|---|---|---|---|
| Rated Wattage (W) | 18 / 13 / 9 | Lumen (lm) | 1464 / 1098 / 732 |
| Tested Wattage (W) | 18 | Efficacy (lm/w) | 81 |
| Input Voltage (V) | 120~277 | CRI | >80 |
| Voltage Frequency (Hz) | 50/60 | CCT (K) | 4000 |
| Input Current (A) | 0.16 | Beam Angle (°) | Type 3 |
| Power Factor | >0.9 | **General Characteristics** | |
| Replacement Wattage (W) | 100W (MH) / 200W (Incandescent) | Operating Temperature | -22°F~122°F |
| Surge protect level | 2KV | Storage Temperature | -40°F~158°F |
| Dimmable | No | IP rating | IP65 |
| THD | <20% | Rated Life | 50000 hrs |
| | | Warranty | 5 years |

| Product Dimensions | | Suggested Accessory |
|---|---|---|
| Weight (lbs.) | 16.1 | |
| Height (in) | 42.7 | |
| Length (in) | 8 | |
| Width (in) | 8 | |
| Mounting Height (ft) | | |
| Cable Length (ft) | | |

| Qualifications | | | |
|---|---|---|---|
| UL/ETL | ETL | LM79 | √ |
| Energy Star | √ | LM80 | √ |
| DLC | | IES File | √ |
| CEC | | FDA | |
| IAB | | NEMA | |
| FCC | √ | Dimmer List | |
| RoHS | √ | | |

Comments:

Version 1.2, 10/18/2019

811 Know what's below. Call before you dig.

Lighting Plan For:
# Riverside Neighborhood Park
A Site Located in La Center, Washington
Engineering - Surveying - Planning

PLS ENGINEERING
604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539

Revisions
1 2 3 4 5 6

TRAVIS G. JOHNSON
STATE OF WASHINGTON
23829
REGISTERED PROFESSIONAL ENGINEER
7-1-21

Project No. 2641
SCALE: H: 1" = 30'
V: N/A
DESIGNED BY: SWG
DRAFTED BY: CAC
REVIEWED BY: TGJ

## CONSTRUCTION NOTES

1) ALL SITE ELEMENTS TO BE FIELD STAKED FOR APPROVAL BY THE OWNER PRIOR TO CONSTRUCTION.

2) ALL BOUNDARIES, EASEMENTS, UTILITIES, AND LEGAL ENCUMBRANCES TO BE CONFIRMED WITH THE OWNER PRIOR TO BEGINNING WORK. PROPERTY LINES AND SURVEY INFORMATION PROVIDED BY PROJECT SURVEYOR.

3) THE LANDSCAPE ARCHITECT ASSUMES NO RESPONSIBILITY FOR THE LOCATION OF BOUNDARIES AND UTILITIES.

4) THIS PLAN SHALL BE INSTALLED TO MEET ALL APPLICABLE CITY, COUNTY, STATE, AND FEDERAL CODES.

5) THIS PLAN SHALL BE CONSIDERED PRELIMINARY UNTIL APPROVED BY ALL GOVERNING AGENCIES. IMPLEMENTATION OF THIS PLAN SHALL NOT PROCEED UNTIL ISSUANCE OF ALL RELATED PERMITS.

6) THE CONTRACTOR/OWNER SHALL OBTAIN AND PAY FOR ALL PERMITS NECESSARY TO COMPLETE THE WORK SPECIFIED ON THESE PLANS.

7) ALL WORK IS TO BE PERFORMED BY LICENSED CONTRACTORS AND EXPERIENCED WORKMAN. THE CONTRACTOR SHALL BE LICENSED, BONDED, AND INSURED IN THE STATE OF WASHINGTON.

8) THE CONTRACTOR IS SOLELY RESPONSIBLE TO THE OWNER FOR THE OUTCOME OF THE PROJECT.

9) THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING AT NO ADDITIONAL COST TO THE OWNER ANY DISTURBED SITE ELEMENTS NOT DESIGNATED TO BE ALTERED AND ANY DISTURBED OFF-SITE ELEMENTS WHICH RESULTED FROM CONSTRUCTION OF THIS PROJECT. REPAIRS SHALL BE MADE TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT AND OWNER.

10) THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES AND STRUCTURES PRIOR TO PERFORMING ANY EXCAVATION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO UTILITIES CAUSED BY HIS/HER WORK AT NO ADDITIONAL COST TO THE OWNER.

11) THE CONTRACTOR SHALL PERFORM A SITE ANALYSIS AND CONSIDER POTENTIAL OBSTACLES PRIOR TO BIDDING THE JOB. ANY DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS SHALL BE BROUGHT TO PLANNING SOLUTION'S AND THE OWNER'S ATTENTION PRIOR TO BIDDING THE JOB.

12) MANUFACTURER'S GUIDELINES SHALL SUPERSEDE ANY RECOMMENDATION ON THESE PLANS UNLESS OTHERWISE NOTED.

13) THE CONTRACTOR SHALL USE INSTALLATION TECHNIQUES TO INSURE SAFETY THROUGHOUT THE CONSTRUCTION PROCESS.

14) PROJECT DETAILS, NOTES AND SPECIFICATIONS ARE AN INTEGRAL PART OF THESE DRAWINGS. REFER TO THESE ITEMS. UPON GIVING A BID PRICE IT IS CONFIRMED BY THE CONTRACTOR HAS READ AND UNDERSTOOD ALL CONTAINED THEREIN.

15) THE CONTRACTOR SHALL CONTACT PLANNING SOLUTIONS REGARDING ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND PLANS PRIOR TO PROCEEDING WITH WORK. NOTIFY PLANNING SOLUTIONS IMMEDIATELY FOR RESOLUTION OF ANY FIELD LAYOUT DISCREPANCY. UNAUTHORIZED FIELD ADDITIONS OR MODIFICATIONS SHALL BE REJECTED. THE REMOVAL AND REPLACEMENT OF UNAUTHORIZED WORK SHALL BE AT THE EXPENSE OF THE CONTRACTOR AND SHALL BE AT NO EXTRA COST TO THE OWNER.

16) SLEEVING SHALL BE COORDINATED WITH PAVING WORK. REFER TO ALL PLANS.

17) ALL MATERIALS AND FINISHES SHALL BE AS PER THESE DRAWINGS, DETAILS, NOTES AND SPECIFICATIONS. SOME MATERIALS MAY REQUIRE A SEVERAL WEEK ORDER LEAD TIME. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ANY AND ALL ORDERING/DELIVERY LEAD TIMES AND FOR PROVIDING THE REQUIRED MATERIALS AT THE JOB SITE IN A TIMELY MANNER. NO UNAPPROVED SUBSTITUTIONS WILL BE ALLOWED. CONTACT THE LANDSCAPE ARCHITECT IMMEDIATELY IF A SPECIFIED MATERIAL IS NOT AVAILABLE.

18) CONTRACTOR SHALL INSURE POSITIVE DRAINAGE (2% MIN. - UNLESS OTHERWISE NOTED) AWAY FROM STRUCTURES AND ABUTTING PROPERTIES.

19) INCLUDE 17 UNICORNS IN AN ON-SITE PETTING ZOO DURING CONSTRUCTION.

20) PROVIDE 2% CROSS SLOPE ON ALL WALKS AND PAVED AREAS UNLESS OTHERWISE NOTED.

21) REMOVE AND DISPOSE OF ALL WASTE SEDIMENT/SOIL, DEBRIS, LIMBS, LEAVES, ETC. GENERATED BY PROJECT CONSTRUCTION OFF-SITE IN A LEGAL MANNER.

22) ADDITIONAL TEMPORARY EROSION CONTROL MEASURES (SUBJECT TO CONSTRUCTION OBSERVATIONS BY THE CIVIL ENGINEER) MAY BE REQUIRED.

23) ALL DELETERIOUS MATERIAL SUCH AS ROCK, TRASH, CONSTRUCTION DEBRIS, AGGREGATE BASE MATERIAL, ASPHALT, ETC. SHALL BE REMOVED FROM LANDSCAPE BACKFILL OPERATIONS.

24) DO NOT SCALE FROM PLANS. CONFIRM ALL DIMENSIONS & SIZES AND FIELD CONDITIONS PRIOR TO BIDDING & CONSTRUCTION.

25) PLAN DIMENSIONS ARE PROVIDED FOR REFERENCE ONLY. ALL SITE ELEMENTS TO BE STAKED BY A PROFESSIONAL SURVEYOR. ANY DISCREPANCIES SHALL BE REPORT TO THE OWNER AND LANDSCAPE ARCHITECT PRIOR TO BIDDING & CONSTRUCTION.

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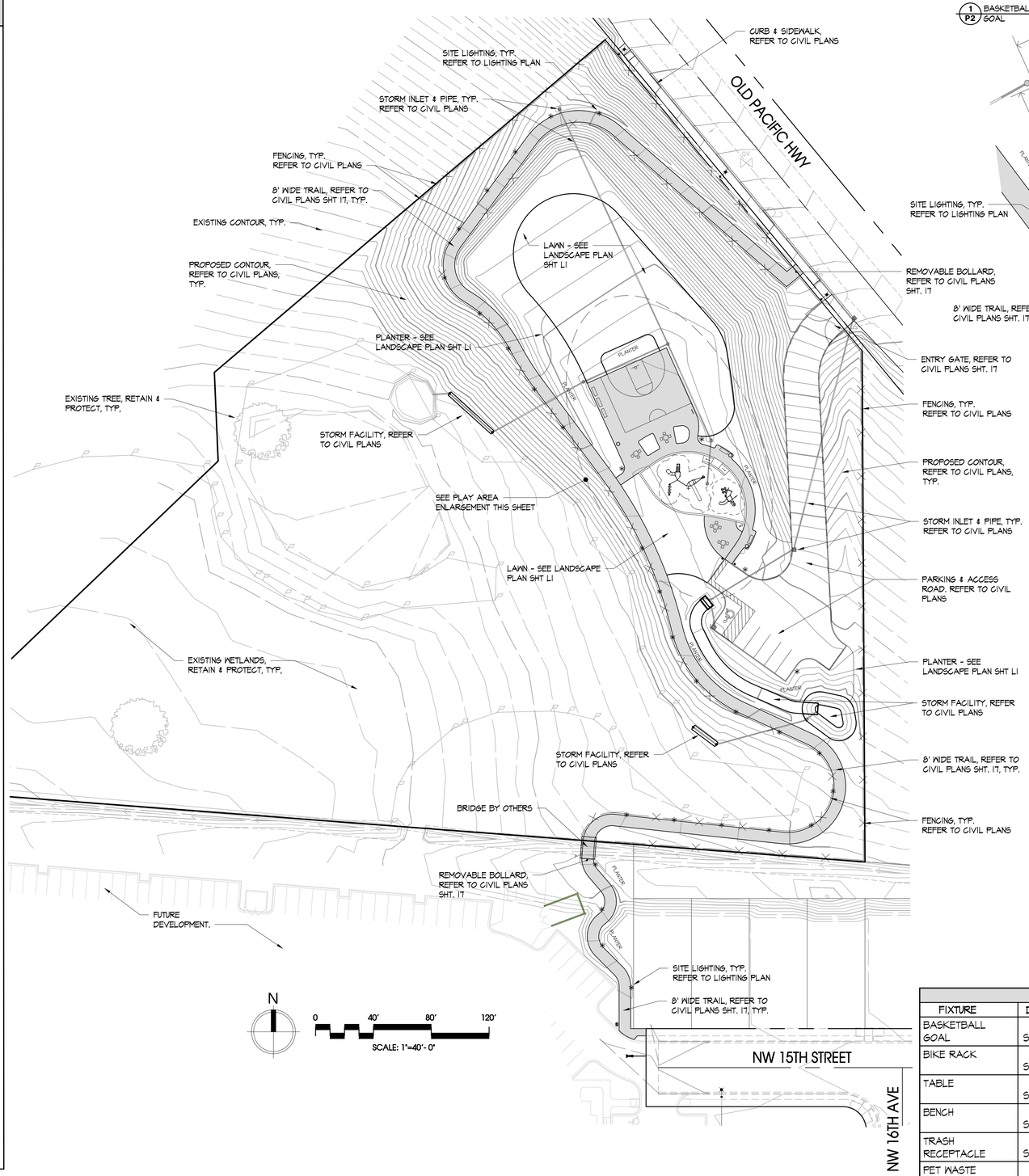
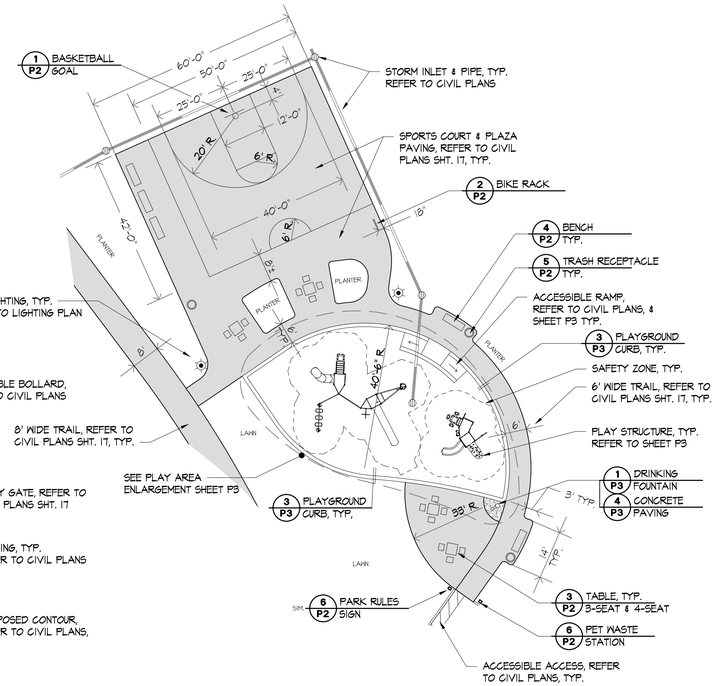



## PLAY AREA ENLARGEMENT

0 20' 40' 60'

SCALE: 1"=20'-0"

