COVER SHEET
FOR
PHASE 2 - WESLEY BRADLEY PARK

A PORTION OF THE SE1/4 OF THE SW1/4 OF SEC. 3, TWP. 19 NORTH, RGE. 4 EAST, W.M.
CITY OF PUYALLUP, PIERCE COUNTY WA

LEGAL DESCRIPTION

(PER FIRST AMERICAN TITLE INSURANCE COMPANY'S FILE NO. NCS-811513-WA1, DATED AUGUST 30, 2016 AT 7:30 A.M.)

PARCEL A:
REVISED PARCEL 2 OF CITY OF PUYALLUP BOUNDARY LINE ADJUSTMENT NO. 06-84-007, RECORDED AUGUST 18, 2006 UNDER RECORDING NO. 200608185003 AND AFFIDAVIT OF MINOR CORRECTION OF SURVEY RECORDED NOVEMBER 30, 2006 UNDER RECORDING NO. 200611300893, RECORDS OF PIERCE COUNTY, WASHINGTON.

PARCEL B:
A NON-EXCLUSIVE EASEMENT FOR INGRESS AND EGRESS CREATED BY INSTRUMENT RECORDED APRIL 26, 2007 UNDER RECORDING NO. 200704260812, IN PIERCE COUNTY, WASHINGTON.

HORIZONTAL DATUM (NAD 83/91)- BASIS OF BEARINGS

SOUTH 05°28'09" EAST, AS MEASURED BETWEEN W.S.D.O.T. MONUMENT ID 244 AND 4208.

VERTICAL DATUM - (NAVD 1988)

BENCHMARK: W.S.D.O.T. MONUMENT ID 244 (GP27512-17), BEING THE TOP OF A FOUND 3" BRASS DISK "1991 GP27512-17" ON NORTH SIDE OF MERIDIAN AVE., 30' EAST OF N.E. CORNER OF SR-512 OVERPASS
ELEV. = 409.93 US FEET

PROCEDURE / NARRATIVE

A FIELD TRAVERSE USING A "TOPCON QS" AND SPECTRA "FOCUS 30" TOTAL STATION, "TOPCON GR5" AND "TDS RANGER" DATA COLLECTOR SUPPLEMENTED WITH GPS AND FIELD NOTES WAS PERFORMED, ESTABLISHING THE ANGULAR, DISTANCE, BETWEEN THE MONUMENTS, PROPERTY LINES, AND TOPOGRAPHIC FEATURES AS SHOWN HEREON. THE RESULTING DATA MEETS OR OR EXCEEDS THE STANDARDS FOR LAND BOUNDARY SURVEYS AS SET FORTH IN WAC 332-130-090.

DATES OF SURVEYS:

FIELD SURVEY BY BARGHAUSEN CONSULTING ENGINEERS, INC. CONDUCTED IN MAY 2015 AND SEPTEMBER 2016.
ALL MONUMENTS SHOWN AS FOUND WERE VISITED IN 2015.

TAX ACCOUNT NUMBERS:

0419037014

CALCULATED AREA:

625,733.52± SQ. FT. (14.36± ACRES)

PROPERTY ADDRESS:

707 39TH AVE. S.E.
PUYALLUP, WA 98374

SURVEYORS NOTES:

1. UNDERGROUND UTILITIES AND FEATURES DEPICTED HEREON ARE BASED ON FIELD OBSERVATION, MARKINGS, DEVELOPMENT PLANS, AND/OR AVAILABLE RECORD DOCUMENTS ONLY. THE TRUE LOCATION, NATURE AND/OR EXISTENCE OF BELOW GROUND FEATURES, DETECTED OR UNDETECTED, SHOULD BE VERIFIED.
2. ALL DISTANCES ARE IN US FEET
3. NO BUILDINGS ARE WITHIN THE SURVEYED AREA
4. THERE WAS NO EVIDENCE OF CURRENT EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS OBSERVED AT THE TIME OF THE FIELD SURVEY.
5. THERE WAS NO EVIDENCE OF SITE USE AS A SOLID WASTE DUMP, SUMP OR SANITARY LANDFILL WAS OBSERVED AT THE TIME OF THE FIELD SURVEY.
6. NO PARKING OR STRIPING WAS FOUND ON SITE.
7. FLAGGED WETLANDS SHOWN AS LOCATED IN THE FIELD IN 2015.
8. NO ZONING INFORMATION HAS BEEN PROVIDED AS OF OCTOBER 13, 2016

REFERENCE SURVEYS:

1. R.O.S., REC. NO. 8410300247
2. R.O.S., REC. NO. 8603170340
3. R.O.S., REC. NO. 8604080409
4. PUYALLUP BLA, REC. NO. 200608185003

ZONING: "CB" COMMUNITY BUSINESS.

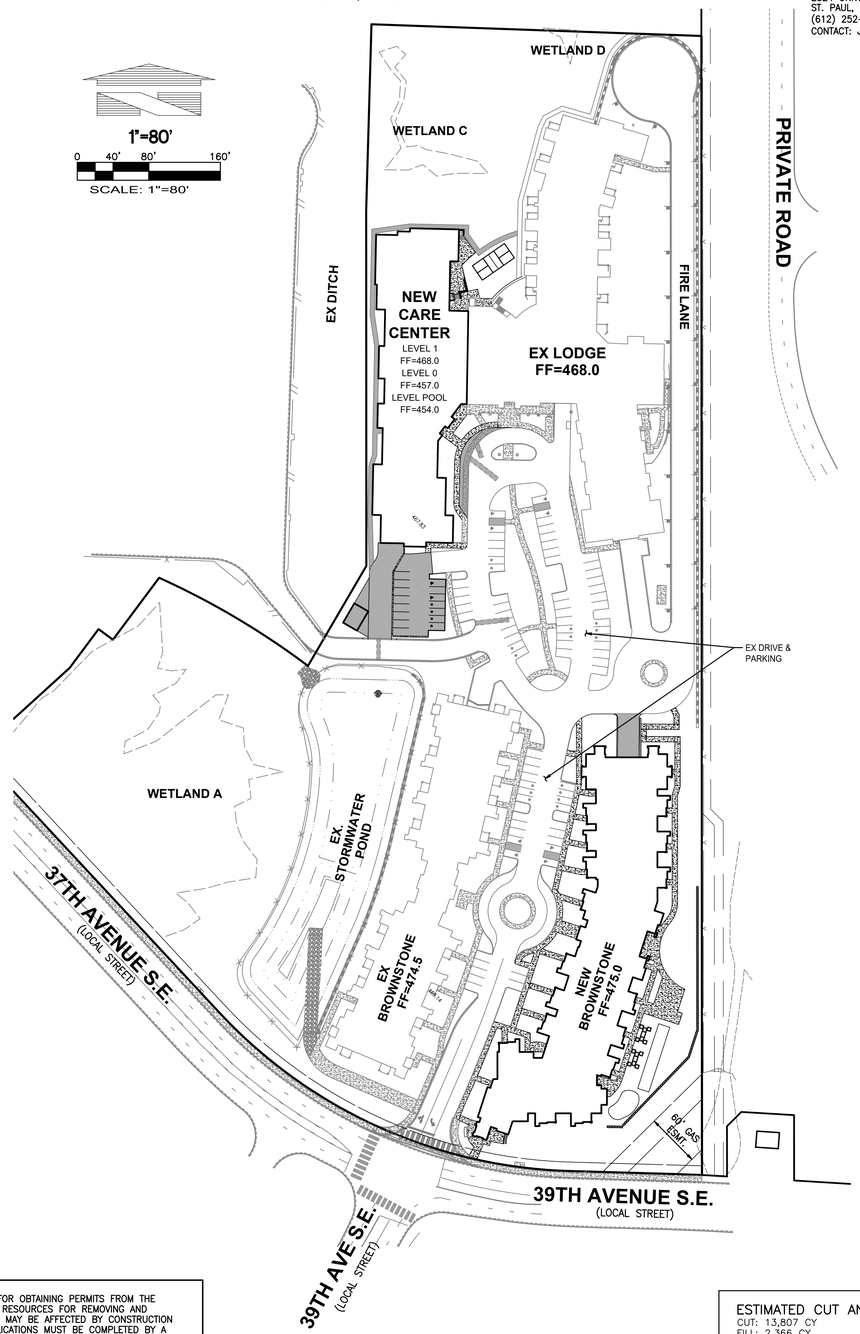
CONSTRUCTION SEQUENCE:

1. SCHEDULE AND ATTEND PRE-CONSTRUCTION MEETING WITH CITY OF PUYALLUP OFFICIALS.
2. FLAG ALL TREES TO REMAIN, CLEARING AND GRADING LIMITS FOR PROJECT AS SHOWN ON THE PLANS.
3. CONSTRUCT TEMPORARY CONSTRUCTION ENTRANCE.
4. INSTALL TEMPORARY FILTER FABRIC FENCE AND CB PROTECTION AS SHOWN ON PLANS.
5. REMOVE EXISTING SITE IMPROVEMENTS AS INDICATED ON PLANS.
6. CONSTRUCT INTERCEPTOR DITCHES WHERE SHOWN.
7. TIME LIMIT APPLIES TO ANY WORK PERFORMED IN THE CITY OF PUYALLUP. CONTRACTOR TO COORDINATE WITH CITY OFFICIAL FOR TIMING OF ANY CONSTRUCTION WITHIN ROW.
8. PROTECT ALL PROPERTIES ADJACENT TO THE PROJECT FROM SEDIMENT DEPOSITION.
9. NO RUNOFF IS TO LEAVE SITE WITHOUT TREATMENT.
10. CLEAR AND GRADE SITE AMEND E.S.C. FACILITIES AS REQUIRED.
11. WHEREVER CONSTRUCTION VEHICLES ACCESS ROUTE CROSSES PAVED ROADS, CARE MUST BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT (MUD) ONTO THE PAVED ROAD. IF SEDIMENT IS TRANSPORTED ONTO PAVED SURFACE, THE ROAD SHALL BE CLEANED IMMEDIATELY.
12. WITH EACH LAYER OF FILL MATERIAL, INTERCEPTOR DITCHES AND T.E.S.C. FACILITIES MUST BE GRADED AND MAINTAINED TO PROVIDE POSITIVE SLOPE FOR DRAINAGE TO DISCHARGE POINT.
13. INSTALL SANITARY SEWER, WATER, AND STORM SYSTEMS.
14. CONSTRUCT BUILDING.
15. CONSTRUCT RIGHT-OF-WAY IMPROVEMENTS.
16. ONCE THE INSTALLED SYSTEMS ARE TESTED AND APPROVED, COMMENCE SITE PAVING.
17. MAINTAIN T.E.S.C. FACILITIES UNTIL ALL RISK OF EROSION/SEDIMENTATION DRAINAGE HAS PASSED AND PERMANENT STORM DRAINAGE SYSTEM IS INSTALLED AND FUNCTIONAL. DO NOT CONVEY SEDIMENT-LADEN WATER INTO STORM DRAINAGE SYSTEM. REMOVE TEMPORARY EROSION & SEDIMENTATION CONTROL MEASURES UPON FINAL SITE STABILIZATION AND APPROVAL FROM THE CITY INSPECTOR.
18. COMPLETE INSPECTION/ PUNCHLIST

SHEET INDEX

GEOTECHNICAL NOTE:

1. DURING SITE GRADING AND BUILDING CONSTRUCTION THE GEOTECHNICAL ENGINEER OF RECORD OR HIS/HER REPRESENTATIVE WILL PERFORM BI-WEEKLY RECONNAISSANCE OF THE SLOPE AND ISSUE A FIELD REPORT REGARDING SITE CONDITIONS. THESE BI-WEEKLY SLOPE RECONS WILL CONTINUE UNTIL BUILDING SHELL CONSTRUCTION AND STORMWATER FACILITIES ARE COMPLETED AND FUNCTIONAL. POST BUILDING CONSTRUCTION SLOPE RECONS SHALL OCCUR ON A QUARTERLY BASIS FOR A PERIOD OF NO LESS THAN TWO YEARS. IF NO INSTABILITY OR EROSION ISSUES ARE PRESENT AT THAT TIME, MONITORING CAN BE TERMINATED.



LEGEND

	EXISTING	PROPOSED
CURB AND GUTTER		
BARRIER CURB		
CONCRETE		
ASPHALT		
PAINT STRIPING		
DIRECTIONAL ARROW		
SAWCUT		
BOLLARD	○	•
SIGN		
BUILDING LINE		
CONTOURS	432	432
WATER LINE	W	W
FIRE HYDRANT		
WATER METER		
WATER VALVE		
FIRE DEPARTMENT CONN.		
POST INDICATOR VALVE		
STORM LINE	SD	
CATCH BASIN TYPE 1	□	■
CATCH BASIN TYPE 2		
SANITARY SEWER LINE	SS	
SANITARY SEWER MANHOLE	○	●
CLEANOUT (AS NOTED)	○	•
POWER OVERHEAD	P (OH)	P(OH)
POWER UNDERGROUND	P (UG)	P(UG)
POWER METER		
UTILITY POLE		
JUNCTION BOX (TYPE 1,2,3)		
LUMINAIRE		
YARD LIGHT		
TELEPHONE	T(UG)	T
GAS	G	G
GAS METER		
GAS VALVE		

CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR OBTAINING PERMITS FROM THE WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES FOR REMOVING AND REPLACING ALL SURVEY MONUMENTATION THAT MAY BE AFFECTED BY CONSTRUCTION ACTIVITY, PURSUANT TO WAC 332-120. APPLICATIONS MUST BE COMPLETED BY A REGISTERED LAND SURVEYOR. APPLICATIONS FOR PERMITS TO REMOVE MONUMENTS MAY BE OBTAINED FROM THE WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES, OR BY CONTACTING THEIR OFFICE BY TELEPHONE AT (206) 902-1190.

WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES
PUBLIC LAND SURVEY OFFICE
1111 WASHINGTON STREET S.E.
P.O. BOX 47060
OLYMPIA, WASHINGTON 98504-7060

UPON COMPLETION OF CONSTRUCTION, ALL MONUMENTS DISPLACED, REMOVED, OR DESTROYED SHALL BE REPLACED BY A REGISTERED LAND SURVEYOR, AT THE COST AND AT THE DIRECTION OF THE CONTRACTOR, PURSUANT TO THESE REGULATIONS. THE APPROPRIATE FORMS FOR REPLACEMENT OF SAID MONUMENTATION SHALL ALSO BE THE RESPONSIBILITY OF THE CONTRACTOR.

UTILITY CONFLICT NOTE:

CAUTION:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT BY POTHOLING THE UTILITIES AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE @ 1-800-424-5555 AND THEN POTHOLING ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATIONS OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON THE UNVERIFIED PUBLIC INFORMATION AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL CONSULT BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

ESTIMATED CUT AND FILL QUANTITIES:
CUT: 13,807 CY
FILL: 2,366 CY
(QTYS. ARE FOR PERMITTING PURPOSES ONLY. CONTRACTOR SHALL VERIFY EXACT QTYS. BEFORE CONSTRUCTION.)

CALL BEFORE YOU DIG:
1-800-424-5555

OWNER/DEVELOPER

WESLEY HOMES
815 SOUTH 216TH STREET
DES MOINES, WA 98190
(206) 870-1209
CONTACT: KEVIN ANDERSON

ARCHITECT:

IN-SITE ARCHITECTS
2324 UNIVERSITY AVE. WEST, SUITE 105
ST. PAUL, MN 55114
(612) 252-4822
CONTACT: JILL KRANCE

ENGINEER/SURVEYORS

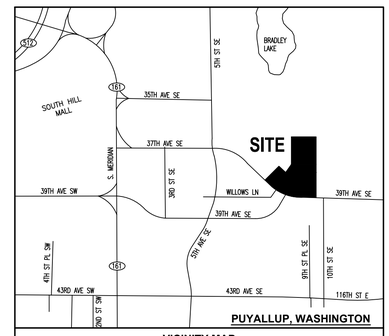
BARGHAUSEN CONSULTING ENGINEERS, INC.
18215 72ND AVENUE SOUTH
KENT, WA. 98032
(425) 251-6222
CONTACT: DAN BALMELLI, P.E. (ENGINEERING)
CONTACT: BRIAN GILLOOLY, P.L.S. (SURVEY)

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning
Engineering | Public Works
Fire | Traffic

APPROVED
BY _____
CITY OF PUYALLUP
ENGINEERING SERVICES
DATE 09/19/2024
NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.
THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE ENGINEERING SERVICES MANAGER.

BCE GENERAL SITE NOTES:

1. THE CONTRACTOR SHALL OBTAIN AND HAVE AVAILABLE COPIES OF THE APPLICABLE GOVERNING AGENCY STANDARDS AT THE JOB SITE DURING THE RELATED CONSTRUCTION OPERATIONS.
2. CONTRACTOR SHALL ASSURE THAT ALL NECESSARY PERMITS HAVE BEEN OBTAINED PRIOR TO COMMENCING WORK.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION WHETHER SHOWN ON THESE PLANS OR NOT. UTILITIES OTHER THAN THOSE SHOWN MAY EXIST ON THIS SITE. ONLY THOSE UTILITIES WITH EVIDENCE OF THEIR INSTALLATION VISIBLE AT GROUND SURFACE OR SHOWN ON RECORD DRAWING PROVIDED BY OTHERS ARE SHOWN HEREON. EXISTING UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE ONLY AND ARE SUBJECT TO A DEGREE OF UNKNOWN VARIATION. SOME UNDERGROUND LOCATIONS SHOWN HEREON MAY HAVE BEEN TAKEN FROM PUBLIC RECORDS. BARGHAUSEN CONSULTING ENGINEERS, INC. ASSUMES NO LIABILITY FOR THE ACCURACY OF PUBLIC RECORDS OR RECORDS OF OTHERS. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL CONSULT BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.
4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR THE RELATIVE CODES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF WORK AS DEFINED BY THE DRAWINGS AND IN FULL COMPLIANCE WITH LOCAL REGULATIONS AND CODES.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE APPROPRIATE UTILITIES INVOLVED PRIOR TO CONSTRUCTION.
6. INSPECTION OF SITE WORK WILL BE ACCOMPLISHED BY A REPRESENTATIVE OF THE GOVERNING JURISDICTION. INSPECTION OF PRIVATE FACILITIES WILL BE ACCOMPLISHED BY A REPRESENTATIVE OF THE OWNER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE INSPECTOR 24 HOURS IN ADVANCE OF BACKFILLING ALL CONSTRUCTION.
7. PRIOR TO ANY CONSTRUCTION OR DEVELOPMENT ACTIVITY THE CONTRACTOR SHALL CONTACT THE AGENCY AND/OR UTILITY INSPECTION PERSONNEL AND ARRANGE ANY REQUIRED PRE-CONSTRUCTION MEETING(S). CONTRACTOR SHALL PROVIDE ONE WEEK MINIMUM ADVANCE NOTIFICATION TO OWNER, FIELD ENGINEER AND ENGINEER OF PRE-CONSTRUCTION MEETINGS.
8. THE CONTRACTOR IS RESPONSIBLE FOR WORKER AND SITE SAFETY AND SHALL COMPLY WITH THE LATEST OSHA STANDARDS AND REGULATIONS, OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE "MEANS AND METHODS" REQUIRED TO MEET THE INTENT AND PERFORMANCE CRITERIA OF OSHA, AS WELL AS ANY OTHER ENTITY THAT HAS JURISDICTION FOR EXCAVATION AND/OR TRENCHING PROCEDURES.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACTOR. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE AT LEAST ONE FLAGGER FOR EACH LANE OF TRAFFIC AFFECTED.
10. PROTECTIVE MEASURES SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT ALL ADJACENT PUBLIC AND PRIVATE PROPERTIES AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL EXISTING UTILITY SERVICES THAT ARE TO REMAIN OPERATIONAL WITHIN THE CONSTRUCTION AREA WHETHER SHOWN OR NOT SHOWN ON THE PLANS.
11. TWO (2) COPIES OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS. ONE (1) SET WITH RECORDS OF AS-BUILT INFORMATION SHALL BE SUBMITTED TO BARGHAUSEN CONSULTING ENGINEERS, INC. AT COMPLETION OF PROJECT.
12. CONTRACTOR SHALL OBTAIN SERVICES OF A LICENSED LAND SURVEYOR TO STAKE HORIZONTAL CONTROL FOR ALL NEW IMPROVEMENTS. STAKING CONTROL SHALL BE TAKEN FROM ELECTRONIC PLAN FILES PROVIDED BY BARGHAUSEN CONSULTING ENGINEERS, INC.
13. CONTRACTOR SHALL REQUEST FROM BARGHAUSEN CONSULTING ENGINEERS, INC., PRIOR TO ANY CONSTRUCTION STAKING OR CONSTRUCTION WORK, A FORMAL CONSTRUCTION RELEASE PLAN SET OR SPECIFIC RELEASE IN WRITING. THE APPROVED AGENCY PERMIT DRAWINGS WILL NOT BE CONSIDERED CONSTRUCTION RELEASE PLANS BY BARGHAUSEN CONSULTING ENGINEERS, INC. UNLESS BARGHAUSEN CONSULTING ENGINEERS, INC. HAS GIVEN A FORMAL WRITTEN RELEASE OR ISSUED A CONSTRUCTION RELEASE PLAN SET.



VICINITY MAP
N.T.S.

PROPERTY ADDRESS:
707 39TH AVE. S.E. PUYALLUP, WA 98374

No.	Date	By	Ckd.	Appr.	Revision

Title: COVER SHEET FOR CIVIL PLANS PHASE 2 - WESLEY BRADLEY PARK

For: WESLEY HOMES
815 SOUTH 216TH STREET
DES MOINES, WA 98190
(206) 870-1209

DANIEL K. BALMELLI — STATE OF WASHINGTON — 25672 — REGISTERED PROFESSIONAL ENGINEER
9/3/24

Scale: Horizontal 1" = 80' Vertical N/A

Designed CK. Drawn BGK. Checked CMV Approved DKB Date 9/3/24

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
425.251.6222
barghausen.com

Job Number 16718 Sheet C1 of C21

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EXISTING SITE AND TESC PLAN NORTH
FOR
PHASE 2 - WESLEY BRADLEY PARK

1"=30'

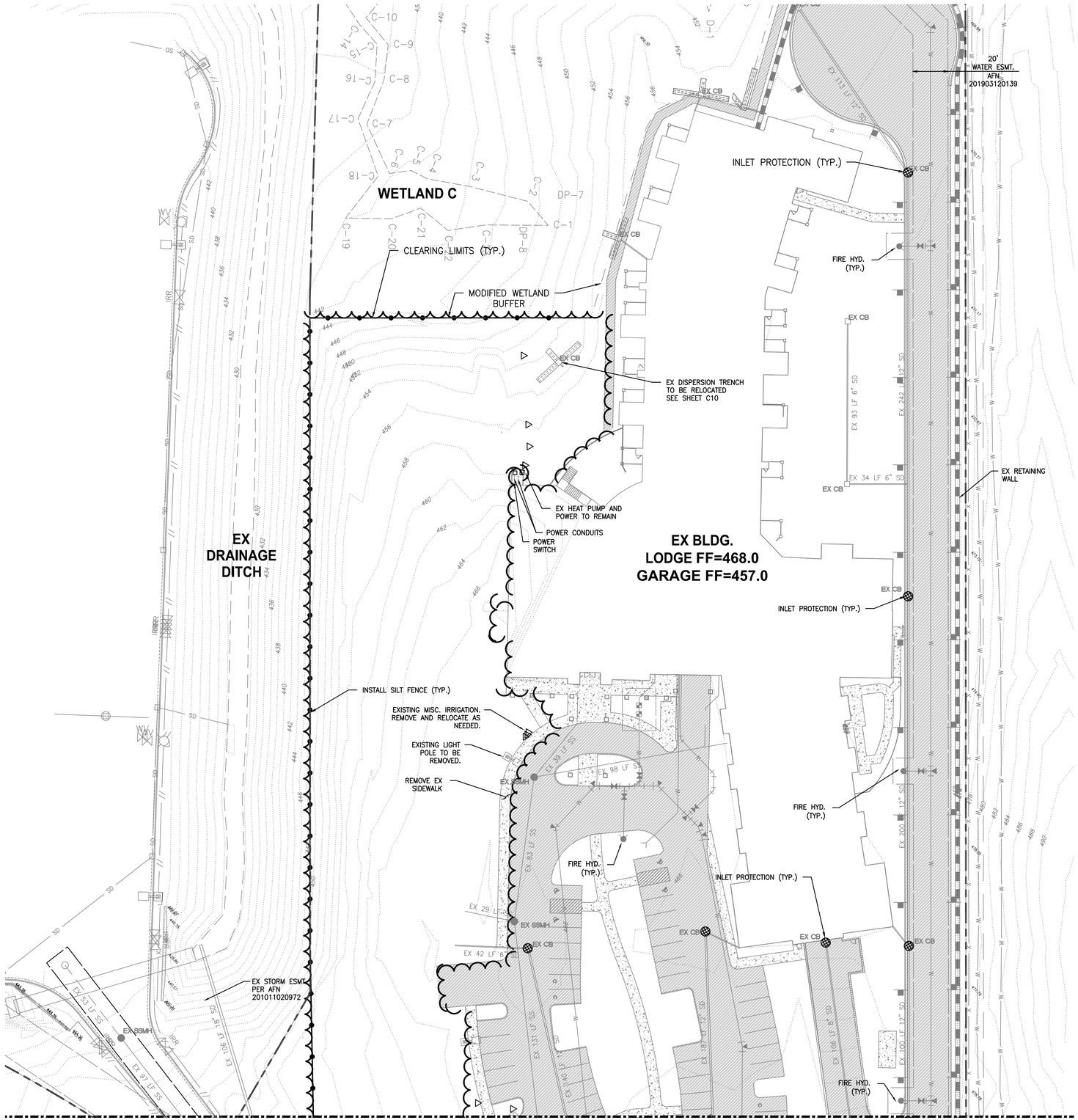
0 15 30 60

NOTES:

1. CONTRACTOR SHALL USE BAKER TANK FOR EROSION CONTROL, IF REQUIRED.
2. AT ANY TIME DURING CONSTRUCTION IT IS DETERMINED BY THE CITY THAT MUD AND DEBRIS ARE BEING TRACKED ONTO PUBLIC STREETS WITH INSUFFICIENT CLEANUP, ALL WORK SHALL CEASE ON THE PROJECT UNTIL THIS CONDITION IS CORRECTED. THE CONTRACTOR AND/OR THE OWNER SHALL IMMEDIATELY TAKE ALL STEPS NECESSARY TO PREVENT FUTURE TRACKING OF MUD AND DEBRIS INTO THE PUBLIC ROW, WHICH MAY INCLUDE THE INSTALLATION OF A WHEEL WASH FACILITY ON-SITE.
3. CONTRACTOR SHALL DESIGNATE A WASHINGTON DEPARTMENT OF ECOLOGY CERTIFIED EROSION AND SEDIMENT CONTROL LEAD PERSON, AND SHALL COMPLY WITH THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED FOR THIS PROJECT.
4. SEDIMENT-LADEN RUNOFF SHALL NOT BE ALLOWED TO DISCHARGE BEYOND THE CONSTRUCTION LIMITS IN ACCORDANCE WITH THE PROJECT'S NPDES GENERAL STORMWATER PERMIT.

TESC LEGEND:

- CATCH BASIN PROTECTION
- SILT FENCE
- CLEARING LIMITS



APPROVED
BY _____
CITY OF PUYALLUP
ENGINEERING SERVICES
DATE 09/19/2024

NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.
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City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

No.	Date	By	Ckd.	Appr.	Revision

Title: EXISTING SITE AND TESC PLAN NORTH FOR CIVIL PLANS PHASE 2 - WESLEY BRADLEY PARK

For: WESLEY HOMES
815 SOUTH 216TH STREET
DES MOINES, WA 98190
(206) 870-1209

DANIEL K. BALMELLI
STATE OF WASHINGTON
25672
REGISTERED PROFESSIONAL ENGINEER
9/3/24

Scale: Horizontal 1" = 30' Vertical N/A

Designed CK Drawn BGK Checked CMV Approved DKB Date 9/3/24

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
425.251.6222
barghausen.com

Job Number 16718

Sheet C2 of C21

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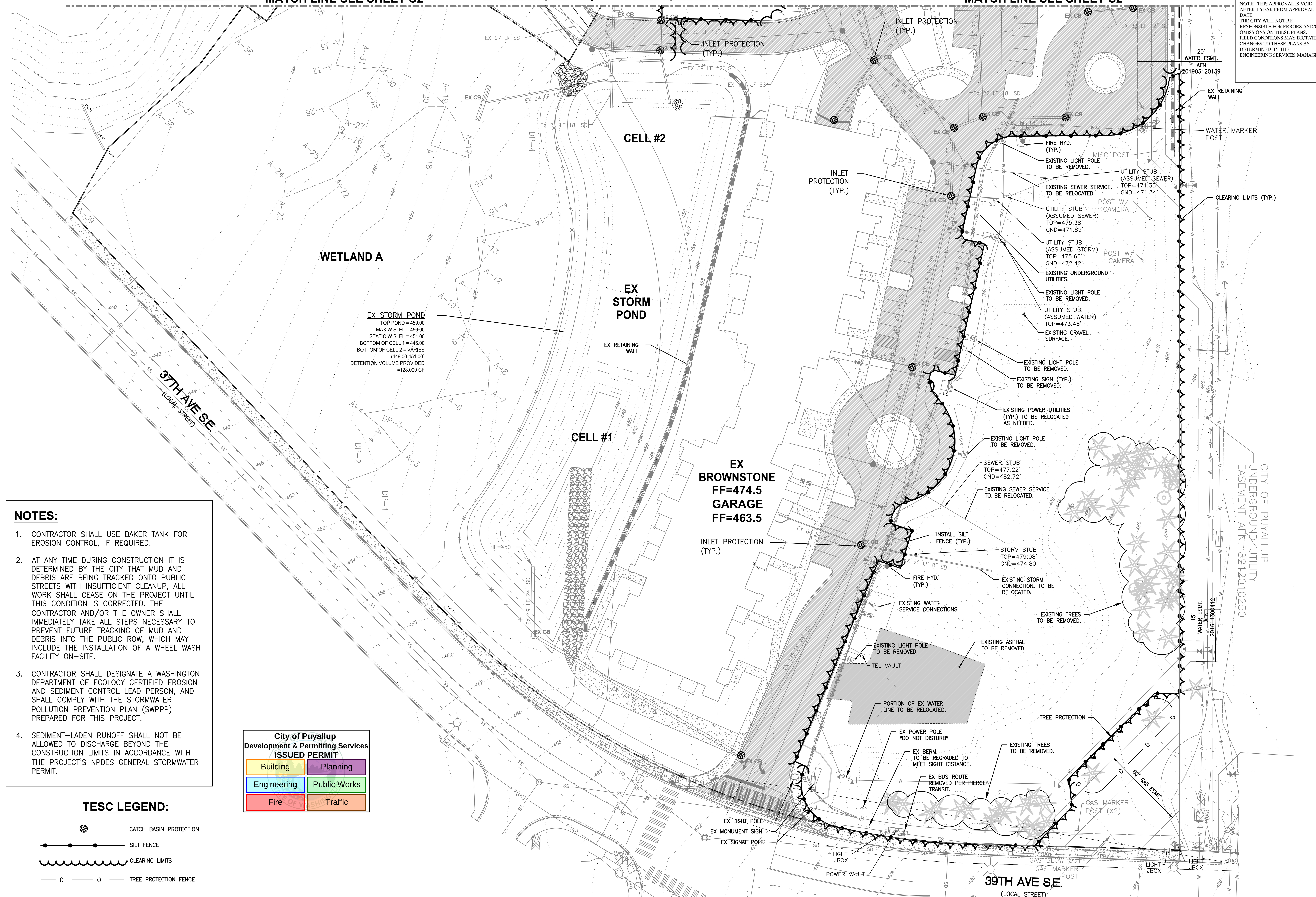
EXISTING SITE AND TESC PLAN SOUTH
FOR
PHASE 2 - WESLEY BRADLEY PARK

1"=30' 0 15 30 60

MATCH LINE SEE SHEET C2 — MATCH LINE SEE SHEET C2



NOTES:

1. CONTRACTOR SHALL USE BAKER TANK FOR EROSION CONTROL, IF REQUIRED.
2. AT ANY TIME DURING CONSTRUCTION IT IS DETERMINED BY THE CITY THAT MUD AND DEBRIS ARE BEING TRACKED ONTO PUBLIC STREETS WITH INSUFFICIENT CLEANUP, ALL WORK SHALL CEASE ON THE PROJECT UNTIL THIS CONDITION IS CORRECTED. THE CONTRACTOR AND/OR THE OWNER SHALL IMMEDIATELY TAKE ALL STEPS NECESSARY TO PREVENT FUTURE TRACKING OF MUD AND DEBRIS INTO THE PUBLIC ROW, WHICH MAY INCLUDE THE INSTALLATION OF A WHEEL WASH FACILITY ON-SITE.
3. CONTRACTOR SHALL DESIGNATE A WASHINGTON DEPARTMENT OF ECOLOGY CERTIFIED EROSION AND SEDIMENT CONTROL LEAD PERSON, AND SHALL COMPLY WITH THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED FOR THIS PROJECT.
4. SEDIMENT-LADEN RUNOFF SHALL NOT BE ALLOWED TO DISCHARGE BEYOND THE CONSTRUCTION LIMITS IN ACCORDANCE WITH THE PROJECT'S NPDES GENERAL STORMWATER PERMIT.

TESC LEGEND:

- CATCH BASIN PROTECTION
- SILT FENCE
- CLEARING LIMITS
- TREE PROTECTION FENCE

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

APPROVED
BY [signature]
CITY OF PUYALLUP
ENGINEERING SERVICES
DATE 09/19/2024

NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.
THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE ENGINEERING SERVICES MANAGER.