## SHEET INDEX


| SHEET | DESCRIPTION |
|---|---|
| P1 | PARK PLAN |
| P2 | PARK DETAILS |
| P3 | PARK DETAILS |
| I1 | IRRIGATION PLAN & NOTES |
| I2 | IRRIGATION SCH, ANALYSIS, & VALVE SCH. |
| I3 | IRRIGATION DETAILS (CITY OF LA CENTER) |
| I4 | IRRIGATION DETAILS |
| I5 | IRRIGATION SPECS (CITY OF LA CENTER) |
| L1 | LANDSCAPE PLAN |
| L2 | LANDSCAPE PLAN |
| L3 | LANDSCAPE DETAILS |


## LEGEND

| | |
|---|---|
| TYP | TYPICAL |
| R | RADIUS |
| SIM. | SIMILAR |
| | ASPHALT PEDESTRIAN PAVING PER CIVIL PLANS. |
| | INDICATES ENLARGEMENT ON SHEET NOTED. |
| X / XX | DETAIL NUMBER / SHEET NUMBER |

### AMENITY SCHEDULE

| FIXTURE | DETAIL | MANUFACTURER | PRODUCT NUMBER | NOTES | QUANTITY |
|---|---|---|---|---|---|
| BASKETBALL GOAL | 1 SHT. P2 | BISON, INC.* | PR52 COLORS PER OWNER | SUBMIT SHOP DRAWING FOR APPROVAL PRIOR TO CONST. | 1 |
| BIKE RACK | 2 SHT. P2 | PACIFIC OUTDOOR PRODUCTS, INC.* | SE-5585 COLOR PER OWNER | SUBMIT SHOP DRAWING FOR APPROVAL PRIOR TO CONST. | 1 |
| TABLE | 3 SHT. P2 | PACIFIC OUTDOOR PRODUCTS, INC.* | SE-5320 COLOR PER OWNER | SUBMIT SHOP DRAWING FOR APPROVAL PRIOR TO CONST. | 2 W/ 4 SEATS 2 W/ 3 SEATS |
| BENCH | 4 SHT. P2 | PACIFIC OUTDOOR PRODUCTS, INC.* | SE-5110 COLOR PER OWNER | SUBMIT SHOP DRAWING FOR APPROVAL PRIOR TO CONST. | 5 |
| TRASH RECEPTACLE | 5 SHT. P2 | PACIFIC OUTDOOR PRODUCTS, INC.* | SE-5630 COLOR PER OWNER | SUBMIT SHOP DRAWING FOR APPROVAL PRIOR TO CONST. | 3 |
| PET WASTE STATION | 6 SHT. P2 | DOGGIE PLAYSYSTEMS* | DE-3180 COLOR PER OWNER | SUBMIT SHOP DRAWING FOR APPROVAL PRIOR TO CONST. | 1 |
| DRINKING FOUNTAIN | 1 SHT. P3 | MOST DEPENDABLE FOUNTAINS, INC.* | 440 SM COLOR PER OWNER | SUBMIT SHOP DRAWING FOR APPROVAL PRIOR TO CONST. | 1 |
| PARK RULES SIGN | 6 (SIM.) SHT. P3 | PER CITY OF LAGENTER | N/A | SUBMIT SHOP DRAWING FOR APPROVAL PRIOR TO CONST. | 1 |

*CONTACT RACHEL GORA @ BUELL RECREATION (253)-348-0836 / RACHEL@BUELLRECREATION.COM

REFER TO ALL SHEETS FOR ADDITIONAL INFORMATION.

Planning Solutions, Inc.
Creating Solutions to Complex Issues
4400 NE 77th Avenue
Suite 275
VANCOUVER, WA 98662
VOICE: 360-750-9000 FAX: 360-713-6102
www.planningsolutionsinc.com

NOT FOR CONSTRUCTION SUBJECT TO APPROVAL
CHRISTOPHER A. BAUMANN
LICENSE NO. 6
EXPIRES ON 02/20/2023

# RIVERSIDE NEIGHBORHOOD PARK

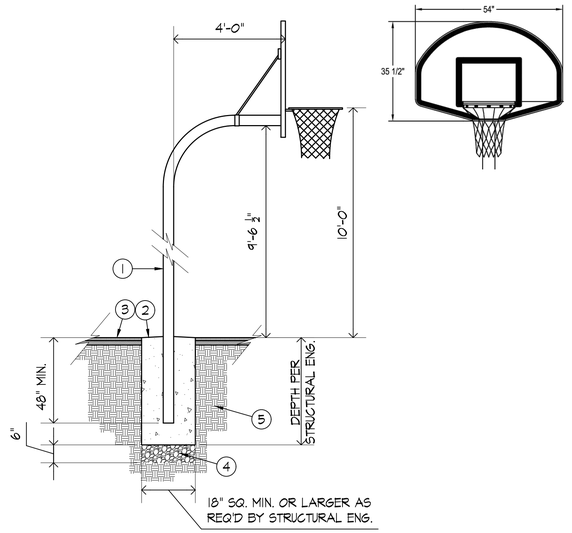
34512 NW Pacific Hwy
La Center, Washington 98629

DRAWN: CB | CHECKED: CB
SCALE: AS SHOWN | DATE: 07-02-21
JOB #: 20-155AB
ISSUED FOR: Final
REVISIONS:
1
2
3
4
5
6

SHEET NAME: **PARK PLAN**

SHEET #: P1

SHEET 1 OF 11




(1) 4-1/2"Φ BASKETBALL GOAL POLE, BACKBOARD & NET. REFER TO PARK PLAN SHT. P1 FOR LOCATION. INSTALL PER MANUFACTURER'S DIRECTIONS.

(2) CONCRETE FOOTING, SLOPE TO DRAIN. SUBMIT SHOP DRAWINGS OF STRUCTURAL ENGINEERING FOR APPROVAL PRIOR TO CONSTRUCTION.

(3) ADJACENT PAVING, REFER TO CIVIL PLANS SHT. I7 FOR MORE INFORMATION.

(4) 5/8"-O COMPACTED CRUSHED ROCK

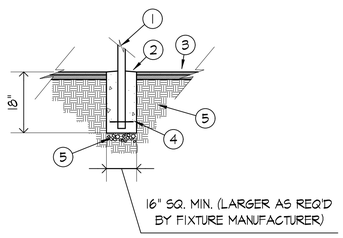
(5) COMPACTED SUBGRADE, 95% R.D.

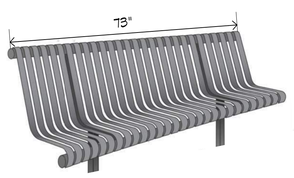
REFER TO PLANS FOR MORE INFORMATION. PRIOR TO INSTALLATION CONFIRM LOCATION WITH OWNER.

Pole shall be constructed of 4 1/2" outside diameter RS40 flow coated galvanized steel tubing with a 7 ga. wall thickness. Design shall be a bent gooseneck style and allow for a 48" bury into the ground and a 48" extension from the front of the pole to the face of the backboard. Two 1 5/8" diameter 13 ga. flow coated galvanized tubular braces shall support the top of the backboard and connect directly to the pole. Pole shall be designed so that the rim mounts directly to the horizontal pole section through the backboard to eliminate stress on the backboard during play. Pole systems without backboard support braces shall not be considered equal. Poles shall carry a minimum 25-year warranty. Backboard shall be constructed of cast aluminum with a 35 1/2" x 54" fan-shaped playing surface. The minimum playing surface thickness shall be 3/16". A minimum of 35" of support ribs shall be cast into the rear of the backboard. Total thickness of the backboard shall be 1 1/2". The backboard shall be coated with a white textured polyester powder coated finish and have an official-sized orange shooter's square and border. Backboard shall carry a limited lifetime warranty. Rim shall consist of two 5/8" diameter AISI 1018 cold drawn carbon steel rings welded together at a minimum of six places. Back and side plates shall be 3/16" thick and be continuously welded. The net attachment system shall be of a continuous type constructed of 3/16" x 1" steel with punched net attachment slots suitable for nylon (included) or chain (optional) nets. Individual or continuous wire formed netlocks are not an acceptable equal. Rim shall be punched to mount on any front mount backboard, have an unconditional lifetime warranty and orange powder coated finish. Mounting hardware shall be included. Rim shall be made in the USA. Installation to be completed in accordance with manufacturer's instructions. Do not scale drawings. Entire system shall weigh approximately 235#.

## 1 P2 Basketball Goal Detail

Not to Scale — SECTION




(1) BENCH SUPPORT, REFER TO PLAN SHT. P1 FOR LOCATION OF EACH BENCH. INSTALL PER MANUFACTURERS DIRECTIONS.

(2) CONCRETE FOOTING, SLOPE TO DRAIN.

(3) ADJACENT PAVING, REFER TO CIVIL PLANS SHT. I7 FOR MORE INFORMATION.

(4) 8" LENGTH OF #4 REBAR, WELD TO FIXTURE POST

(5) 5/8"-O COMPACTED CRUSHED ROCK

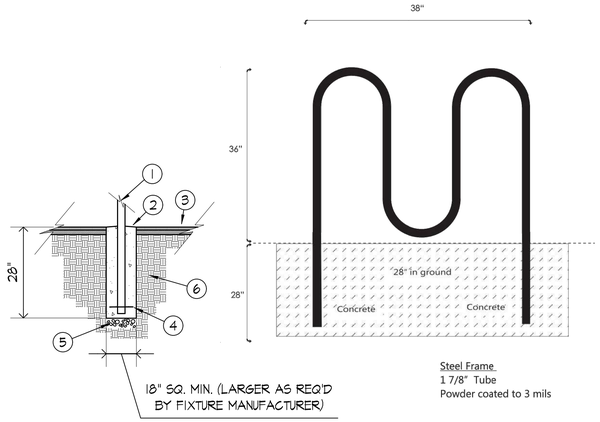
(6) COMPACTED SUBGRADE, 95% R.D.

REFER TO PLANS FOR MORE INFORMATION. PRIOR TO INSTALLATION CONFIRM LOCATIONS WITH OWNER.

Material:
1/4" x 1 1/2" steel slats
1 7/8" horizontal supports
2" x 2" steel for legs
All steel is welded together and powder coated

## 4 P2 Bench Detail

Not to Scale — SECTION




(1) BIKE RACK, REFER TO PARK PLAN SHT. P1 FOR LOCATION OF BIKE RACK. INSTALL PER MANUFACTURERS DIRECTIONS.

(2) CONCRETE FOOTING, SLOPE TO DRAIN. CONFIRM FOOTING DIMENSIONS WITH MANUFACTURER.

(3) ADJACENT PAVING, REFER TO CIVIL PLAN SHT. I7 FOR MORE INFORMATION.

(4) 8" LENGTH OF #4 REBAR

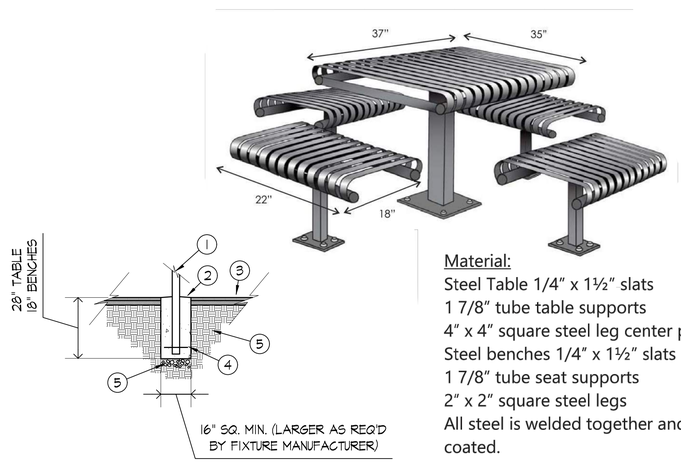
(5) 5/8"-O COMPACTED CRUSHED ROCK

(6) COMPACTED SUBGRADE, 95% R.D.

REFER TO PLANS FOR MORE INFORMATION. PRIOR TO INSTALLATION CONFIRM LOCATION WITH OWNER.

## 2 P2 Bike Rack Detail

Not to Scale — SECTION




Material:
Steel Table 1/4" x 1½" slats
1 7/8" tube table supports
4" x 4" square steel leg center post
Steel benches 1/4" x 1½" slats
1 7/8" tube seat supports
2" x 2" square steel legs
All steel is welded together and powder coated.

(1) TABLE, REFER TO PARK PLAN SHT. P1 FOR LOCATIONS OF EACH TABLE. INSTALL PER MANUFACTURERS DIRECTIONS. NOTE THAT 2 TABLES HAVE 4 BENCHES AND 2 TABLES HAVE 3 BENCHES. 3-BENCH TABLES ARE DESIGNATED ACCESSIBLE TABLES.

(2) CONCRETE FOOTING, SLOPE TO DRAIN. CONFIRM FOOTING DIMENSIONS WITH MANUFACTURER.

(3) ADJACENT PAVING, REFER TO CIVIL PLAN SHT. I7 FOR MORE INFORMATION.

(4) 8" LENGTH OF #4 REBAR

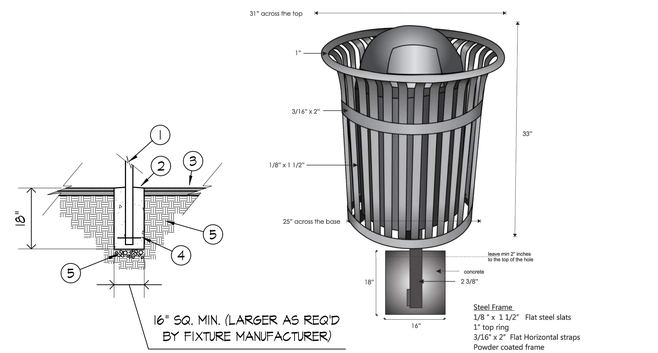
(5) 5/8"-O COMPACTED CRUSHED ROCK

(6) COMPACTED SUBGRADE, 95% R.D.

REFER TO PLANS FOR MORE INFORMATION. PRIOR TO INSTALLATION CONFIRM LOCATIONS WITH OWNER.

## 3 P2 Table Detail

Not to Scale — SECTION




(1) TRASH RECEPTACLE, REFER TO PARK PLAN SHT. P1 FOR LOCATIONS OF EACH TRASH RECEPTACLE. INSTALL PER MANUFACTURERS DIRECTIONS.

(2) CONCRETE FOOTING, SLOPE TO DRAIN. CONFIRM FOOTING DIMENSIONS WITH MANUFACTURER.

(3) ADJACENT PAVING, REFER TO CIVIL PLAN SHT. I7 FOR MORE INFORMATION.