No.	Date	By	Ckd.	Appr.	Revision

Title: EXISTING SITE AND TESC PLAN SOUTH FOR CIVIL PLANS PHASE 2 - WESLEY BRADLEY PARK

For: WESLEY HOMES
815 SOUTH 216TH STREET
DES MOINES, WA 98190
(206) 870-1209

DANIEL K. BALMELLI, STATE OF WASHINGTON, 25672, REGISTERED PROFESSIONAL ENGINEER 9/3/24

Scale: Horizontal 1" = 30' Vertical N/A

Designed CK
Drawn BGK
Checked CMV
Approved DKB
Date 9/3/24

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
425.251.6222
barghausen.com

Job Number 16718

Sheet C3 of C21

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TESC NOTES AND DETAILS
FOR
PHASE 2 - WESLEY BRADLEY PARK

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

APPROVED
BY CITY OF PUYALLUP ENGINEERING SERVICES
DATE 09/19/2024
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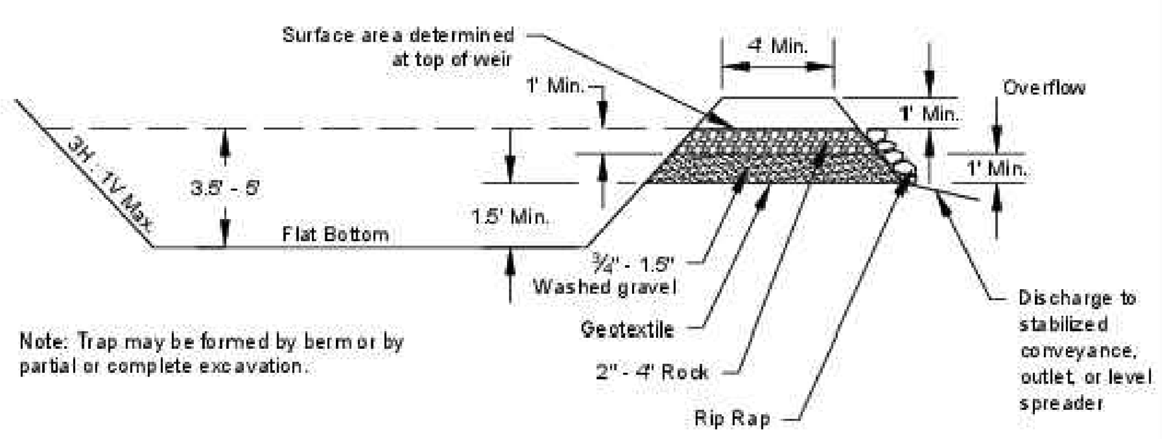
FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE ENGINEERING SERVICES MANAGER.

SOIL STABILIZATION AND REVEGETATION

EXPOSED AREAS AND SOIL STOCKPILES MUST BE STABILIZED ACCORDING TO THE FOLLOWING SCHEDULE:

1. FROM APRIL 1 TO OCTOBER 31 ALL DISTURBED AREAS AT FINAL GRADE AND ALL EXPOSED AREAS THAT ARE SCHEDULED TO REMAIN UNWORKED FOR MORE THAN 30 DAYS SHALL BE STABILIZED WITHIN 10 DAYS.
2. FROM NOVEMBER 1 TO MARCH 31 ALL EXPOSED SOILS AT FINAL GRADE SHALL BE STABILIZED IMMEDIATELY USING PERMANENT OR TEMPORARY MEASURES. EXPOSED SOILS WITH AN AREA GREATER THAN 5,000 SQUARE FEET THAT ARE SCHEDULED TO REMAIN UNWORKED FOR MORE THAN 24 HOURS AND EXPOSED AREAS OF LESS THAN 5,000 SQUARE FEET THAT WILL REMAIN UNWORKED FOR MORE THAN SEVEN (7) DAYS SHALL BE STABILIZED IMMEDIATELY.

ALL DISTURBED AREAS WHICH ARE NOT PLANNED TO BE CONSTRUCTED ON WITHIN 90 DAYS FROM TIME OF CLEARING AND GRADING SHALL BE REVEGETATED WITH THE NATIVE VEGETATION.



NOT TO SCALE

DEPARTMENT OF ECOLOGY State of Washington

Figure II-4.2.16
Cross Section of Sediment Trap
Revised November 2015

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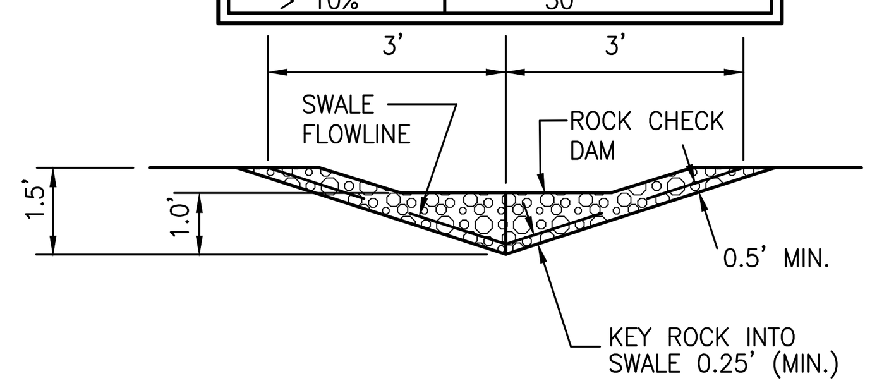
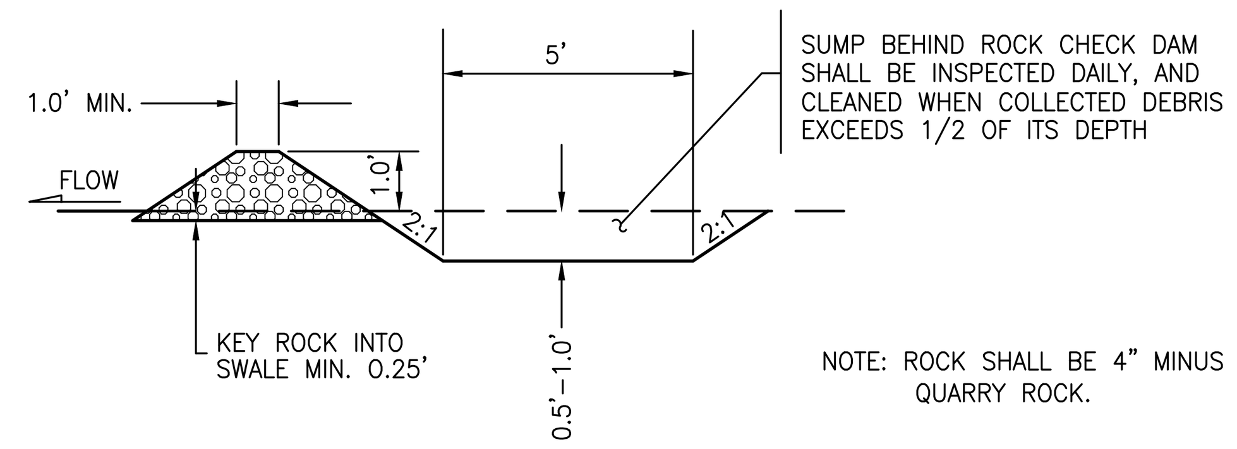
SWALE SLOPE	CHECK DAM SPACING
0% - 5%	150'
5% - 10%	100'
> 10%	50'



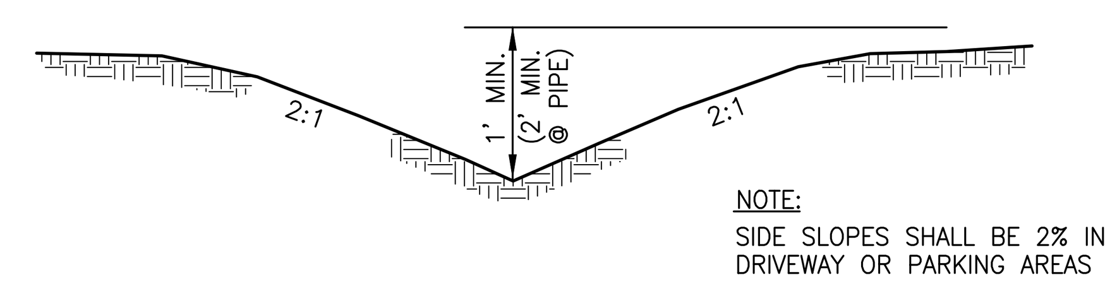
SWALE X-SECTION AT ROCK CHECK DAM



ROCK DAM X-SECTION

ROCK CHECK DAM DETAILS

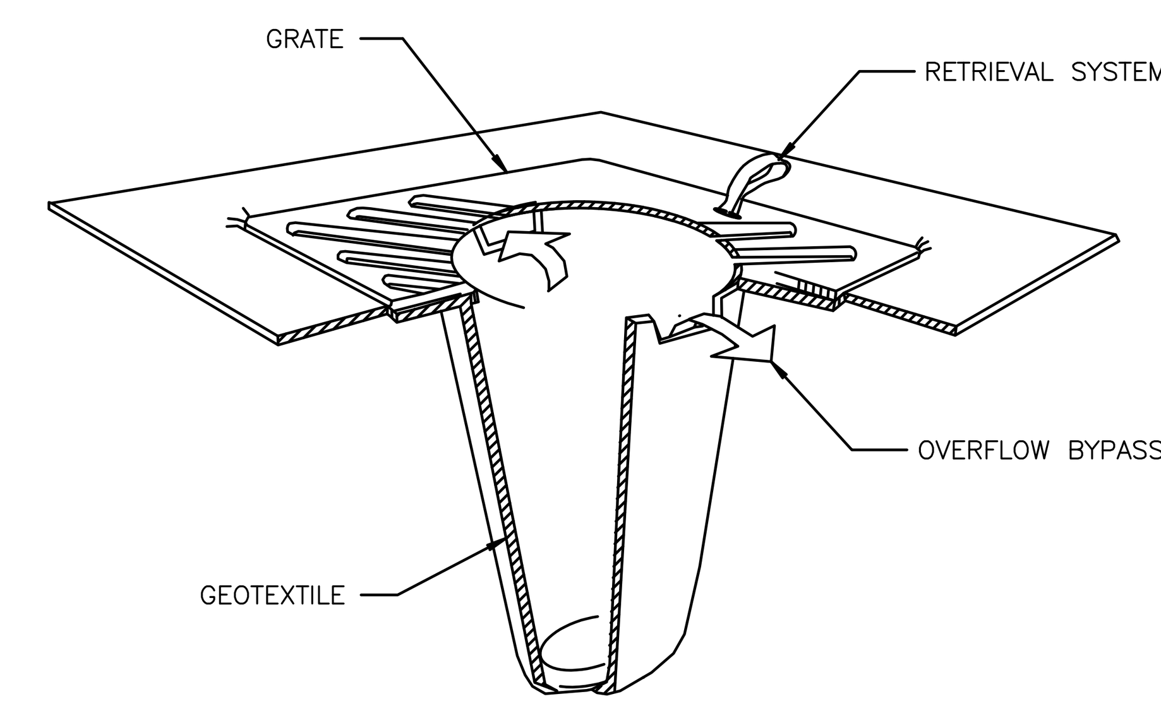
NOT TO SCALE



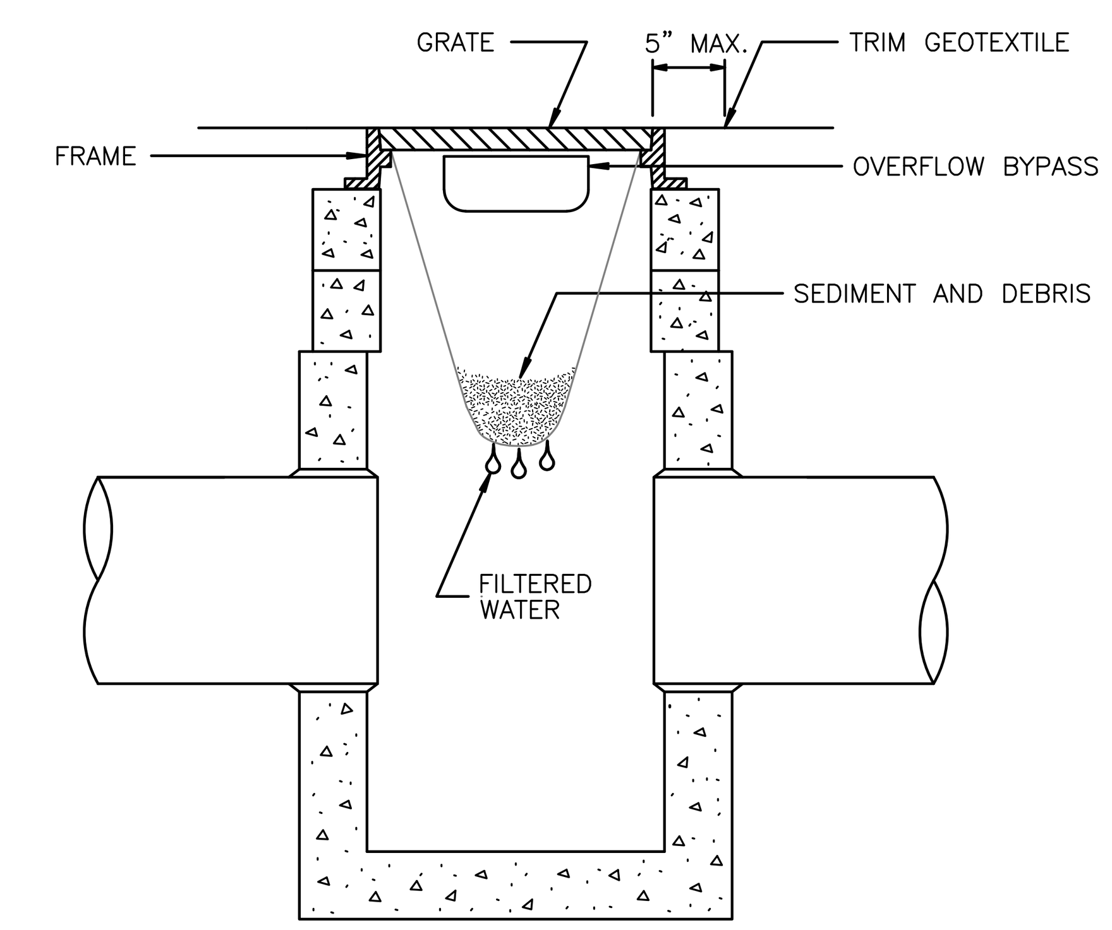
TEMPORARY SWALE

NOT TO SCALE

NOTES
1. PERFORM MAINTENANCE IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION 8-01.3(15).
2. SIZE THE BELOW GRATE INLET DEVICE (BGID) FOR THE STORM WATER STRUCTURE IT WILL SERVICE.
3. THE BGID SHALL HAVE A BUILT-IN HIGH-FLOW RELIEF SYSTEM (OVERFLOW BYPASS).
4. THE RETRIEVAL SYSTEM MUST ALLOW REMOVAL OF THE BGID WITHOUT SPILLING THE COLLECTED MATERIAL.

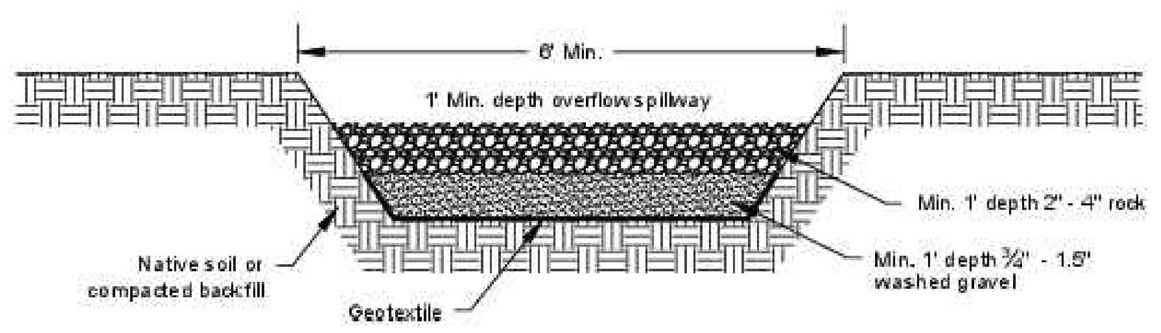


ISOMETRIC VIEW
NOT TO SCALE



CROSS SECTION
NOT TO SCALE

STORM DRAIN INLET PROTECTION
PREFABRICATED BELOW GRATE INLET DEVICE DETAILS
WSDOT STANDARD PLAN I-7



NOT TO SCALE

DEPARTMENT OF ECOLOGY State of Washington

Figure II-4.2.17
Sediment Trap Outlet
Revised November 2015

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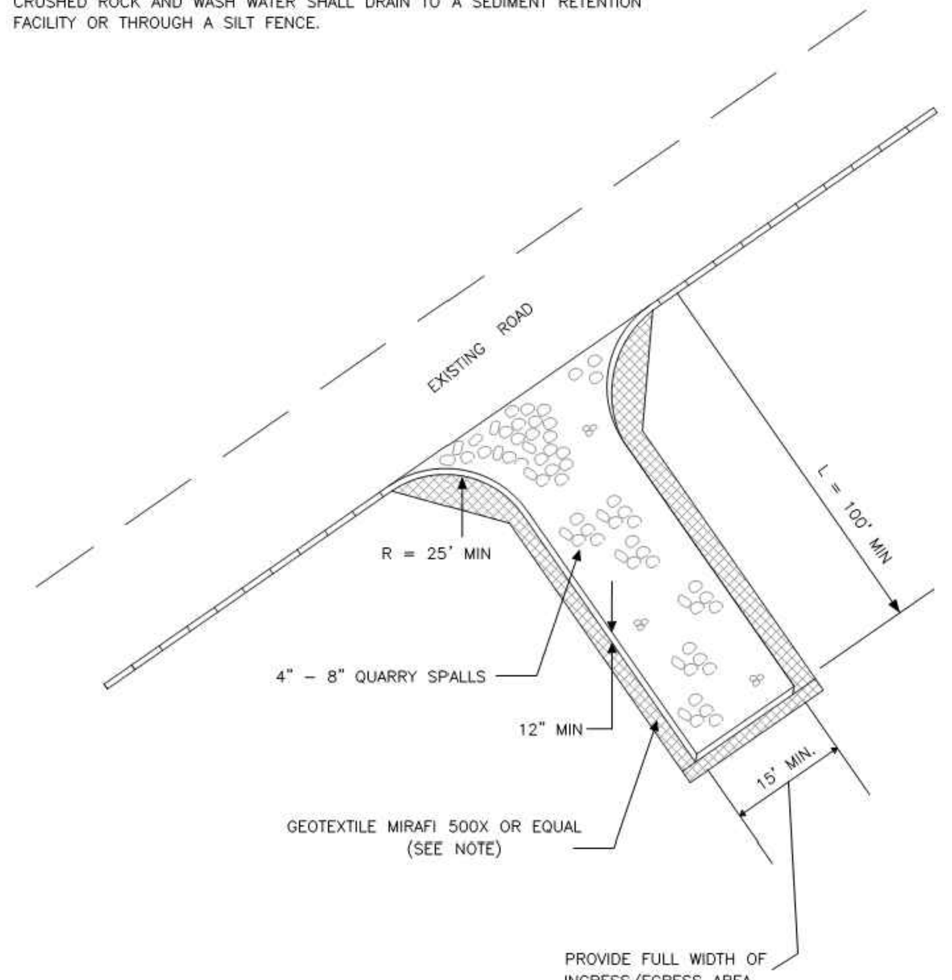
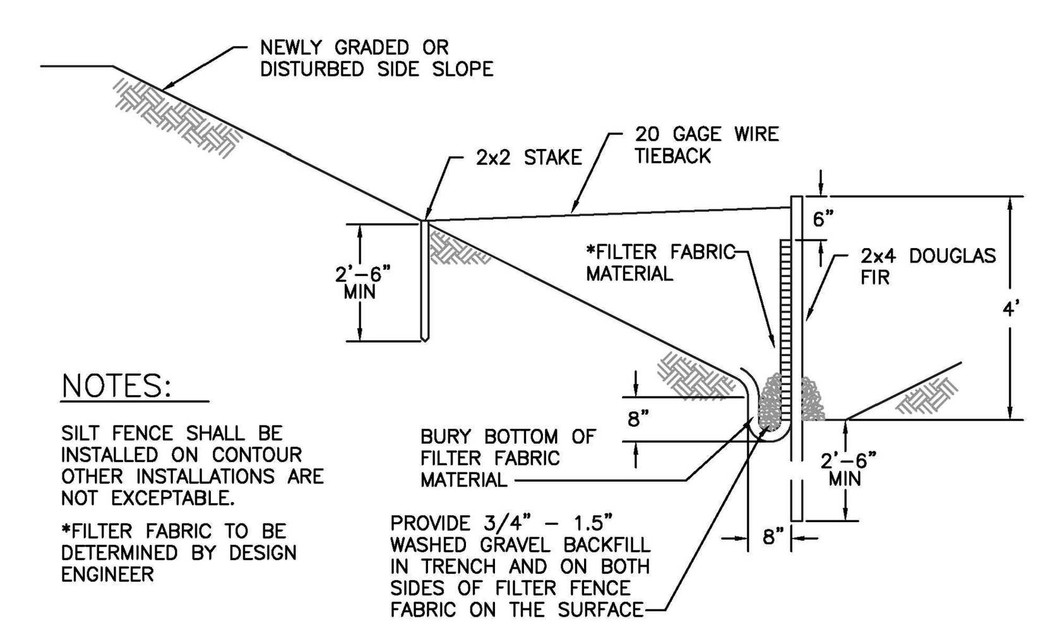
NOTE:
1. GEOTEXTILE MIRAFI 500 X OR APPROVED EQUAL SHALL BE PLACED UNDER THE ENTIRETY OF THE TEMPORARY ENTRANCE.
2. ADDITIONAL ROCK SHALL BE ADDED PERIODICALLY TO MAINTAIN PROPER FUNCTION OF THE PAD.
3. IF THE PAD DOES NOT ADEQUATELY REMOVE THE MUD FROM THE VEHICLE'S WHEELS, THE WHEELS SHALL BE HOSED OFF BEFORE THE VEHICLE ENTERS A PAVED STREET. THE WASHING SHALL BE DONE ON AN AREA COVERED WITH CRUSHED ROCK AND WASH WATER SHALL DRAIN TO A SEDIMENT RETENTION FACILITY OR THROUGH A SILT FENCE.



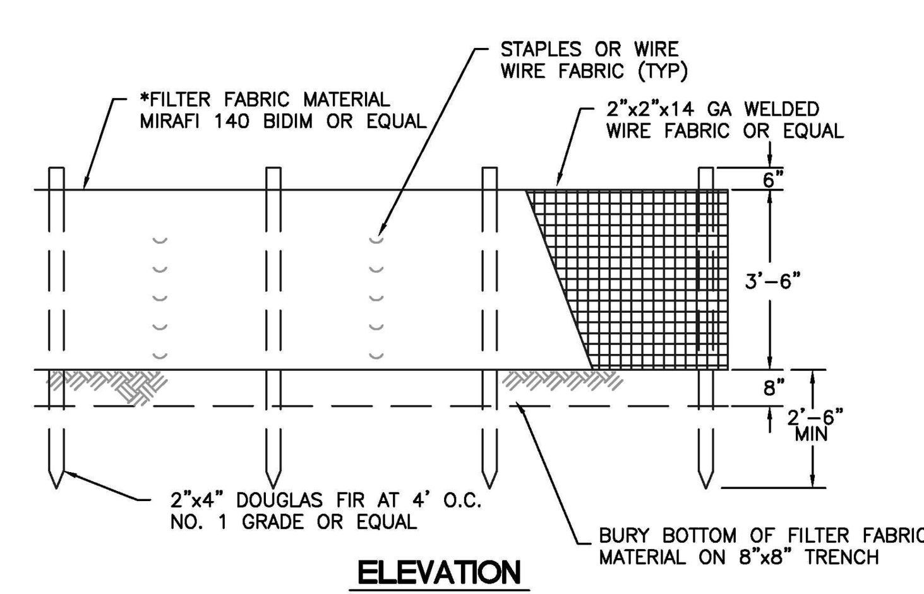
CITY OF PUYALLUP
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

TEMPORARY CONSTRUCTION ENTRANCE
05.01.01



NOTES:
SILT FENCE SHALL BE INSTALLED ON CONTOUR OTHER INSTALLATIONS ARE NOT EXCEPTABLE.
*FILTER FABRIC TO BE DETERMINED BY DESIGN ENGINEER

TYPICAL CROSS SECTION



ELEVATION

CITY OF PUYALLUP
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

SILTATION FENCE
02.03.02

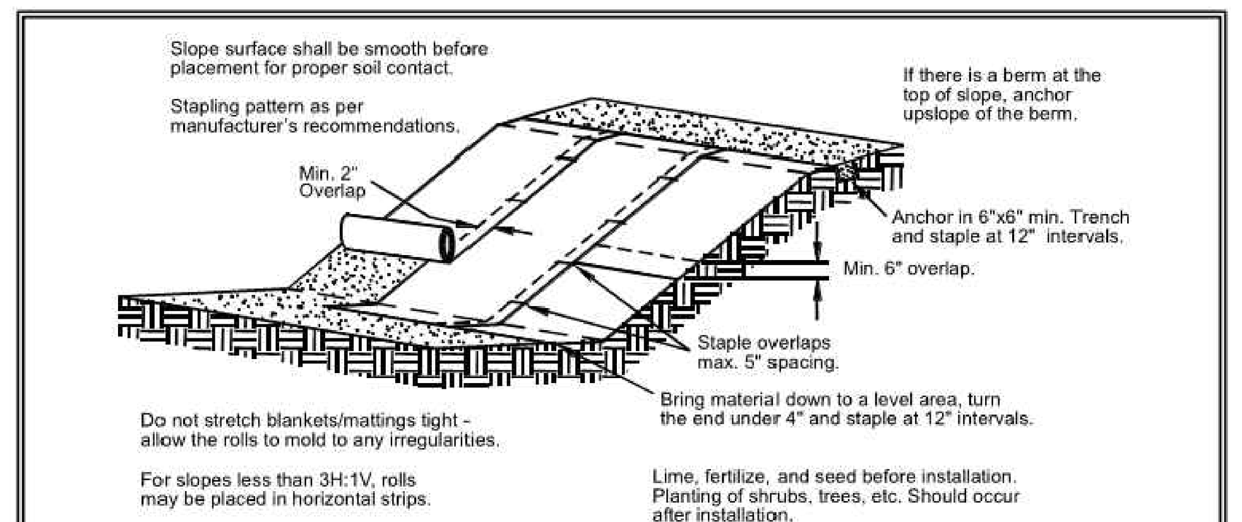


Figure 4.5 – Slope Installation

No.	Date	By	Ckd.	Appr.	Revision

Title: CONSTRUCTION NOTES FOR CIVIL PLANS PHASE 2 - WESLEY BRADLEY PARK

For: WESLEY HOMES
815 SOUTH 216TH STREET
DES MOINES, WA 98190
(206) 870-1209

DANIEL K. BALMELLI, STATE OF WASHINGTON, 25672, REGISTERED PROFESSIONAL ENGINEER
9/3/24

Scale: Horizontal N/A, Vertical C4

Designed CK
Drawn BGK
Checked CMV
Approved DKB
Date 9/3/24

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
425.251.6222
barghausen.com

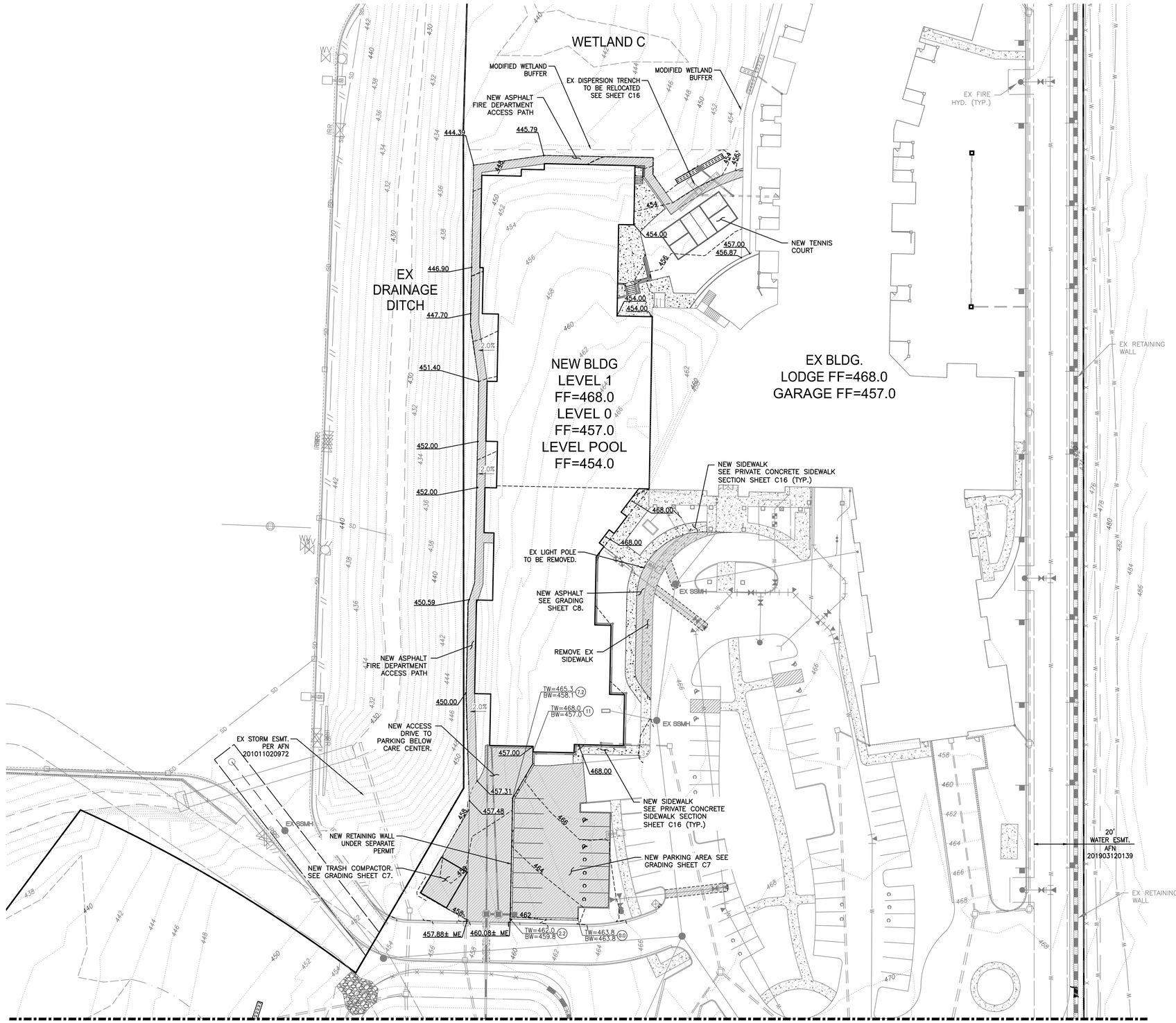
Job Number 16718
Sheet C4 of C21

P:\16000s\16718\engineering\Phase 2\16718-ed.dwg 4/26/2023 2:38 PM LPALMER

1"=30'

0 15 30 60

GRADING PLAN NORTH
FOR
PHASE 2 - WESLEY BRADLEY PARK



MATCH LINE SEE SHEET C6

APPROVED
BY _____
CITY OF PUYALLUP
ENGINEERING SERVICES
DATE 09/19/2024

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City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

No.	Date	By	Ckd.	Appr.	Revision

Title: **GRADING PLAN NORTH FOR CIVIL PLANS PHASE 2 - WESLEY BRADLEY PARK**

For: **WESLEY HOMES**
815 SOUTH 216TH STREET
DES MOINES, WA 98190
(206) 870-1209

DANIEL K. BALMER — STATE OF WASHINGTON — 25672 — REGISTERED PROFESSIONAL ENGINEER
9/3/24

Scale: Horizontal 1" = 30' Vertical N/A

Designed CK Drawn BGK Checked CMV Approved DKB Date 9/3/24

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18215 72nd Avenue South
Kent, WA 98032
425.251.6222 **barghausen.com**

Job Number **16718**

Sheet **C5** of **C21**

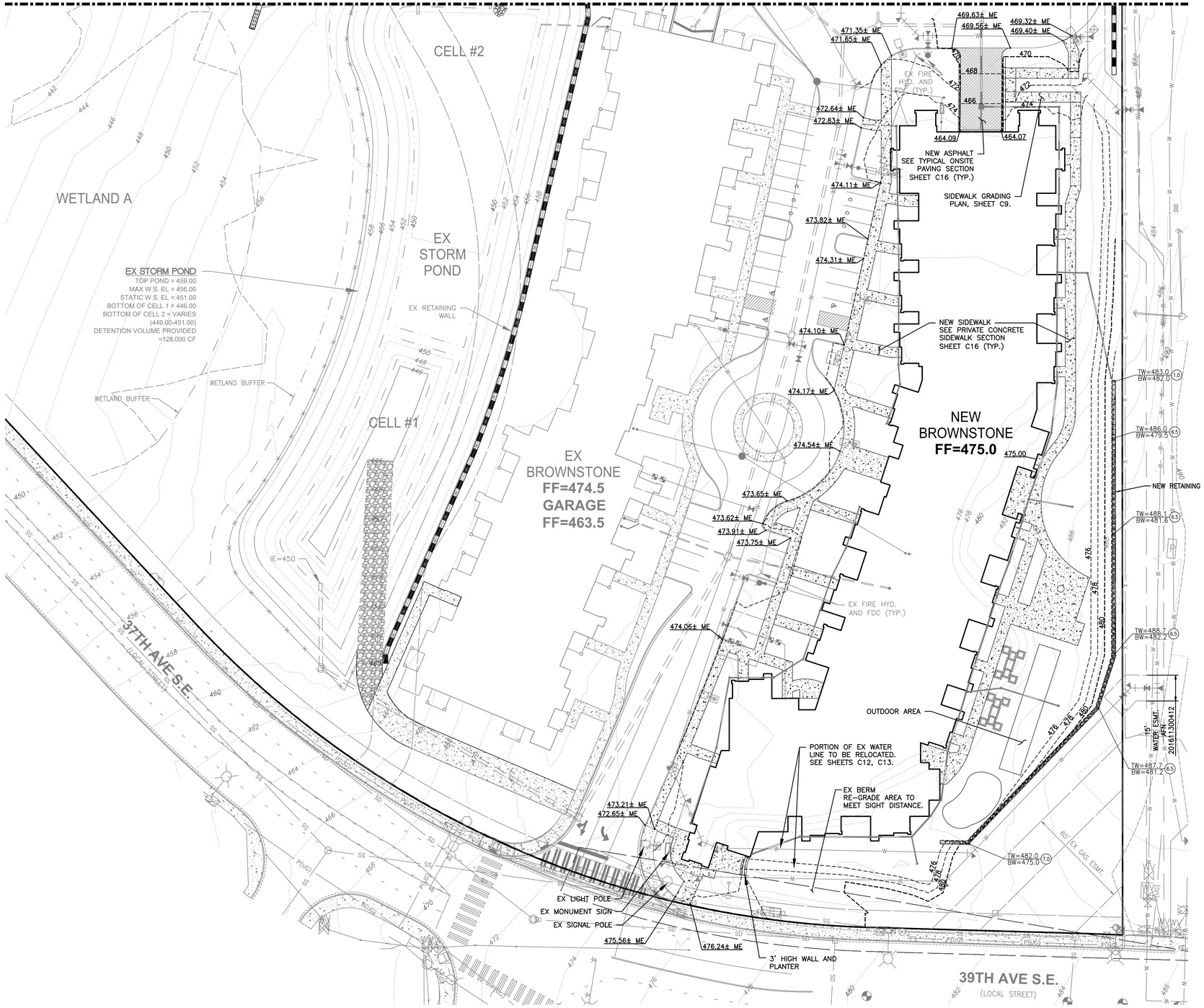
P:\16000s\16718\engineering\Phase 2\16718-g.dwg 9/3/2024 11:52 AM LPALMER

1"=30'

0 15 30 60

GRADING PLAN SOUTH
FOR
PHASE 2 - WESLEY BRADLEY PARK

MATCH LINE SEE SHEET C5

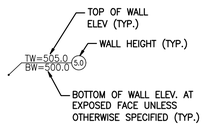


NOTES:

1. WALL DESIGN BY OTHERS.
2. MAINTAIN 5FT MIN SEPARATION BETWEEN RETAINING WALL COMPONENTS AND WATERMAIN

RETAINING WALL LEGEND:

1 PROPOSED LOCK + LOAD RETAINING WALL (TYP.) SEE BUILDING PERMIT #_____



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DATE 09/19/2024

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Development & Permitting Services
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Building	Planning
Engineering	Public Works
Fire	Traffic

No.	Date	By	Ckd.	Appr.	Revision

Title: GRADING PLAN SOUTH FOR CIVIL PLANS PHASE 2 - WESLEY BRADLEY PARK

For: WESLEY HOMES
815 SOUTH 216TH STREET
DES MOINES, WA 98190
(206) 870-1209

DANIEL K. BALMELLI — STATE OF WASHINGTON — 25672 — REGISTERED PROFESSIONAL ENGINEER
9/3/24

Scale: Horizontal 1" = 30' Vertical N/A

Designed CK | Drawn BGK | Checked CMV | Approved DKB | Date 9/3/24

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Sheet C6 of C21

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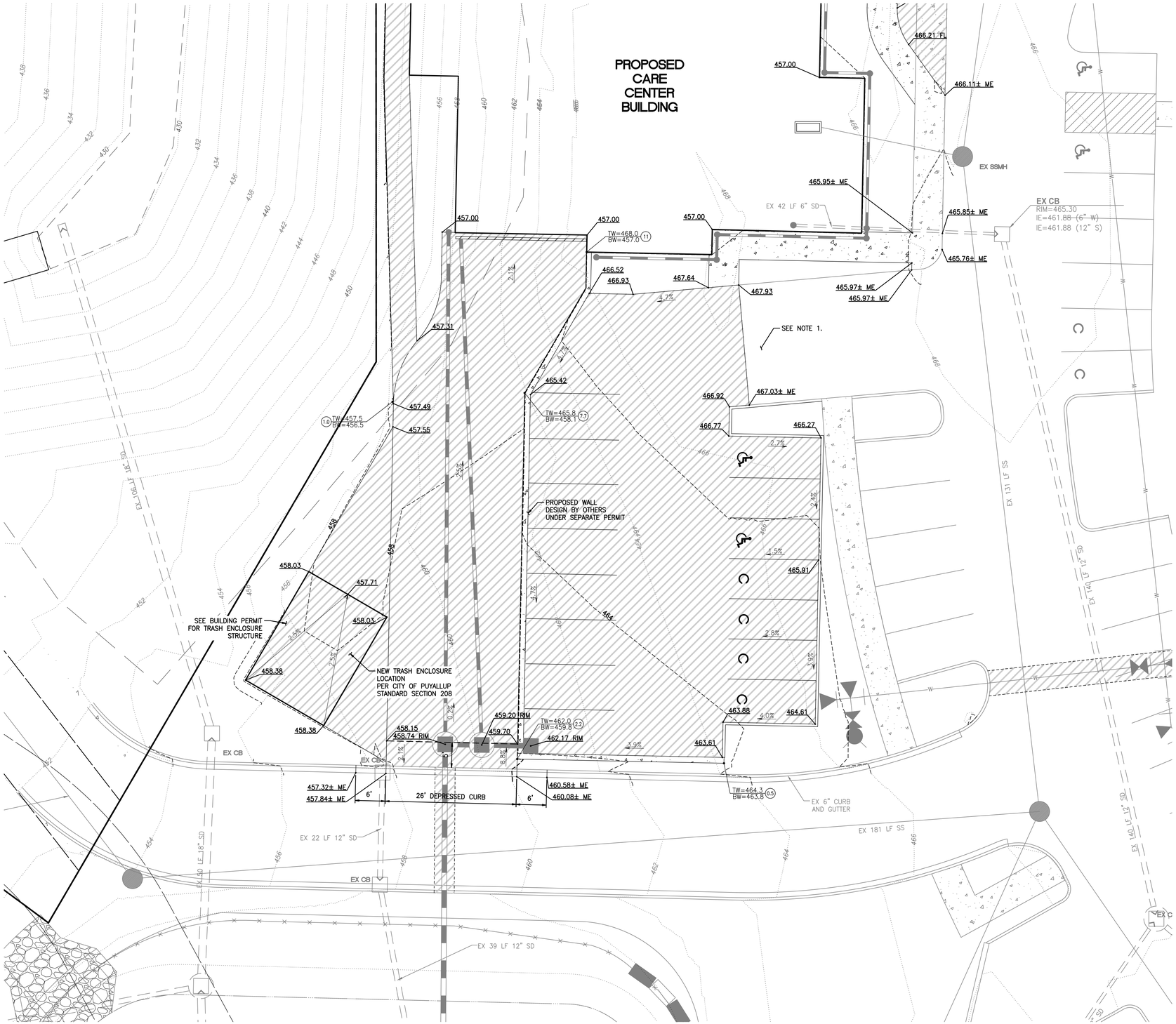
GRADING PLAN - CARE CENTER SOUTH PARKING LOT
FOR
PHASE 2 - WESLEY BRADLEY PARK

1"=10'

0 15 30 60



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CITY OF PUYALLUP
ENGINEERING SERVICES
DATE 09/19/2024

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City of Puyallup
Development & Permitting Services
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Building	Planning
Engineering	Public Works
Fire	Traffic

No.	Date	By	Ckd.	Appr.	Revision

Title: GRADING PLAN - CARE CENTER SOUTH PARKING LOT FOR CIVIL PLANS PHASE 2 - WESLEY BRADLEY PARK

For:
WESLEY HOMES
815 SOUTH 216TH STREET
DES MOINES, WA 98190
(206) 870-1209

DANIEL K. BALMELLI
STATE OF WASHINGTON
25672
REGISTERED PROFESSIONAL ENGINEER
9/3/24

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Sheet C7 of C21

P:\16000s\16718\engineering\Phase 2\16718-g2.dwg 7/8/2024 9:13 AM LPALMER

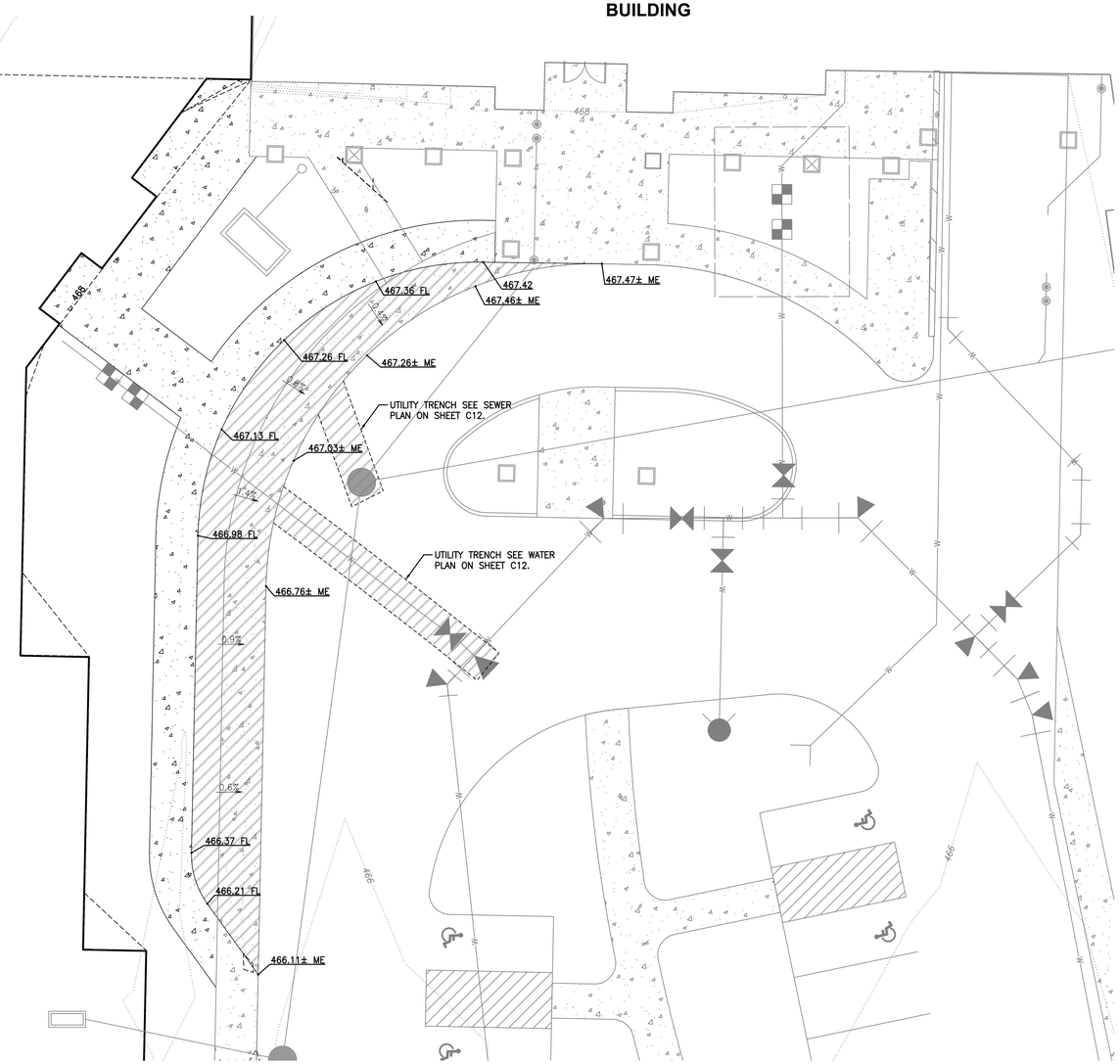
1"=10'

0 15 30 60

GRADING PLAN - CARE CENTER ENTRANCE PAVING
FOR
PHASE 2 - WESLEY BRADLEY PARK

EXISTING BUILDING

PROPOSED CARE CENTER BUILDING



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DATE 09/19/2024

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Building	Planning
Engineering	Public Works
Fire	Traffic

No.	Date	By	Ckd.	Appr.	Revision

Title: GRADING PLAN - CARE CENTER ENTRANCE PAVING FOR CIVIL PLANS PHASE 2 - WESLEY BRADLEY PARK

For: WESLEY HOMES
815 SOUTH 216TH STREET
DES MOINES, WA 98190
(206) 870-1209

DANIEL K. BALMELLI
STATE OF WASHINGTON
25672
REGISTERED PROFESSIONAL ENGINEER
9/3/24

Scale: Horizontal 1" = 10' Vertical N/A

Designed CK
Drawn BGK
Checked CMV
Approved DKB
Date 9/3/24

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Job Number 16718

Sheet C8 of C21

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1"=10'

0 15 30 60

GRADING PLAN - BROWNSTONE NORTHEAST SIDEWALK
FOR
PHASE 2 - WESLEY BRADLEY PARK

APPROVED
BY _____
CITY OF PUYALLUP
ENGINEERING SERVICES
DATE 09/19/2024

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City of Puyallup
Development & Permitting Services
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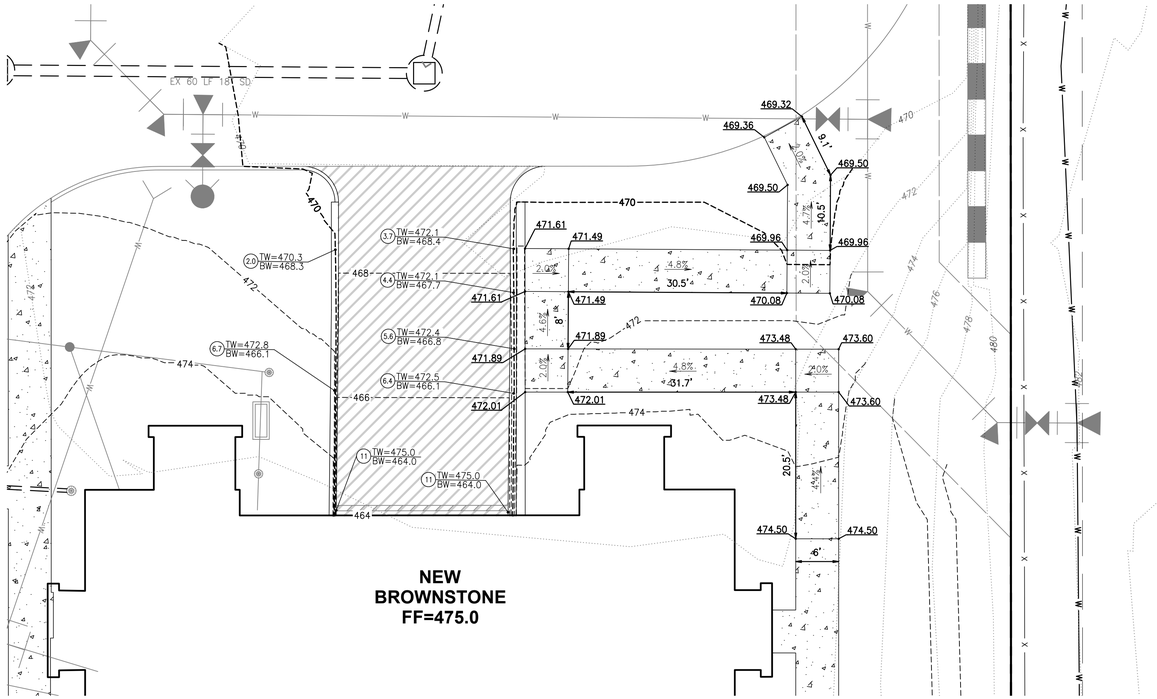
Building	Planning
Engineering	Public Works
Fire	Traffic



No.	Date	By	Ckd.	Appr.	Revision

Title: GRADING PLAN - BROWNSTONE NORTHEAST SIDEWALK FOR CIVIL PLANS PHASE 2 - WESLEY BRADLEY PARK

For:
WESLEY HOMES
815 SOUTH 216TH STREET
DES MOINES, WA 98190
(206) 870-1209

DANIEL K. BALMELLI
STATE OF WASHINGTON
25672
REGISTERED
PROFESSIONAL ENGINEER
9/3/24

Scale: Horizontal 1" = 10' Vertical N/A

Designed CK
Drawn BGK
Checked CMV
Approved DKB
Date 9/3/24

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Job Number 16718

Sheet C9 of C21

P:\16000s\16718\engineering\Phase 2\16718-g3.dwg 7/9/2024 9:12 AM LPALMER

DRAINAGE PLAN NORTH
FOR
PHASE 2 - WESLEY BRADLEY PARK

1"=30'

0 15 30 60

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

APPROVED
BY _____
CITY OF PUYALLUP
ENGINEERING SERVICES
DATE 09/19/2024

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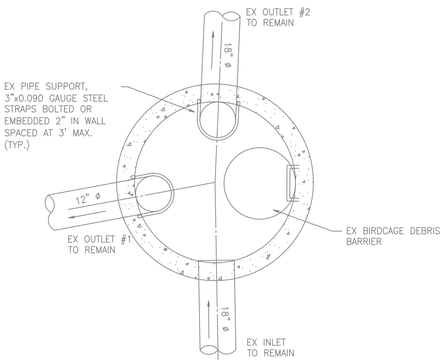
KEYNOTES:

1. NEW 6" PVC ROOF DRAIN COLLECTION SYSTEM @ 0.5% MIN. (TYP.)
2. NEW 8" PVC ROOF DRAIN COLLECTION SYSTEM @ 0.5% MIN. (TYP.)

NOTES:

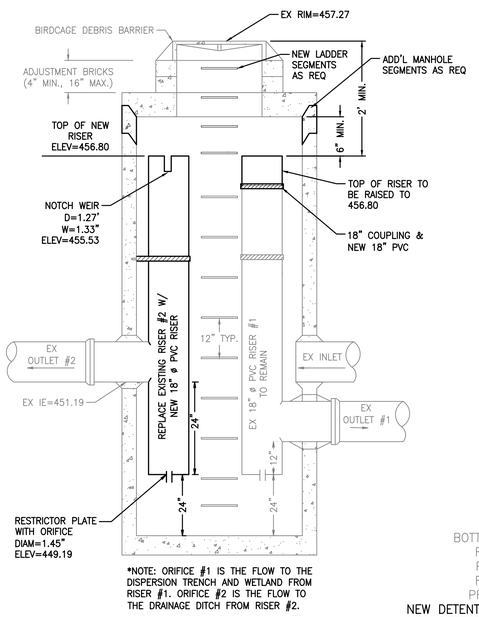
1. RELOCATE EX. UTILITY STUB TO NEW FACE OF BUILDING (CO#15). (CONNECT EX STORM DRAIN PIPE TO NEW ROOF DRAIN SYSTEM.)
2. All CATCH BASIN OFF-SETS ARE TO CENTER OF GRATE (NOT CENTER OF STRUCTURE)
3. PIPE MATERIAL SHALL CONFORM TO WSDOT STANDARD SPECIFICATION 9-05 AND CITY STANDARDS.

CATCH BASINS
CB #9, RIM=465.30 IE=461.88 (6" W) IE=461.88 (12" S)
CB#1, RIM=458.74 IE=451.66 (8" N) IE=451.33 (12" E) IE=451.33 (12" S)
CB#3, RIM=452.22 IE=449.22 (8" SE)
CB#5, RIM=462.17 IE=457.27 (12" W)
CO#7, RIM=454.63 IE=450.89 (8" NW)
CO#10, RIM=468.00 IE=465.00 (6" S)
CO#11, RIM=468.00 IE=464.60 (6" N) IE=464.60 (6" E)
CO#12, RIM=467.93 IE=464.50 (6" W) IE=464.50 (6" S)
CO#13, RIM=468.00 IE=464.08 (6" N) IE=464.08 (6" E)
CO#14, RIM=467.79 IE=463.99 (6" W) IE=463.99 (6" S)
CO#15, RIM=467.82 IE=462.41 (6" S) IE=462.41 (6" N)
CO#16, RIM=467.75 IE=462.43 (6" W) IE=462.43 (6" N)
CO#17, RIM=468.00 IE=464.71 (6" S) IE=464.71 (6" E)
CO#18, RIM=467.99 IE=464.76 (6" W) IE=464.76 (6" N)
CO#19, RIM=467.95 IE=465.00 (6" E)
CO#20, RIM=457.00 IE=452.17 (8" S)
STORMFILTER#1, RIM=459.20 IE=454.99 (12" E) IE=454.99 (8" N) IE=452.69 (12" W)



PLAN VIEW

NOT TO SCALE

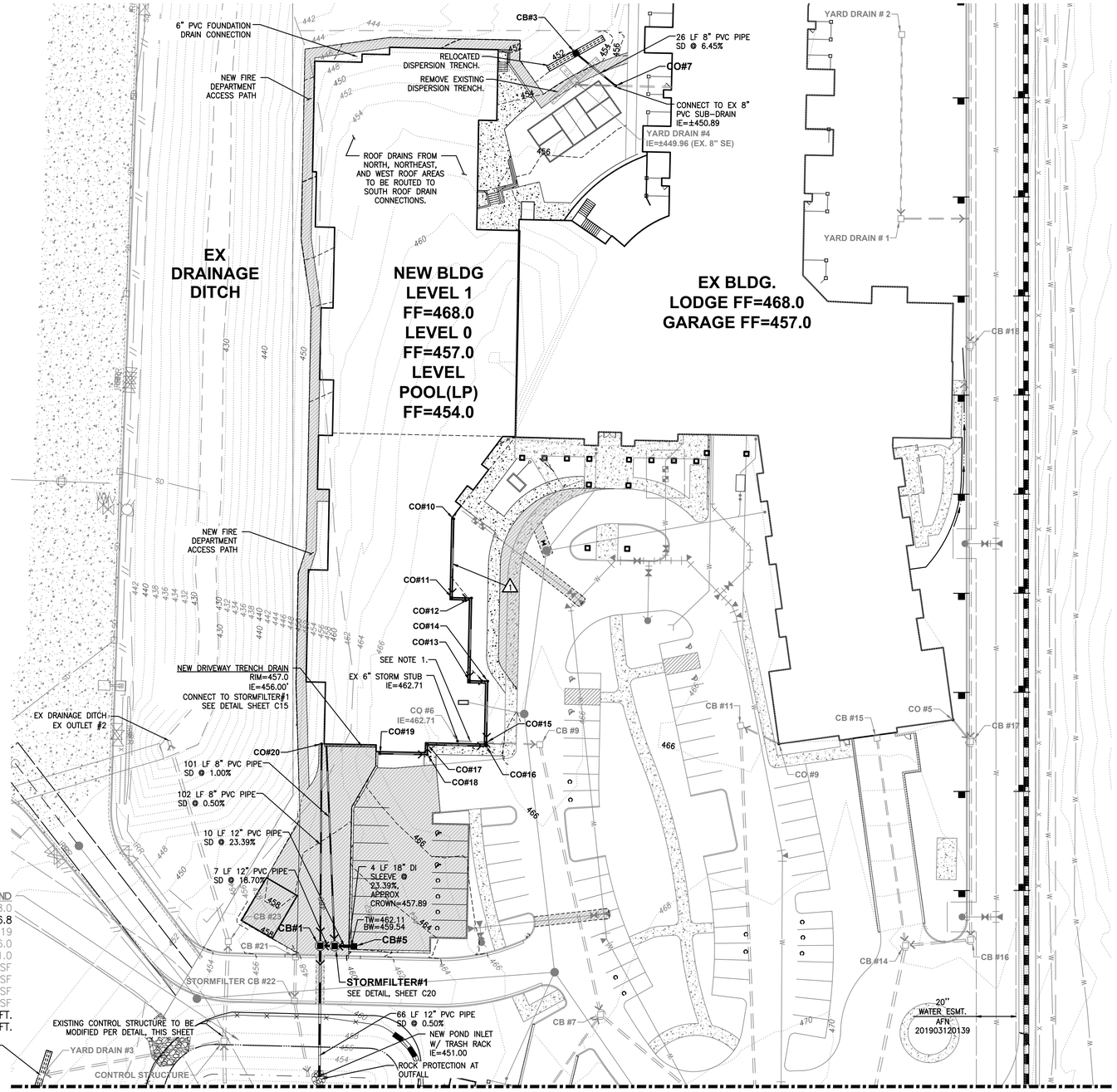


*NOTE: ORIFICE #1 IS THE FLOW TO THE DISPERSION TRENCH AND WETLAND FROM RISER #1. ORIFICE #2 IS THE FLOW TO THE DRAINAGE DITCH FROM RISER #2.

EX 72" FLOW CONTROL STRUCTURE

NOT TO SCALE

EX STORMWATER WETLAND/DETENTION POND
EX TOP POND = ±458.0
NEW MAX W.S. = 456.8
EX STATIC W.S. = 451.19
BOTTOM OF POND CELL 1 = 446.0
BOTTOM OF POND CELL 2 = VARIES 449.0-451.0
REQUIRED SURFACE AREA CELL 1 = 2,617 SF
PROVIDED SURFACE AREA CELL 1 = 7,013 SF
REQUIRED SURFACE AREA CELL 2 = 7,851 SF
PROVIDED SURFACE AREA CELL 2 = 11,526 SF
NEW DETENTION VOLUME REQUIRED = 139,697 ± CU. FT.
NEW DETENTION VOLUME PROVIDED = 152,482 ± CU. FT.



MATCH LINE SEE SHEET C11

No.	Date	By	Ckd.	Appr.	Revision

Title: DRAINAGE PLAN NORTH FOR CIVIL PLANS PHASE 2 - WESLEY BRADLEY PARK

For: WESLEY HOMES
815 SOUTH 216TH STREET
DES MOINES, WA 98190
(206) 870-1209

DANIEL K. BALMELLI — STATE OF WASHINGTON — 25672 — REGISTERED PROFESSIONAL ENGINEER
9/3/24

Scale: Horizontal 1" = 30' Vertical N/A
Designed CK Drawn BDK Checked CMV Approved DKB Date 9/3/24

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
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Job Number 16718
Sheet C10 of C21

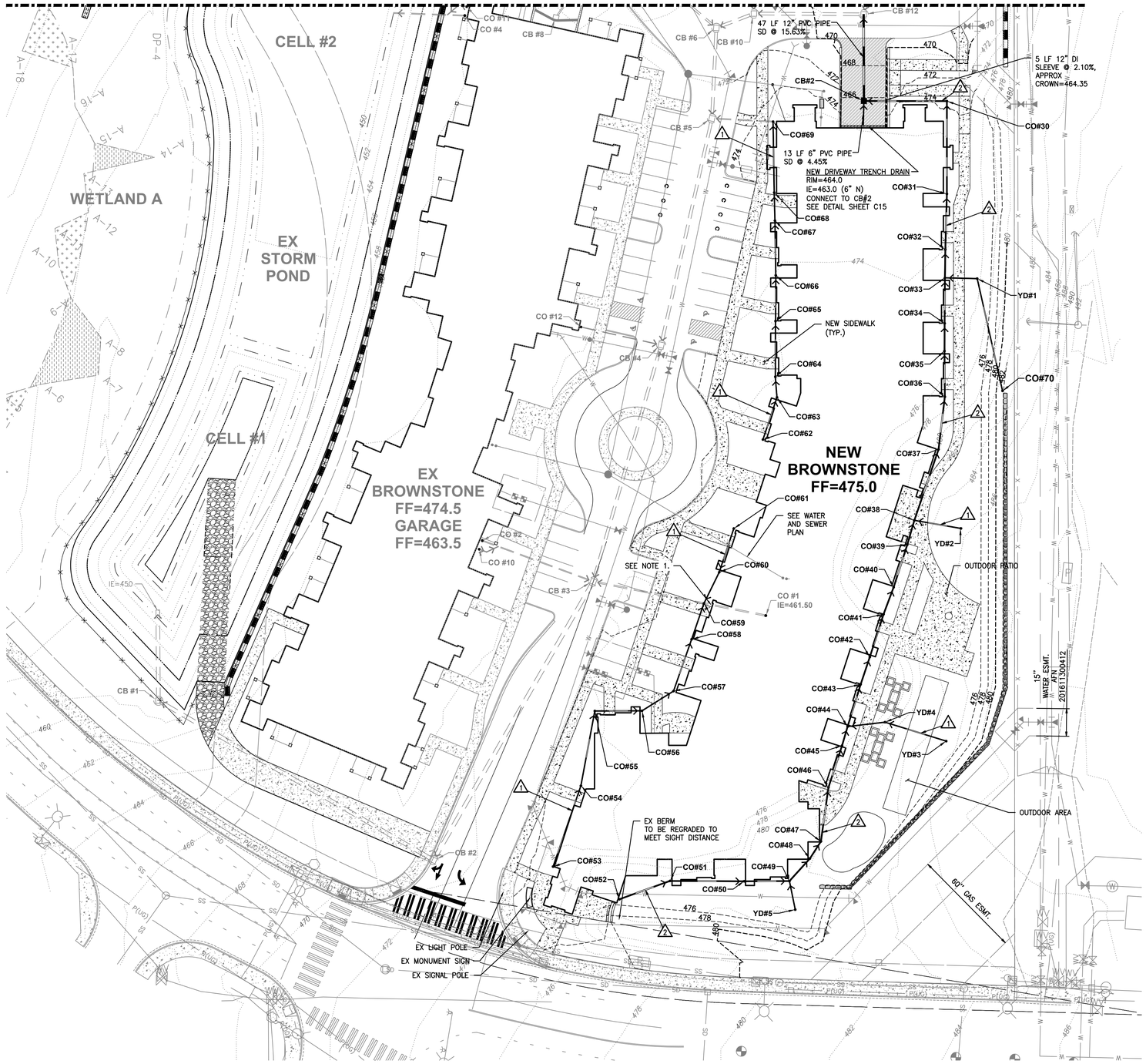
P:\16000s\16718\engineering\Phase 2\16718-m.dwg 8/15/2024 3:27 PM LPALMER

DRAINAGE PLAN SOUTH
FOR
PHASE 2 - WESLEY BRADLEY PARK

1"=30'

0 15 30 60

MATCH LINE SEE SHEET C10



KEYNOTES:

1. NEW 6" PVC ROOF DRAIN COLLECTION SYSTEM @ 0.5% MIN. (TYP.)
2. NEW 8" PVC ROOF DRAIN COLLECTION SYSTEM @ 0.5% MIN. (TYP.)

NOTES:

1. RELOCATE EX. UTILITY STUB TO NEW FACE OF BUILDING (CO#59). (CONNECT EX STORM DRAIN PIPE TO NEW ROOF DRAIN SYSTEM.)
2. All CATCH BASIN OFF-SETS ARE TO CENTER OF GRATE (NOT CENTER OF STRUCTURE)
3. PIPE MATERIAL SHALL CONFORM TO WSDOT STANDARD SPECIFICATION 9-05.
4. CONNECT NEW FOUNDATION DRAINS TO EXISTING STORM DRAIN SYSTEM.

City of Puyallup
Development & Permitting Services
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Building	Planning
Engineering	Public Works
Fire	Traffic

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CITY OF PUYALLUP
ENGINEERING SERVICES
DATE 09/19/2024

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THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE ENGINEERING SERVICES MANAGER.