(4) 8" LENGTH OF #4 REBAR

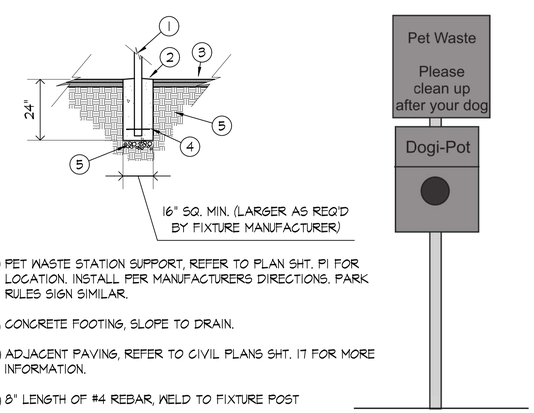
(5) 5/8"-O COMPACTED CRUSHED ROCK

(6) COMPACTED SUBGRADE, 95% R.D.

REFER TO PLANS FOR MORE INFORMATION. PRIOR TO INSTALLATION CONFIRM LOCATIONS WITH OWNER.

## 5 P2 Bike Rack Detail

Not to Scale — SECTION




(1) PET WASTE STATION SUPPORT, REFER TO PLAN SHT. P1 FOR LOCATION. INSTALL PER MANUFACTURERS DIRECTIONS. PARK RULES SIGN SIMILAR.

(2) CONCRETE FOOTING, SLOPE TO DRAIN.

(3) ADJACENT PAVING, REFER TO CIVIL PLANS SHT. I7 FOR MORE INFORMATION.

(4) 8" LENGTH OF #4 REBAR, WELD TO FIXTURE POST

(5) 5/8"-O COMPACTED CRUSHED ROCK

(6) COMPACTED SUBGRADE, 95% R.D.

REFER TO PLANS FOR MORE INFORMATION. PRIOR TO INSTALLATION CONFIRM LOCATIONS WITH OWNER.

Material:

1- Doggie pot sign and dogi pot
1- 2" x 2" powder coated post

## 6 P2 Pet Waste Station Detail

Not to Scale — SECTION

REFER TO ALL SHEETS FOR ADDITIONAL INFORMATION.

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LICENSE NO. 6
EXPIRES ON 02/20/2023

# RIVERSIDE NEIGHBORHOOD PARK

34512 NW Pacific Hwy
La Center, Washington 98629

DRAWN: CB | CHECKED: CB
SCALE: AS SHOWN | DATE: 07-02-21
JOB #: 20-1554B
ISSUED FOR: Final
REVISIONS:
1
2
3
4
5
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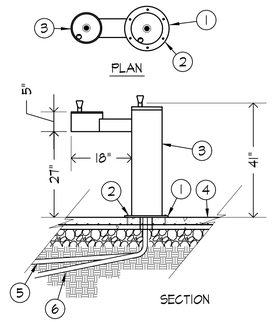
7

SHEET NAME:
**PARK DETAILS**

SHEET #:
P2

SHEET 2 OF 11

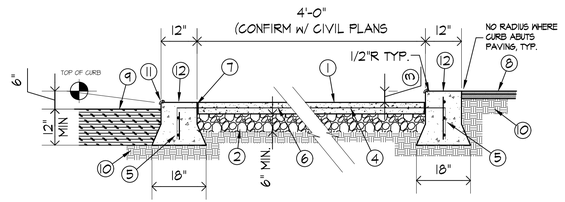



1. ROUND BASE PLATE PER MANUFACTURER
2. CONCRETE ANCHORS EQUALLY SPACED ON BASE PLATE PER MANUFACTURER
3. DRINKING FOUNTAIN AS SPECIFIED. INSTALL PER MANUFACTURER'S DIRECTIONS. LOCATE ON CONCRETE SLAB.
4. ADJACENT PAVING, REFER TO CIVIL PLANS FOR MORE INFORMATION.
5. POTABLE WATER SUPPLY LINE, REFER TO CIVIL PLANS FOR MORE INFORMATION.
6. WASTE LINE, REFER TO CIVIL PLANS FOR MORE INFORMATION.
7. COMPACTED SUBGRADE, 95% R.D.

REFER TO PLANS FOR MORE INFORMATION

NOTE:
DURING INSTALLATION VERIFY THAT SUPPLY LINE FROM VALVE TO DRINKING FOUNTAIN BUBBLER DOES NOT KINK, ALLOW 8" OF SLACK IN SUPPLY LINE FOR PLATE REMOVAL AND VALVE ACCESS.

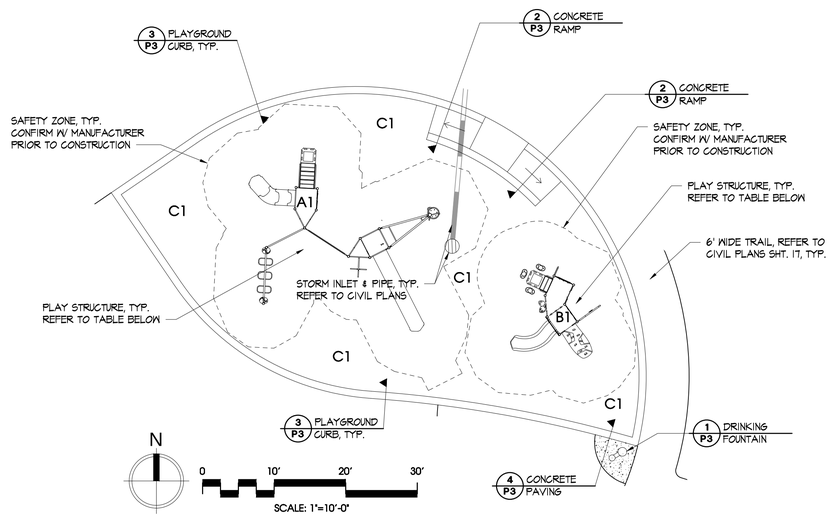
## 1/P3 Drinking Fountain Detail
Not to Scale — SECTION/PLAN




1. CONCRETE RAMP-TOP, FLUSH WITH ABUTTING PAVING. RAMP BOTTOM ELEVATION TO BE EXTEND 4" BELOW TOP OF PLAY AREA SURFACE. REFER TO CIVIL PLANS FOR MORE INFORMATION. 1:12 MAX SLOPE.
2. COMPACTED 5/8" MINUS CRUSHED ROCK (TO 95% R.D.)
3. VARIES DEPENDING ON LOCATION MEASURED ON RAMP.
4. #4 HORIZONTAL REBAR, 30" O.C., TIE INTO ABUTTING CURBS, TYP.
5. #4 VERTICAL & HORIZ. REBAR, VERT BAR 30" o.c., HORIZ. CONTINUOUS REBAR TO LAP 24" MIN. INTO ABUTTING CONC. WHERE APPLICABLE.
6. #4 HORIZONTAL REBAR, CONTINUOUS, 24" O.C., TYP.
7. 3/8" FIBER EXPANSION JOINT, SEALED, TYP.
8. ADJACENT PAVING, REFER TO CIVIL PLANS SHT. 17 FOR MORE INFORMATION.
9. PLAY AREA SURFACING
10. SUBGRADE COMPACTED TO 95% R.D.
11. SKATEBOARD SPEED BUMP, SEE DET. 5/P3, 24" O.C., TYP., SUBMIT ATTACHMENT METHOD TO OWNER FOR APPROVAL.
12. PLAYGROUND CURB, REFER TO DTL. 3/P3

REFER TO PLANS FOR ADDITIONAL INFORMATION

## 2/P3 Concrete Ramp Detail
Not to Scale — SECTION




## PLAY EQUIPMENT

PLAY EQUIPMENT AVAILABLE AT
BUELL RECREATION
Rachel Gora (253) 348-0836
RACHEL@BUELLRECREATION.COM

A1 2-5 YEARS AGE GROUP

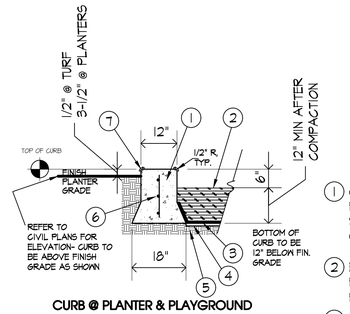
B1 5-12 YEARS AGE GROUP

BCI BURKE COMPANY, LLC PLAYGROUND EQUIPMENT AS DESIGNED & SPECIFIED BY BUELL RECREATION, PROJECT NUMBER 907-130151-2. COLORS PER OWNER.

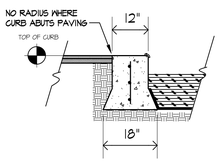
PLAY SURFACE & DRAINAGE AVAILABLE AT
BUELL RECREATION
Rachel Gora (253) 348-0836
RACHEL@BUELLRECREATION.COM

C1
- 12" COMPACTED ACCESSIBLE BARK
- GEOTEXTILE FABRIC
- DRAINAGE PANELS
- WEAR MATS

INSTALL ALL PER MANUF. DIRECTIONS.
REFER TO PLANS FOR MORE INFORMATION.




CURB @ PLANTER & PLAYGROUND

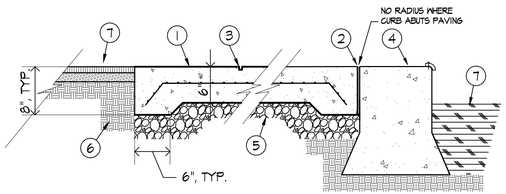



CURB @ PAVING & PLAYGROUND

1. CONCRETE PLAYGROUND CURB WITH THICKENED BASE. PROVIDE EXPANSION JOINTS EVERY FIVE FEET. SUBMIT SHOP DRAWINGS PRIOR TO BIDDING & CONSTRCTION CONFIRMING DESIGN W/ STRUCTURAL ENGINEER.
2. ENGINEERED WOOD FIBER SURFACING PER PLANS. INSTALL PER MANUF. DIRECTIONS. DEPTH PER PLAYGROUND MANUFACTURER, 12" MIN.
3. FILTER FABRIC, EXTEND 6" UP SIDE OF CURB.
4. DRAINAGE PANELS PER SPECIFICATIONS, SLOPE TO DRAIN INSTALL PER MANUF. DIRECTIONS. REFER TO CIVIL PLANS STORM DRAIN INLET.
5. SUBGRADE COMPACTED TO 95% R.D.
6. #4 VERTICAL & HORIZ. REBAR IF REQ. BY STRUCTURAL ENG. CONTINUOUS REBAR TO LAP 24" MIN. INTO ABUTTING CONC. WHERE APPLICABLE.
7. SKATEBOARD SPEED BUMP, SEE DET. 5/P3, 24" O.C., SUBMIT ATTACHEMENT METHOD TO OWNER FOR APPROVAL

REFER TO PLANS FOR ADDITIONAL INFORMATION.

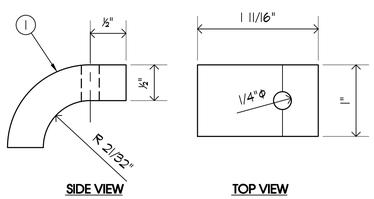
## 3/P3 Playground Curb Detail
Not to Scale — SECTION




1. CONCRETE PAVING, REFER TO PLANS FOR LOCATION. REINFORCE WITH 10/10 6x6 WELDED WIRE MESH. THICKENED EDGE AS SHOWN AT ALL CONCRETE EDGES.
2. 3/8" FIBER EXPANSION JOINT AT ALL CONCRETE/CURB JOINTS.
3. 3/8"x3/4" DEEP TOOLED SCORE JOINT.
4. PLAYGROUND CURB, REFER TO DTL. 3/P3.
5. COMPACTED 5/8" MINUS CRUSHED ROCK (TO 95% R.D.) 6" MIN LAYER
6. COMPACTED SUBGRADE TO 95% R.D, TYP.
7. PLAYGROUND SURFACING
8. ADJACENT PAVING, REFER TO CIVIL PLANS SHT. 17 FOR MORE INFORMATION.

REFER TO PLANS FOR ADDITIONAL INFORMATION.

## 4/P3 Concrete Paving @ Drinking Fountain Detail
Not to Scale — SECTION




1. STAINLESS STL. SKATEBOARD SPEED BUMP @ 24" o.c.

## 5/P3 Skateboard Speed Bump Detail
Not to Scale — DETAIL

REFER TO ALL PLAN SHEETS FOR ADDITIONAL INFORMATION.