CATCH BASINS
CB #12, RIM=469.30 IE=454.04 (15" N) IE=454.04 (18" W) IE=454.54 (12" S)
CB#2, RIM=465.78 IE=462.41 (6" S) IE=462.24 (8" E) IE=461.91 (12" N)
CO#30, RIM=473.55 IE=463.19 (8" S) IE=463.19 (8" W)
CO#31, RIM=475.00 IE=469.58 (8" S) IE=467.16 (8" N)
CO#32, RIM=475.00 IE=469.73 (8" S) IE=469.73 (8" N)
CO#33, RIM=475.00 IE=469.81 (8" S) IE=469.81 (8" E) IE=469.81 (8" N)
CO#34, RIM=475.00 IE=469.93 (8" S) IE=469.93 (8" N)
CO#35, RIM=475.00 IE=470.01 (8" S) IE=470.01 (8" N)
CO#36, RIM=475.00 IE=470.13 (8" S) IE=470.13 (8" N)
CO#37, RIM=475.00 IE=470.27 (8" S) IE=470.27 (8" N)
CO#38, RIM=475.00 IE=470.48 (8" S) IE=470.48 (8" E) IE=470.48 (8" N)
CO#39, RIM=475.00 IE=470.55 (8" S) IE=470.55 (8" N)
CO#40, RIM=475.00 IE=470.67 (8" S) IE=470.67 (8" N)
CO#41, RIM=475.00 IE=470.75 (8" S) IE=470.75 (8" N)
CO#42, RIM=475.00 IE=470.87 (8" S) IE=470.87 (8" N)
CO#43, RIM=475.00 IE=470.95 (8" S) IE=470.95 (8" N)
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YD#4, RIM=474.50 IE=471.23 (6" E) IE=471.23 (6" W)
YD#5, RIM=474.25 IE=471.61 (6" N)

No.	Date	By	Ckd.	Appr.	Revision

Title: **DRAINAGE PLAN SOUTH FOR CIVIL PLANS PHASE 2 - WESLEY BRADLEY PARK**

For: **WESLEY HOMES**
815 SOUTH 216TH STREET
DES MOINES, WA 98190
(206) 870-1209

DANIEL K. BALMELLI — STATE OF WASHINGTON — 25672 — REGISTERED PROFESSIONAL ENGINEER
9/3/24

Scale: Horizontal 1" = 30' Vertical N/A

Designed CK Drawn BGK Checked CMV Approved DKB Date 9/3/24

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
425.251.6222 **barghausen.com**

Job Number 16718

Sheet C11 of C21

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1"=30'

0 15 30 60

WATER AND SEWER PLAN NORTH
FOR
PHASE 2 - WESLEY BRADLEY PARK

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

FIRE HYDRANT/FDC LOCATION/ACCESS APPROVED

BY _____
CITY OF PUYALLUP
FIRE CODE OFFICIAL

DATE 09/19/2024

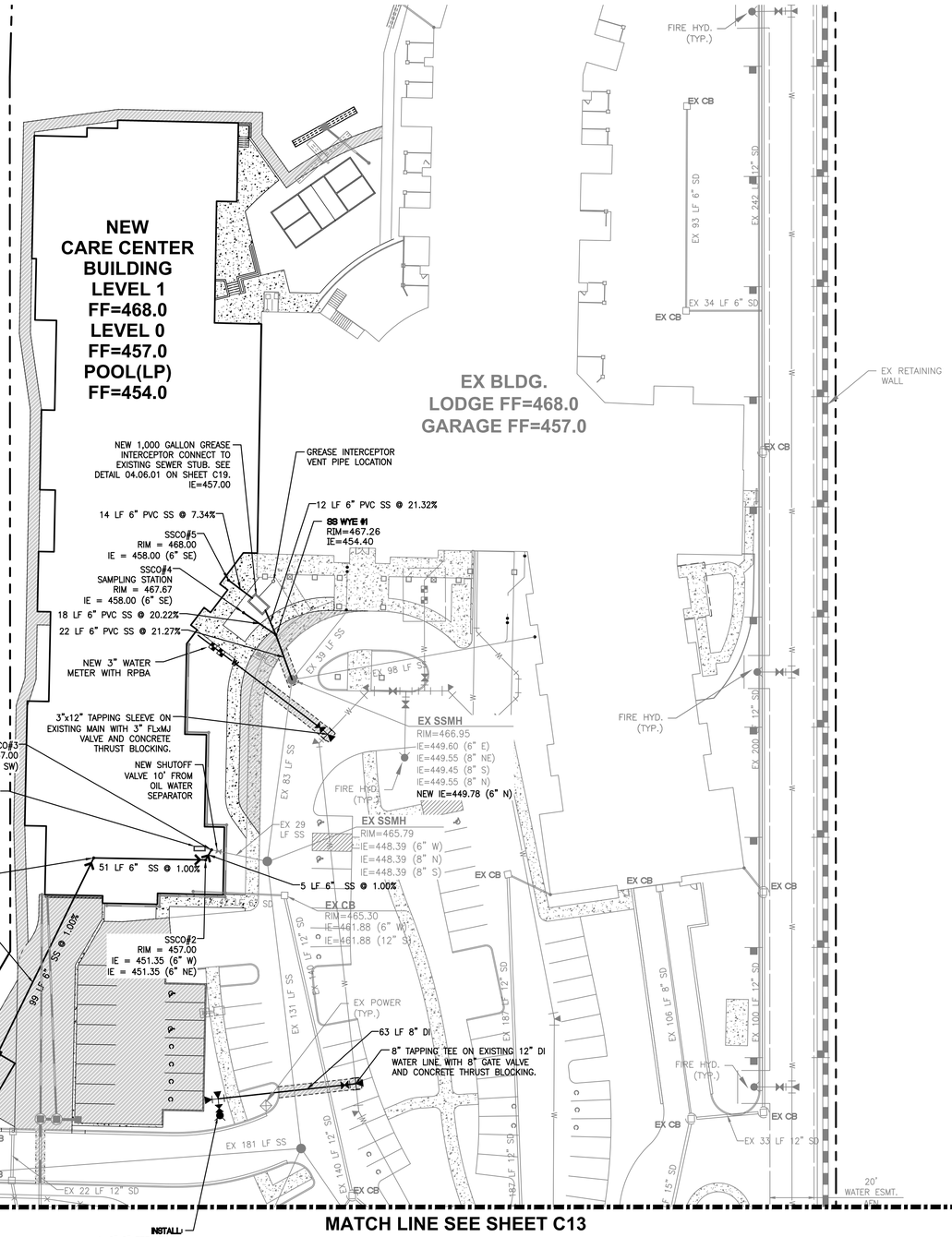
NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.
THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS.
FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE FIRE CODE OFFICIAL.

APPROVED

BY _____
CITY OF PUYALLUP
ENGINEERING SERVICES

DATE 09/19/2024

NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.
THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS.
FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE ENGINEERING SERVICES MANAGER.



MATCH LINE SEE SHEET C13

NOTES:

1. ALL 12" VALVES TO BE BUTTERFLY VALVES PER CITY STANDARDS.
2. NO TREES TO BE PLANTED WITHIN 5 FEET OF THE WATER MAIN.
3. ALL FDCs SHALL BE LOCATED WITHIN 15 FEET OF THE ADJACENT FIRE HYDRANT, BUT NOT LESS THAN 10 FEET.

UTILITY CONFLICT
NOTE: CAUTION:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT BY POTHOLING THE UTILITIES AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE @ 1-800-424-5555 AND THEN POTHOLING ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATIONS OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON THE UNVERIFIED PUBLIC INFORMATION AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL CONSULT BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

No.	Date	By	Ckd.	Appr.	Revision

Title: **WATER AND SEWER PLAN NORTH FOR CIVIL PLANS PHASE 2 - WESLEY BRADLEY PARK**

For: **WESLEY HOMES**
815 SOUTH 216TH STREET
DES MOINES, WA 98190
(206) 870-1209

DANIEL K. BALMELLI — STATE OF WASHINGTON — 25672 — REGISTERED PROFESSIONAL ENGINEER
9/3/24

Scale: Horizontal 1" = 30' Vertical N/A

Designed CK Drawn BGK Checked CMV Approved DKB Date 9/3/24

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
425.251.6222
barghausen.com

Job Number 16718

Sheet C12 of C21

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WATER AND SEWER PLAN SOUTH
FOR
PHASE 2 - WESLEY BRADLEY PARK

1"=30'

0 15 30 60

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

FIRE HYDRANT/FDC LOCATION/ACCESS APPROVED

BY _____
CITY OF PUYALLUP
FIRE CODE OFFICIAL

DATE 09/19/2024

NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.
THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS.
FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE FIRE CODE OFFICIAL.

APPROVED

BY _____
CITY OF PUYALLUP
ENGINEERING SERVICES

DATE 09/19/2024

NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.
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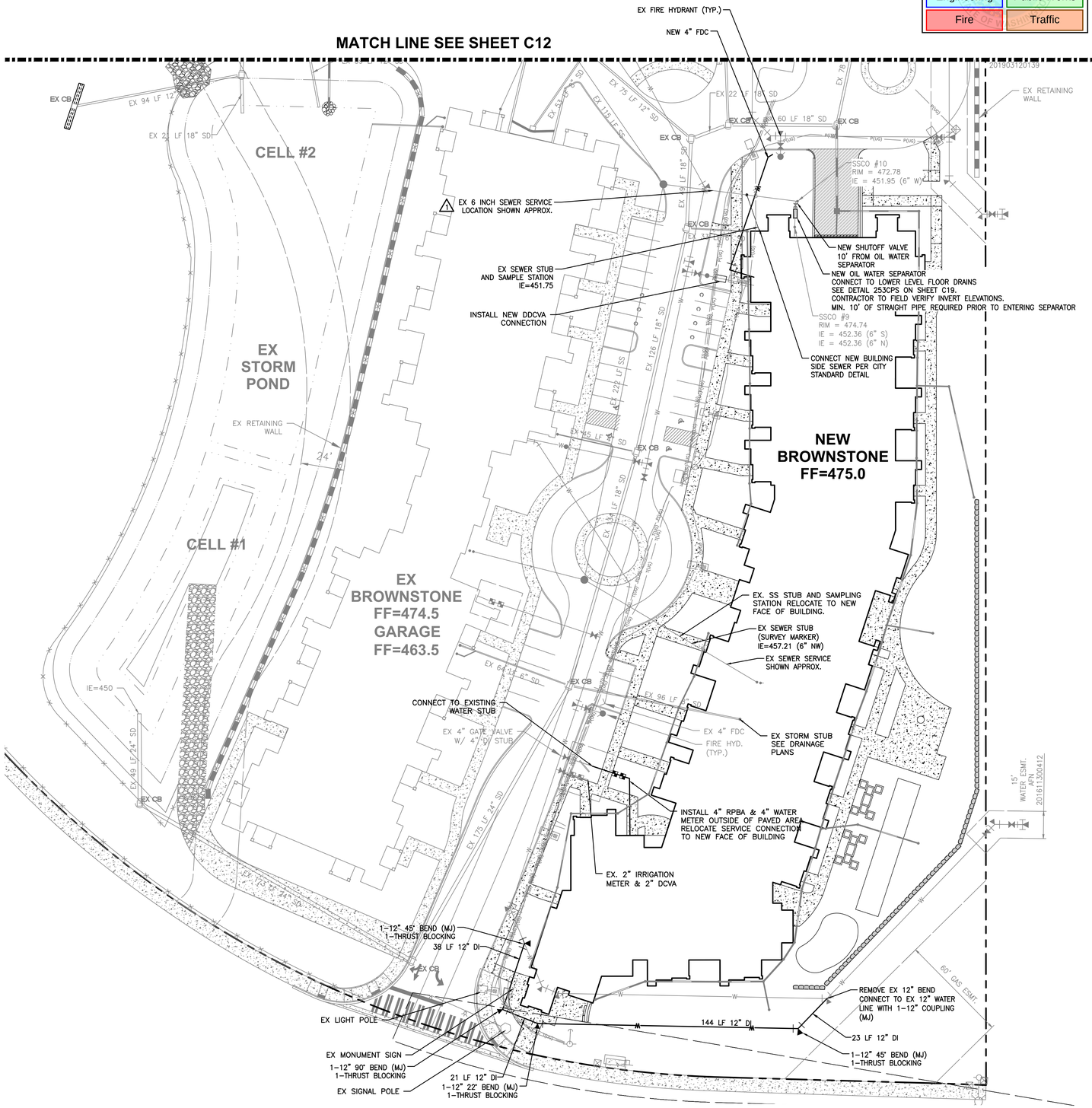
FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE ENGINEERING SERVICES MANAGER.



SPECIAL NOTES:

⚠1 CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF EXISTING SEWER SERVICE. CONTRACTOR SHALL VERIFY A SERVICE CONNECTION CAN BE MADE TO THE PROPOSED GREASE INTERCEPTOR. NOTIFY ENGINEER IF CONFLICT EXISTS.

NOTES:

1. ALL 12" VALVES TO BE BUTTERFLY VALVES PER CITY STANDARDS.
2. NO TREES TO BE PLANTED WITHIN 5 FEET OF THE WATER MAIN.
3. MAINTAIN 5FT MIN SEPARATION BETWEEN RETAINING WALL COMPONENTS AND WATERMAIN

UTILITY CONFLICT

NOTE: CAUTION:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT BY POTHOLING THE UTILITIES AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE @ 1-800-424-5555 AND THEN POTHOLING ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATIONS OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON THE UNVERIFIED PUBLIC INFORMATION AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL CONSULT BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

No.	Date	By	Ckd.	Appr.	Revision

Title: WATER AND SEWER PLAN SOUTH FOR CIVIL PLANS PHASE 2 - WESLEY BRADLEY PARK

For: WESLEY HOMES
815 SOUTH 216TH STREET
DES MOINES, WA 98190
(206) 870-1209

DANIEL K. BALMELLI
STATE OF WASHINGTON
25672
REGISTERED
PROFESSIONAL ENGINEER
9/3/24

Scale: Horizontal 1" = 30' Vertical N/A

Designed CK
Drawn BGK
Checked CMV
Approved DKB
Date 9/3/24

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
425.251.6222 barghausen.com

Job Number 16718

Sheet C13 of C21

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CONSTRUCTION NOTES

GENERAL NOTES:

1. All work in City right-of-way requires a permit from the City of Puyallup. Prior to any work commencing, the general contractor shall arrange for a preconstruction meeting at the Development Services Center to be attended by all contractors that will perform work shown on the approved engineering plans, representatives from all applicable utility companies, the project owner and appropriate city staff. Contact Engineering Services at (253-841-5568) to schedule the meeting. The contractor is responsible to have their own set of approved plans at the meeting.

2. After completion of all items shown on these plans and before acceptance of the project the contractor shall obtain a "punch list" prepared by the City's inspector detailing remaining items of work to be completed. All items of work shown on these plans shall be completed to the satisfaction of the City prior to acceptance of the water system and provision of sanitary sewer service.

3. All materials and workmanship shall conform to the Standard Specifications for Road, Bridge, and Municipal Construction (hereinafter referred to as the "Standard Specifications"), Washington State Department of Transportation and American Public Works Association, Washington State Chapter, latest edition, unless superseded or amended by the City of Puyallup City Standards for Public Works Engineering and Construction (hereinafter referred to as the "City Standards").

4. A copy of these approved plans and applicable city developer specifications and details shall be on site during construction.

5. Any revisions made to these plans must be reviewed and approved by the developer's engineer and the City prior to any implementation in the field. The City shall not be responsible for any errors and/or omissions on these plans.

6. The contractor shall have all utilities verified on the ground prior to any construction. Call (811) at least two working days in advance. The owner and his/her engineer shall be contacted immediately if a conflict exists.

7. Any structure and/or obstruction that requires removal or relocation relating to this project shall be done so at the developer's expense.

8. Locations of existing utilities are approximate. It shall be the contractor's responsibility to determine the true elevations and locations of hidden utilities. All visible items shall be the engineer's responsibility.

9. The contractor shall install, replace, or relocate all signs, as shown on the plans or as affected by construction, per City Standards.

10. Power, street light, cable, and telephone lines shall be in a trench located within a 10-foot utility easement adjacent to public right-of-way. Right-of-way crossings shall have a minimum horizontal separation from other utilities (sewer, water, and storm) of 5 feet.

11. All construction surveying for extensions of public facilities shall be done under the direction of a Washington State licensed land surveyor or a Washington State licensed professional civil engineer.

12. During construction, all public streets adjacent to this project shall be kept clean of all material deposits resulting from on-site construction, and existing structures shall be protected as directed by the City.

13. Certified record drawings are required prior to project acceptance.

14. A NPDES Stormwater General Permit may be required by the Department of Ecology for this project. For information contact the Department of Ecology, Southwest Region Office at (360)407-6300.

15. Any disturbance or damage to Critical Areas and associated buffers, or significant trees designated for preservation and protection shall be mitigated in accordance with a Mitigation Plan reviewed and approved by the City's Planning Division. Preparation and implementation of the Mitigation Plan shall be at the developer's expense.

Stormwater Plan Notes

The following applicable notes shall be shown on the plans.

STORMWATER NOTES:

1. All work in City right-of-way requires a permit from the City of Puyallup. Prior to any work commencing, the general contractor shall arrange for a preconstruction meeting at the Development Services Center to be attended by all contractors that will perform work shown on the engineering plans, representatives from all applicable Utility Companies, the project owner and appropriate City staff. Contact Engineering Services to schedule the meeting (253) 841-5568. The contractor is responsible to have their own approved set of plans at the meeting.

2. After completion of all items shown on these plans and before acceptance of the project, the contractor shall obtain a "punch list" prepared by the City's inspector detailing remaining items of work to be completed. All items of work shown on these plans shall be completed to the satisfaction of the City prior to acceptance of the water system and provision of sanitary sewer service.

3. All materials and workmanship shall conform to the Standard Specifications for Road, Bridge, and Municipal Construction (hereinafter referred to as the "Standard Specifications"), Washington State Department of Transportation and American Public Works Association, Washington State Chapter, latest edition, unless superseded or amended by the City of Puyallup City Standards for Public Works Engineering and Construction (hereinafter referred to as the "City Standards").

4. A copy of these approved plans and applicable city developer specifications and details shall be on site during construction.

5. Any revisions made to these plans must be reviewed and approved by the developer's engineer and the Engineering Services Staff prior to any implementation in the field. The City shall not be responsible for any errors and/or omissions on these plans.

6. The contractor shall have all utilities verified on the ground prior to any construction. Call (811) at least two working days in advance. The owner and his/her engineer shall be contacted immediately if a conflict exists.

7. Any structure and/or obstruction which requires removal or relocation relating to this project shall, be done so at the developer's expense.

8. During construction, all existing and newly installed drainage structures shall be protected from sediments.

9. All storm manholes shall conform to City Standard Detail No. 02.01.01. Flow control manhole/oil water separator shall conform to City Standard Detail No. 02.01.06 and 02.01.07.

10. Manhole ring and cover shall conform to City Standard Detail 06.01.02.

11. Catch basins Type I shall conform to City Standard Detail No.02.01.02 and 02.01.03 and shall be used only for depths less than 5 feet from top of the grate to the invert of the storm pipe.

12. Catch basins Type II shall conform to City Standard Detail No.02.01.04 and shall be used for depths greater than 5 feet from top of the grate to the invert of the storm pipe.

13. Cast iron or ductile iron frame and grate shall conform to City Standard Detail No.02.01.05. Grate shall be marked with "drains to stream". Solid catch basin lids (square unless noted as round) shall conform to WSDOT Standard Plan B-30.20-04 (Olympic Foundry No. SM60 or equal). Vaned grates shall conform to WSDOT Standard Plan B-30.30-03 (Olympic Foundry No. SM60V or equal).

14. Stormwater pipe shall be only PVC, concrete, ductile iron, or dual walled Polypropylene pipe.

    a. The use of any other type shall be reviewed and approved by the Engineering Services Staff prior to installation.

    b. PVC pipe shall be per ASTM D3034, SDR 35 for pipe size 15-inch and smaller and F679 for pipe sizes 18 to 27 inch. Minimum cover on PVC pipe shall be 3.0 feet.

    c. Concrete pipe shall conform to the WSDOT Standard Specifications for concrete underdrain pipe. Minimum cover on concrete pipe shall not less than 3.0 feet.

    d. Ductile iron pipe shall be Class 50, conforming to AWWA C151. Minimum cover on ductile iron pipe shall be 1.0 foot.

    e. Polypropylene Pipe (PP) shall be dual walled, have a smooth interior and exterior corrugations and meet WSDOT 9-05.24(1). 12-inch through 30-inch pipe shall meet or exceed ASTM F2736 and AASHTO M330, Type S, or Type D. 36-inch through 60-inch pipe shall meet or exceed ASTM F2881 and AASHTO M330, Type S, or Type D. Testing shall be per ASTM F1417. Minimum cover over Polypropylene pipe shall be 3-feet.

15. Trenching, bedding, and backfill for pipe shall conform to City Standard Detail No. 06.01.01.

16. Storm pipe shall be a minimum of 10 feet away from building foundations and/or roof lines.

17. All storm drain mains shall be tested and inspected for acceptance as outlined in Section 406 of the City of Puyallup Sanitary Sewer System Standards.

18. All temporary sedimentation and erosion control measures, and protective measures for critical areas and significant trees shall be installed prior to initiating any construction activities.

WATER SYSTEM NOTES:

1. All work in City right-of-way requires a permit from the City of Puyallup. Prior to any work commencing, the general contractor shall arrange for a preconstruction meeting at the Development Services Center to be attended by all contractors that will perform work shown on the engineering plans, representatives from all applicable Utility Companies, the project owner and appropriate City staff. Contact Engineering Services to schedule the meeting (253) 841-5568. The contractor is responsible to have their own approved set of plans at the meeting.

2. After completion of all items shown on these plans and before acceptance of the project, the contractor shall obtain a "punch list" prepared by the City's inspector detailing remaining items of work to be completed. All items of work shown on these plans shall be completed to the satisfaction of the City prior to acceptance of the water system and provision of sanitary sewer service.

3. All materials and workmanship shall conform to the Standard Specifications for Road, Bridge, and Municipal Construction (hereinafter referred to as the "Standard Specifications"), Washington State Department of Transportation and American Public Works Association, Washington State Chapter, latest edition, unless superseded or amended by the City of Puyallup City Standards for Public Works Engineering and Construction (hereinafter referred to as the "City Standards"), or as directed by Fruitland Mutual Water Company (FMWC), Valley Water (VW), or Tacoma City Water (TCW) is the purveyor.

4. A copy of these approved plans and applicable city developer specifications and details shall be on site during construction.

5. Any revisions made to these plans must be reviewed and approved by the developer's engineer, the Engineering Services Staff, and the FMWC, VW or TCW when served by that purveyor, prior to any implementation in the field. The City shall not be responsible for any errors and/or omissions on these plans.

6. The contractor shall have all utilities verified on the ground prior to any construction. Call (811) at least two working days in advance. The owner and his/her engineer shall be contacted immediately if a conflict exists.

7. Any structure and/or obstruction which requires removal or relocation relating to this project shall be done so at the developer's expense.

8. Bacteriological (Coliform and Iron Bacteria) test samples will be taken by the City (or FMWC, VW or TCW when served by that purveyor) and paid for by the contractor, except for Capital Improvement Projects (CIP) which shall be paid for by the City.

9. Water mains shall have a minimum cover of 36 inches from paved final grade in improved right-of-way and improved easements, and a minimum of 48 inches in unimproved right-of-way and unimproved easements.

10. Pipe for water mains shall be ductile iron conforming to Section 7-09 of the Standard Specifications, Class 52 with tyton or approved equal joints. Pipe shall be cement lined in accordance with A.S.A. Specification A 21.4-1964.

11. Connections to existing water mains typically shall be wet taps through a tapping tee and tapping valve and shall be made by a city approved contractor. The tapping sleeve shall be Romac SST all stainless steel tapping sleeve or approved equal. A two-piece epoxy coated or ductile iron tapping sleeve may be used on ductile iron pipe, when the tap is smaller than the water main size i.e. 6-inch tap on 8-inch pipe. The City (or FMWC, VW or TCW when served by that purveyor) shall approve the time and location for these connections.

12. All water mains and appurtenances shall be hydrostatically tested at 200 psi in accordance with Standard Specification 7-09.3(23). Pressure testing shall not be performed until satisfactory purity samples have been received, except when new water mains are installed independently from the water system piping.

13. Fire hydrants shall be installed in accordance with City Standard Detail 03.05.01 and as directed by the City of Puyallup Fire Code Official.

14. Valve marker posts shall be installed where valve boxes are hidden from view or in unpaved areas. The installation shall be in accordance with City Standard Detail 03.01.02.

15. Resilient seated wedge gate valves shall be used for 10-inch mains and smaller. Butterfly valves shall be used for mains greater than 10 inches.

16. Pipe fitting for water mains shall be ductile iron and shall be mechanical joint conforming to AWWA Specification C111-72.

17. Water main pipe and service connections shall be a minimum of 10 feet away from building foundations and/or roof lines.

18. Where a water main crosses the Northwest Gas pipeline, the water line shall be cased with PVC pipe a minimum of 10 feet beyond each side of the gas line easement. Contact Williams Northwest Pipeline before the crossing is made.

19. Trenching, bedding, and backfill for water mains shall be installed in accordance with City Standard Detail 06.01.01.

20. All commercial and industrial developments, irrigation systems, and multi-family water service connections shall be protected by a double check valve assembly or a reduced pressure backflow assembly as directed by the City (or FMWC, VW or TCW when served by that purveyor) conforming to City Standard Details 03.04.01, 03.04.02, and 03.04.03.

21. Any lead joint fitting disturbed during construction shall be replaced with a mechanical joint fitting at the contractor's expense.

22. Hydraulic fire flow modeling shall be required for formal plats within or to be annexed into the City of Puyallup's water service area. The developer shall be responsible to apply for a hydraulic model permit prior to plat review. The hydraulic modeling criteria is based on the projected water demand while maintaining a minimum system pressure of 20 pounds per square inch (PSI) and a maximum velocity of 10 feet per second.

23. When using a fire hydrant for non-firefighting purposes, a city hydrant meter must be used. Coordinate the acquisition of the hydrant meter with the City's Utility Billing Division at Puyallup City Hall. A city approved backflow protection assembly shall be installed by the person requesting use of a fire hydrant. The assembly shall be accompanied by a current backflow assembly test report. The test report shall be available at the site for the duration of the hydrant use.

24. Should a break occur on any City water main, the Contractor shall follow the City's adopted "Water Main Break Procedure" issued to them at the Pre-Construction Meeting and notify those connected to the system in the impacted area as outlined in the Procedure.

25. Water Main Repairs (References: AWWA C651-14 and WSDOT Standard Specification Section 7-09)

    (Note: A planned water main repair shall be approved by the City Inspector and/or Water Division Supervisor prior to commencing work.)

    a. Repair without depressurization – Small leaks shall be repaired using repair bands while maintaining positive pressure in the water main. Valves surrounding the leak will be partially shut by the City Water Department to reduce the flow and pressure to the area. Blowoffs and hydrants in the reduced pressure area may be opened as needed to further reduce the pressure. The water main trench shall be over-excavated to allow water in the trench to be pumped out and maintained below the level of the water main. The repair shall be completed with the water main pressure remaining positive. After the repair is made, the system shall be fully pressurized and a visual leak inspection will be completed. The water main in the affected area shall be flushed to achieve three pipe volumes pulled from the pipe (distance measured from valve opened for flushing to the exit hydrant or blowoff).

    b. Repair/cut-in with depressurization – Trench shall be over excavated and dewatered below the water main. Flush water from pipe from each direction until it runs clear. Immediately prior to installation of a new pipe section for repair or cut in tee, all new fittings and pipe spools shall be swabbed with a five percent (5%) chlorine solution (minimum). The interior of the existing pipe shall be swabbed with a five percent (5%) chlorine solution at least 6 feet in each direction from exposed cut ends. The water main in the affected area shall be flushed to achieve three pipe volumes pulled from the pipe (distance measured from the valve opened for flushing to the exit hydrant or blowoff). Customers shall be notified after the water main is flushed and repairs have been completed, as outlined in the "Water Main Break Procedure."

26. New Water Main Installation:

    a. Each new water main section shall be delivered, stacked and stored onsite with ends plugged. The plugs shall remain in the pipe until each particular section is installed. National Sanitation Foundation (NSF) approved sixty-five percent (65%) calcium hypochlorite shall be added to the upstream end of each pipe section, and at each hydrant tee in the amount given in the table below (or per approved manufacturer specifications). The minimum amount of calcium hypochlorite added should be sufficient to achieve a 50 mg/L concentration within the impacted area.

65% Calcium Hypochlorite Addition per Pipe Section

Pipe Diameter (Inches)	Pipe Volume per 18 feet (gal)	5-gram tablets per pipe section	Hypochlorite Granules		Maximum Fill Rate (gpm)
			Ounces per 500 feet	Teaspoons per 18 feet	
4	35	1	1.7	0.2	40
6	53	1	3.8	0.4	90
8	70	2	6.7	0.7	150
12	106	4	15.1	1.4	350
16	141	6	27	2.5	600

    b. New water mains shall be filled using an approved backflow prevention assembly. The water main shall be filled from the lower elevation end so that as the water main is filled, the chorine is contacted, dissolved and spread relatively uniform through the length of the new water main. The fill rate shall be minimized so that the velocity of the water is less than 1 ft/sec (see table above). Successful pressure test and bacteriological tests shall be completed and provided to the City prior to any new water main connection to the existing water system.

    c. The chlorinated water will be allowed to remain in contact with the new water main system for 24 to 72 hours. After 24 hours, water may be added to the water main for the purposes of pressure testing. The water in the main used for pressure testing must remain in the water main until pressure test is completed. If necessary, liquid chlorine shall be injected into the water main with fill water to maintain a concentration in the water main above 50 mg/L. Under no circumstance shall "super" chlorinated water be allowed to sit within a new water main for more than 5 days.

    d. Pressure testing includes testing against new valves and hydrants. Each valve shall be tested by closing each in turn and reducing the pressure beyond the valve. The pressure on the back side of the valve should not be eliminated. Care must be taken that, during this process, positive pressure remains throughout the system being tested at all times. All hydrant foot valves shall be open during pressure testing so that the pressure test is against the hydrant valve. Pressure testing will not be allowed against any existing valves.

    e. After successful pressure testing, the water main shall be thoroughly flushed to remove all "super" chlorinated water from the new water main. Flushing of new or extended water mains shall be conducted per WSDOT Specification 7-09.3(24)A with a minimum velocity developed within the pipe while flushing of 2.5 feet per second (fps). All flushed water shall be dechlorinated prior to disposal. The Contractor shall be responsible for disposal of all chlorinated water flushed from mains. **The City shall approve the disposal method prior to implementation in the field**. The Contractor shall utilize on-site disposal methods, if available. Disposal of flush water to the sanitary sewer system shall not be allowed without written permission from the Water Pollution Control Plant (WPCP) Supervisor. Any planned discharge to a stormwater system shall be dechlorinated to a concentration of 0.1 ppm or less, pH adjusted (if necessary) to be between 6.5 and 8.5, and volumetrically and velocity controlled to prevent any resuspension of sediments. The City will require independent testing throughout the water discharge process to ensure compliance of these standards are met.

    f. Samples for bacteriological analysis shall be collected after flushing and again 24 hours after the first set of samples.

    g. All closure/final connection fittings shall be sprayed clean and then swabbed with a five percent (5%) chlorine solution immediately prior to installation per AWWA Standard C651. Additional samples for bacteriological analysis shall be collected from the immediate vicinity of the new or replaced water main and analyzed after the final connections are made. If necessary, additional flushing shall be conducted and additional samples shall be collected until satisfactory results are obtained.

SANITARY SEWER NOTES:

1. All work in City right-of-way requires a permit from the City of Puyallup. Prior to any work commencing, the general contractor shall arrange for a preconstruction meeting at the Development Services Center to be attended by all contractors that will perform work shown on the engineering plans, representatives from all applicable Utility Companies, the project owner and appropriate City staff. Contact Engineering Services to schedule the meeting (253) 841-5568. The contractor is responsible to have their own approved set of plans at the meeting.

2. After completion of all items shown on these plans and before acceptance of the project, the contractor shall obtain a "punch list" prepared by the City's inspector detailing remaining items of work to be completed. All items of work shown on these plans shall be completed to the satisfaction of the City prior to acceptance of the sewer system and provision of sanitary sewer service.

3. All materials and workmanship shall conform to the Standard Specifications for Road, Bridge, and Municipal Construction (hereinafter referred to as the "Standard Specifications"), Washington State Department of Transportation and American Public Works Association, Washington State Chapter, latest edition, unless superseded or amended by the City of Puyallup City Standards for Public Works Engineering and Construction (hereinafter referred to as the "City Standards").

4. A copy of these approved plans and applicable city developer specifications and details shall be on site during construction.

5. Any revisions made to these plans must be reviewed and approved by the developer's engineer and the Engineering Services Staff prior to any implementation in the field. The City shall not be responsible for any errors and/or omissions on these plans.

6. The contractor shall have all utilities verified on the ground prior to any construction. Call (811) at least two working days in advance. The owner and his/her engineer shall be contacted immediately if a conflict exists.

7. Any structure and/or obstruction which require removal or relocation relating to this project shall be done so at the developer's expense.

8. Minimum grade on all 4 inch residential side sewers shall be 2 percent and 6 inch commercial side sewers shall be 1 percent; maximum shall be 8 percent. All side sewers shall be 6 inches within City right-of-way.

9. Side sewers shall be installed in accordance with City Standard Nos. 04.03.01, 04.03.02, 04.03.03 and 04.03.04. Side sewer installation work shall be done in accordance with the Washington Industrial Safety and Health Act (WISHA).

10. All sewer pipe shall be PVC, Polypropylene, or Ductile Iron. PVC sewer pipe shall conform to ASTM D-3034, SDR35 for pipe sizes 15-inch and smaller and ASTM F679 for pipe sizes 18- to 27-inch, ductile iron pipe shall be Class 51 or greater, lined with Protecto 401TM epoxy lining or equivalent, unless otherwise noted. 12-inch through 30-inch Polypropylene Pipe (PP) shall be dual walled, have a smooth interior and exterior corrugations and meet WSDOT 9-05.24(2). It shall meet or exceed ASTM F2764. 36-inch through 60-inch PP pipe shall be triple walled and meet WSDOT 9-05.24(2). It shall meet or exceed ASTM F2764. PP shall have a minimum pipe stiffness of 46 pii when tested in accordance with ASTM D2412. Testing shall be per ASTM F1417. Trenching, bedding, and backfill shall be in accordance with City Standard No. 06.01.01. Minimum cover on PVC and PP pipe shall be 3.0 feet. Minimum cover on ductile iron pipe shall be 1.0 foot.

11. Sanitary sewer manhole frames and covers shall conform to City Standard No. 06.01.02.

12. Sanitary sewer manholes shall conform to City Standard Nos. 04.01.01, 04.01.02, 04.01.03 and 04.01.04. All manholes shall be channeled for future lines as specified on these plans. Manhole steps and ladder shall conform to Standard No. 06.01.03.

13. Sanitary sewer pipe and side sewers shall be 10 feet away from building foundations and/or roof lines with the exception of side sewers that provide service to a single-family residence. At the discretion of the review engineer, a Licensed Professional Engineer will be required to stamp the design to account for depth or proximity to foundation, steep slopes, or other factors.

14. No side sewers shall be connected to any house or building until all manholes are adjusted to the finished grade of the completed asphalt roadway and the asphalt patch and seal around the ring are accepted.

15. For commercial developments in which sources of grease and/or oils may be introduced to the City sanitary sewer system, a City approved grease interceptor shall be installed downstream from the source.

16. Once sewer and all other utility construction is completed, all sanitary sewer mains and side sewers shall be tested per Section 406 of the City Standards.

ROADWAY NOTES:

1. All work in City right-of-way requires a permit from the City of Puyallup. Prior to any work commencing, the general contractor shall arrange for a preconstruction meeting at the Development Services Center to be attended by all contractors that will perform work shown on the engineering plans, representatives from all applicable Utility Companies, the project owner and appropriate City staff. Contact Engineering Services to schedule the meeting (253) 841-5568. The contractor is responsible to have their own approved set of plans at the meeting.

2. After completion of all items shown on these plans and before acceptance of the project, the contractor shall obtain a "punch list" prepared by the City's inspector detailing remaining items of work to be completed. All items of work shown on these plans shall be completed to the satisfaction of the City prior to acceptance of the water system and provision of sanitary sewer service.

3. All materials and workmanship shall conform to the Standard Specifications for Road, Bridge, and Municipal Construction (hereinafter referred to as the "Standard Specifications"), Washington State Department of Transportation and American Public Works Association, Washington State Chapter, latest edition, unless superseded or amended by the City of Puyallup City Standards for Public Works Engineering and Construction (hereinafter referred to as the "City Standards").

4. A copy of these approved plans and applicable city developer specifications and details shall be on site during construction.

5. Any revisions made to these plans must be reviewed and approved by the developer's engineer and the Engineering Services Staff prior to any implementation in the field. The City shall not be responsible for any errors and/or omissions on these plans.

6. The contractor shall have all utilities verified on the ground prior to any construction. Call (811) at least two working days in advance. The owner and his/her engineer shall be contacted immediately if a conflict exists.

7. Any structure and/or obstruction which requires removal or relocation relating to this project, shall be done so at the developer's expense.

8. Monuments shall be installed at all street intersections, at angle points, and points of curvature in each street. All boundary monuments must be installed according to the Washington State subdivision laws.

9. Curb and gutter installation shall conform to City Standard Detail 01.02.09.

10. Sidewalks and driveways shall be installed as lots are built on. Sidewalks and driveways shall conform to City Standard Detail 01.02.01, 01.02.02 and 01.02.12. If asphalt is damaged during replacement of curb and gutter, the repair shall conform to City Standard Detail 01.02.10.

11. The surrounding ground (5 feet beyond the base) for all power transformers, telephone/TV pedestals, and street light main disconnects shall be graded to a positive 2 percent slope from top of curb.

12. Signage and traffic control devices are safety items and shall be installed prior to issuance of any certificate of occupancy or plat approval. However, in larger developments, exact locations of stop and yield signs may need to be determined after full buildout when traffic patterns have been established. In this case, contractor shall provide indicated "City-placed" signs, signposts, and brackets to the City sign specialist (253) 841-5471 for later installation by the City. All signage shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD).

13. Prior to any sign or striping installation or removal the Contractor shall contact the City sign specialist (253) 841-5471 to arrange for an on-site meeting to discuss placement and uniformity.

14. New or revised stop signs or yield signs shall be advance warned using the procedure outlined in the MUTCD. Advance warning signs and flags shall be maintained by installer for 30 days and then removed.

GRADING, EROSION AND SEDIMENTATION CONTROL NOTES:

1. All work in City right-of-way requires a permit from the City of Puyallup. Prior to any work commencing, the general contractor shall arrange for a preconstruction meeting at the Development Services Center to be attended by all contractors that will perform work shown on the engineering plans, representatives from all applicable Utility Companies, the project owner and appropriate City staff. Contact Engineering Services to schedule the meeting (253) 841-5568. The contractor is responsible to have their own approved set of plans at the meeting.

2. After completion of all items shown on these plans and before acceptance of the project, the contractor shall obtain a "punch list" prepared by the City's inspector detailing remaining items of work to be completed. All items of work shown on these plans shall be completed to the satisfaction of the City prior to acceptance of the water system and provision of sanitary sewer service.

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4. A copy of these approved plans and applicable city developer specifications and details shall be on site during construction.

5. Any revisions made to these plans must be reviewed and approved by the developer's engineer and the city engineer prior to any implementation in the field. The City shall not be responsible for any errors and/or omissions on these plans.

6. The contractor shall have all utilities verified on the ground prior to any construction. Call (811) at least two working days hours in advance. The owner and his/her engineer shall be contacted immediately if a conflict exists.

7. All limits of clearing and areas of vegetation preservation as prescribed on the plans shall be clearly flagged in the field and observed during construction.

8. All required sedimentation and erosion control facilities must be constructed and in operation prior to any land clearing and/or other construction to ensure that sediment laden water does not enter the natural drainage system. The contractor shall schedule an inspection of the erosion control facilities PRIOR to any land clearing and/or other construction. All erosion and sediment facilities shall be maintained in a satisfactory condition as determined by the City, until such time that clearing and/or construction is completed and the potential for on-site erosion has passed. The implementation, maintenance, replacement, and additions to the erosion and sedimentation control systems shall be the responsibility of the permittee.

9. The erosion and sedimentation control system facilities depicted on these plans are intended to be minimum requirements to meet anticipated site conditions. As construction progresses and unexpected or seasonal conditions dictate, facilities will be necessary to ensure complete siltation control on the site. During the course of construction, it shall be the obligation and responsibility of the permittee to address any new conditions that may be created by his activities and to provide additional facilities, over and above the minimum requirements, as may be needed to protect adjacent properties, sensitive areas, natural water courses, and/or storm drainage systems.

10. Approval of these plans is for grading, temporary drainage, erosion and sedimentation control only. It does not constitute an approval of permanent storm drainage design, size or location of pipes, restrictors, channels, or retention facilities.

11. Any disturbed area which has been stripped of vegetation and where no further work is anticipated for a period of 30 days or more, must be immediately stabilized with mulching, grass planting, or other approved erosion control treatment applicable to the time of year in question. Grass seeding alone will be acceptable only during the months of April through September inclusive. Seeding may proceed outside the specified time period whenever it is in the interest of the permittee but must be augmented with mulching, netting, or other treatment approved by the City.

12. In case erosion or sedimentation occurs to adjacent properties, all construction work within the development that will further aggravate the situation must cease, and the owner/contractor will immediately commence restoration methods. Restoration activity will continue until such time as the affected property owner is satisfied.

13. No temporary or permanent stockpiling of materials or equipment shall occur within critical areas or associated buffers, or the critical root zone for vegetation proposed for retention.

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

APPROVED
BY _____
CITY OF PUYALLUP
ENGINEERING SERVICES
DATE 09/19/2024

NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.
THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE ENGINEERING SERVICES MANAGER.

No.	Date	By	Ckd.	Appr.	Revision

Title: CONSTRUCTION NOTES FOR CIVIL PLANS PHASE 2 - WESLEY BRADLEY PARK

For: WESLEY HOMES
815 SOUTH 216TH STREET
DES MOINES, WA 98190
(206) 870-1209

DANIEL K. BALMELLI — STATE OF WASHINGTON — 25672 — REGISTERED PROFESSIONAL ENGINEER
9/3/24

Scale: Horizontal N/A Vertical N/A

Designed CK Drawn BGK Checked CMV Approved DKB Date 9/3/24

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
425.251.6222 barghausen.com

Job Number 16718

Sheet C14 of C21

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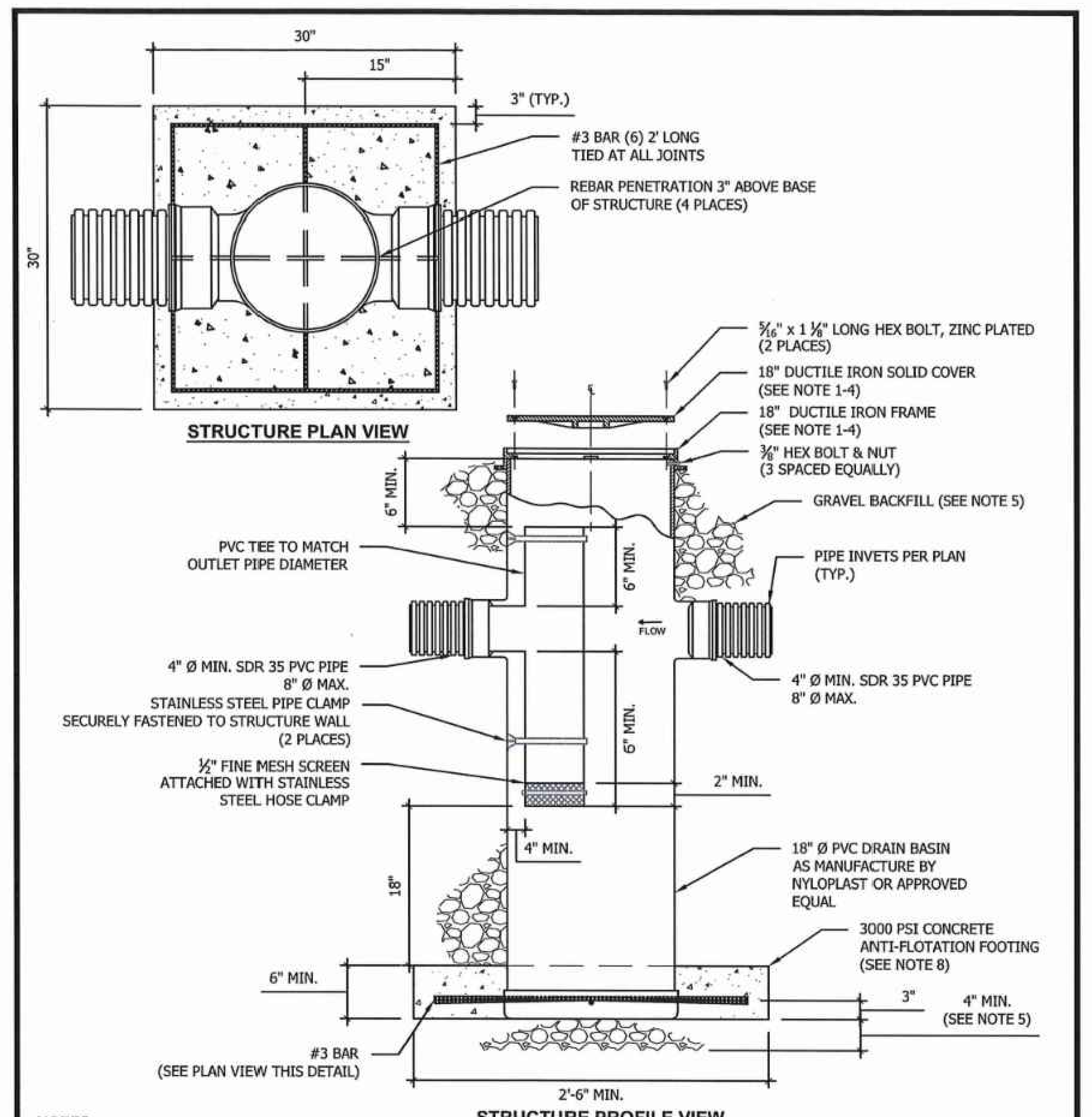
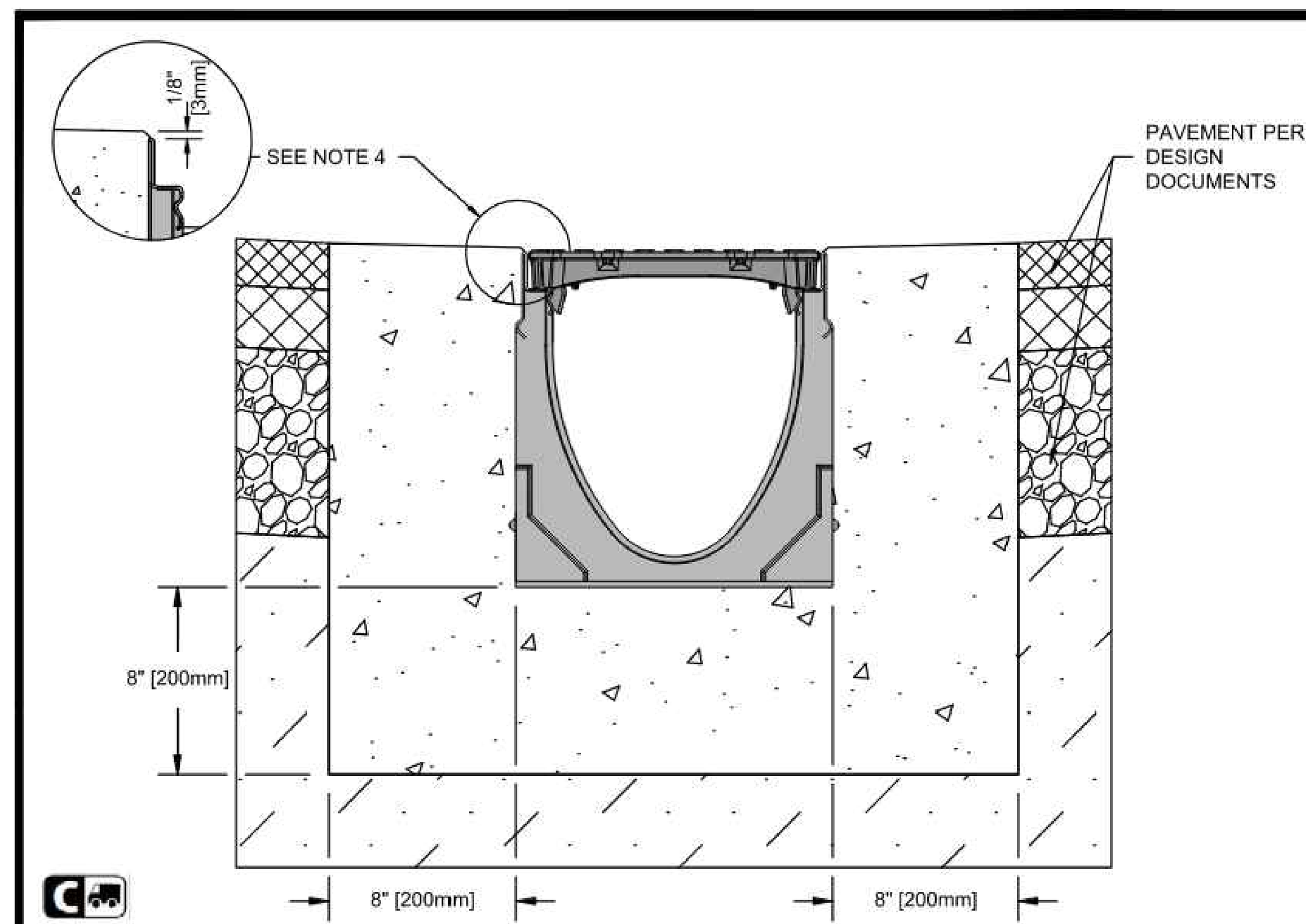
CONSTRUCTION NOTES & DETAILS
FOR
PHASE 2 - WESLEY BRADLEY PARK



NOTES:

1. TRAFFIC APPLICATIONS SHALL BE HS-20 RATED, NOT FOR USE IN PUBLIC RIGHT-OF-WAY, PUBLIC EASEMENTS, OR TRACTS.
2. 18" SOLID LOCKING DUCTILE IRON FRAME AND COVER BY NYLOPLAST - TYPE C OR APPROVED EQUAL.
3. DUCTILE IRON FRAME AND COVER SHALL BE DRILLED AND TAPPED WITH ⅝"- 8 ZINC-PLATED HEX BOLT 1 ½" LONG.
4. DUCTILE IRON FRAME AND COVER SHALL BE FLUSH WITH FINISHED GRADE.
5. STORM PIPE AND STRUCTURE BEDDING AND BACKFILL SHALL CONFORM TO STD DETAIL 06.01.01.
6. ALL BOLT HOLES DRILLED IN THE STRUCTURE SHALL BE WATERTIGHT WITH RUBBER SEALING WASHERS OR APPROVED EQUAL.
7. ALL PIPE JOINTS SHALL BE WATERTIGHT.
8. A CONCRETE FOOTING SHALL BE PROVIDED AT THE BASE OF THE STRUCTURE WHEN THE BOTTOM ELEVATION OF THE STRUCTURE IS WITHIN 6" OF HIGH GROUNDWATER.
9. THE MAXIMUM DEPTH FROM FINISHED GRADE TO THE PIPE INVERT IS 5'-0".

CITY OF PUYALLUP — PUBLIC WORKS AND DEVELOPMENT ENGINEERING — YARD DRAIN — CITY STANDARD 02.05.02



NOTES:

1. IT IS NECESSARY TO ENSURE MINIMUM DIMENSIONS SHOWN ARE SUITABLE FOR EXISTING GROUND CONDITIONS. *ENGINEERING ADVICE MAY BE REQUIRED.*
2. MINIMUM CONCRETE STRENGTH OF 4,000 PSI IS RECOMMENDED. CONCRETE SHOULD BE VIBRATED TO ELIMINATE AIR POCKETS.
3. EXPANSION AND CONTRACTION CONTROL JOINTS AND REINFORCEMENT ARE RECOMMENDED TO PROTECT CHANNEL AND CONCRETE SURROUND. *ENGINEERING ADVICE MAY BE REQUIRED.*
4. THE FINISHED LEVEL OF THE CONCRETE SURROUND MUST BE APPROX. 1/8" [3mm] ABOVE THE TOP OF THE CHANNEL EDGE.
5. CONCRETE BASE THICKNESS SHOULD MATCH SLAB THICKNESS. ENGINEERING ADVICE MAY BE REQUIRED TO DETERMINE PROPER LOAD CLASS.
6. REFER TO ACO'S LATEST INSTALLATION INSTRUCTIONS FOR FURTHER DETAILS.

SPECIFICATION CLAUSE

K200 KLASSIKDRAIN 'DRAINLOK' LOAD CLASS C

GENERAL
THE SURFACE DRAINAGE SYSTEM SHALL BE POLYMER CONCRETE K200 CHANNEL SYSTEM WITH GALVANIZED STEEL EDGE RAILS AS MANUFACTURED BY ACO POLYMER PRODUCTS, INC.

MATERIALS
CHANNELS SHALL BE MANUFACTURED FROM POLYESTER RESIN POLYMER CONCRETE WITH AN INTEGRALLY CAST-IN GALVANIZED STEEL EDGE RAIL. MINIMUM PROPERTIES OF POLYMER CONCRETE WILL BE AS FOLLOWS:

COMPRESSIVE STRENGTH:	14,000 PSI
FLEXURAL STRENGTH:	4,000 PSI
TENSILE STRENGTH:	1,500 PSI
WATER ABSORPTION:	0.07%
FROST PROOF	YES
DILUTE ACID AND ALKALI RESISTANT	YES
B117 SALT SPRAY TEST COMPLIANT	YES

THE SYSTEM SHALL BE 8" (200mm) NOMINAL INTERNAL WIDTH WITH A 10.2" (260mm) OVERALL WIDTH AND A BUILT-IN SLOPE OF 0.5%. CHANNEL INVERT SHALL HAVE DEVELOPED "V" SHAPE. ALL CHANNELS SHALL BE INTERLOCKING WITH A MALE/FEMALE JOINT.

THE COMPLETE DRAINAGE SYSTEM SHALL BE BY ACO POLYMER PRODUCTS, INC. ANY DEVIATION OR PARTIAL SYSTEM DESIGN AND/OR IMPROPER INSTALLATION WILL VOID ANY AND ALL WARRANTIES PROVIDED BY ACO POLYMER PRODUCTS, INC.

CHANNEL SHALL WITHSTAND LOADING TO PROPER LOAD CLASS AS OUTLINED BY EN 1433. GRATE TYPE SHALL BE APPROPRIATE TO MEET THE SYSTEM LOAD CLASS SPECIFIED AND INTENDED APPLICATION. GRATES SHALL BE SECURED USING 'DRAINLOK' BOLTLESS LOCKING SYSTEM. CHANNEL AND GRATE SHALL BE CERTIFIED TO MEET THE SPECIFIED EN 1433 LOAD CLASS. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.

K2D-C-EAP — DATE: 08/17/16

K200 - KLASSIKDRAIN - LOAD CLASS: C
Exposed Asphalt Pavement
INSTALLATION DRAWING - ACO DRAIN

ACO Polymer Products, Inc.

825 W. Beechcraft St, Casa Grande, AZ 85122, Tel: 520-421-9988, Fax: 520-421-9899	9470 Pinecone Dr., Mentor, OH 44060, Tel: 440-639-7230, Fax: 440-639-7235	4211 Pleasant Rd., Fort Mill, SC 29708, Tel: 440-639-7230, Fax: 803-802-1063

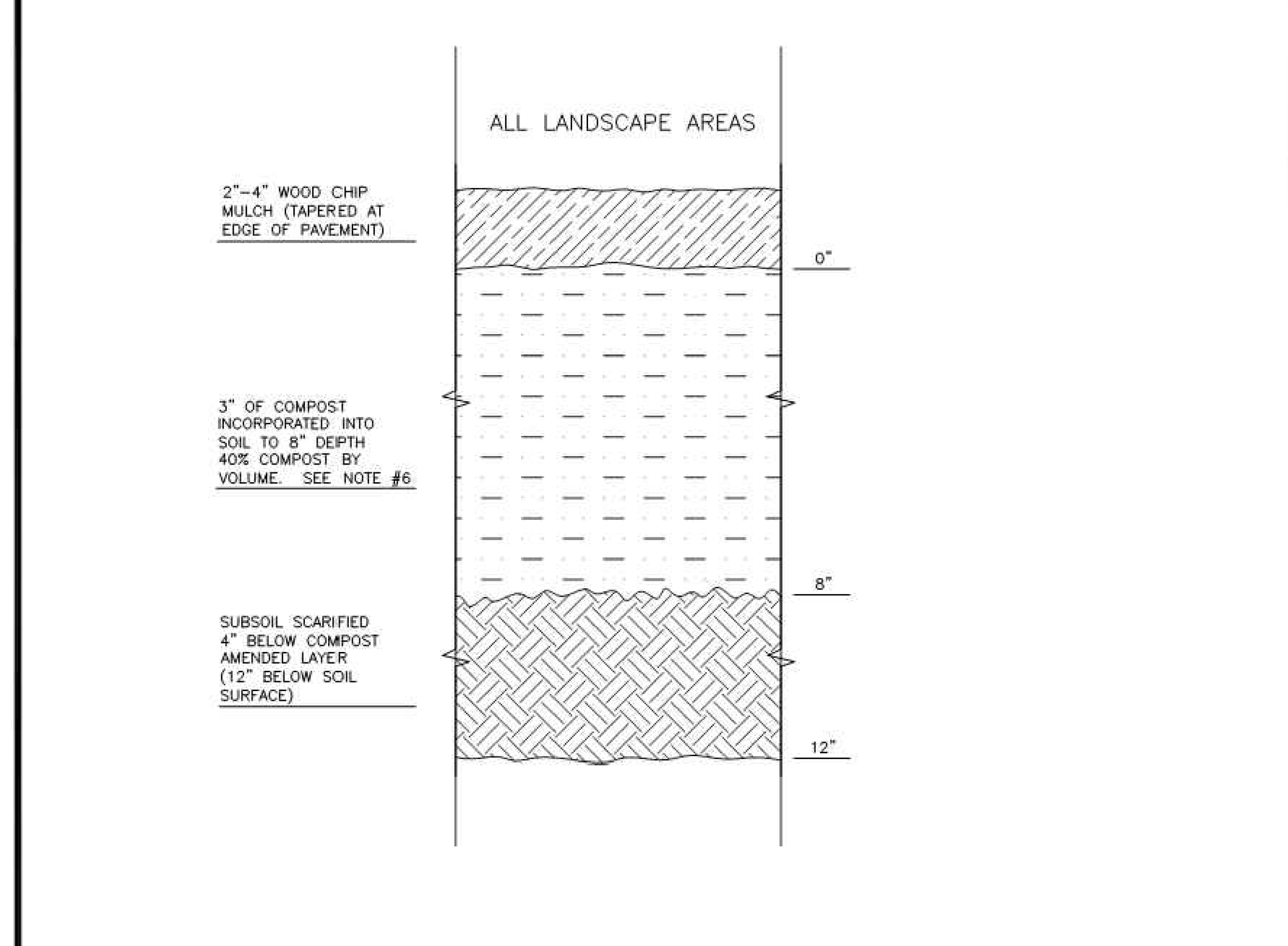
Arizona Tel: 888-490-9552 e-mail: sales@acousa.com Ohio Tel: 800-543-4764 www.acousa.com South Carolina Tel: 800-543-4764

APPROVED
CITY OF PUYALLUP ENGINEERING SERVICES
DATE 09/19/2024

NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE. THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE ENGINEERING SERVICES MANAGER.

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

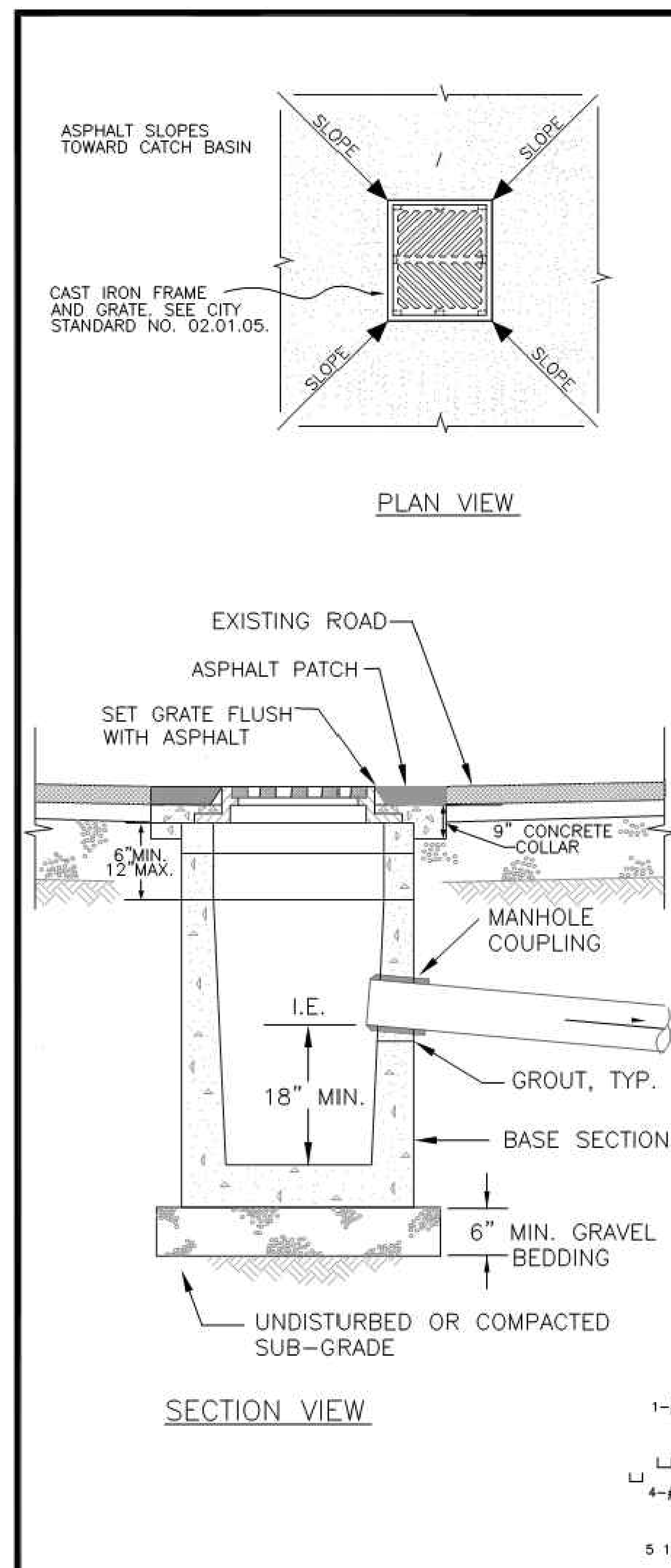
Building	Planning
Engineering	Public Works
Fire	Traffic



NOTES:

1. ALL SOIL AREAS DISTURBED OR COMPACTED DURING CONSTRUCTION, AND NOT COVERED BY BUILDINGS OR PAVEMENT, SHALL BE AMENDED WITH COMPOST AS DESCRIBED BELOW.
2. SUBSOIL SHOULD BE SCARIFIED (LOOSENED) 4 INCHES BELOW AMENDED LAYER, TO PRODUCE 12-INCH DEPTH OF UN-COMPACTED SOIL, EXCEPT WHERE SCARIFICATION WOULD DAMAGE TREE ROOTS OR AS DETERMINED BY THE ENGINEER. SEE NOTE BELOW REGARDING PLANTING STEPS FOR STREET TREES.
3. COMPOST SHALL BE TILLED IN TO 8 INCH DEPTH INTO EXISTING SOIL, OR PLACE 8 INCHES OF COMPOST-AMENDED SOIL, PER SOIL SPECIFICATION.
4. PLANTING BEDS SHALL RECEIVE 3 INCHES OF COMPOST TILLED IN TO 8-INCH DEPTH, OR MAY SUBSTITUTE 8" OF IMPORTED SOIL CONTAINING 35-40% COMPOST BY VOLUME. MULCH AFTER PLANTING, WITH 4 INCHES OF ARBORIST WOOD CHIP MULCH OR APPROVED EQUAL (6" OF LOOSE WOOD CHIPS AT THE TIME OF PLANTING TO ALLOW SETTLING TO 4").
5. SETBACKS: TO PREVENT UNEVEN SETTLING, DO NOT COMPOST-AMEND SOILS WITHIN 3 FEET OF UTILITY INFRASTRUCTURES (POLES, VAULTS, METERS ETC.). WITHIN ONE FOOT OF PAVEMENT EDGE, CURBS AND SIDEWALKS SOIL SHOULD BE COMPACTED TO APPROXIMATELY 95% PROCTOR TO ENSURE A FIRM SURFACE.
6. SEE SECTION 8.2(B) OF THE VMS FOR SOIL AMENDMENT AND INSTRUCTION PROCEDURES FOR STREET TREE PLANTER STRIPS. ALL STREET TREE PLANTER STRIPS SHALL RECEIVE 40% COMPOST AMENDED SOIL TO THE FULL DEPTH OF THE STREET TREE ROOTBALL.

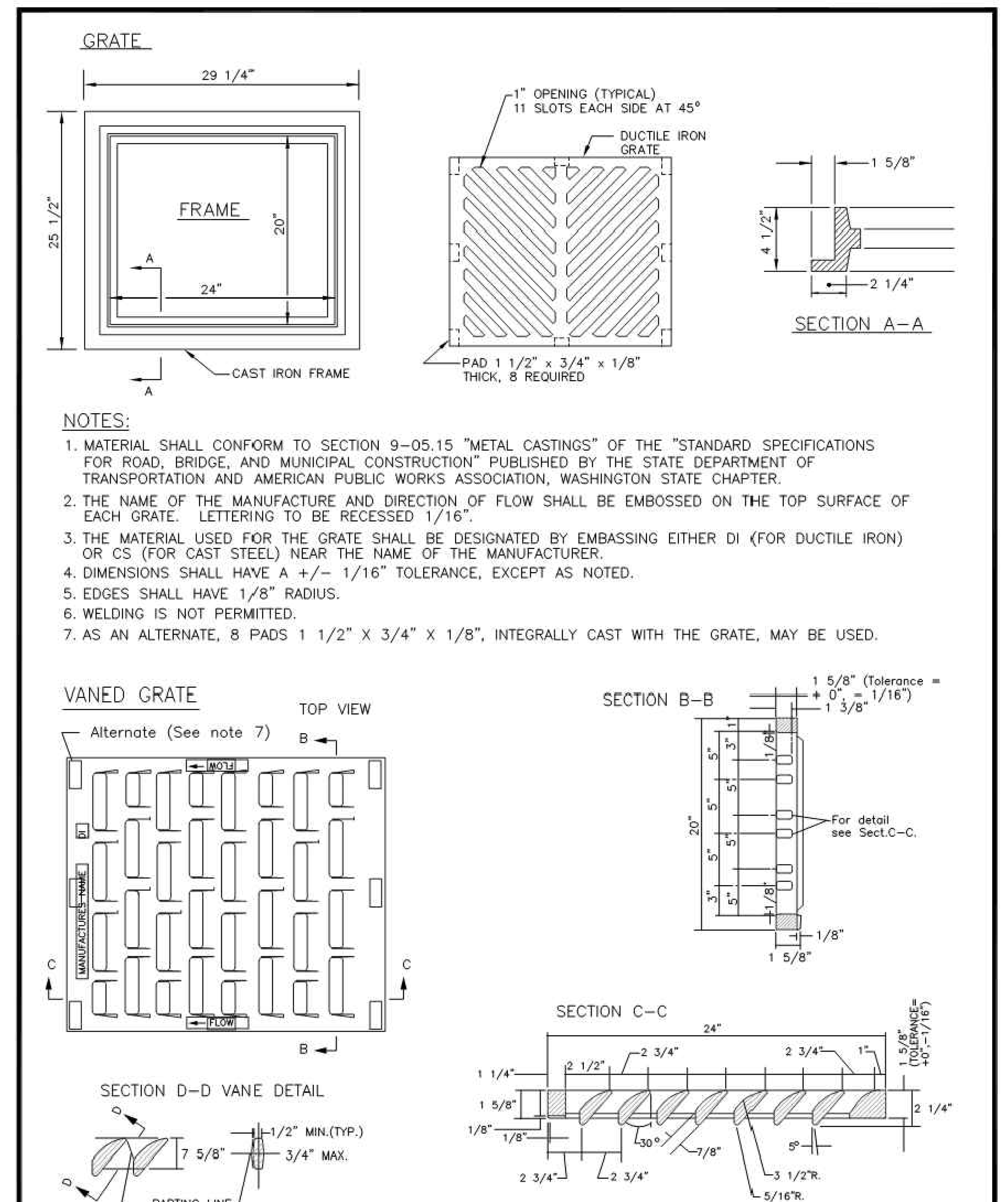
CITY OF PUYALLUP — DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS — SOIL AMENDMENT AND DEPTH — CITY STANDARD 01.02.08a



NOTES:

1. MAXIMUM LENGTH OF PIPE BETWEEN CATCH BASINS SHALL BE 400'.
2. TYPE I CATCH BASIN IS USED FOR DEPTHS LESS THAN 5'-0" FROM TOP OF GRATE TO I.E.(PIPE INVERT).
3. PRECAST BASE SECTION SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MIN. KNOCKOUTS SHALL BE ON 4 SIDES WITH A MAXIMUM DIAMETER OF 20" TO PROVIDE FOR A MINIMUM SUMP DEPTH OF 18".
4. THE TAPER ON THE SIDES OF THE PRECAST BASE SECTION SHALL NOT EXCEED 1/2" PER FOOT.
5. CATCH BASIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C 478 (AASHTO M 199) AND ASTM C 890 UNLESS OTHERWISE NOTED.
6. CATCH BASIN MARKER WILL BE AFFIXED WITH MANUFACTURER'S EPOXY IN DRY WEATHER, 40 DEGREES OR WARMER. IF CURB EXISTS MARKER IS PLACED ON TOP OF CURB, IF A RAISED EDGE PLACE MARKER ON THE WEDGE, IF NO CURB PLACE MARKER ON PAVEMENT ON SIDE LEAST EXPOSED TO TRAFFIC.