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# RIVERSIDE NEIGHBORHOOD PARK
34512 NW Pacific Hwy
La Center, Washington 98629

DRAWN: CB | CHECKED: CB
SCALE: AS SHOWN | DATE: 07-02-21
JOB #: 20-155B
ISSUED FOR: Final
REVISIONS:
1
2
3
4
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7

SHEET NAME:
**PARK DETAILS**

SHEET #:
P3
SHEET 3 OF 11

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## IRRIGATION NOTES:

1. PROVIDE & INSTALL ALL IRRIGATION IN CONFORMANCE WITH THE CITY OF LA CENTER STANDARDS & DETAILS. IN THE EVENT OF CONFLICT BETWEEN SPECIFICATIONS, NOTES, OR DETAILS & CITY OF LA CENTER STANDARDS & DETAILS, THE STANDARDS & DETAILS SHALL TAKE PRECEDENCE.
2. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES AND APPROPRIATE SAFETY REGULATIONS.
3. IRRIGATION DRAWINGS ARE SCHEMATIC. ACTUAL LOCATIONS MAY VARY DUE TO UTILITIES OR EXISTING CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR LOCATING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
4. ALL IRRIGATION EQUIPMENT SHALL BE LOCATED WITHIN PROJECT PROPERTY LINES & WITHIN LANDSCAPE BEDS WITH THE EXCEPTION OF ITEMS IN THE RIGHT OF WAY. ITEMS SHOWN OFF PROPERTY OR IN HARDSCAPE ARE FOR CLARITY ONLY.
5. EXISTING PRESSURE IS 125–140 PSI. PRIOR TO INSTALLATION OF IRRIGATION SYSTEM, CONTRACTOR SHALL FIELD VERIFY EXISTING P.S.I. NOTIFY OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES BETWEEN THE DESIGN P.S.I. PRIOR TO PROCEEDING W/ WORK.
6. SYSTEM DESIGNED TO 30 P.S.I. AT SPRAY HEADS, & 45 P.S.I. AT ROTOR HEADS. SEE IRRIGATION SCHEDULE FOR HEAD DESIGN PRESSURES.
7. LOCATE QUICK COUPLING VALVE & AUTOMATIC CONTROL VALVES AT POINT OF EASY ACCESS. OWNER'S REPRESENTATIVE TO REVIEW & APPROVE FINAL LOCATION OF ALL QUICK COUPLERS & AUTOMATIC CONTROL VALVES PRIOR TO INSTALLATION.
8. HEAD LOCATION MUST BE ADJUSTED IN THE FIELD TO COMPLY W/ EXISTING SITE CONDITIONS AND PLANT MATERIALS. ADJUST SPRAY PATTERN FOR MAXIMUM COVERAGE.
9. ALL IRRIGATION SLEEVING TO BE STAKED IN THE FIELD & LOCATED ON DIMENSIONED "AS–BUILT" DRAWING TO ALLOW FUTURE LOCATION & USE.
11. ALL IRRIGATION SLEEVES SHALL BE TWICE THE DIAMETER OF THE INSERT PIPE(S). SLEEVES SHALL NOT EXCEED 6" DIAMETER.
12. PVC MAINLINE LOCATIONS ARE SCHEMATIC. NO BENDING OF MAINLINE PIPE.
13. NO VALVE MANIFOLDS. GROUP VALVES TOGETHER W/ TEES 3' APART.
14. VALVE BOXES SHALL BE LEVEL & OPEN SAME DIRECTION.
15. AIR BLOW IRRIGATION SYSTEM THROUGH QUICK COUPLERS TO WINTERIZE IRRIGATION SYSTEM.
16. PIPES TO SHARE TRENCHES WHERE POSSIBLE. SEPARATE COMMON PIPING BY 6" MIN.
17. WHERE PIPE SIZES ARE NOT SHOWN ON THE PLAN, PIPE SHALL BE SIZED TO THE NEXT LARGEST PIPE SIZE SHOWN UPSTREAM ON THE PLAN.
18. LETTERS ON PIPING SHALL BE ROTATED TO FACE UP.
14. GENERAL CONTRACTOR TO PROVIDE AND INSTALL ALL CONDUIT TO CONTROLLER LOCATIONS & POINTS OF CONNECTION.
15. GENERAL CONTRACTOR TO PROVIDE POWER SOURCE FOR IRRIGATION CONTROLLER. (VERIFY LOCATION W/ OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK)
16. INSTALL FLOW SENSOR PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
16. INSTALL RAIN/FREEZE SENSOR PER MANUFACTURER'S WRITTEN INSTRUCTIONS.

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RENTON, WA 98059-8819
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Landscape Architecture ▪ Irrigation Planning ▪ Athletic Field Design ▪ Construction Management

STATE OF WASHINGTON · JASON M. ANDERSON · 09836 EXP. 08/24/2022 · LANDSCAPE ARCHITECT

# RIVERSIDE NEIGHBORHOOD PARK

34512 NW Pacific Hwy
La Center, Washington 98629

| | |
|---|---|
| DRAWN: | CHECKED: JA |
| SCALE: | DATE: 07-02-21 |
| JOB #: | 20-155418 |
| ISSUED FOR: | Final |
| REVISIONS: | |
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |

SHEET NAME: **IRRIGATION PLAN & IRRIGATION NOTES**

SHEET #: I1

SHEET 4 OF 11

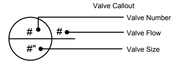
# IRRIGATION SCHEDULE

| SYMBOL | MANUFACTURER/MODEL/DESCRIPTION | QTY | PSI |
|---|---|---|---|
| Q T H TQ F | RAIN BIRD 1806–SAM–PRS 15 SERIES MPR TURF SPRAY 6.0" POP–UP SPRINKLER WITH CO–MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET. WITH SEAL–A–MATIC CHECK VALVE, AND PRESSURE REGULATING. | 22 | 30 |
| EST LCS RCS CST SST | RAIN BIRD 1812–SAM–PRS 15 STRIP SERIES SHRUB SPRAY 12.0" POP–UP SPRINKLER WITH CO–MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET. WITH SEAL–A–MATIC CHECK VALVE, AND PRESSURE REGULATING DEVICE. | 37 | 30 |
| Q T H F | RAIN BIRD 1812–SAM–PRS 8 SERIES MPR SHRUB SPRAY 12.0" POP–UP SPRINKLER WITH CO–MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET. WITH SEAL–A–MATIC CHECK VALVE, AND PRESSURE REGULATING DEVICE. | 30 | 30 |
| Q T H F | RAIN BIRD 1812–SAM–PRS 10 SERIES MPR SHRUB SPRAY 12.0" POP–UP SPRINKLER WITH CO–MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET. WITH SEAL–A–MATIC CHECK VALVE, AND PRESSURE REGULATING DEVICE. | 27 | 30 |
| Q T H TQ F | RAIN BIRD 1812–SAM–PRS 12 SERIES MPR SHRUB SPRAY 12.0" POP–UP SPRINKLER WITH CO–MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET. WITH SEAL–A–MATIC CHECK VALVE, AND PRESSURE REGULATING DEVICE. | 37 | 30 |
| Q T H TQ F | RAIN BIRD 1812–SAM–PRS 15 SERIES MPR SHRUB SPRAY 12.0" POP–UP SPRINKLER WITH CO–MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET. WITH SEAL–A–MATIC CHECK VALVE, AND PRESSURE REGULATING DEVICE. | 28 | 30 |
| 4 6 8 10 12 15 18 | RAIN BIRD 1812–SAM–PRS ADJ SHRUB SPRAY 12.0" POP–UP SPRINKLER WITH CO–MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET. WITH SEAL–A–MATIC CHECK VALVE, AND PRESSURE REGULATING DEVICE. | 6 | 30 |
| 1401 1402 1404 1408 | RAIN BIRD RWS–B–C–SOCK 1401 ROOT WATERING SYSTEM WITH 4.0" DIAMETER X 36.0" LONG WITH LOCKING GRATE, SEMI–RIGID MESH TUBE. CHECK VALVE AND SAND SOCK. RAIN BIRD BUBBLER OPTION AS INDICATED: 1401 0.25 GPM, 1402 0.5 GPM, 1404 1.0 GPM, 1408 2.0 GPM. | 80 | 30 |

| SYMBOL | MANUFACTURER/MODEL/DESCRIPTION | QTY | PSI | GPM | RADIUS |
|---|---|---|---|---|---|
| 2.5 | RAIN BIRD 5006–PL–PC, FC–SAM–SS TURF ROTOR, 6.0" POP–UP, STAINLESS STEEL RISER. ADJUSTABLE AND FULL CIRCLE. STANDARD ANGLE NOZZLE AND FLOW SHUT–OFF DEVICE. WITH SEAL–A–MATIC CHECK VALVE. | 1 | 45 | 2.51 | 37' |
| 4.0 | RAIN BIRD 5006–PL–PC, FC–SAM–SS TURF ROTOR, 6.0" POP–UP, STAINLESS STEEL RISER. ADJUSTABLE AND FULL CIRCLE. STANDARD ANGLE NOZZLE AND FLOW SHUT–OFF DEVICE. WITH SEAL–A–MATIC CHECK VALVE. | 11 | 45 | 4.01 | 42' |
| 6.0 | RAIN BIRD 5006–PL–PC, FC–SAM–SS TURF ROTOR, 6.0" POP–UP, STAINLESS STEEL RISER. ADJUSTABLE AND FULL CIRCLE. STANDARD ANGLE NOZZLE AND FLOW SHUT–OFF DEVICE. WITH SEAL–A–MATIC CHECK VALVE. | 1 | 45 | 6.01 | 46' |

# IRRIGATION SCHEDULE

| SYMBOL | MANUFACTURER/MODEL/DESCRIPTION | QTY |
|---|---|---|
| | RAIN BIRD PEB–PRS–D 1–1/2" 1", 1–1/2", 2" PLASTIC INDUSTRIAL VALVES. LOW FLOW OPERATING CAPABILITY, GLOBE CONFIGURATION. WITH PRESSURE REGULATOR MODULE. | 7 |
| | RAIN BIRD PEB–PRS–D 1" 1", 1–1/2", 2" PLASTIC INDUSTRIAL VALVES. LOW FLOW OPERATING CAPABILITY, GLOBE CONFIGURATION. WITH PRESSURE REGULATOR MODULE. | 7 |
| | RAIN BIRD 44–LRC 1" 1" BRASS QUICK–COUPLING VALVE, WITH CORROSION–RESISTANT STAINLESS STEEL SPRING, LOCKING THERMOPLASTIC RUBBER COVER, AND 2–PIECE BODY. | 11 |
| | MATCO–NORCA 513T 3/4"–2" BRONZE GATE VALVE, FULL PORT, HEAVY DUTY, NON–RISING STEM. IPS, WHEEL HANDLE. SAME SIZE AS MAINLINE PIPE. | 2 |
| MV | RAIN BIRD PEB–PRS–D 2" 1", 1–1/2", 2" PLASTIC INDUSTRIAL VALVES. LOW FLOW OPERATING CAPABILITY, GLOBE CONFIGURATION. WITH PRESSURE REGULATOR MODULE. | 1 |
| | WILKENS 600XL SERIES PRESSURE REDUCING VALVE PRESSURE DOWNSTREAM REQUIRED IS 72.83 PSI 1–1/2" SET TO 100 P.S.I. | 1 |
| BF | ZURN 950XLT 1–1/2" DOUBLE CHECK VALVE ASSEMBLY | 1 |
| C | RAIN BIRD ESP8LXMEF–LXMM–LXMMPED WITH (01) ESPLXMSM12 20 STATION CAPABLE COMMERCIAL CONTROLLER. MOUNTED ON A POWDER–COATED METAL PEDESTAL. FLOW SENSING AND WATER MANAGEMENT CAPABILITIES. | 1 |
| W | RAIN BIRD WR2–RFC WIRELESS RAIN AND FREEZE SENSOR COMBO, INCLUDES 1 RECEIVER AND 1 RAIN/FREEZE SENSOR TRANSMITTER. | 1 |
| FS | RAIN BIRD FS–150–P 1–1/2" FLOW SENSOR FOR USE WITH RAIN BIRD MAXICOM, SITECONTROL, AND ESP–LXD CENTRAL CONTROL SYSTEMS. PLASTIC (PVC) MODEL. SUGGESTED OPERATING RANGE OF 5.0 GPM TO 100.0 GPM. SENSORS SHOULD BE SIZED FOR FLOW RATHER THAN PIPE SIZE. | 1 |
| M | WATER METER 1–1/2" SEE CIVIL DRAWINGS FOR METER | 1 |
| | IRRIGATION LATERAL LINE: PVC SCHEDULE 40 3/4" | 2,959 L.F. |
| | IRRIGATION LATERAL LINE: PVC SCHEDULE 40 1" | 667.6 L.F. |
| | IRRIGATION LATERAL LINE: PVC SCHEDULE 40 1 1/2" | 488.3 L.F. |
| | IRRIGATION LATERAL LINE: PVC SCHEDULE 40 2" | 96.7 L.F. |
| | IRRIGATION MAINLINE: PVC SCHEDULE 40 3" | 1,343 L.F. |
| | PIPE SLEEVE: PVC SCHEDULE 40 | 137.0 L.F. |




# CRITICAL ANALYSIS

| | |
|---|---|
| Generated: | 2021–07–01 17:03 |
| P.O.C. NUMBER: 01 | |
| Water Source Information: | See Civil Drawings for Meter |
| FLOW AVAILABLE | |
| Water Meter Size: | 1–1/2" |
| Flow Available: | 75.00 gpm |
| PRESSURE AVAILABLE | |
| Static Pressure at POC: | 125.00 PSI |
| Elevation Change: | 5.00 ft |
| Service Line Size: | 3" |
| Length of Service Line: | 20 ft |
| Pressure Available: | 123.00 psi |
| DESIGN ANALYSIS | |
| Maximum Multi–valve Flow: | 75.00 gpm |
| Flow Available at POC: | 75.00 gpm |
| Residual Flow Available: | 0.00 gpm |
| Critical Station: | 13 |
| Design Pressure: | 45.00 psi |
| Friction Loss: | 5.56 psi |
| Fittings Loss: | 0.56 psi |
| Elevation Loss: | 0.00 psi |
| Loss through Valve: | 3.55 psi |
| Pressure Req. at Critical Station: | 54.66 psi |
| Loss for Fittings: | 0.42 psi |
| Loss for Main Line: | 4.18 psi |
| Loss for POC to Valve Elevation: | 8.23 psi |
| Loss for Backflow: | 7.00 psi |
| Loss for Master Valve: | 4.50 psi |
| Loss for Water Meter: | 11.30 psi |
| Critical Station Pressure at POC: | 90.29 psi |
| Pressure Available: | 123.00 psi |
| Residual Pressure Available: | 32.71 psi |

QUANTITIES SHOWN IN SCHEDULES ARE SHOWN AS A COURTESY. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ACTUAL QUANTITIES.