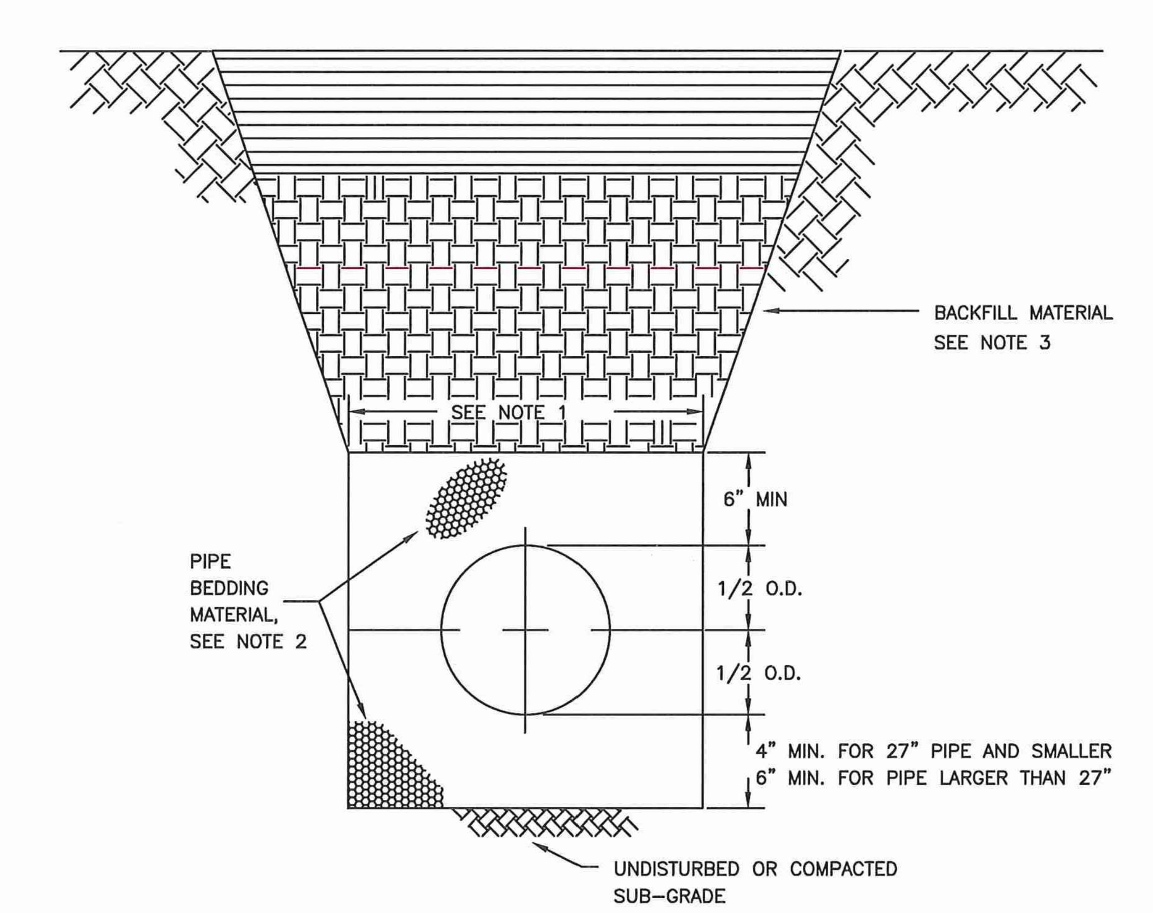
CITY OF PUYALLUP — DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS — CATCH BASIN TYPE 1 (AREA DRAIN) — CITY STANDARD 02.01.02



NOTES:

1. MATERIAL SHALL CONFORM TO SECTION 9-05.15 "METAL CASTINGS" OF THE "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION" PUBLISHED BY THE STATE DEPARTMENT OF TRANSPORTATION AND AMERICAN PUBLIC WORKS ASSOCIATION, WASHINGTON STATE CHAPTER.
2. THE NAME OF THE MANUFACTURE AND DIRECTION OF FLOW SHALL BE EMBOSSED ON THE TOP SURFACE OF EACH GRATE. LETTERING TO BE RECESSED 1/16".
3. THE MATERIAL USED FOR THE GRATE SHALL BE DESIGNATED BY EMBASSING EITHER DI (FOR DUCTILE IRON) OR CS (FOR CAST STEEL) NEAR THE NAME OF THE MANUFACTURER.
4. DIMENSIONS SHALL HAVE A +/- 1/16" TOLERANCE, EXCEPT AS NOTED.
5. EDGES SHALL HAVE 1/8" RADIUS.
6. WELDING IS NOT PERMITTED.
7. AS AN ALTERNATE, 8 PADS 1 1/2" X 3/4" X 1/8", INTEGRALLY CAST WITH THE GRATE, MAY BE USED.

CITY OF PUYALLUP — DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS — CATCH BASIN FRAME AND GRATE/VANED GRATE — CITY STANDARD 02.01.05



1. TRENCHING SHALL MEET THE REQUIREMENTS OF SECTION 7-08.3(1)A AND 2-06.3(1) OF THE WSDOT SPECIFICATIONS.
2. BEDDING MATERIAL SHALL CONFORM TO 9-03.12(3) GRAVEL BACKFILL FOR PIPE ZONE BEDDING.
3. GRAVEL BACKFILL SHALL CONFORM TO 9-03.12(1)A GRAVEL BACKFILL FOR FOUNDATIONS, CLASS A.

CITY OF PUYALLUP — OFFICE of THE CITY ENGINEER — PIPE TRENCHING BEDDING AND BACKFILL — CITY STANDARD 06.01.01

Title: CONSTRUCTION NOTES & DETAILS FOR CIVIL PLANS PHASE 2 - WESLEY BRADLEY PARK

For: WESLEY HOMES
815 SOUTH 216TH STREET
DES MOINES, WA 98190
(206) 870-1209

DANIEL K. BALMELLI — STATE OF WASHINGTON — 25672 — REGISTERED PROFESSIONAL ENGINEER — 9/3/24

Scale: Horizontal N/A, Vertical N/A

Designed CK, Drawn BGK, Checked CMV, Approved DKB, Date 9/3/24

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
425.251.6222
barghausen.com

Job Number 16718

Sheet C15 of C21

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CONSTRUCTION NOTES & DETAILS
FOR
PHASE 2 - WESLEY BRADLEY PARK

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

APPROVED
BY: CITY OF PUYALLUP ENGINEERING SERVICES
DATE 09/19/2024
NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.
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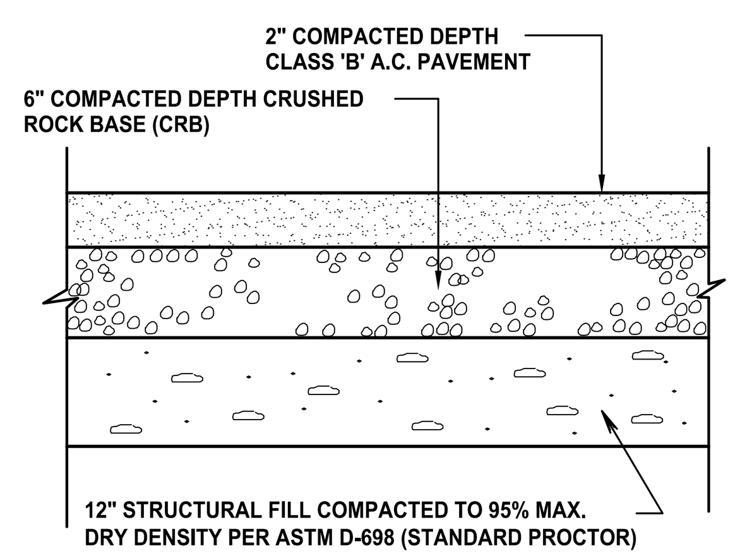
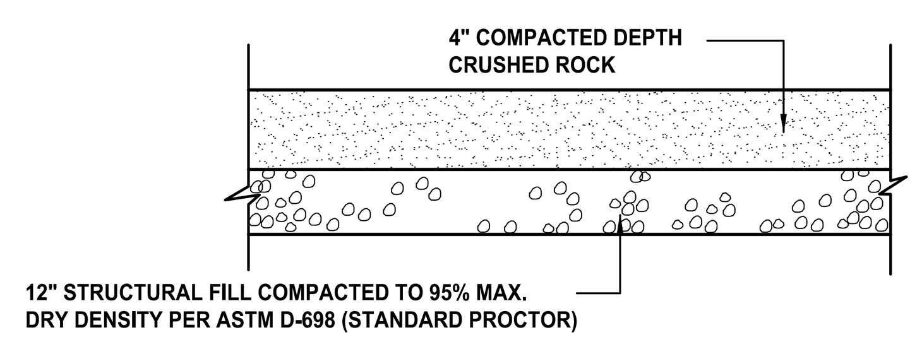
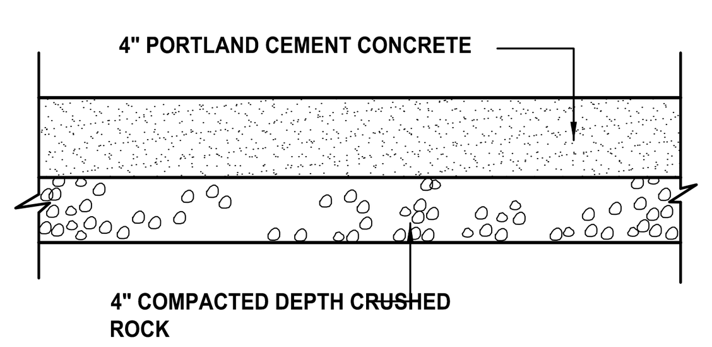


ALTERNATE PAVING SECTION
2" COMPACTED DEPTH
CLASS "B" A.C. PAVEMENT
3" ASPHALT TREATED BASE (ATB)

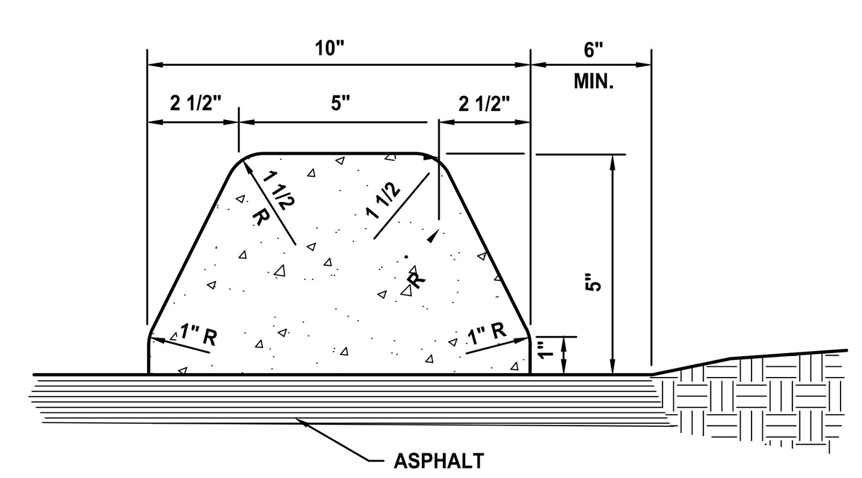
TYPICAL PAVING SECTION (ONSITE ONLY)
NOT TO SCALE



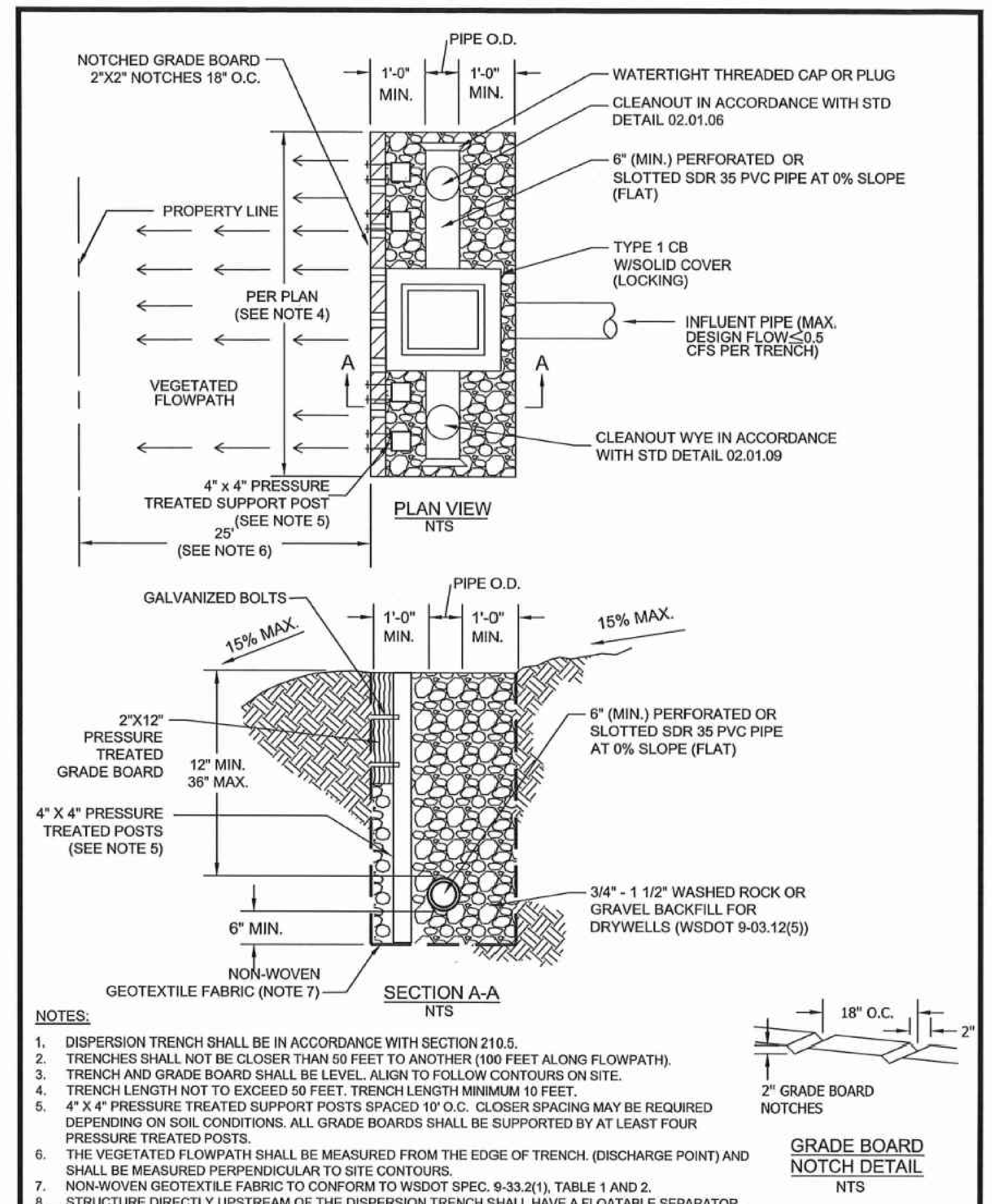
GRAVEL WALKING PATH (ONSITE ONLY)
NOT TO SCALE



PRIVATE CONCRETE SIDEWALKS (ONSITE ONLY)
NOT TO SCALE



EXTRUDED CONCRETE CURB DETAIL (ONSITE ONLY)
NOT TO SCALE



NOTES:

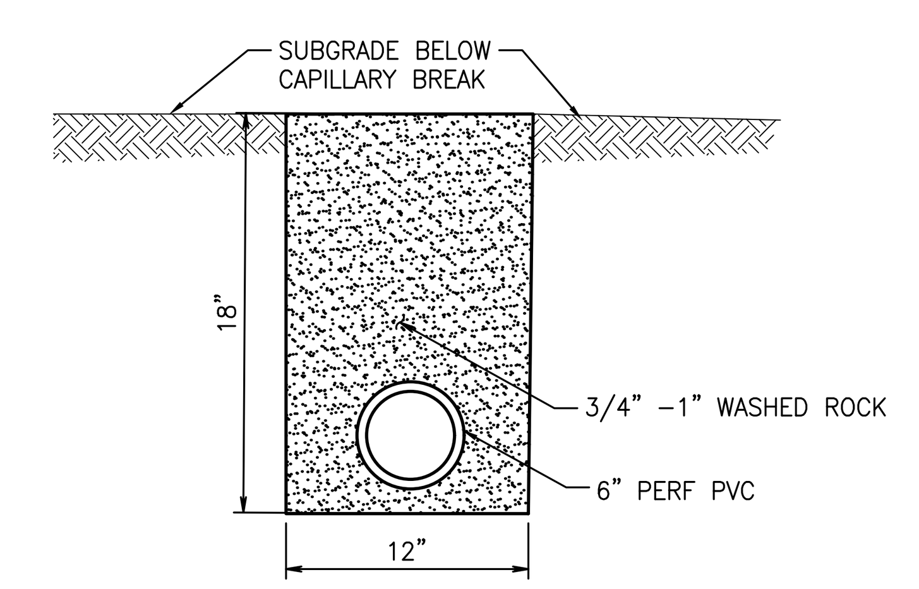
1. DISPERSION TRENCH SHALL BE IN ACCORDANCE WITH SECTION 210.5.
2. TRENCHES SHALL NOT BE CLOSER THAN 50 FEET TO ANOTHER (100 FEET ALONG FLOWPATH).
3. TRENCH AND GRADE BOARD SHALL BE LEVEL. ALIGN TO FOLLOW CONTOURS ON SITE.
4. TRENCH LENGTH NOT TO EXCEED 50 FEET. TRENCH LENGTH MINIMUM 10 FEET.
5. 4" X 4" PRESSURE TREATED SUPPORT POSTS SPACED 10' O.C. CLOSER SPACING MAY BE REQUIRED DEPENDING ON SOIL CONDITIONS. ALL GRADE BOARDS SHALL BE SUPPORTED BY AT LEAST FOUR PRESSURE TREATED POSTS.
6. THE VEGETATED FLOWPATH SHALL BE MEASURED FROM THE EDGE OF TRENCH. (DISCHARGE POINT) AND SHALL BE MEASURED PERPENDICULAR TO SITE CONTOURS.
7. NON-WOVEN GEOTEXTILE FABRIC TO CONFORM TO WSDOT SPEC. 9-33.2(1), TABLE 1 AND 2.
8. STRUCTURE DIRECTLY UPSTREAM OF THE DISPERSION TRENCH SHALL HAVE A FLOATABLE SEPARATOR.

CITY OF PUYALLUP
PUBLIC WORKS AND DEVELOPMENT ENGINEERING

APPROVED FOR PUBLICATION
HANS P. HUNGER, STATE OF WASHINGTON, 33750, REGISTERED PROFESSIONAL ENGINEER
DATE SIGNED: 7/06/23

DOWNSPOUT DISPERSION TRENCH

SCALE NTS | DATE REVISED: 07/06/2023 | CITY STANDARD 02.05.06



SUB DRAIN TYPICAL SECTION
NOT TO SCALE

No. | Date | By | Ckd. | Appr. | Revision

Title: CONSTRUCTION NOTES & DETAILS FOR CIVIL PLANS PHASE 2 - WESLEY BRADLEY PARK

For: WESLEY HOMES
815 SOUTH 216TH STREET
DES MOINES, WA 98190
(206) 870-1209

DANIEL K. BALMELLI, STATE OF WASHINGTON, 25672, REGISTERED PROFESSIONAL ENGINEER
9/3/24

Scale: Horizontal N/A Vertical N/A

Designed CK
Drawn BGK
Checked CMV
Approved DKB
Date 9/3/24

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
425.251.6222
barghausen.com

Job Number 16718
Sheet C16 of C21

P:\16000s\16718\engineering\Phase 2\16718-d3.dwg 7/8/2024 9:11 AM LPALMER

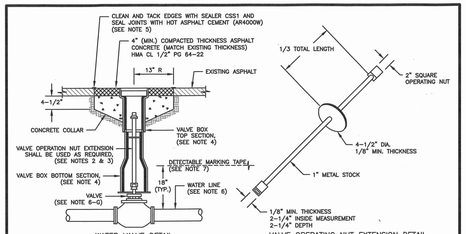
WATER DETAILS
FOR
PHASE 2 - WESLEY BRADLEY PARK

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

APPROVED
BY _____
CITY OF PUYALLUP
ENGINEERING SERVICES
DATE 09/19/2024

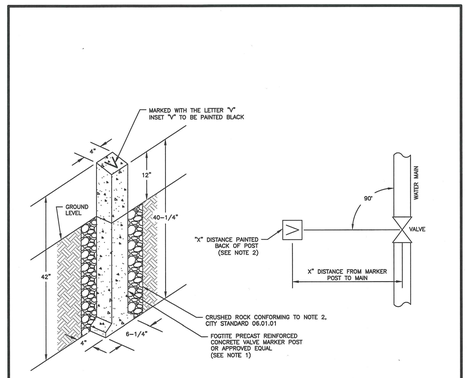
NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.
THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE ENGINEERING SERVICES MANAGER.



NOTES:

1. WATER MAINS SHALL HAVE A MINIMUM COVER OF 36" FROM PAVED FINAL GRADE IN IMPROVED RIGHT-OF-WAY AND IMPROVED EASEMENTS, AND A MINIMUM OF 48" IN UNIMPROVED RIGHT-OF-WAY AND UNIMPROVED EASEMENTS.
2. VALVE OPERATING NUT EXTENSIONS ARE REQUIRED WHEN THE VALVE NUT IS MORE THAN FIVE (5) FEET BELOW FINISHED GRADE. EXTENSIONS ARE TO BE A MINIMUM OF TWO (2) FEET LONG, ONLY ONE EXTENSION TO BE USED PER VALVE. TOP OF EXTENSION SHALL BE 2 FEET 6 INCHES TO 3 FEET BELOW FINISHED GRADE.
3. ALL VALVE OPERATING NUT EXTENSIONS ARE TO BE MADE OF STEEL, SIZED AS NOTED, AND PAINTED WITH TWO COATS OF METAL PAINT.
4. VALVE BOXES SHALL BE TWO-PIECE, ADJUSTABLE, CAST IRON WITH EXTENSION PIECES (IF NECESSARY), AS MANUFACTURED BY THE VANRICH #940 SEATTLE OR APPROVED EQUAL. THE WORD "WATER" SHALL BE CAST IN RELIEF ON THE VALVE BOX COVER. VALVE BOX TOPS INSTALLED IN ARTERIAL ROADWAYS SHALL BE MANUFACTURED BY EAST JORDAN (EJ) IRONWORKS MODEL 8555 WITH LOCKING VALVE BOX COVER MODEL 6800 (PART# 06800025U) OR APPROVED EQUAL.
5. NEAT LINE CUTS SHALL BE SEALED WITH A HOT PAVING GRADE ASPHALT AND FACE OF CUT TACKED.
6. WATER MAINS SHALL BE CONSTRUCTED AND TESTED IN ACCORDANCE WITH DIVISION 7 OF THE WSDOT STANDARD SPECIFICATIONS SUPPLEMENTED WITH THE FOLLOWING:
   A. DUCTILE IRON PIPE SHALL CONFORM TO AWWA C 151, THICKNESS CLASS 52, AND THE EXTERIOR SHALL BE COATED WITH COAL TAR VARNISH. PIPE AND FITTINGS SHALL BE MORTOR LINED AND SHALL CONFORM TO AWWA C 104. THE THICKNESS OF THE LINING SHALL BE NOT LESS THAN 1/16" THICK FOR 3" TO 12" PIPE, 3/32" THICK FOR 14" TO 24" PIPE, AND 1/8" THICK FOR 30" TO 54" PIPE. THE CEMENT LINING SHALL CONFORM TO THE REQUIREMENTS OF ASTM C 150.
   B. JOINTS SHALL BE TYTON PUSH-ON JOINTS, OR APPROVED EQUAL, OR MECHANICAL JOINT TYPE PER AWWA C 111 EXCEPT WHERE FLANGED JOINTS ARE REQUIRED TO CONNECT TO VALVES OR OTHER EQUIPMENT.
   C. BOLTS AND NUTS FOR BURIED FLANGES LOCATED OUTDOORS, ABOVE GROUND, OR IN OPEN VAULTS IN STRUCTURES SHALL BE TYPE 316 STAINLESS STEEL CONFORMING TO ASTM A 193, GRADE B8M FOR BOLTS, AND ASTM A 194, GRADE 8M FOR NUTS. BOLTS AND NUTS LARGER THAN ONE AND ONE-QUARTER (1-1/4) INCHES SHALL BE STEEL, ASTM A 307, GRADE B, WITH CADMIUM PLATING, ASTM A 165, TYPE NS.
   D. BOLTS USED IN FLANGE INSTALLATION SETS SHALL CONFORM TO ASTM B 193, GRADE B7. NUTS SHALL COMPLY WITH ASTM A 194, GRADE 2H.
   E. PROVIDE A WASHER FOR EACH NUT, WHERE NEEDED. WASHERS SHALL BE OF THE SAME MATERIAL AS THE NUTS.
   F. ALL FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF AWWA C 110 AND AWWA C 111.
   G. RESILIENT SEATED WEDGE GATE VALVES SHALL BE USED FOR TEN (10) INCH MAINS AND SMALLER. BUTTERFLY VALVES SHALL BE USED FOR MAINS GREATER THAN TEN (10) INCHES.
      1) RESILIENT SEATED WEDGE GATE VALVE: GATE VALVES SHALL CONFORM TO THE LATEST AWWA SPECIFICATIONS FOR COLD WATER, DOUBLE-DISK GATE VALVES, 200 PSI WORKING PRESSURE. THEY SHALL BE IRON-BODIED, BRONZE MOUNTED, NON-RISING STEM, WITH TWO (2) INCH SQUARE NUT, COUNTER-CLOCKWISE OPENING, MECHANICAL JOINT AND / OR FLANGED ENDS (6" VALVES ON FIRE HYDRANT LINES WHICH SHALL BE MECHANICAL JOINTS BY FLANGED). VALVE STEMS SHALL BE PROVIDED WITH O-RING SEALS AND SHALL BE AS MANUFACTURED BY THE MUELLER COMPANY OR APPROVED EQUAL.
      2) BUTTERFLY VALVES: BUTTERFLY VALVES CONFORMING WITH AWWA C 504, CLASS 150 AND SHALL HAVE STANDARD AWWA TWO (2) INCH SQUARE NUT.
7. DETECTABLE MARKING TAPE SHALL BE INSTALLED 18" ABOVE PIPE, BE BLUE IN COLOR, AND READ "CAUTION WATER LINE BELOW" MEETING WSDOT SPEC. 9-15.1B.

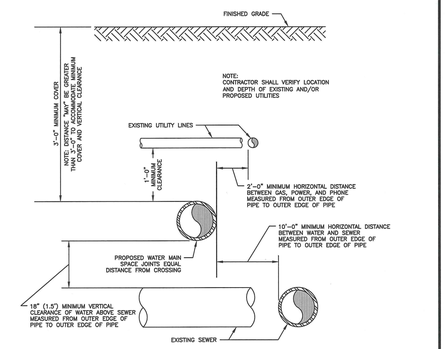
CITY OF PUYALLUP OFFICE of THE CITY ENGINEER | APPROVED FOR PUBLICATION 12/10/2021 | WATER VALVES AND MAINS | (NOT TO SCALE) | CITY STANDARD 03.01.01



NOTES:

1. PAINT MARKER POST WITH RUST-OLEUM SAFETY YELLOW #7543 OR APPROVED EQUAL.
2. THE DISTANCE FROM THE MARKER POST TO THE WATER MAIN SHALL BE PAINTED ON THE BACKSIDE OF THE MARKER POST, IN BLACK WITH A 2" HIGH NUMBER.
3. VALVE MARKER POST SHALL BE REQUIRED WHEN EVER THE WATER VALVE IS LOCATED IN AN UNPAVED AREA.
4. THE POST WILL ALSO BE REQUIRED FOR BLOW-OFF ASSEMBLIES IN THE SAME CONDITION AS WATER VALVES.
5. LOCATION OF VALVE MARKER POSTS SHALL BE OFFSET AT RIGHT ANGLES TO EACH LINE VALVE.

CITY OF PUYALLUP OFFICE of THE CITY ENGINEER | APPROVED FOR PUBLICATION 4/5/2018 | VALVE MARKER POST | (NOT TO SCALE) | CITY STANDARD 03.01.02



SEE CITY STANDARD 03.01.03-2 FOR ADDITIONAL NOTES FOR THIS DETAIL

CITY OF PUYALLUP OFFICE of THE CITY ENGINEER | APPROVED FOR PUBLICATION 4/5/2018 | WATER MAIN CROSSING OTHER UTILITIES | (NOT TO SCALE) | CITY STANDARD 03.01.03-1

NOTES FOR WATER MAIN CROSSING OTHER UTILITIES
CITY STANDARD 03.01.03-1

WHEN LOCAL CONDITIONS PREVENT THE SEPARATIONS DESCRIBED ON CITY STANDARD 03.01.03-1, A SEWER MAY BE LAID CLOSER THAN 10-FEET HORIZONTALLY OR 18-INCHES VERTICALLY TO A WATER LINE, PROVIDED THE GUIDELINES BELOW ARE FOLLOWED:

UNUSUAL CONDITIONS (PARALLEL SYSTEMS)

1. SEWER LINE IS LAID IN A SEPARATE TRENCH FROM THE WATER LINE.
2. WHEN 18-INCHES VERTICAL SEPARATION CANNOT BE OBTAINED, THE SEWER SHALL BE CONSTRUCTED OF MATERIALS AND JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS OF CONSTRUCTION AND SHALL BE PRESSURE TESTED TO ENSURE WATER TIGHTNESS PRIOR TO BACKFILLING.
3. THE WATER LINE SHALL BE PLACED ON A BENCH OF UNDISTURBED EARTH WITH THE BOTTOM OF THE WATER PIPE AT LEAST 18-INCHES ABOVE THE CROWN OF THE SEWER, AND SHALL HAVE AT LEAST 5-FEET OF HORIZONTAL SEPARATION AT ALL TIMES. THE CITY RESERVES THE RIGHT TO REQUIRE SUPPLEMENTAL MITIGATION EFFORTS, SUCH AS IMPERMEABLE BARRIERS OR OTHER MEANS, FOR ADDITIONAL PROTECTION.
4. THE SEWER SHALL NOT BE INSTALLED IN THE SAME DITCH AS A POTABLE WATER LINE WITHOUT PRIOR WRITTEN APPROVAL BY THE CITY OF PUYALLUP.

UNUSUAL CONDITIONS (PERPENDICULAR SYSTEMS)

CONDITION A - GRAVITY SEWERS PASSING UNDER WATER LINES (ALL OF THE FOLLOWING APPLY)

1. ONE FULL SEGMENT (NOT LESS THAN 18-FEET LONG) OF DUCTILE IRON CLASS 52 WATER PIPE, AND THE LONGEST STANDARD SEWER PIPE LENGTH AVAILABLE FROM THE MANUFACTURER SHALL BE USED WITH THE PIPES CENTERED TO MAXIMIZE JOINT SEPARATION.
2. STANDARD GRAVITY-SEWER MATERIAL, ENCASED IN CONCRETE OR IN A ONE-QUARTER-INCH THICK CONTINUOUS STEEL, DUCTILE IRON, OR PRESSURE RATED PVC PIPE WITH A DIMENSION RATIO (THE RATIO OF THE OUTSIDE DIAMETER TO THE PIPE WALL THICKNESS) OF 18 OR LESS, WITH ALL VOIDS PRESSURE-GROUTED WITH SAND-CEMENT GROUT OR BENTONITE.

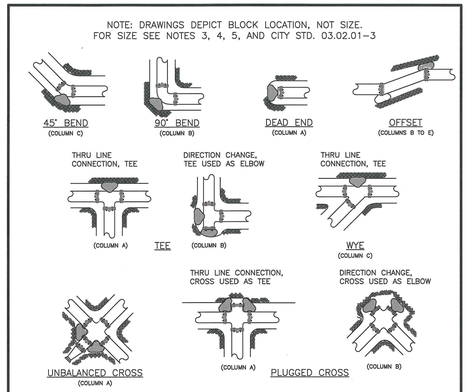
   EXAMPLE OF DIMENSION RATIO (DR): OUTSIDE PIPE DIAMETER DIVIDED BY THE WALL THICKNESS OR OD/T.
   FOR 8-INCH SCH. 80 PVC PIPE (T=0.5 INCHES), THE DR IS 8.625/0.5=17.25

CONDITION B - GRAVITY SEWER PASSING OVER WATER LINES

WATER LINES SHALL BE PROTECTED BY PROVIDING:

1. A VERTICAL SEPARATION OF AT LEAST 18-INCHES BETWEEN THE INVERT OF THE SEWER AND THE CROWN OF THE WATER LINE.
2. ADEQUATE STRUCTURAL SUPPORT FOR THE SEWER LINE TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING ON AND BREAKING OF THE WATER LINE.
3. THE SEWER PIPE SHALL BE THE LONGEST STANDARD SEWER PIPE LENGTH AVAILABLE FROM THE MANUFACTURER WITH THE WATER AND SEWER PIPES CENTERED TO MAXIMIZE JOINT SEPARATION.
4. THE SEWER LINE CASING EQUIVALENT TO THAT SPECIFIED IN A(2) ABOVE.