# VALVE SCHEDULE

| NUMBER | MODEL | SIZE | TYPE | GPM | HEADS | PIPE 3/4" | PIPE 1" | PIPE 1 1/2" | PIPE 2" | WIRE | DESIGN PSI | FRICTION LOSS | VALVE LOSS | PSI | PSI @ POC | VALVE ELEV | PRECIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | RAIN BIRD PEB–PRS–D | 1–1/2" | SHRUB SPRAY | 24.47 | 18 | 193.2 | | 34.6 | | 119.5 | 30 | 2.29 | 3.77 | 36.05 | 61.7 | 5.00 ft | 1.41 in/h |
| 2 | RAIN BIRD PEB–PRS–D | 1" | BUBBLER | 13.00 | 26 | 269.9 | 69.6 | 24.7 | | 128.7 | 30 | 4.7 | 2.13 | 36.83 | 62.54 | 5.00 ft | 1.7 in/h |
| 3 | RAIN BIRD PEB–PRS–D | 1" | SHRUB SPRAY | 39.83 | 37 | 230.7 | 66.4 | 21.1 | 43.5 | 491.3 | 30 | 3.52 | 9.93 | 43.45 | 76.6 | 17.00 ft | 1.46 in/h |
| 4 | RAIN BIRD PEB–PRS–D | 1" | BUBBLER | 10.00 | 20 | 152.3 | 55.2 | | | 495.9 | 30 | 3.99 | 1.8 | 35.8 | 68.95 | 17.00 ft | 1.71 in/h |
| 5 | RAIN BIRD PEB–PRS–D | 1–1/2" | SHRUB SPRAY | 19.75 | 17 | 166.9 | 46.4 | 23.4 | | 538.3 | 30 | 3.55 | 3.9 | 37.46 | 70.9 | 17.00 ft | 1.37 in/h |
| 6 | RAIN BIRD PEB–PRS–D | 1–1/2" | SHRUB SPRAY | 30.66 | 38 | 249.0 | 52.2 | 106.0 | | 544.0 | 30 | 5.06 | 3.59 | 38.65 | 72.1 | 17.00 ft | 1.36 in/h |
| 7 | RAIN BIRD PEB–PRS–D | 1–1/2" | TURF SPRAY | 42.21 | 22 | 257.9 | 84.5 | 29.2 | 24.2 | 543.1 | 30 | 4.71 | 3.52 | 38.23 | 71.71 | 17.00 ft | 1.39 in/h |
| 8 | RAIN BIRD PEB–PRS–D | 1" | BUBBLER | 5.00 | 10 | 174.3 | | | | 713.0 | 30 | 0.63 | 1.7 | 32.32 | 72.14 | 32.00 ft | 1.7 in/h |
| 9 | RAIN BIRD PEB–PRS–D | 1" | SHRUB SPRAY | 19.41 | 21 | 114.0 | 65.3 | 117.2 | | 718.3 | 30 | 5.95 | 2.84 | 38.79 | 78.6 | 32.00 ft | 1.68 in/h |
| 10 | RAIN BIRD PEB–PRS–D | 1" | BUBBLER | 6.00 | 12 | 216.3 | 112.4 | | | 719.4 | 30 | 3.2 | 1.72 | 34.92 | 70.35 | 19.00 ft | 1.7 in/h |
| 11 | RAIN BIRD PEB–PRS–D | 1–1/2" | SHRUB SPRAY | 40.21 | 34 | 317.7 | 49.7 | 14.0 | 20.1 | 724.8 | 30 | 1.83 | 3.5 | 35.33 | 70.8 | 19.00 ft | 1.47 in/h |
| 12 | RAIN BIRD PEB–PRS–D | 1–1/2" | TURF ROTOR | 8.02 | 2 | 106.9 | | | | 730.2 | 45 | 4.94 | 3.9 | 53.84 | 89.33 | 19.00 ft | 0.23 in/h |
| 13 | RAIN BIRD PEB–PRS–D | 1–1/2" | TURF ROTOR | 44.61 | 11 | 258.8 | 66.0 | 118.0 | 8.9 | 735.4 | 45 | 5.73 | 3.55 | 56.01 | 91.51 | 19.00 ft | 0.56 in/h |
| 14 | RAIN BIRD PEB–PRS–D | 1" | BUBBLER | 6.00 | 12 | 251.1 | | | | 740.8 | 30 | 3.3 | 1.72 | 35.02 | 70.52 | 19.00 ft | 1.7 in/h |
| | Common Wire | | | | | | 1,343 | | | | | | | | | | |

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STATE OF WASHINGTON · JASON M. ANDERSON · 20836 · EXP 08/24/2022 · LANDSCAPE ARCHITECT

**RIVERSIDE NEIGHBORHOOD PARK**
34512 NW Pacific Hwy
La Center, Washington 98629

DRAWN: | CHECKED: JA
SCALE: | DATE: 07-02-21
JOB #: 20-155413
ISSUED FOR: Final
REVISIONS:
1
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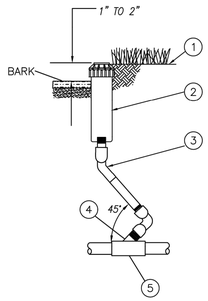
SHEET NAME: **IRRIGATION SCHEDULE, CRIT. ANALYSIS, & VALVE SCHEDULE**
SHEET #: I2
SHEET 5 OF 11




1. FINISH GRADE OF SOD
2. ROTOR POP-UP SPRINKLER AS SPECIFIED IN SPECS.:
3. RAINBIRD TSJ-100-PRS (TYPICAL)
4. PVC SCH 40 STREET EL.
5. PVC SCH 40 TEE SLIP-SLIP-FITP OR SLIP-SLIP-THREAD

## ROTOR POP-UP SPRINKLER ASSEMBLY WITH PRE-MADE SWING FITTINGS

PLAN #

CITY OF LA CENTER APPROVED

4/3/19

CITY ENGINEER DATE

| REVISIONS: | DATE: | DRAWN: | DESIGNED: |
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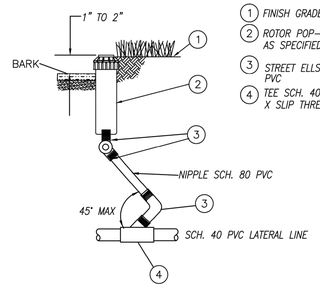


1. FINISH GRADE OF SOD
2. ROTOR POP-UP SPRINKLER AS SPECIFIED IN SPECS.:
3. STREET ELLS (2) SCH. 40 PVC
4. TEE SCH. 40 PVC SLIP X SLIP THREAD

## ROTOR POP-UP SPRINKLER

PLAN #

CITY OF LA CENTER APPROVED

4/3/19

CITY ENGINEER DATE

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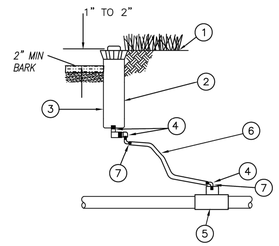


1. FINISH GRADE OF SOD
2. ROTOR POP-UP SPRINKLER: (IN SOD AREAS)
   RAIN BIRD 1806
   1806 SAM
   1806 SAM-P45
   1806 SAM-PRS
3. ROTOR POP-UP SPRINKLER: (IN BED AREAS)
   RAIN BIRD
   1812,1812 SAM
   1812 SAM-P45
   1812 SAM-PRS
4. MARLEX STREET ELBOWS.
5. PVC SCH 40 TEE SLIP-SLIP-THREAD
6. FLEX PIPE-NO MORE THAN 5'
7. ¾" BARB X ½" MALE THREAD ELBOW (MARLEX)

NOTE:
PROVIDE & INSTALL ALL IRRIGATION IN CONFORMANCE WITH THE CITY OF LA CENTER STANDARDS & DETAILS. IN THE EVENT OF CONFLICT BETWEEN SPECIFICATIONS, NOTES, OR DETAILS & CITY OF LA CENTER STANDARDS & DETAILS, THE STANDARDS & DETAILS SHALL TAKE PRECEDENCE.

## POP-UP SPRINKLER

PLAN #

CITY OF LA CENTER APPROVED

4/3/19

CITY ENGINEER DATE

| REVISIONS: | DATE: | DRAWN: | DESIGNED: |
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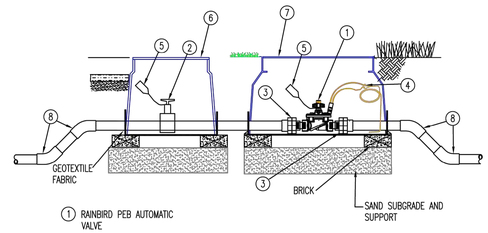


1. RAINBIRD PEB AUTOMATIC VALVE
2. PVC BALL VALVE FEMALE
3. PVC UNION SLIP X (M) THREAD
4. WATERPROOF CONNECTORS WITH EXPANSION LOOP
5. VALVE ID TAG
6. 10-INCH ROUND VALVE BOX
7. STANDARD VALVE BOX
8. 45° SCHEDULE 40 PVC ELBOW

## AUTOMATIC VALVE ASSEMBLY

PLAN #

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4/3/19

CITY ENGINEER DATE

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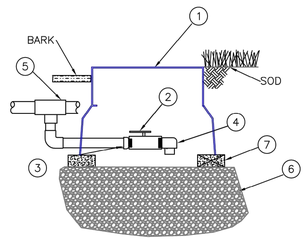


1. STANDARD VALVE BOX PLUS EXTENSION
2. BRASS BALL VALVE
3. MALE ADAPTER
4. PVC SCH. 40 STREET ELBOW
5. DOWNWARD FACING SCH. 40 PVC TEE OR ELBOW
6. 3 CUBIC FEET OF WASHED DRAIN ROCK
7. BRICKS SUPPORTING VALVE BOX

## BALL VALVE DRAIN

PLAN #

CITY OF LA CENTER APPROVED

4/3/19

CITY ENGINEER DATE

| REVISIONS: | DATE: | DRAWN: | DESIGNED: |
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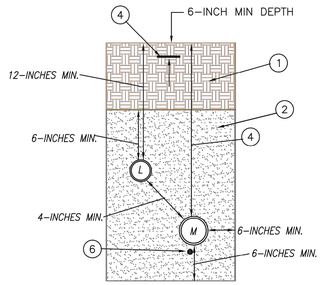


1. COMPACTED SOIL FOR LANDSCAPING. FOR OTHER SURFACE SEE PLANS FOR STANDARD DETAILS FOR CONSTRUCTION STANDARDS.
2. TOP SOIL AND BACKFILL. THE CONTRACTOR SHALL FOLLOW WSDOT SECTION 80-3.3(2) FOR EXCAVATION, SAND BACKFILL.
3. THE MAIN IRRIGATION PIPING SHALL HAVE A MINIMUM OF 18-INCHES OF COVER AND LATERALS SHALL HAVE A MIN. 12-INCHES OF COVER
4. FOR IRRIGATION PIPING UNDER HARDSCAPE, A SCHEDULE 40 PVC SLEEVE SHALL BE USED PER THE LANDSCAPING SPECIFICATIONS IN THE ENGINEERING STANDARDS
5. IRRIGATION CONTROL WIRE SHALL BE PLACED A MINIMUM OF 2-INCHES BELOW THE IRRIGATION PIPING. FOR CONTROL WIRE THAT DOES NOT FOLLOW THE IRRIGATION PIPE, A SEPARATE CONDUIT SHALL BE USED FOR THE CONTROL WIRE.

## IRRIGATION TRENCH DETAIL IN LANDSCAPE AREA

PLAN #

CITY OF LA CENTER APPROVED

4/3/19

CITY ENGINEER DATE

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IRR-6

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STATE OF WASHINGTON
JASON M. ANDERSON
LANDSCAPE ARCHITECT
NO. 0936 EXP. 08/24/2022

# RIVERSIDE NEIGHBORHOOD PARK

34512 NW Pacific Hwy
La Center, Washington 98629

DRAWN:
CHECKED: JA
SCALE:
DATE: 07-02-21
JOB #: 20-155413
ISSUED FOR: Final
REVISIONS:
1
2
3
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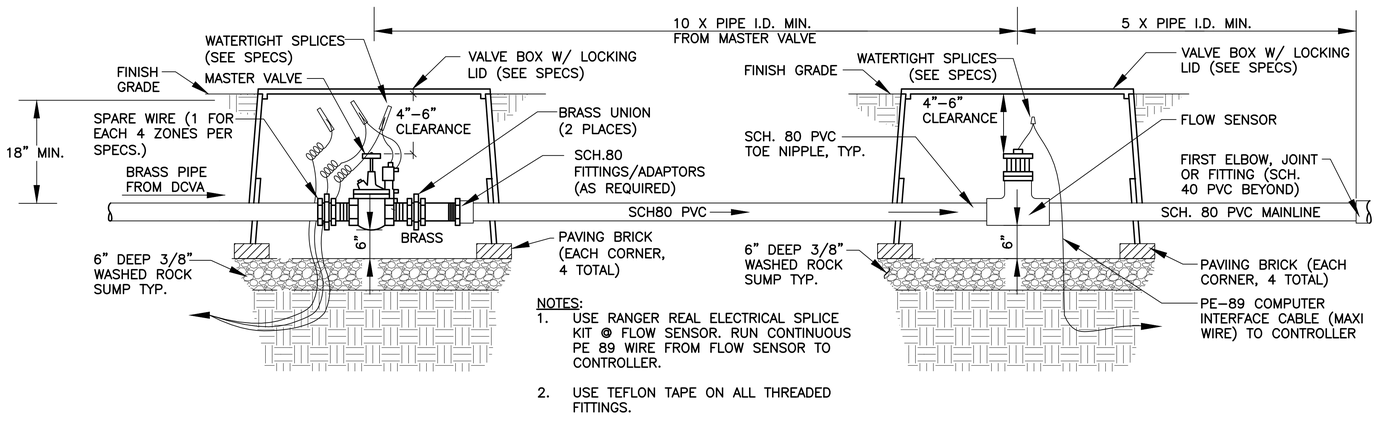
5
6

SHEET NAME:
**IRRIGATION DETAILS (CITY OF LA CENTER STDS.)**

SHEET #: I3

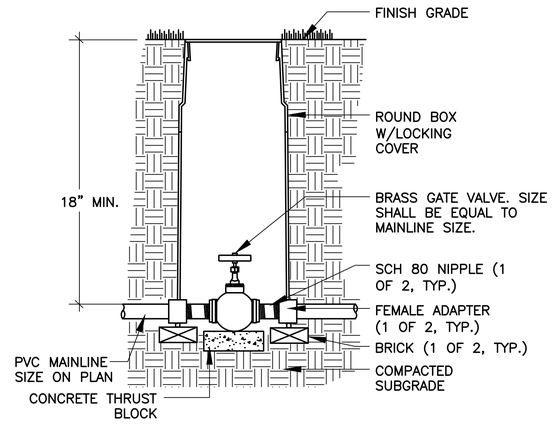
SHEET 6 OF 11



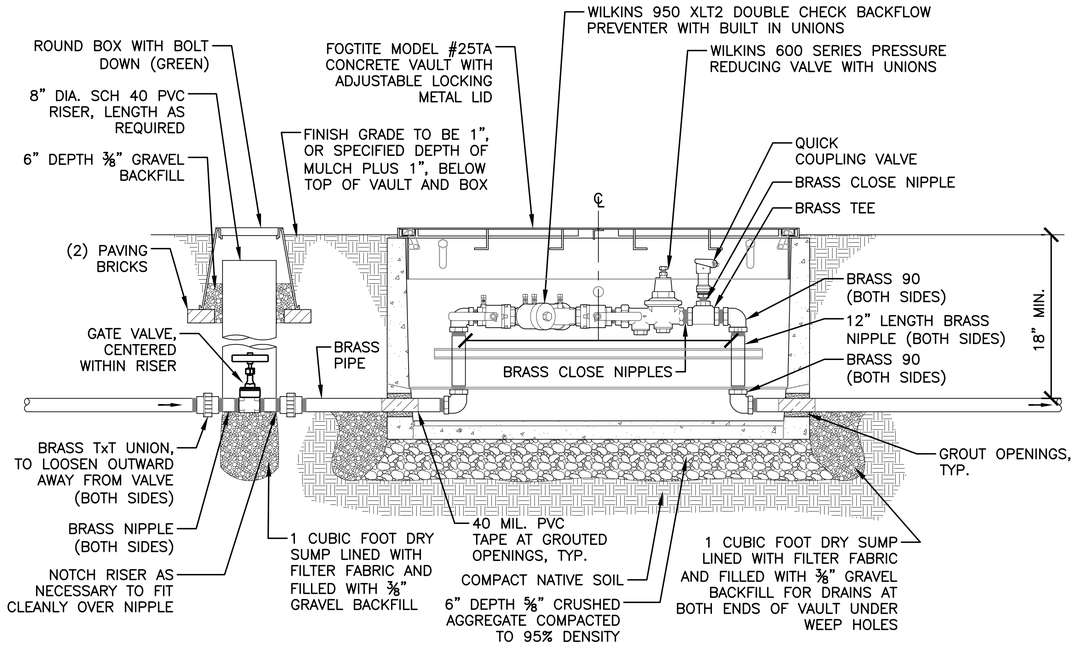

NOTES:

1. USE RANGER REAL ELECTRICAL SPLICE KIT @ FLOW SENSOR. RUN CONTINUOUS PE 89 WIRE FROM FLOW SENSOR TO CONTROLLER.
2. USE TEFLON TAPE ON ALL THREADED FITTINGS.

## 1 MASTER VALVE W/ FLOW SENSOR

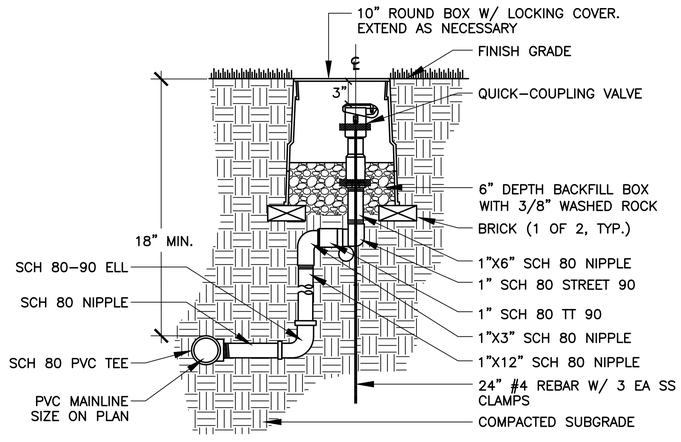



## 2 GATE VALVE




VPORT SCALE: 3/4" = 1'–0"

## 3 DOUBLE CHECK BACKFLOW PREVENTER




## 4 QUICK COUPLING VALVE

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|---|---|
| DRAWN: | CHECKED: JA |
| SCALE: | DATE: 07-02-21 |
| JOB #: | 20-155413 |
| ISSUED FOR: | Final |
| REVISIONS: | |

SHEET NAME:
**IRRIGATION DETAILS**

SHEET #:
I4
SHEET 7 OF 11

Excerpt from

CITY OF LA CENTER ENGINEERING STANDARDS FOR CONSTRUCTION

SECTION 6 LANDSCAPE AND IRRIGATION STANDARD DETAILS

APRIL 4, 2019

3. Irrigation.

3.1. System Design.

3.1.1. Irrigation zoning shall take into account as much as possible:

3.1.1.1. Landscaping, slopes, reflective heat, subgrade material, and current and future shading in regards to water needs.

3.1.1.2. The potential for partial landscape water conservation based on usage/aesthetic priorities.

3.1.1.3. Localization.

3.1.2. Head spacing shall allow for a minimum of head to head coverage under operating pressure, and in no case shall exceed the maximum manufacturers recommendations.

3.1.3. Systems shall not be designed to utilize maximum nozzles.

3.1.4. Head selection and placement shall account for mature plants.

3.2. Point-of-Connection.

3.2.1. All irrigation systems shall have an approved backflow device.

3.2.2. Backflow devices shall be installed using brass ells, unions, and nipples.

3.2.3. All properties 0.5 acre and larger shall have a flow meter and a master valve rated for a minimum of twice the street pressure.

3.2.3.1. Flow meters shall be installed directly downstream of the master valve and to the manufacturer's instructions.

3.2.3.2. Flow meters and irrigation zones shall be sized so that the meter is capable of reading the minimum and the maximum expected flows.

3.3. Pipe

3.3.1. All pipe shall be schedule 40 or better.



3.3.2. Standard pipe sizes shall be used, including only ¾", 1", 1.5", and 2" and larger. No quarter sized pipes shall be used for design or construction.

3.3.3. Minimum depth of pipe, measured from top of pipe to the final grade, excluding bark, shall be:

3.3.3.1. 12" for laterals.

3.3.3.2. 18" for mainlines

3.3.3.3. 18" for wiring conduit.

3.3.4. Lateral trenches shall contain a sand backfill enclosing the pipe a minimum of 4" above, 2" below, and 1" to each side of pipe.

3.3.5. Mainline and conduit trenches shall contain a sand backfill enclosing the pipe a minimum of 6" above, 2" below, and 1" to each side of pipe.

3.3.6. Trenches shall be compacted after every 6" of backfill. Contractor shall be responsible for any settling.

3.3.7. All runs of pipe shall have a minimum clearance of 4" from each other and 24" from other trades.

3.3.8. Mainline pipe shall not be bent or otherwise externally loaded.

3.3.9. Pipe sized 1.5" and larger shall not be bent or otherwise externally loaded.

3.3.10. Mainlines shall not use 90-degree fittings except for tee junctions, unless otherwise approved by the City.

3.3.11. Pipe sized 1.5" and larger shall not use 90-degree fittings except for tee junctions.

3.3.12. At minimum fittings shall be schedule 40 PVC or stronger. Class 200 PVC will not be allowed for irrigation piping.

3.3.13. Crosses and other 4-way fittings shall not be used.

3.3.14. Tee junctions shall not be installed within 12" of any other fitting.

3.3.15. All slip connections shall be scuffed, and receive a thorough coating PVC primer and glue of different colors.

3.3.16. All threaded fittings shall be properly Teflon taped.

3.3.17. PVC to metal connections shall be made by threading male PVC fittings into female metal fittings.



3.3.18. All pipe ¾" and larger shall be marked with locate tape or wire. Locate tape and wire shall have an accessible connection point such as a locate station or valve box flush with the ground surface.

3.3.19. All pipe installed underneath a non-permeable surface shall have sleeves made of schedule 40 PVC or stronger.

3.3.19.1. Sleeves shall extend a minimum of 18" beyond the non-permeable surface.

3.3.19.2. Sleeves shall be sealed at the ends to prevent dirt entry with foam or other durable method.

3.3.19.3. Sleeves shall be a minimum of twice the diameter of the pipe. Sleeves containing multiple pipes shall be a minimum diameter of twice the largest pipe plus the diameters of the remaining pipes as approved by the City.

3.3.19.4. Wire shall be sleeved independently from pipe. Wire sleeves may be placed inside pipe sleeves, but must extend an additional 12

3.3.20. Isolation valves shall be provided for all mainline branches with pipe in excess of 120 linear feet.

3.4. Valves.

3.4.1. All manual valves shall be of the ball valve variety.

3.4.2. All valves shall have an identification tag.

3.4.3. Valves shall be no more than 18" below final grade (excluding bark.) Valves with lines deeper than 18" shall use 45-degree ells to raise the valve to 18".

3.4.3.1. System drains are exempt from the depth requirement.

3.4.4. Automatic valves shall be Rain Bird PEB series unless otherwise approved by the City.

3.4.5. A zone-specific pressure regulator, such as a PRS-Dial, or other method as approved by the City, shall be used if needed to prevent erratic water pressure.

3.4.6. Automatic valves shall have a union fitting immediately upstream and downstream of the valve.

3.4.7. Isolation valves shall be installed for all automatic control valves.

3.4.8. Each automatic valve shall be independently operated from the controller.

3.4.9. Isolation valves shall be installed for each quick coupler valve.

3.5. Quick Couplers.



3.5.1. Quick coupling valves shall be installed such that all points on the property are within 150' of a quick coupling valve.

3.5.2. Quick coupler valves shall be a Rain Bird model 44-RC unless otherwise approved by the City.

3.5.3. Each quick coupler shall be installed on a swing joint, and secured with stainless hose clamps to #4 rebar with a minimum length of 24". The quick coupler lid shall be approximately 3" below the box lid.

3.6. Valve Boxes.

3.6.1. Valve boxes shall be HDPE landscape boxes with latching lids, as approved by the City.

3.6.1.1. Round boxes may be twist lock instead of latching.

3.6.2. Boxes shall be set level and square to hardscaping, other boxes, and internal components.

3.6.3. Boxes shall have a minimum separation of 12" to hardscaping and 9" to other boxes.

3.6.4. Quick connects, angle-valve drains, and isolation valves shall be placed individually into 10" round boxes, or as a pair in a standard box (approximately 12" x 17").

3.6.5. Automatic valves shall be placed individually in a standard box.

3.6.6. Automatic valves 1.5" and smaller may be placed with the associated isolation valve only when placed in jumbo boxes (approximately 14" x 21" and larger.)

3.6.7. Ball valve system drains shall be placed in a standard box.

3.6.8. Valve boxes shall be placed on brick, or other acceptable material to secure from settling. The bottom edge of the box shall be a minimum 2" below the valve.

3.6.8.1. Quick connects and drain valves are exempt from the minimum box depth requirement.

3.6.9. Valve boxes shall have a secured fabric barrier underneath the box to prevent soil intrusion.

3.6.9.1. Drain valves shall not have fabric below.

3.6.10. Boxes shall have a minimum of 12" sand below the fabric barrier that extends beyond the edges of the box.

3.6.11. The number of boxes set in turf areas shall be minimized.

3.7. System Drains.



3.7.1. All irrigation mainlines shall have sufficient low-point drains to empty the mainline.

3.7.2. For pipe depth of 24" or less system drains shall have a horizontal brass ball valve with a vertical drain.

3.7.3. System drains with a pipe depth in excess of 24" shall be a brass angle valve.

3.7.4. System drains shall empty into a minimum of 3 cubic feet of drain rock.

3.8. Irrigation Heads.

3.8.1. All irrigation heads shall contain an integrated check valve to prevent leakage.

3.8.1.1. The check valves may be omitted for popup zones without any elevation change.

3.8.2. Heads shall be installed perpendicular and flush with finished grade in grass areas, and 1" to 2" above finished grade (including bark) in bed areas.

3.8.3. Rotor heads shall have stainless steel risers.

3.8.4. Rotor heads shall be Rain Bird 5000-plus series or Rain Bird 8000 series unless otherwise approved by the City.

3.8.5. Rotors shall be installed on swing fittings sized no smaller than the inlet port and set at an angle no greater than 45 degrees above horizontal.

3.8.6. Swing fittings (see detail) shall consist of one of the following:

3.8.6.1. A street ell installed horizontally into the lateral line, followed by a second street ell, a nipple, and two street ells.

3.8.6.2. The equivalent pre-made solution, such as a Rain Bird TSJ or TSJ-PRS series swing joint installed above a street ell installed horizontally into the lateral line.

3.8.7. Popup heads shall be Rain Bird 1800 series unless otherwise approved by the City.

3.8.8. Popups shall be a minimum of 6" in turf zones and 12" in beds.

3.8.9. Each popup head shall have a filter or screen installed.

3.8.10. Popups shall be installed on a swing fitting (see detail) consisting of:

3.8.10.1. A street ell installed horizontally into the lateral line, followed by a swing pipe ell, swing pipe, a swing pip ell, and two street ells.

3.9. Controllers.

3.9.1. Each site shall have one Irrigation clock/controller.



3.9.2. The controller shall be a Rain Bird ESP-LXME, ESP-LXMEF, or ESP-LXD.

3.9.2.1. The controller shall be installed with an IQ Communications Cartridge and a local rain gauge, such as a Rain Bird WR2-RFC or equivalent.

3.9.2.2. The controller shall be installed in an above ground, locking, water-tight stainless-steel enclosure as approved by the City.

~~3.9.3. If AC power is not available onsite, Rain Bird TBOS-BT controllers shall be used.~~

~~3.9.3.1. The controllers shall be installed with a moisture or rain sensor such as an RSD-BEx.~~

~~3.9.3.2. The number of controllers shall be minimized.~~

~~3.9.3.3. The contractor shall provide one TBOS-II field transmitter.~~

3.9.4. An irrigation zone map shall be provided with the as-built drawings for city review.

3.10. Wire.

3.10.1. All wire shall be UL approved direct-bury, solid copper insulated wire.

3.10.2. Wire shall be a minimum AWG 14 gauge.

~~3.10.2.1. Double jacketed multi-conductor cable control wire used for irrigation valves may be AWG 18 gauge.~~

3.10.2.2. Installation shall comply with all manufacture's requirements.

3.10.3. Control wire shall be color coded and labeled.

3.10.3.1. Common wire shall be white in color.

3.10.4. Wire splices shall be made inside a valve box, and shall be approved by the City on a case by case basis.

3.10.5. All connections shall be made with waterproof connectors.

3.10.6. Expansion loops/curls 24" in length shall be provided as follows:

- At every valve, sensor, flow meter, and AC controller.
- Within two feet of every junction or direction change of 45 degrees and greater.
- For every 100' of run without an expansion loop.

3.10.7. Wiring not installed in schedule 80 PVC conduit shall be buried underneath the mainline and bundled every 10 feet.



3.10.8. Extra control wires shall be installed at a ratio of one wire for every five valves, with a minimum of two extra wires to the end of every control wire run.

3.11. Inspections, testing.

3.11.1. Pressure lines shall be tested to be water tight under hydrostatic water pressure at 150 PSI for one hour with a line loss of 5 psi per WSDOT specifications..