CITY OF PUYALLUP OFFICE of THE CITY ENGINEER | APPROVED FOR PUBLICATION 4/5/2018 | WATER MAIN CROSSING OTHER UTILITIES (NOTES) | (NOT TO SCALE) | CITY STANDARD 03.01.03-2



NOTES:

1. THE FOLLOWING PRECAUTIONS MUST BE OBSERVED WHEN CONSTRUCTING THRUST BLOCKS:
   A. BLOCKS MUST BE POURED OR PLACED AGAINST UNDISTURBED SOIL.
   B. THE PIPE FITTING(S) AND BOLTS MUST BE ACCESSIBLE. WRAP IN PLASTIC BEFORE POURING CONCRETE BLOCKING.
   C. CONCRETE SHOULD BE CURED FOR AT LEAST 5 DAYS AND SHOULD HAVE A MINIMUM COMPRESSION STRENGTH OF 3,000 PSI AT 28 DAYS.
   D. RESTRAINED JOINTS SHALL BE INSTALLED, IN ADDITION TO CONCRETE THRUST BLOCKING.
   E. BLOCKS MUST BE POSITIONED TO COUNTERACT THE DIRECTION OF THE RESULTANT THRUST FORCE.
2. ALL PIPE SHALL BE PROPERLY BEDDED, SEE CITY OF PUYALLUP STANDARD BEDDING DETAIL NO. 06.01.01.
3. CONTRACTOR TO PROVIDE BLOCKING ADEQUATE TO WITHSTAND FULL TEST PRESSURE.
4. DIVIDE THRUST BY SAFE BEARING LOAD TO DETERMINE REQUIRED AREA (IN SQUARE FEET) OF CONCRETE TO DISTRIBUTE LOAD.
5. BEARING SURFACE AREAS TO BE ADJUSTED BY THE ENGINEER FOR OTHER PRESSURE AND/OR SOIL CONDITIONS.

CITY OF PUYALLUP OFFICE of THE CITY ENGINEER | APPROVED FOR PUBLICATION 4/5/2018 | HORIZONTAL THRUST BLOCKING | (NOT TO SCALE) | CITY STANDARD 03.02.01-1

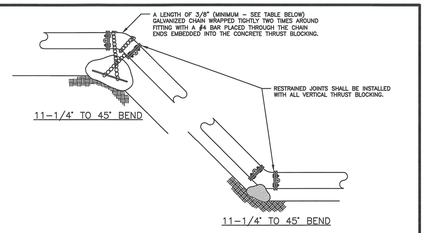


TABLE 1: CONCRETE BLOCKING FOR VERTICAL BENDS

PIPE DIAMETER (INCHES)	TEST PRESSURE (PSI)	BEND ANGLE (DEG)	CONCRETE VOLUME (FT³)	CUBE SIZE (FEET)	CHAIN SIZE (INCHES)	CHAIN EMBEDMENT (INCHES)
4"	200	11.25°	6	1.8	3/8"	17"
		22.5°	12	2.3		
		45°	22	2.8		
6"	200	11.25°	14	2.4	3/8"	17"
		22.5°	27	3.0		
		45°	50	3.7		
8"	200	11.25°	25	2.9	3/8"	17"
		22.5°	48	3.6		
		45°	89	4.5		
10"	200	11.25°	38	3.4	3/8"	17"
		22.5°	75	4.2		
		45°	139	5.2		
12"	200	11.25°	55	3.8	3/8"	17"
		22.5°	108	4.8		
		45°	200	5.8	1/2"	24"
14"	200	11.25°	75	4.2	3/8"	17"
		22.5°	147	5.3	1/2"	20"
		45°	272	6.5	1/2"	27"
16"	200	11.25°	98	4.6	3/8"	17"
		22.5°	192	5.8	1/2"	24"
		45°	355	7.1	3/4"	30"

ALL NOTES ON CITY STANDARD 03.02.01-1 SHALL APPLY TO THIS DETAIL.
SEE CITY STANDARD 03.02.01-3 FOR ADDITIONAL INFORMATION.

CITY OF PUYALLUP OFFICE of THE CITY ENGINEER | APPROVED FOR PUBLICATION 4/5/2018 | VERTICAL THRUST BLOCKING | (NOT TO SCALE) | CITY STANDARD 03.02.01-2

TABLE 2: THRUST AT FITTINGS AT 200 PSI

SIZE	TEST PRESSURE (PSI)	THRUST FITTINGS AT 200 PSI A (TEE AND DEAD ENDS)	B (90° BEND)	C (45° BEND)	D (22.5° BEND)	E (11.25° BEND)
4"	200	3,140	4,440	2,405	1,225	615
6"	200	7,070	9,995	5,410	2,760	1,385
8"	200	12,565	17,770	9,620	4,905	2,465
10"	200	19,635	27,770	15,030	7,660	3,850
12"	200	28,275	39,985	21,640	11,030	5,545
14"	200	38,485	54,425	29,455	15,015	7,545
16"	200	50,265	71,085	38,470	19,615	9,855

TABLE 3: BEARING VALUE OF SOIL

SOIL TYPE	SAFE BEARING LOAD LBS/SF
MUCK, PEAT, ETC.	0
SOFT CLAY/ALLUVIAL SOIL	1,000
SAND	2,000
SAND AND GRAVEL	3,000
SAND AND GRAVEL CEMENTED WITH CLAY	4,000
HARD SHALE	10,000

SEE CITY STANDARDS 03.02.01-1 AND 03.02.01-2 FOR ADDITIONAL INFORMATION.

NOTES:

① TO DETERMINE THRUST AT PRESSURES OTHER THAN PSI SHOWN, MULTIPLY THE THRUST OBTAINED IN TABLE 2 BY THE RATIO OF THE PRESSURE TO 200 PSI.

EXAMPLE:
THE THRUST ON A 12 INCH, 90° BEND AT 300 PSI.

39,985 X 300 PSI / 200 PSI = 59,978 LBS

② TO DETERMINE THE BEARING AREA OF THE THRUST BLOCK IN SQUARE FEET (SF):

SEE TABLE 3, BEARING VALUE OF SOIL

EXAMPLE:
FOR SAND AND GRAVEL BEARING VALUE FROM TABLE 3 IS 3,000 LBS/SF

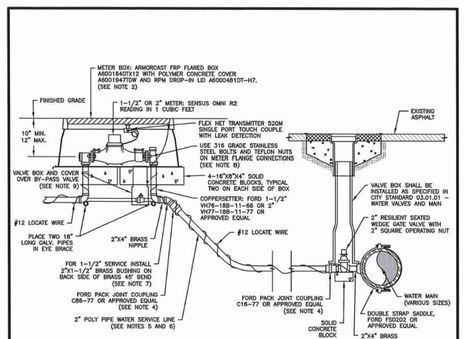
59,978 LBS ÷ 3000 LB/SF = 20 SF OF AREA

③ CONTRACTOR TO PROVIDE BLOCKING ADEQUATE TO WITHSTAND FULL TEST PRESSURE

④ AREAS SHALL BE ADJUSTED FOR OTHER PRESSURE CONDITIONS.

⑤ NO WATER MAIN SHALL DEAD END AGAINST A MAIN LINE VALVE. DEAD END WATER MAINS SHALL BE BLOCKED AGAINST A RESTRAINED MECHANICAL JOINT (M.J.) PLUG OR CAP.

CITY OF PUYALLUP OFFICE of THE CITY ENGINEER | APPROVED FOR PUBLICATION 4/5/2018 | THRUST BLOCKING TABLE | (NOT TO SCALE) | CITY STANDARD 03.02.01-3



NOTES:

1. ALL MATERIALS AND FITTINGS SHALL BE AS SPECIFIED OR AN APPROVED EQUAL.
2. NORMALLY THE WATER METER BOX SHOULD BE LOCATED IN THE PLANTING STRIP. IF SIDEWALK IS AGAINST THE CURB, PLACE METER BOX DIRECTLY BEHIND THE SIDEWALK. THE WATER METER BOX SHALL NOT BE LOCATED IN HARD SURFACES. WHEN UNAVOIDABLE, EXCEPTIONS CAN BE MADE AT END OF CUL-DE-SACS OR PAN HANDLED LOTS. AND TIER 22 RATING REQUIRED.
3. WATER MAINS SHALL HAVE A MINIMUM COVER OF 36" IN IMPROVED RIGHT-OF-WAY AND IMPROVED EASEMENTS, AND A MINIMUM OF 48" IN UNIMPROVED RIGHT-OF-WAY AND UNIMPROVED EASEMENTS.
4. ALL POLY PIPE COUPLINGS SHALL USE PIPE INSERT STIFFENERS.
5. THE WATER SERVICE LINE SHALL BE BEDDED IN WASHED SAND WITH 36" OF COVER BELOW FINISHED GRADE WITHIN THE RIGHT-OF-WAY. THE WATER SERVICE LINE SHALL BE ONE CONTINUOUS PIECE WITH NO SPLICES.
6. ALL POLY PIPE SHALL BE HIGH DENSITY POLY (IRON PIPE SIZE) MEETING ASTM D-2239-SIDR 7, BLUE IN COLOR, 200 PSI MINIMUM.
7. FOR A 1-1/2" WATER SERVICE, ALL MATERIAL SHALL BE 2" FROM THE WATER MAIN TO THE COPPERSETTER. REDUCE FROM 2" TO 1-1/2" IMMEDIATELY BEFORE COPPERSETTER.
8. THE STAINLESS STEEL METER FLANGE BOLTS SHALL BE 5/8" DIAMETER FOR THE 1-1/2" METER, AND 3/4" DIAMETER FOR THE 2" METER.
9. PROVIDE A 6" CIRCULAR VALVE BOX WITH COVER (APPLIED ENGINEERING PRODUCT MODEL 708 WITH GREEN LID OR AN APPROVED EQUAL) OVER BY-PASS VALVE.
10. ALL WATER SERVICE LINES SHALL BE INSTALLED PERPENDICULAR (90 DEGREES) TO THE POINT OF CONNECTION TO THE WATER MAIN.

CITY OF PUYALLUP PUBLIC WORKS AND DEVELOPMENT ENGINEERING | APPROVED FOR PUBLICATION 9/6/23 | 1-1/2" AND 2" WATER SERVICE CONNECTION | (NOT TO SCALE) | CITY STANDARD 03.03.02

No.	Date	By	Ckd.	Appr.	Revision

Title: WATER DETAILS FOR CIVIL PLANS PHASE 2 - WESLEY BRADLEY PARK

For:
WESLEY HOMES
815 SOUTH 216TH STREET
DES MOINES, WA 98190
(206) 870-1209

STATE OF WASHINGTON DANIEL K. BALMELLI 25672 REGISTERED PROFESSIONAL ENGINEER
9/3/24

Scale: Horizontal N/A Vertical N/A

Designed CK | Drawn BGK | Checked CMV | Approved DKB | Date 9/3/24

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
425.251.6222 barghausen.com

Job Number 16718 | Sheet C17 of C21

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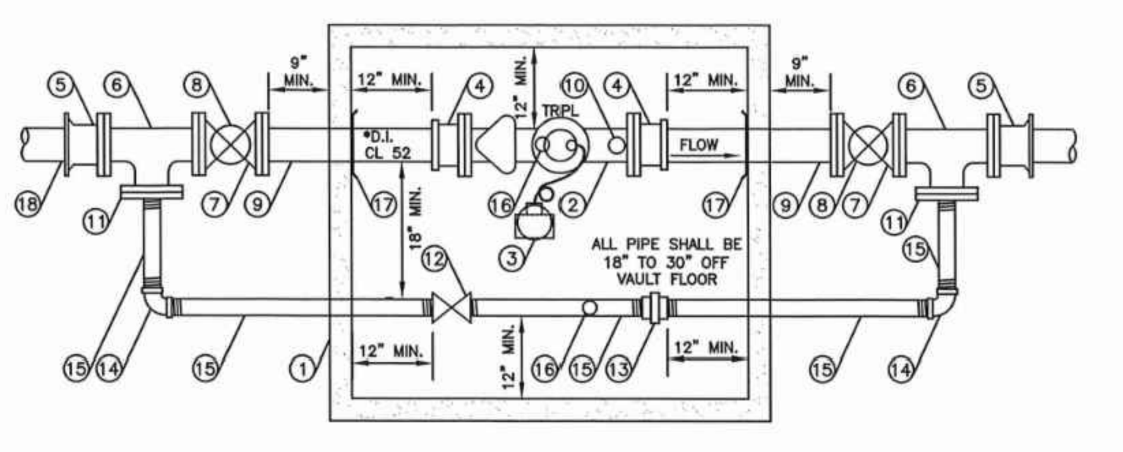
WATER DETAILS
FOR
PHASE 2 - WESLEY BRADLEY PARK

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

APPROVED
BY ____
CITY OF PUYALLUP
ENGINEERING SERVICES
DATE 09/19/2024

NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.
THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS.
FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE ENGINEERING SERVICES MANAGER.



CONSTRUCTION NOTES

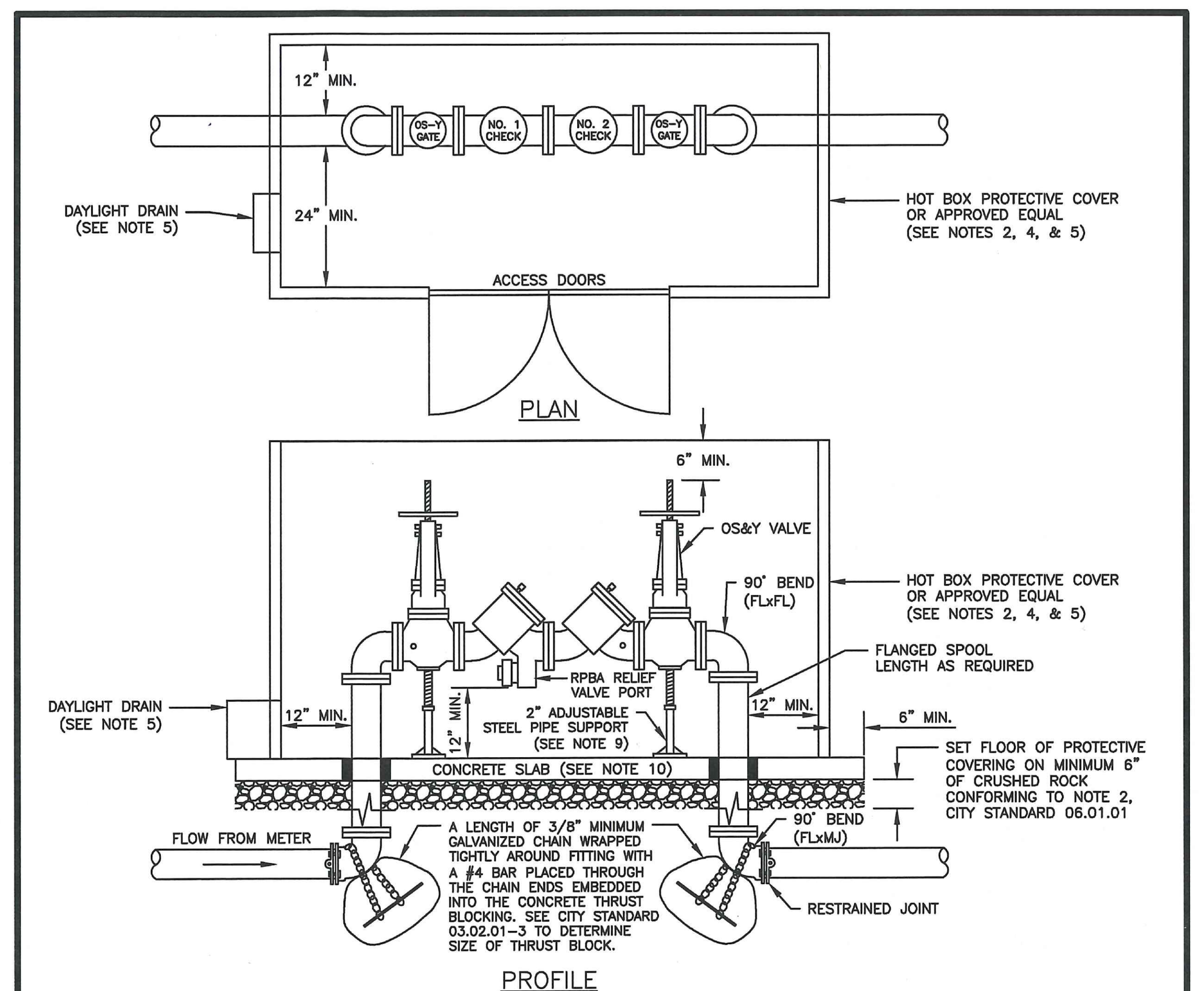
1. PRECAST CONCRETE VAULT WITH STANDARD SUMP PIT THAT DRAINS TO DAYLIGHT, IF FEASIBLE. IF INFEASIBLE, VAULT SHALL BE PROVIDED WITH A 1/4 HP (MIN.) SUMP PUMP WITHIN THE SUMP PIT. VAULT SHALL BE SUFFICIENTLY SIZED TO MAINTAIN MINIMUM CLEARANCES SPECIFIED ON THIS DETAIL. VAULT SHALL MEET CITY STANDARD 03.11.01. PROVIDE A CUT 2" HOLE IN LID FOR METER TRANSMITTER.
2. * SENSUS FLANGED C2 OMNI METER WITH BUILT-IN STRAINER WITH TRPL READING IN 1 CUBIC FEET. USE 3/4" DIAMETER 316 GRADE STAINLESS STEEL BOLTS AND TEFLON NUTS ON METER FLANGE CONNECTIONS.
3. FLEX NET TRANSMITTER 520M SINGLE PORT COUPLE WITH LEAK DETECTION. MOUNTED ON METER VAULT LID.
4. FLANGED COUPLING ADAPTOR.
5. * FLANGE x MECHANICAL JOINT ADAPTOR.
6. * FLANGED TEE.
7. * RESILIENT SEATED WEDGE GATE VALVE (FLGxFLG) WITH 2" SQUARE OPERATING NUT.
8. INSTALL TWO-PIECE, ADJUSTABLE, CAST IRON VALVE BOX AS SPECIFIED IN CITY STANDARD 03.01.01.
9. * FLANGE x PLAIN END SPOOL LENGTH AS REQUIRED.
10. REMOVE METER TEST PLUG AND INSTALL 2" x 4" BRASS NIPPLE, 2" BALL VALVE FORD B11-777W OR APPROVED EQUAL, 2-1/2" MALE (NST) x 2" MALE IPS THREADED BRASS FIRE HOSE ADAPTOR, 2-1/2" (NST) BRASS NOZZLE CAP.
11. * BLIND FLANGE WITH 2" THREADED OUTLET.
12. 2" LOCKING BALL VALVE FORD B11-777W OR APPROVED EQUAL.
13. 2" GALVANIZED UNION.
14. 2" GALVANIZED ELL.
15. 2" THREADED GALVANIZED PIPE – CUT TO LENGTH AS REQUIRED.
16. 2" ADJUSTABLE GALVANIZED PIPE SUPPORT.
17. MEGA LUG RING SECURED AGAINST VAULT WALL. MASTIC AND MORTAR SEAL WHERE PIPE PASSES THROUGH VAULT WALL.
18. AN ADDITIONAL * GATE VALVE IS REQUIRED AT THE WATER MAIN BRANCH CONNECTION.

NOTE: * = 3" ,4" ,OR 6" DEPENDING ON SERVICE LINE SIZE.

GENERAL NOTES

1. ALL PIPE, VALVES, FITTINGS AND OTHER MATERIAL USED SHALL CONFORM TO AWWA STANDARDS (LATEST EDITION).
2. ALL CONSTRUCTION SHALL CONFORM TO WSDOT/APWA STANDARDS SPECIFICATIONS, CURRENT EDITION, AND CITY OF PUYALLUP STANDARDS.

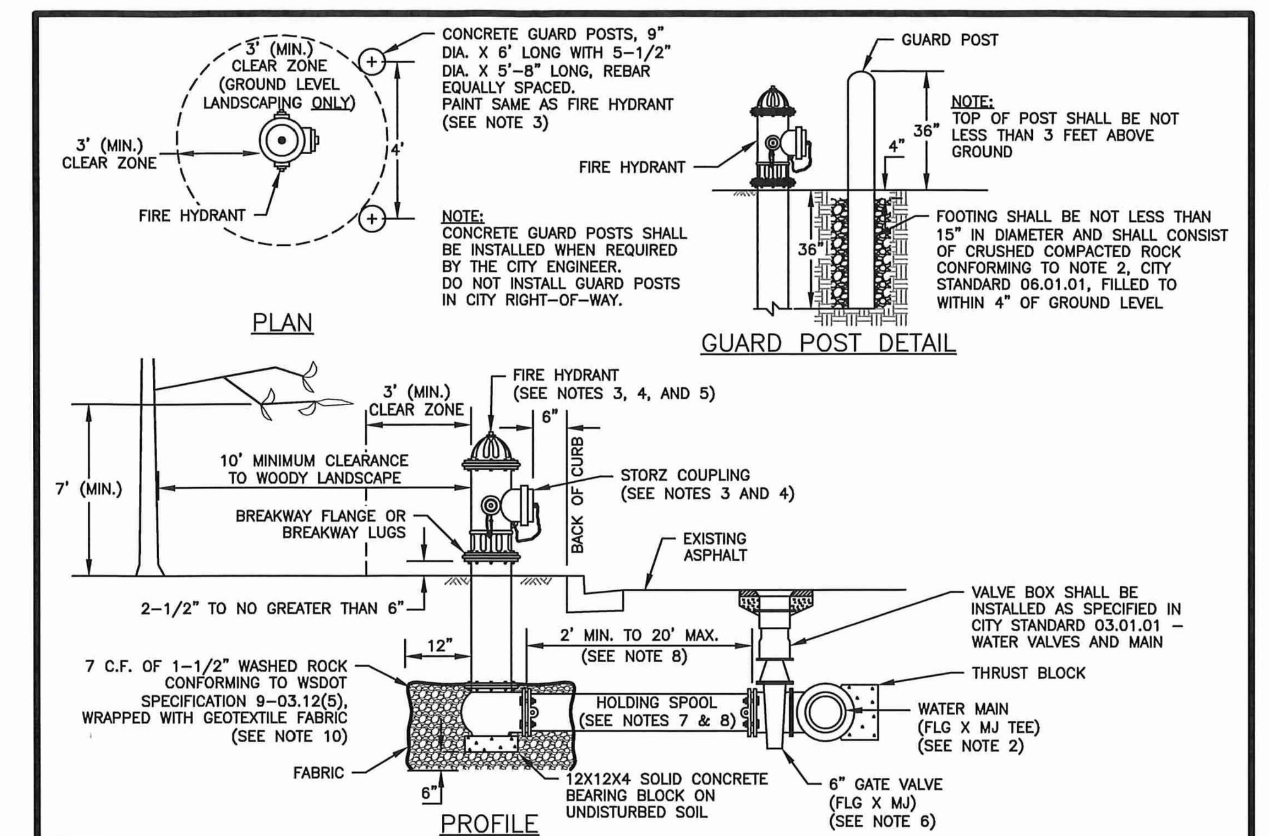
CITY OF PUYALLUP
PUBLIC WORKS AND DEVELOPMENT ENGINEERING
APPROVED FOR PUBLICATION
3"-4"-6" WATER SERVICE
(NOT TO SCALE)
CITY STANDARD 03.03.03



NOTES:

1. BACKFLOW ASSEMBLY MUST BE SELECTED FROM WASHINGTON STATE DEPARTMENT OF HEALTH'S LIST OF BACKFLOW PREVENTION ASSEMBLIES APPROVED FOR INSTALLATION IN WASHINGTON STATE, LASTEST EDITION.
2. THE RPBA SHALL BE INSTALLED WITH ADEQUATE SPACE TO FACILITATE MAINTENANCE AND TESTING. IT SHALL BE TESTED AFTER INSTALLATION, BY A WASHINGTON STATE CERTIFIED BACK-FLOW ASSEMBLY TESTER, TO INSURE ITS SATISFACTORY OPERATION BEFORE OCCUPANCY, AND ANNUALLY THERAFTER. SEND TEST RESULTS TO: CITY OF PUYALLUP, WATER QUALITY OPERATIONS, 1100 39TH AVE SE, PUYALLUP, WA 98374.
3. THE RPBA MUST BE PURCHASED AS A UNIT. NO MODIFICATIONS TO THE ASSEMBLY ARE ALLOWED.
4. THE RPBA SHALL NOT BE INSTALLED IN A PIT BELOW GROUND LEVEL.
5. THE PROTECTIVE COVERING FOR THE RPBA, WHICH PROTECTS THE ASSEMBLY FROM FREEZING, MUST INCLUDE A DAYLIGHT DRAIN. THE DRAIN MUST BE INSTALLED ABOVE GROUND OR ABOVE THE MAXIMUM FLOOD LEVEL, WHICHEVER IS HIGHER. THE DRAIN MUST BE A MINIMUM OF TWICE THE SIZE OF THE RPBA, TO BE ABLE TO HANDLE THE VOLUME OF WATER THAT POTENTIALLY COULD BE DISCHARGED FROM THE RELIEF VALVE PORT.
6. THE RPBA SHALL BE SIZED EQUAL OR COMPARABLE TO THE METER SIZE.
7. THE RPBA SHALL BE LOCATED IMMEDIATELY DOWN STREAM OF THE METER, AND CANNOT BE INSTALLED INSIDE OF A BUILDING, DUE TO THE SEVERE HAZARD FROM THE WATER THAT POTENTIALLY COULD BE DISCHARGED FROM THE RELIEF VALVE PORT DURING A FOULED CHECK VALVE SITUATION.
8. ALL ELECTRICAL SHALL BE INSPECTED BY A WASHINGTON STATE ELECTRICAL INSPECTOR.
9. PIPE SUPPORTS SHALL BE RUST-PROTECTED WITH ALUMINUM PAINT.
10. POUR A 4 INCH CONCRETE SLAB FOR RPBA PROTECTIVE COVER. PROVIDE A 2 INCH ANNULAR SPACE BETWEEN THE PIPE AND FLOOR. EXTEND THE CONCRETE SLAB 6 INCHES BEYOND THE PROTECTIVE COVERING TO PROVIDE ADEQUATE ANCHORING.
11. PROVIDE FREEZE PROTECTION AS DIRECTED BY OWNER.

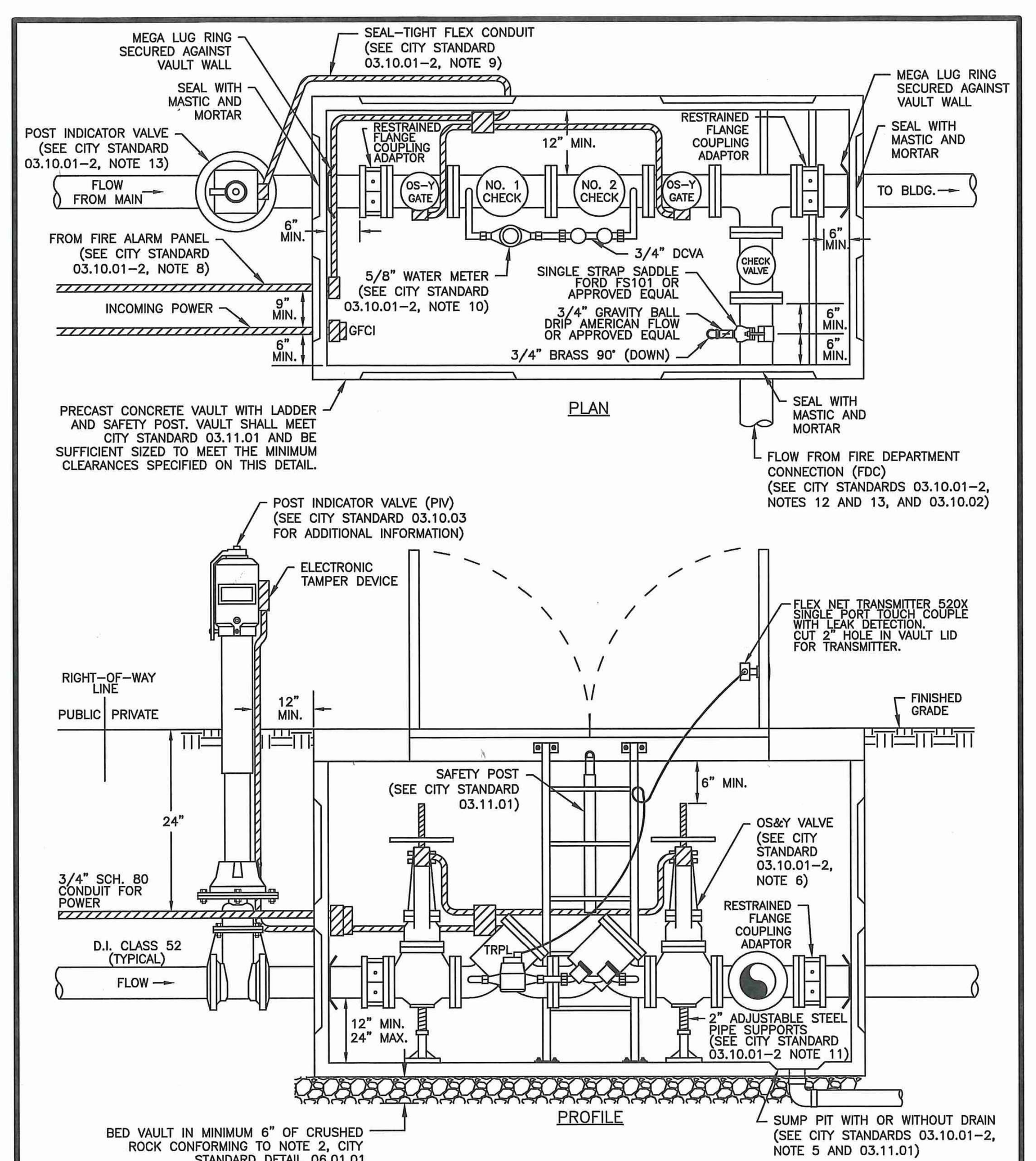
CITY OF PUYALLUP
OFFICE of THE CITY ENGINEER
APPROVED FOR PUBLICATION
DATE SEALED: 2/5/2018
3" AND ABOVE REDUCED PRESSURE BACKFLOW ASSEMBLY INSTALLATION
(NOT TO SCALE)
CITY STANDARD 03.04.03
FILE NAME: F:\DRAWINGS\COMMON\STANDARDS\CITY STANDARDS\2018\02 - PART 2 - STANDARD DETAILS\CAD\300\03.04



NOTES:

1. ALL MATERIALS AND FITTINGS SHALL BE AS SPECIFIED OR APPROVED EQUAL.
2. WATER MAINS SHALL HAVE A MINIMUM COVER OF 36" IN IMPROVED RIGHT-OF-WAY AND IMPROVED EASEMENTS, AND A MINIMUM 48" IN UNIMPROVED RIGHT-OF-WAY AND UNIMPROVED EASEMENTS.
3. THE FIRE HYDRANT AND CONCRETE GUARD POSTS SHALL BE PAINTED, RUST-OLEUM SAFETY YELLOW #7543 (TWO COATS) OR AN APPROVED EQUAL. THE STORZ FITTING SHALL NOT BE PAINTED.
4. FIRE HYDRANTS SHALL HAVE TWO 2-1/2" HOSE PORTS (NATIONAL STANDARD THREAD) WITH CAPS AND CHAINS AND ONE 4" PUMPER PORT (#8 TACOMA STEAMER PORT THREAD) WITH A 5" 'STORZ' COUPLING AND BLIND CAP INSTALLED ON THE STEAMER PORT, (STEAMER PORT SHALL FACE THE STREET), 1-1/4" PENTAGONAL OPERATING NUT (COUNTER-CLOCKWISE OPENING), O-RING TYPE STUFFING BOX, AUTOMATIC BARREL DRAINS AND 5-1/4" MAIN VALVE OPENING. HYDRANTS SHALL BE DESIGNED IN A MANNER THAT WILL PREVENT BARREL BREAKAGE WHEN STRUCK BY A VEHICLE. HYDRANTS SHALL CONFORM TO THE LATEST REVISION OF AWWA SPECIFICATIONS NO. C 502-73 FOR FIRE HYDRANTS FOR ORDINARY WATER SERVICE. FIRE HYDRANTS SHALL INCLUDE THE ENTIRE ASSEMBLY COMPLETE, INCLUDING HYDRANT, GATE VALVE AND BOX, CONNECTING PIPING, FITTINGS, AND ACCESSORIES.
5. FIRE HYDRANTS SHALL BE AVK, CLOW MEDALLION, M & H 129S, MUELLER CENTURION, OR WATEROUS.
6. GATE VALVES SHALL CONFORM TO THE LATEST AWWA SPECIFICATIONS FOR COLD WATER, RESILIENT SEATED WEDGE GATE VALVES, 200 PSI WORKING PRESSURE. THEY SHALL BE IRON-BODIED BRONZE-MOUNTED, NON-RISING STEM, COUNTER-CLOCKWISE OPENING, MECHANICAL JOINT BY FLANGED. VALVE STEMS SHALL BE PROVIDED WITH O-RING SEALS AND SHALL BE AS MANUFACTURED BY THE MUELLER COMPANY OR APPROVED EQUAL.
7. THE HOLDING SPOOL SHALL BE A MECHANICAL-JOINT (M.J.) HOLDING SPOOL, WITH THE USE OF MEGA-LUG CONNECTORS OR APPROVED EQUAL WITH CLASS 52 DUCTILE IRON PIPE.
8. IF DISTANCE BETWEEN WATER MAIN AND FIRE HYDRANT IS GREATER THAN 17 FEET, RESTRAINED JOINTS ARE REQUIRED ON ANY ADDITIONAL JOINTS. THE MAXIMUM 6-INCH HYDRANT RUN ALLOWED IS 20 FEET. ANY PROPOSED HYDRANT RUN EXCEEDING 20' IN LENGTH SHALL BE SIZED USING AN ENGINEERED HYDRAULIC FIRE FLOW MODEL. ANY HYDRANT RUN EXCEEDING 50 FEET IN LENGTH SHALL BE NO LESS THAN 8-INCHES IN DIAMETER.
9. FIRE HYDRANTS SHALL BE LOCATED A MINIMUM OF 50 FEET FROM A BUILDING OR STRUCTURE.
10. THE CONTRACTOR SHALL PLACE A 6 OZ. GEOTEXTILE FABRIC AROUND THE WASHED ROCK AREA, ENDS TO OVERLAP.
11. A FLUORESCENT ORANGE BAG MUST COVER AND BE SECURED TO THE FIRE HYDRANT UNTIL APPROVED FOR USE BY CITY ENGINEER.
12. A MINIMUM THREE FOOT (3') RADIUS UNOBSTRUCTED CLEAR ZONE (WORK AREA) SHALL BE PROVIDED AROUND ALL FIRE HYDRANTS. ADDITIONALLY, NO WOODY LANDSCAPE SHALL BE PLANTED WITHIN TEN FEET (10') OF ANY FIRE HYDRANT. OVERREACHING BRANCHES OF TREES ADJACENT TO HYDRANTS SHALL HAVE A MAINTAINED VERTICAL CLEARANCE OF SEVEN (7') FEET ABOVE FINISHED GRADE OF THE FIRE HYDRANT.