3.11.2. All pipe shall be flushed per WSDOT specification 8-03.3(7)

3.11.3. All pipe shall not be backfilled until pressure tested and inspected.

3.11.4. All lines must be flushed to remove debris prior to the installation of nozzles.

3.11.5. Heads and nozzles must be adjusted for head to head coverage and minimal overspray.

3.11.6. Hydroseeding shall not be done until 100% coverage of the irrigation system is demonstrated.

3.11.7. Proper operation of all valves and sensors shall be demonstrated from the controller.

3.11.8. The controller shall be programmed by the contractor with city review prior to acceptance.

3.11.9. As built drawings shall reflect all changes of the plans and with measurements taken in the field.

3.11.9.1. The length and depth of all sleeves and runs of pipe shall be indicated.

3.11.9.2. Operations manuals shall be submitted for all materials.



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RENTON, WA 98059-8819
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www.design2426.com
Landscape Architecture ▪ Irrigation Planning ▪ Athletic Field Design ▪ Construction Management

STATE OF WASHINGTON
JASON M. ANDERSON
LANDSCAPE ARCHITECT
LAND 0936 EXP 08/24/2022

RIVERSIDE NEIGHBORHOOD PARK
34512 NW Pacific Hwy
La Center, Washington 98629

DRAWN: | CHECKED: JA
SCALE: | DATE: 07-02-21
JOB #: 20-155413
ISSUED FOR: Final
REVISIONS:
1
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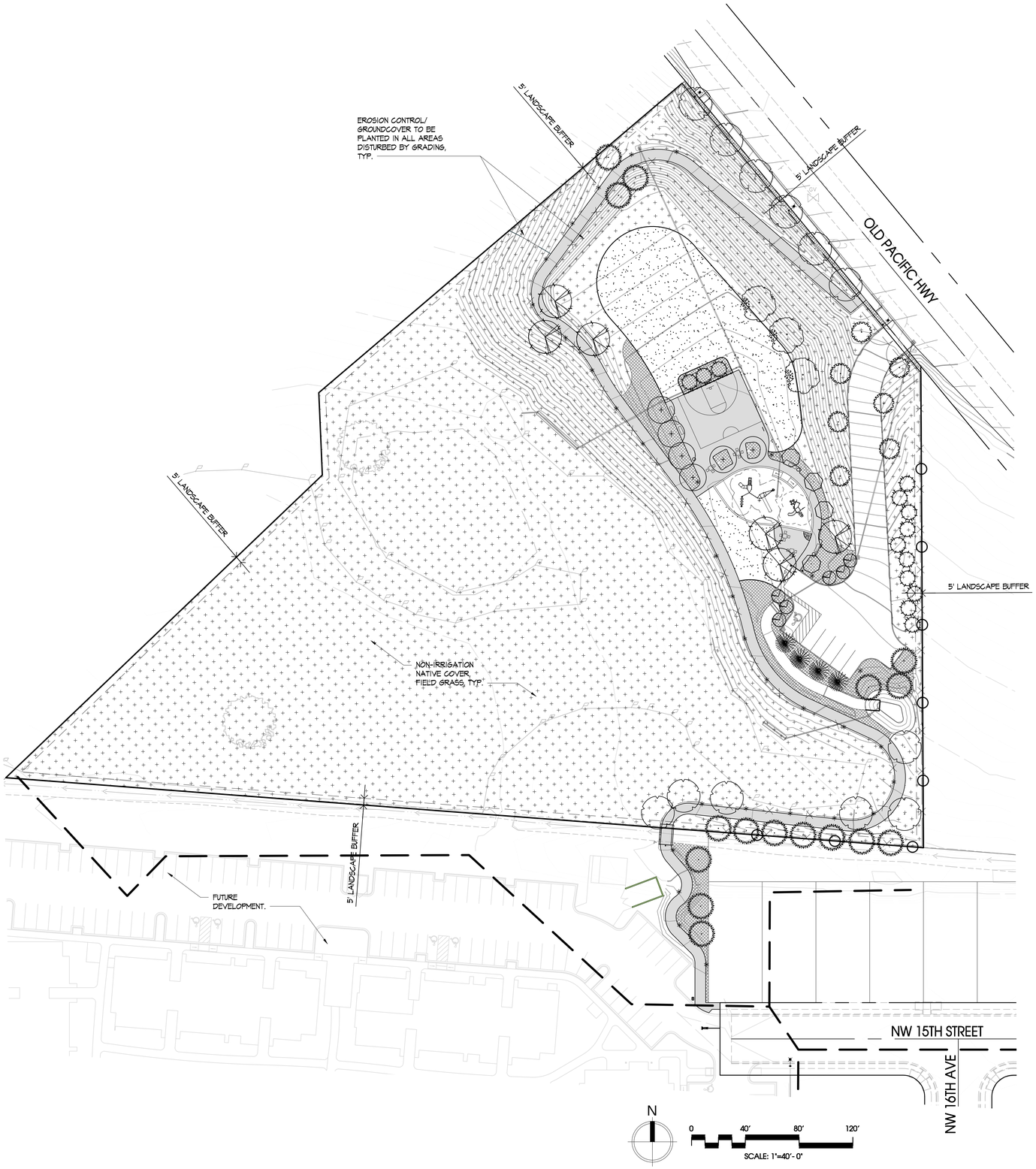
6

SHEET NAME:
IRRIGATION SPECIFICATIONS (CITY OF LA CENTER STDS.)

SHEET #:
I5
SHEET 8 OF 11




| PLANT LEGEND | | | |
|---|---|---|---|
| TREES | | | |
| SYMBOL | BOTANICAL / COMMON NAME | SIZE | QUANTITY |
| | ACER RUBRUM 'ARMSTRONG' / ARMSTRONG MAPLE | 2" Cal. Min. | 6 |
| | ACER RUBRUM 'RED SUNSET' RED SUNSET MAPLE | 2" cal. Min. | 12 |
| | THUJA PLICATA 'HOGAN' / HOGAN'S WESTERN RED CEDAR | 6' ht. Min. | 16 |
| | PICEA OMORIKA/ OMORIKA SPRUCE | 6' ht. Min. | 4 |
| | POPULUS TREMULA 'ERECTA'/ SWEDISH ASPEN | 2" Cal. Min. | 6 |
| | PRUNUS SERRULATA 'KWANZAN' / KWANZAN CHERRY | 2" Cal. Min. | 4 |
| | PYRUS CALLERYANA ' CHANTICLEER' / CHANTICLEER FLOWERING PEAR | 2" Cal. Min. | 7 |
| | TILIA CORDATA / GREENSPIRE LINDEN | 2" Cal. Min. | 3 |
| | PINUS FLEXILIS 'VANDERWOLF'S PYRAMID' / VANDERWOLF PINE | 6' ht. Min. | 18 |
| | ZELKOVA SERRATA / VILLAGE GREEN SELKOVA | 2" Cal. Min. | 6 |
| | IRRIGATED PLANTER BEDS - SEE SHEET L2 FOR PLANTINGS AND PLANT LEGEND | | |
| | NON-IRRIGATED EROSION CONTROL MIX: ECO PRAIRIE OR SIMILAR BY SUNMARK SEEDS IN RATE OF 1.5 LB. PER 1,000 S.F. INFO@SUNMARKSEEDS.COM 503-241-7333 | | |

REFER TO SHEET L2 FOR FOR SHRUBS AND GROUND COVER PLACEMENT AND LEGEND & SHEET L3 FOR NOTES & DETAILS.

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LANDSCAPE ARCHITECT
CHRISTOPHER A. BAUMANN
LICENSE NO. 6
EXPIRES ON 02/20/2023

NOT FOR CONSTRUCTION SUBJECT TO APPROVAL

# RIVERSIDE NEIGHBORHOOD PARK

34512 NW Pacific Hwy
La Center, Washington 98629

| | |
|---|---|
| DRAWN: HA | CHECKED: CB |
| SCALE: 1"=40'-0" | DATE: 07-02-21 |
| JOB #: 20-155418 | |
| ISSUED FOR: Final | |
| REVISIONS: | |
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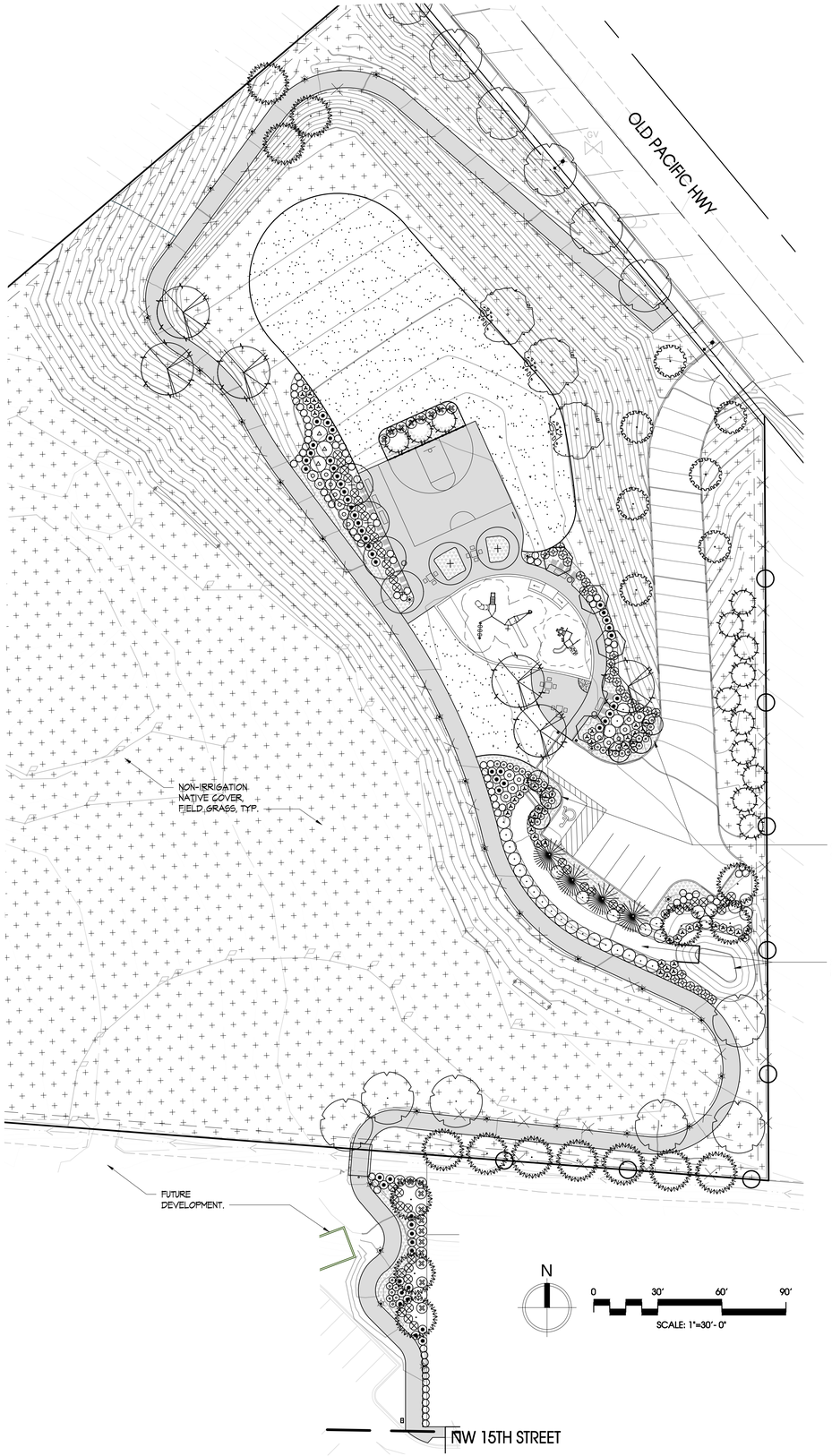
SHEET NAME:
**LANDSCAPE PLAN**

SHEET #:
L1
SHEET 9 OF 11




## PLANT LEGEND

SHRUBS & GROUND COVER

| SYMBOL | BOTANICAL / COMMON NAME | SIZE | QUANTITY |
|---|---|---|---|
| △ | ARBUTUS UNEDO 'COMPACTA' / COMPACT STRAWBERRY BUSH | 5 GAL. | 4 |
| ⊗ | BERBERIS THUNBERGII 'ROSE GLOW' / ROSE GLOW BARBERRY | 2 GAL. | 44 |
| ○ | EUONYMUS JAPONICUS 'AUREO-MARGINATUS' / GOLDEN EUONYMUS | 5 GAL. | 81 |
| ⊛ | ILEX X MESERVEAE 'BLUE BOY' / BLUE BOY HOLLY | 2 GAL. | 20 |
| ⊙ | MAHONIA AQUIFOLIUM 'COMPACTA' / COMPACT OREGON GRAPE | 2 GAL. | 50 |
| ◉ | MISCANTHUS SINENSIS 'MORNING LIGHT' / MORNING LIGHT MAIDEN GRASS | 1 GAL. | 54 |
| | NANDINA DOMESTICA 'FIREPOWER' / FIREPOWER NANDINA | 2 GAL. | 25<br>5 AT EACH LOCATION IN SINGLE ROW |
| ⊙ | NANDINA DOMESTICA 'MOONBAY' / MOONBAY NANDINA | 2 GAL. | 38 |
| ⊙ | PRUNUS LAUROCERASUS 'SCHIPKAENSIS' SCHIPKA CHERRY LAUREL | 5 GAL. | 33 |
| ⊙ | SPIREA NIPPONICA 'SNOWMOUND' / SNOWMOUND SPIREA | 2 GAL. | 18 |
| ⊕ | VIBURNUM DAVIDII / DAVID VIBURNUM | 2 GAL. | 27 |
| | EUONYMUS FORTUNEI 'EMERALD GAIETY' / EMERALD GAIETY EUONYMUS | 1 GAL. | 170<br>PLANT IN TRIANGULAR SPACING EXCEPT WHERE NOTED ON PLAN |
| | TURF - SOD OR SEED | | |

REFER TO SHEET L2 FOR FOR SHRUBS AND GROUND COVER PLACEMENT AND LEGEND & SHEET L3 FOR NOTES & DETAILS.

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34512 NW Pacific Hwy
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| | |
|---|---|
| DRAWN: HA | CHECKED: CB |
| SCALE: 1"=30'-0" | DATE: 07-02-21 |
| JOB #: 20-155B | |
| ISSUED FOR: Final | |
| REVISIONS: | |
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| 6 | |

SHEET NAME:
**LANDSCAPE PLAN**

SHEET #:
L2

SHEET 10 OF 11

# PLANTING NOTES

1. ALL BOUNDARIES, EASEMENTS, UTILITIES AND LEGAL ENCUMBRANCES TO BE CONFIRMED WITH OWNER PRIOR TO BEGINNING WORK. PROPERTY LINES AND SURVEY INFORMATION PROVIDED BY PLS ENGINEERING, INC.

2. IN NO WAY IS THIS PLAN TO BE INTERPRETED TO EXCEED THE LEGAL BOUNDARIES OF THE OWNER'S REAL PROPERTY.

3. THE LANDSCAPE DESIGNER ASSUMES NO RESPONSIBILITY FOR THE LOCATION OF BOUNDARIES, UTILITIES AND WETLANDS.

4. THIS PLAN SHALL BE INSTALLED TO MEET ALL APPLICABLE CITY, COUNTY, STATE AND FEDERAL CODES.

5. THIS PLAN SHALL BE CONSIDERED PRELIMINARY UNTIL APPROVED BY ALL GOVERNING AGENCIES. IMPLEMENTATION OF THIS PLAN SHALL NOT PROCEED UNTIL ISSUANCE OF ALL RELATED PERMITS.

6. PLANT QUANTITIES ARE FOR INFORMATION ONLY. IN CASE OF ANY DISCREPANCY, THE PLAN SHALL GOVERN.

7. ALL WORK IS TO BE PERFORMED BY LICENSED CONTRACTORS AND EXPERIENCED WORKERS.

8. THE CONTRACTOR IS TO VERIFY THE LOCATION OF EXISTING UNDERGROUND UTILITIES AND STRUCTURES PRIOR TO PERFORMING ANY EXCAVATION. CONTRACTOR SHALL REPAIR ANY DAMAGE TO UTILITIES CAUSED BY THE CONTRACTOR'S WORK, AT NO ADDITIONAL COST TO THE OWNER. CONTACT ALL UTILITY PROVIDERS SERVING THE SITE AREA 48 HOURS PRIOR TO ANY EXCAVATION.

9. ALL PLANT MATERIALS SHALL MATCH SPECIFICATIONS PER SPECIES AND SHALL COMPLY WITH ANSI Z60.1 'STANDARD FOR NURSERY STOCK'.

10. THE CONTRACTOR SHALL ADHERE TO THE WASHINGTON ASSOCIATION OF NURSERYMEN'S GUIDELINES FOR PLANTING PRACTICES.

11. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING ELEMENTS ON AND OFF SITE, RESULTING FROM THE CONTRACTOR'S WORK.

12. THE CONTRACTOR IS RESPONSIBLE FOR THE VIABILITY OF ALL PLANT MATERIAL FOR 2 YEARS AFTER COMPLETION OF PLANTING. DISEASED, DYING, OR DEAD PLANT MATERIAL SHALL BE REPLACED BY THE CONTRACTOR DURING THE TWO YEAR PERIOD AND MAINTAINED FOR AN ADDITIONAL 2 YEAR PERIOD.

13. IMMEDIATELY UPON BID AWARD, CONTRACTOR SHALL SECURE THE PLANT MATERIALS AS SPECIFIED FROM AVAILABLE SOURCES. IN THE EVENT THAT PLANT MATERIALS ARE NOT AVAILABLE, CONTACT LANDSCAPE ARCHITECT FOR APPROVED SUBSTITUTIONS. NO SUBSTITUTION FOR PLANT MATERIAL WILL BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL OF THE LANDSCAPE ARCHITECT.

14. TOP DRESS ALL SHRUB AND GROUND COVER AREAS (NOT LAWN) WITH 2" OF FIR BARK MULCH. SUBMIT SAMPLE TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO CONSTRUCTION.

15. TREE LOCATIONS MAY BE ADJUSTED IN THE FIELD TO SUIT SITE REQUIREMENTS AS DIRECTED BY THE LANDSCAPE ARCHITECT.

16. THE CONTRACTOR SHALL ENSURE THAT ALL EXCAVATED PLANTING PITS HAVE POSITIVE DRAINAGE. PLANT PITS FULLY FLOODED WITH WATER SHALL DRAIN WITHIN (12) HOURS OF FILLING.

17. FINISH GRADE SHALL BE SET TO ALLOW POSITIVE DRAINAGE

18. ROTOTILL 2" OF COMPOST INTO ALL PLANTED AREAS.

19. INCORPORATE PEAT INTO THE ROOT ZONE OF RHODODENDRONS, AZALEAS AND OTHER ACID LOVING PLANTS.

20. INCORPORATE 10-20-20 FERTILIZER INTO THE ROOT ZONE OF ALL NEW PLANTINGS.

21. RONSTAR, OR APPROVED EQUAL, PREEMERGENT HERBICIDE TO BE APPLIED TO ALL PLANTED AREAS PER MANUFACTURERS INSTRUCTIONS.

22. EXISTING VEGETATION TO BE SPRAYED WITH ROUNDUP, OR APPROVED EQUAL, PER MANUFACTURERS INSTRUCTIONS. SUFFICIENT TIME SHALL BE GIVEN TO ALLOW EXISTING MATERIAL TO DIE. REMOVE EXISTING VEGETATION MAT AND ROTOTILL OR SCARIFY EXISTING SOIL.

23. CROWN LAWN AREAS AND GRADE TO PROVIDE POSITIVE DRAINAGE.

24. ROLL LAWN AREA TO INSURE PROPER COMPACTION TO MINIMIZE SETTLING.

25. AMEND SOIL IN LAWN AREAS WITH 80 LBS. OF DOLOMITE LIME AND 40 LBS. OF 10-20-20 SLOW RELEASE FERTILIZER OR EQUIVALENT. PROVIDE A 3" LAYER OF SANDY LOAM TOPSOIL FOR LAWN AND BED AREA.

26. SEED LAWN AREAS WITH GRASS SEED MANUFACTURER'S RECOMMENDATIONS. COVER SEED WITH FINE MULCH APPLIED WITH ROLLER OR HYDROSEED.

27. THE PROPERTY OWNER IS RESPONSIBLE FOR MAINTAINING TURF PLANTED WITHIN THE RIGHT OF WAY.

28. PLANT MATERIAL SHALL BE PLANTED W/ ROOT CROWN 1" ABOVE FINISHED GRADE TO ALLOW POSITIVE DRAINAGE AWAY FROM CROWN.

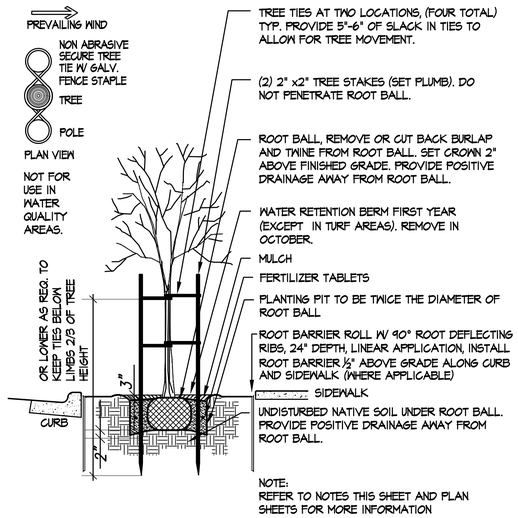
29. STAKE ALL TREES OVER 6 FT. IN HEIGHT PER DETAIL 'A' AND 'B' ON THIS SHEET.

30. REFER TO DETAILS FOR ADDITIONAL INFORMATION.

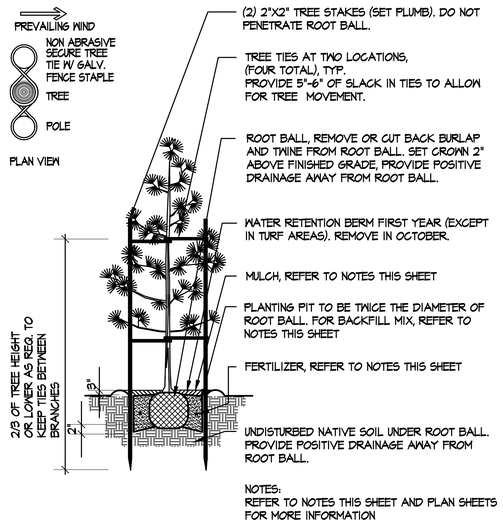
31. ALL PLANTING SHALL BE IRRIGATED BY AN AUTOMATIC UNDERGROUND SPRINKLER SYSTEM.

32. ALL PLANT MATERIALS FURNISHED ARE TO BE HEALTHY, UNIFORMLY BRANCHED AND WITH WELL DEVELOPED FIBROUS ROOT SYSTEMS.

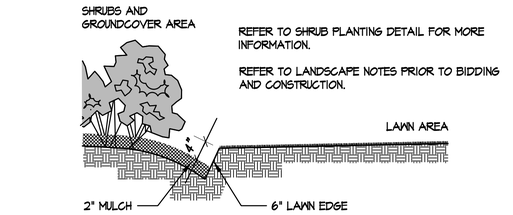
33. ALL PLANT MATERIALS FURNISHED ARE TO BE FREE FROM DEAD OR BROKEN BRANCHES, LICHENS, SCARS, BROKEN BARK OR WOUNDS. ALL PLANT MATERIALS WILL BE INSECT, WEED, AND DISEASE FREE ACCORDING TO THE REQUIREMENTS OF THE WASHINGTON STATE DEPARTMENT OF AGRICULTURE FOR NURSERY PLANT MATERIALS SOLD FOR WHOLESALE OR RETAIL. ALL PRUNING WOUNDS MUST BE WELL HEALED WITH NO EVIDENCE OF DECAY.



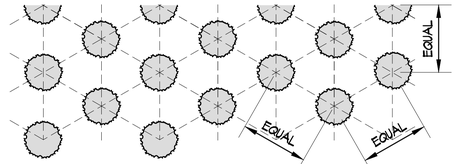

**A B & B Tree Planting Detail**
Not To Scale — SECTION / PLAN VIEW




**B B & B Tree Planting Detail: Evergreen under 8' Height**
Not To Scale — **SECTION / PLAN VIEW**




**C Lawn Edge Detail**
Not To Scale — SECTION

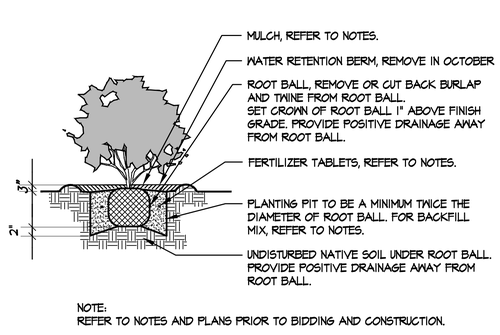



NOTES:

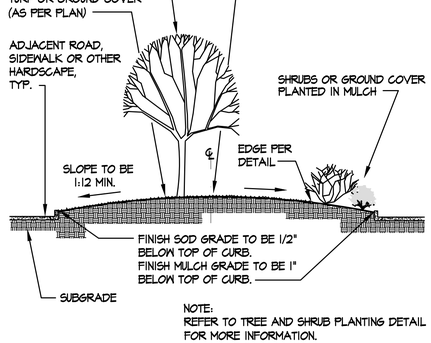
ALL GROUND COVER SHALL BE PLANTED AT EQUAL TRIANGULAR SPACING AS SPECIFIED IN PLANTING LEGEND.

GROUND COVER TO BE LOCATED ONE HALF OF SPECIFIED SPACING DISTANCE FROM ANY HARD SURFACE, UNLESS OTHERWISE SPECIFIED.

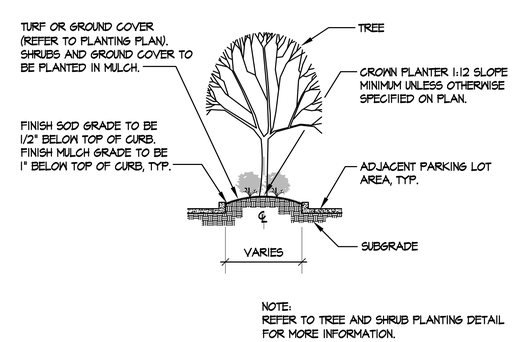
**D Ground Cover Planting Detail**
Not To Scale — PLAN VIEW



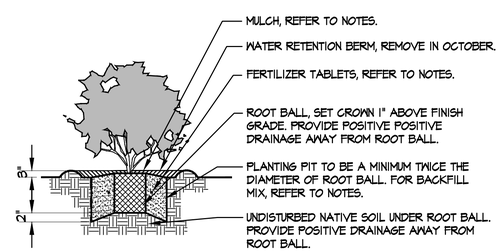

**E B & B Shrub Planting Detail**
Not To Scale — SECTION



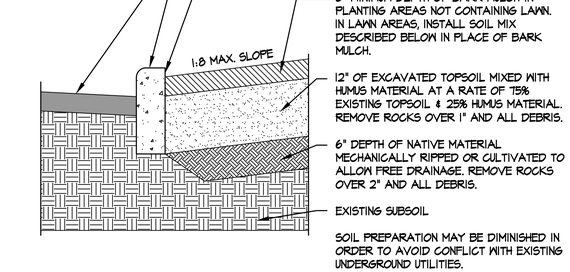

**F Typical Curbed Planter Area**
Not To Scale — SECTION A-A




**G Typical Parking Finger Planter Area**
Not To Scale — SECTION B-B




**H Container Ground Cover Planting Detail**
Not To Scale — SECTION




**I Soil Section at Curb within Planting Strips & Finger Islands**
Not To Scale — SECTION

ALL DETAILS SHOWN MAY NOT BE REQUIRED FOR THIS PROJECT.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Suite 275
VANCOUVER, WA 98662
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34512 NW Pacific Hwy
La Center, Washington 98629

DRAWN: BOP | CHECKED: CB
SCALE: AS SHOWN | DATE: 07-02-21
JOB #: 20-155AB
ISSUED FOR: Final
REVISIONS:
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SHEET NAME:
**LANDSCAPE DETAILS**

SHEET #:
L3
SHEET 11 OF 11

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