CITY OF PUYALLUP
OFFICE of THE CITY ENGINEER
APPROVED FOR PUBLICATION
DATE SEALED: 11/17/2020
FIRE HYDRANT ASSEMBLY
(NOT TO SCALE)
CITY STANDARD 03.05.01
FILE NAME: Y:\SHARED\DRAWINGS\CITY STANDARDS\2018\02 - PART 2 - STANDARD DETAILS\CAD\300\03.05



INSTALLATION LOCATION NOTE:
DOUBLE DETECTOR-CHECK VALVE ASSEMBLY (DDCVA) MAY BE INSTALLED WITHIN A BUILDING. THE PLAN AND PROFILE VIEW OF THIS DETAIL SHOWS ALTERNATIVE EXTERIOR VAULT INSTALLATION.

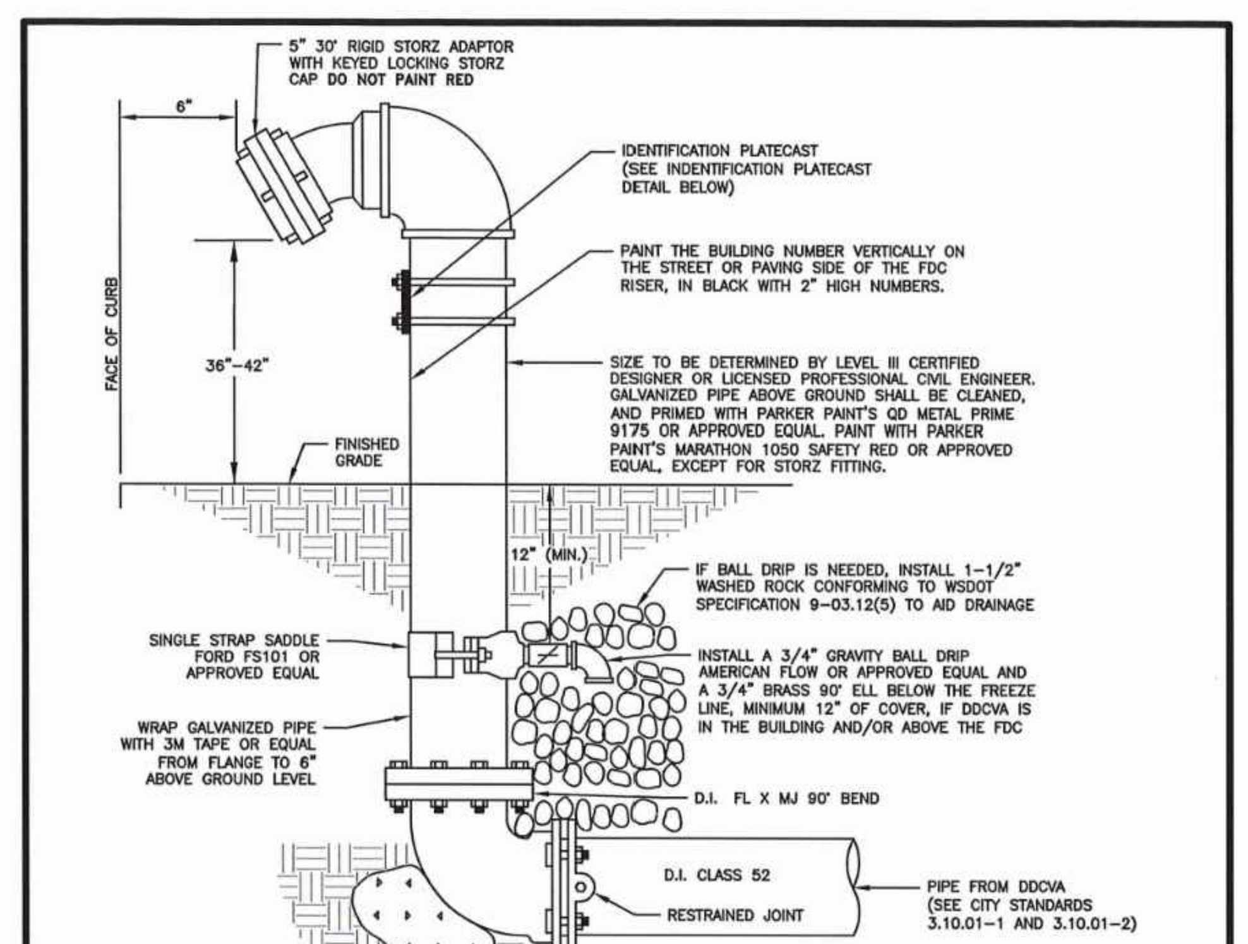
CITY STANDARD 03.10.01-2 COVERS ADDITIONAL NOTES FOR THIS DETAIL.

CITY OF PUYALLUP
OFFICE of THE CITY ENGINEER
APPROVED FOR PUBLICATION
DOUBLE DETECTOR-CHECK VALVE ASSEMBLY INSTALLATION
(NOT TO SCALE)
CITY STANDARD 03.10.01-1

NOTES FOR: DOUBLE DETECTOR CHECK VALVE ASSEMBLY (DDCVA) INSTALLATION CITY STANDARD 03.10.01-1

1. BACKFLOW ASSEMBLY MUST BE SELECTED FROM WASHINGTON STATE DEPARTMENT OF HEALTH'S LIST OF BACKFLOW PREVENTION ASSEMBLIES APPROVED FOR INSTALLATION IN WASHINGTON STATE, LATEST EDITION.
2. THE DDCVA SHALL BE INSTALLED WITH ADEQUATE SPACE TO FACILITATE MAINTENANCE AND TESTING. IT SHALL BE TESTED AFTER INSTALLATION, BY A WASHINGTON STATE CERTIFIED BACK-FLOW ASSEMBLY TESTER, TO INSURE ITS SATISFACTORY OPERATION BEFORE OCCUPANCY, AND ANNUALLY THEREAFTER. SEND TEST RESULTS TO: CITY OF PUYALLUP, WATER QUALITY OPERATIONS, 1100 39TH AVE SE, PUYALLUP, WA 98374.
3. DDCVA MUST BE PURCHASED AS A UNIT. NO MODIFICATIONS TO THE ASSEMBLY ARE ALLOWED.
4. DDCVA IS ALLOWED TO BE LOCATED WITHIN A BUILDING AS APPROVED BY THE FIRE CODE OFFICIAL. WHEN THE DDCVA IS LOCATED WITHIN A BUILDING, THE FIRE DEPARTMENT CONNECTION (FDC) BALL DRIP SHALL DRAIN TO THE NEAREST APPROVED ON-SITE STORM DRAINAGE STRUCTURE.
5. IN A VAULT INSTALLATION, IF VAULT CANNOT BE DRAINED TO DAYLIGHT, A 1/4 HP SUMP PUMP SHALL BE INSTALLED IN THE SUMP PIT OF THE VAULT. IT SHALL BE WIRED PER WASHINGTON STATE ELECTRICAL CODE, AND INSPECTED BY A STATE ELECTRICAL INSPECTOR. THE DISCHARGE PIPE SHALL BE CONNECTED TO THE NEAREST APPROVED ON-SITE STORM DRAINAGE STRUCTURE.
6. DDCVA OUTSIDE STEM AND YOKE (OS&Y) GATE VALVES, AND THE POST INDICATOR VALVE (PIV), SHALL HAVE SUPERVISED TAMPER SWITCHES.
7. ALL ELECTRICAL SHALL BE INSPECTED BY A WASHINGTON STATE ELECTRICAL INSPECTOR.
8. IN A VAULT INSTALLATION, RUN TWO 3/4" SCHEDULE 80 P.V.C. CONDUITS TO THE VAULT. ONE WILL BE USED FOR A GFCI PROTECTED OUTLET, AND ONE WILL BE FOR LOW VOLTAGE COMING FROM THE FIRE ALARM PANEL. INSTALL AN APPLETON FSCA OR FDCA CAST DEVICE BOX OR APPROVED EQUAL ON THE VAULT WALL AT THE CONDUIT PENETRATION.
9. IN A VAULT INSTALLATION, RUN LOW VOLTAGE WIRE INSIDE VAULT AND TO PIV THROUGH SEAL-TIGHT FLEX CONDUIT. CONDUIT SHALL BE SECURELY FASTENED PERPENDICULAR OR HORIZONTALLY TO THE WALLS OF THE VAULT.
10. WATER METER SHALL BE A SENSUS SRII TRPL READING IN 1 CUBIC FEET.
11. PIPE SUPPORTS SHALL BE RUST-PROTECTED WITH ALUMINUM PAINT.
12. THE FDC SHALL BE LOCATED WITHIN 15 FEET OF A FIRE HYDRANT, BUT NOT LESS THAN 10 FEET.
13. THE FDC AND PIV SHALL BE A MINIMUM OF 50 FEET FROM A BUILDING, UNLESS APPROVED BY THE CITY OF PUYALLUP FIRE CODE OFFICIAL, BUT NEVER LESS THAN 5 FEET FROM BUILDING.
14. A DDCVA INSTALLED MORE THAN 5 FEET ABOVE THE FLOOR LEVEL MUST HAVE A PLATFORM UNDER IT FOR THE TESTER OR MAINTENANCE PERSON TO STAND ON. THE PLATFORM MUST BE OSHA APPROVED AND MEET ALL APPLICABLE SAFETY STANDARDS AND CODES.

CITY OF PUYALLUP
OFFICE of THE CITY ENGINEER
APPROVED FOR PUBLICATION
DATE SEALED: 2/5/2018
DOUBLE DETECTOR-CHECK VALVE ASSEMBLY INSTALLATION (NOTES)
(NOT TO SCALE)
CITY STANDARD 03.10.01-2



FIRE DEPARTMENT CONNECTION (FDC) NOTES:

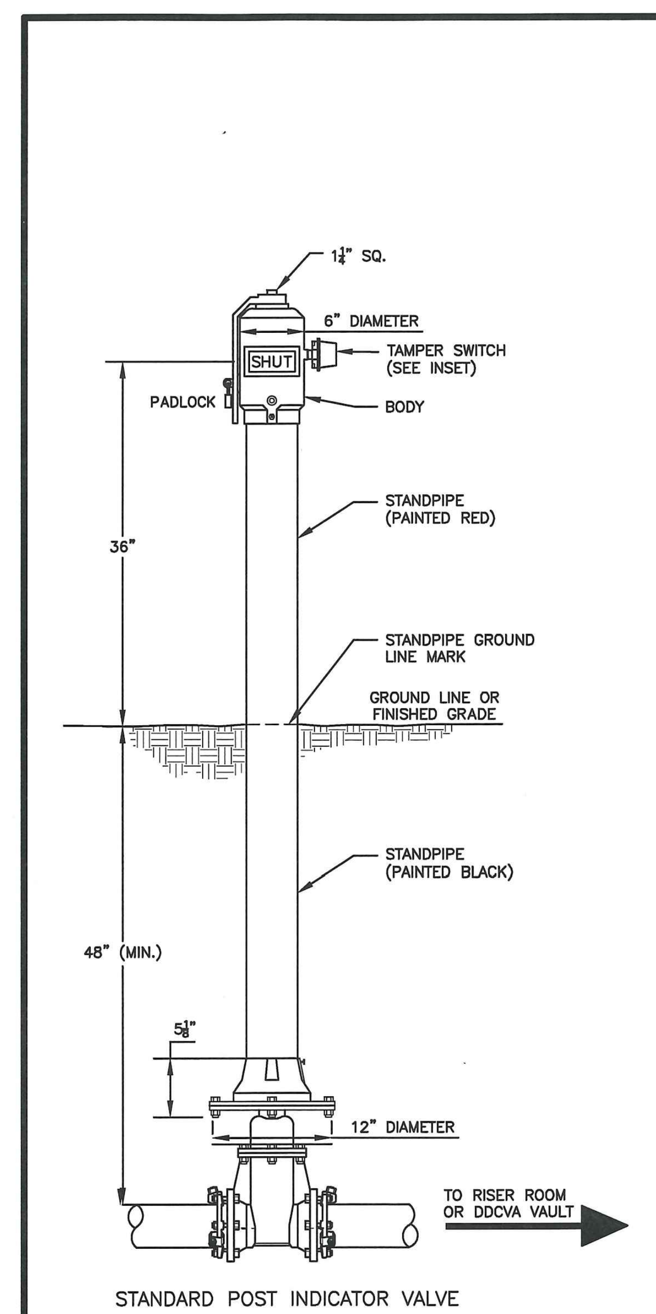
1. THE FIRE DEPARTMENT CONNECTION (FDC) SHALL BE LOCATED WITHIN 15 FEET OF A FIRE HYDRANT, BUT NOT LESS THAN 10 FEET.
2. THE FDC SHALL BE A MINIMUM OF 50 FEET FROM THE BUILDING, UNLESS APPROVED BY THE FIRE CODE OFFICIAL, BUT NEVER LESS THAN 5 FEET FROM BUILDING.
3. IF THE PROJECT IS UTILIZING A FIRE BOOSTER PUMP, THE FDC MUST CONNECT TO THE SPRINKLER SYSTEM ON THE DISCHARGE SIDE OF THE PUMP IN ACCORDANCE WITH NFPA REGULATIONS.
4. THERE SHALL BE A MINIMUM OF 36" OF UNOBSTRUCTED CLEARANCE AROUND THE PERIMETER OF ANY FDC.
5. SEE STANDARD DETAIL 03.05.01 FOR GUARD POST DETAIL AND SPACING.

IDENTIFICATION PLATECAST DETAIL

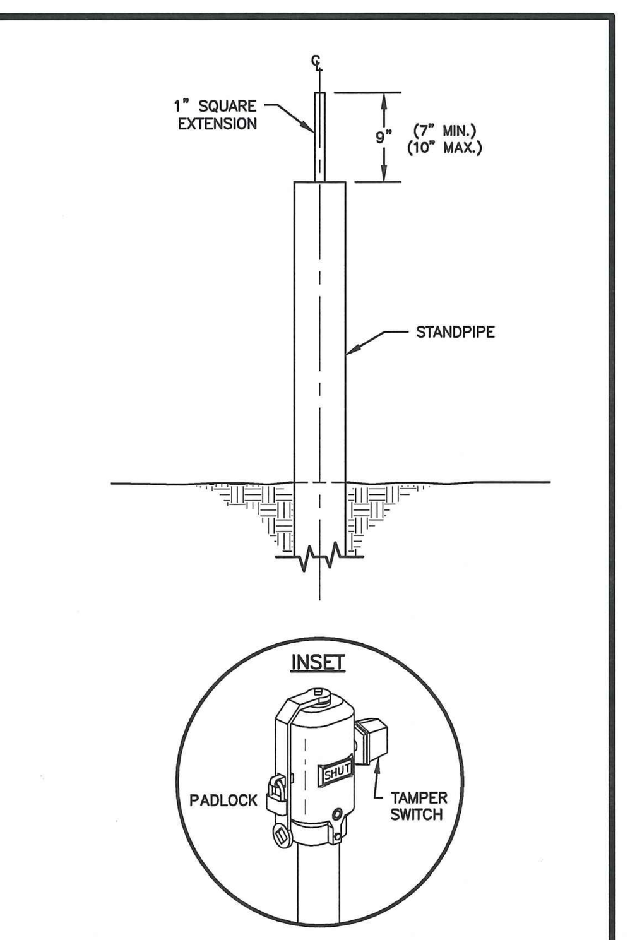
IDENTIFICATION PLATECAST DETAIL NOTES:

1. IDENTIFICATION PLATECAST WILL BE BRASS
2. IDENTIFICATION PLATECAST WILL BE 1/4" THICK
3. LETTERS WILL BE ONE INCH HIGH AND RAISED
4. USE TWO (2) STAINLESS STEEL U-BOLTS TO AFFIX TO PIPE

CITY OF PUYALLUP
PUBLIC WORKS AND DEVELOPMENT ENGINEERING
APPROVED FOR PUBLICATION
FIRE DEPARTMENT CONNECTION (FDC)
(NOT TO SCALE)
CITY STANDARD 03.10.02



STANDARD POST INDICATOR VALVE



FIELD ADJUSTMENT INSTRUCTIONS

1. REMOVE THE BODY FROM THE TOP OF THE INDICATOR POST ASSEMBLY.
2. CUT THE REQUIRED LENGTH OFF THE BOTTOM OF THE STANDPIPE FOR THE GROUND LINE TO MATCH UP WITH STANDPIPE GROUND LINE MARK.
3. CUT THE 1" SQ. EXTENSION AT A DISTANCE OF 9" ABOVE THE TOP OF THE STANDPIPE.
4. SET THE "OPEN" AND "SHUT" TARGETS FOR THE APPROPRIATE VALVE SIZE.
5. RE-ATTACH THE BODY TO THE TOP OF THE INDICATOR POST ASSEMBLY.
6. ALL POST INDICATOR VALVES SHALL BE INSTALLED WITH AN ELECTRONIC UL LISTED TAMPER SWITCH.
7. THERE SHALL BE 36" OF UNOBSTRUCTED CLEARANCE AROUND THE PERIMETER OF ALL POST INDICATOR VALVES.
8. POST INDICATOR VALVE SHALL BE LOCATED AT A MINIMUM 5-ft FROM BUILDING.

CITY OF PUYALLUP
OFFICE of THE CITY ENGINEER
APPROVED FOR PUBLICATION
DATE SEALED: 2/5/2018
POST INDICATOR VALVE
(NOT TO SCALE)
CITY STANDARD 03.10.03

Revision | No. | Date | By | Ckd. | Appr.

Title: WATER DETAILS FOR CIVIL PLANS PHASE 2 - WESLEY BRADLEY PARK

For: WESLEY HOMES
815 SOUTH 216TH STREET
DES MOINES, WA 98190
(206) 870-1209

DANIEL K. BALMELLI, STATE OF WASHINGTON, 25672, REGISTERED PROFESSIONAL ENGINEER
9/3/24

Scale: Horizontal N/A, Vertical N/A

Designed CK
Drawn BGK
Checked CMV
Approved DKB
Date 9/3/24

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
425.251.6222
barghausen.com

Job Number 16718
Sheet C18 of C21

P:\16000s\16718\engineering\Phase 2\16718-wd.dwg 11/6/2023 10:29 AM LPALMER

SEWER DETAILS

FOR

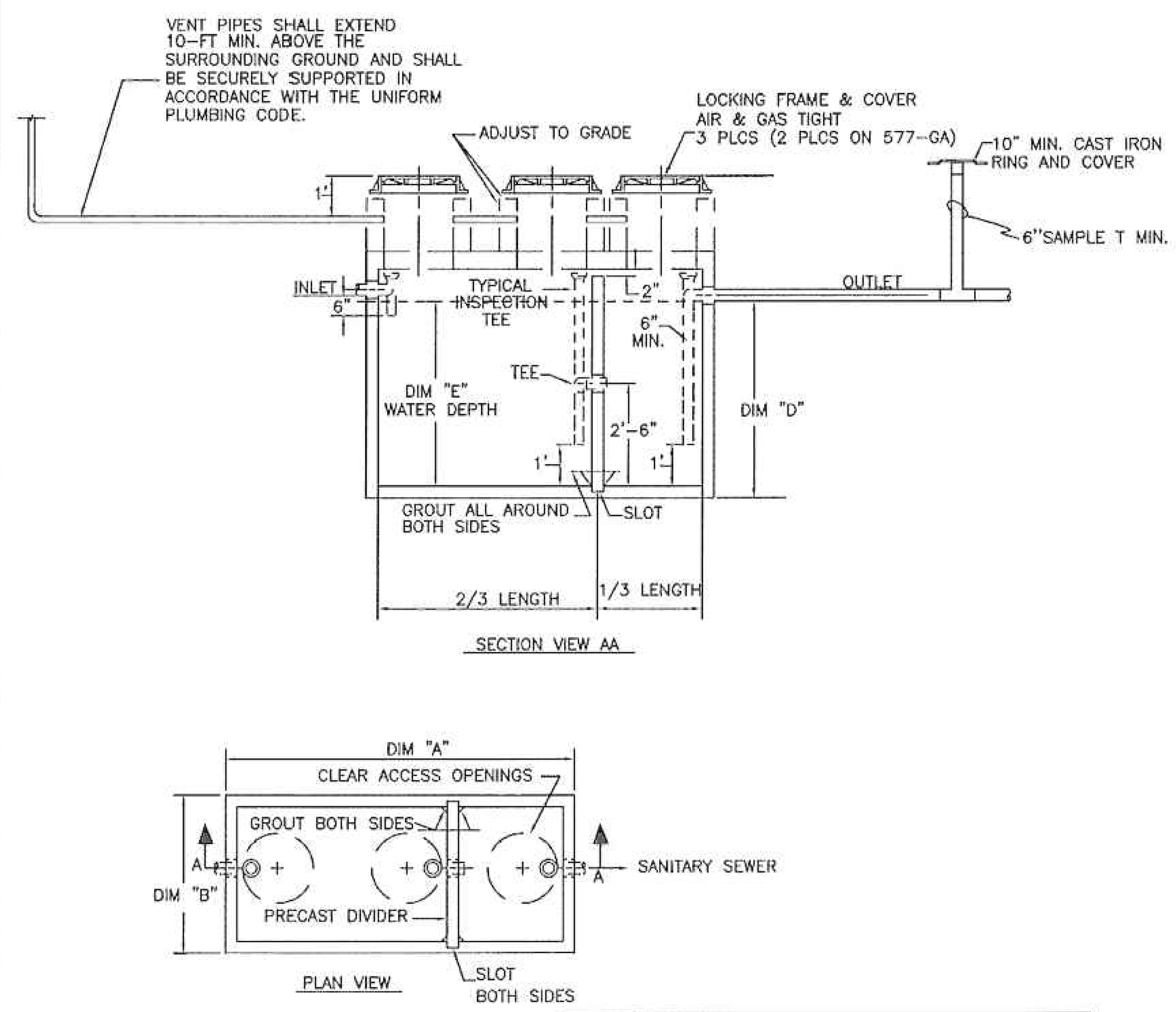
PHASE 2 - WESLEY BRADLEY PARK

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

APPROVED
CITY OF PUYALLUP
ENGINEERING SERVICES
DATE 09/19/2024

NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.
THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE ENGINEERING SERVICES MANAGER.



CAPACITY	DIM "A"	DIM "B"	DIM "C"	DIM "D"	WATER DEPTH DIM "E"
750 (Min. Size)	7'-0"	4'-8"	7'-0"	4'-3"	3'-11"
1000	9'-0"	5'-0"	7'-2"	4'-2"	3'-10"
1500	11'-2"	5'-8"	7'-2"	4'-3"	3'-11"
2000	12'-8"	6'-8"	8'-0"	4'-7"	3'-10"
2500	12'-8"	6'-8"	8'-0"	5'-6"	4'-9"
3000	13'-1"	8'-0"	8'-7"	5'-1"	4'-8"
4000	13'-1"	8'-0"	8'-7"	6'-8"	6'-3"
5000	15'-7"	9'-7"	10'-0"	7'-4"	6'-1"
6000	19'-11"	9'-11"	10'-5"	7'-1"	5'-8"
7000	19'-11"	9'-11"	10'-5"	8'-0"	6'-7"

NOTES:

1. CONCRETE: 28 DAY COMPRESSIVE STRENGTH f'c = 4500 psi
2. REBAR: ASTM A-615 GRADE 60
3. MESH: ASTM A-185 GRADE 65
4. DESIGN: ACI-318-83 BUILDING CODE ASTM C-857 "MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES"
5. MINIMUM VAULT DIMENSIONS BASED ON UTILITY VAULT. OTHER MANUFACTURER'S SIZING MAY VARY.

* SEE CITY STANDARD DETAIL NO. 04.06.02 FOR ADDITIONAL NOTES

CITY OF PUYALLUP
OFFICE of THE CITY ENGINEER

GREASE INTERCEPTOR

CITY STANDARD 04.06.01

NOTES FOR GREASE INTERCEPTORS:

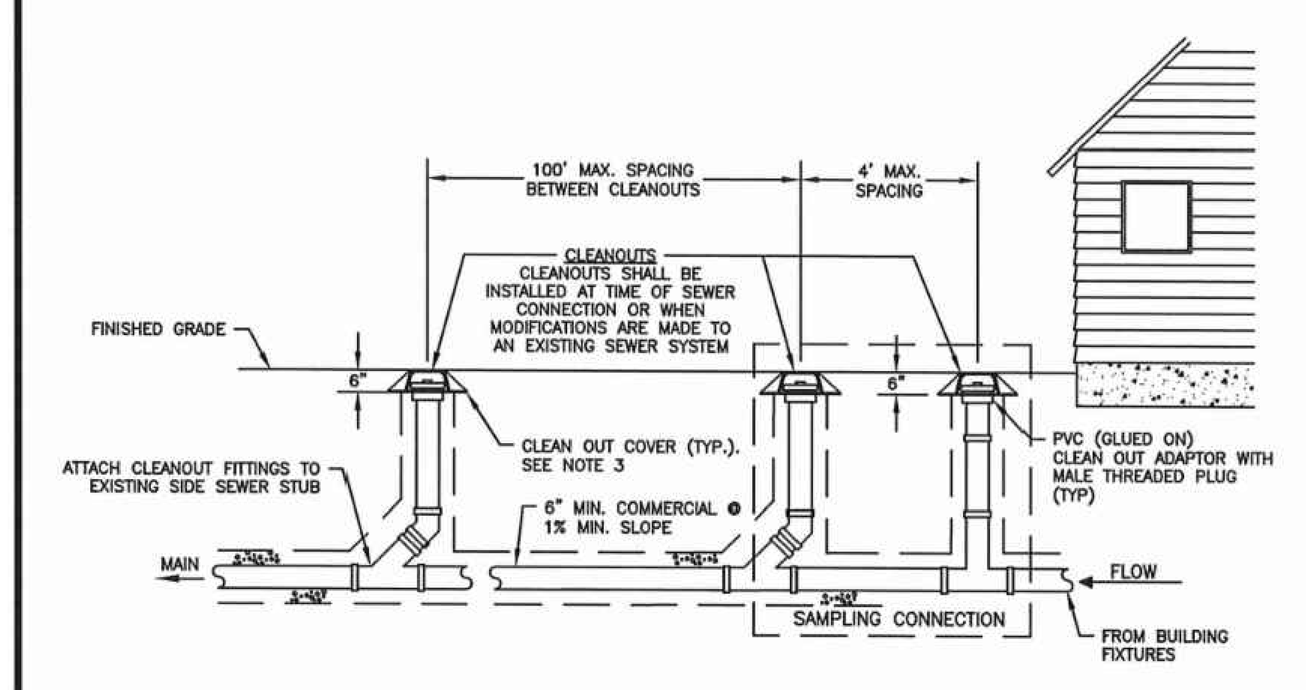
1. THE PLANS & SPECIFICATIONS SHALL ILLUSTRATE PROPERTY BOUNDARIES, PIPING/DRAINAGE DETAILS AND CONNECTIONS TO THE SANITARY SEWER. DETAIL AND ELEVATION DRAWINGS OF THE GREASE INTERCEPTOR SHALL INCLUDE SIZING CALCULATIONS IN ACCORDANCE WITH THE UNIFORM PLUMBING CODE CURRENTLY ADOPTED BY THE CITY OF PUYALLUP.
2. VENTING OF THE INTERCEPTOR SHALL BE IN ACCORDANCE WITH THE UNIFORM PLUMBING CODE CURRENTLY ADOPTED BY THE CITY OF PUYALLUP.
3. EFFLUENT FROM GREASE INTERCEPTORS SHALL NOT EXCEED 100 mg/L FAT, OIL, AND/OR GREASE DISCHARGED TO THE DOWNSTREAM SANITARY SEWER SYSTEM.
4. GREASE INTERCEPTORS INSTALLED IN PAVED AREAS SHALL COMPLY WITH H-20 LOADING CRITERIA.
5. THE GREASE INTERCEPTOR SHALL BE INSTALLED AND CONNNECTED SUCH THAT IT SHALL BE EASILY ACCESSIBLE FOR INSPECTION, CLEANING, AND REMOVAL AT ALL TIMES. MANHOLE COVERS SHALL BE GAS TIGHT AND HAVE A MINIMUM OPENING OF 24-INCHES IN DIAMETER.
6. NO SANITARY WASTEWATER SHALL BE CONVEYED TO THE SEPARATOR. A SEPARATE SIDE SEWER SHALL BE REQUIRED TO CARRY SANITARY WASTEWATER TO THE SEWER MAIN AND SHALL BE PLACED AS CLOSE TO THE SERVICE AREA AS PRACTICAL.
7. PLUMBING/PIPING SHALL BE CONSTRUCTED TO ESTABLISH "PARALLEL FLOW" (90-DEGREES TO THE TANK BAFFLE) THROUGH THE GREASE INTERCEPTOR. NO RADIUS, BEND, OR ELBOW SHALL BE ALLOWED IN THE INLET PIPE UPSTREAM OF THE INTERCEPTOR FOR A MINIMUM OF 10-FEET, OR 20-PIPE DIAMETERS, WHICHEVER IS GREATER.
8. ANY PUMP MECHANISM SHALL BE INSTALLED DOWNSTREAM OF THE INTERCEPTOR TO PREVENT FAT, OIL AND GREASE EMULSIFICATION. A "TEE" CONNECTION SHALL BE INSTALLED IN THE DISCHARGE PIPING TO PROVIDE FOR SAMPLE COLLECTION
9. ALL GREASE INTERCEPTORS SHALL BE FILLED WITH CLEAN WATER BEFORE USE.
10. THE DESIGN ENGINEER SHALL PROVIDE ENGINEERING SERVICES STAFF WITH A LETTER OF INSPECTION CERTIFYING THAT THE INSTALLATION WAS PERFORMED IN ACCORDANCE WITH ALL REGULATIONS AND THE APPROVED PLAN.
11. FINAL INSPECTION IS REQUIRED BY ENGINEERING SERVICES STAFF PRIOR TO CONNECTING TO THE SANITARY SEWER.
12. THE PROPERTY OWNER SHALL RETAIN OWNERSHIP OF THE GREASE INTERCEPTOR AND SIDE SEWER LINES AND SHALL BE RESPONSIBLE FOR THEIR OPERATION AND MAINTENANCE. A SERVICE/MAINTENANCE RECORD SHALL BE KEPT ON THE PREMISES AT ALL TIMES AND SHALL BE IMMEDIATELY AVAILABLE TO CITY OF PUYALLUP STAFF UPON REQUEST.
13. THE PROPERTY OWNER SHALL REPORT IMMEDIATELY TO THE CITY'S INDUSTRIAL PRETREATMENT SPECIALIST ANY SPILL, SURCHARGE, BYPASS, OR MECHANICAL FAULT AND/OR FAILURE WHICH INTERRUPTS, OR OTHERWISE REDUCES THE CAPACITY OR REMOVAL EFFICIENCY OF THE GREASE INTERCEPTOR BY CALLING (253) 841-5523.

CITY OF PUYALLUP
OFFICE of THE CITY ENGINEER

GREASE INTERCEPTOR (NOTES)

DRAWN BY LINDA LIAN | CHECKED BY COLLEEN HARRIS | APPROVED BY MARK PALMER | REVISED BY LINDA LIAN | DATE REVISED 11/28/16

CITY STANDARD 04.06.02



NOTES:

1. SAMPLING CONNECTION SHALL BE INSTALLED OUTSIDE WITH UNOBSTRUCTED ACCESS AT ALL TIMES.
2. SAMPLING CONNECTION SHALL BE INSTALLED FOR EACH COMMERCIAL / RETAIL UNIT OR SPACE.
3. CLEAN OUT AND SAMPLING CONNECTION COVERS:
   A) FOR NON-VEHICULAR TRAFFIC INSTALLATIONS USE "CARSON" MODEL 910 GREEN YARD BOX WITH BOLT DOWN LID MARKED SEWER OR APPROVED EQUAL.
   B) FOR ASPHALT, GRAVEL, OR TRAFFIC INSTALLATIONS, SEE CITY STANDARD DETAIL NO. 04.03.05 FOR FRAME AND COVER SECTION.
4. EACH CLEANOUT ASSEMBLY SHALL CONSIST OF: ONE CLEANOUT ADAPTER, HUB x FEMALE, FIPT, PVC SI AND ONE CLEANOUT PLUG, MOPT WITH RAISED NUT, PVC SDR35.

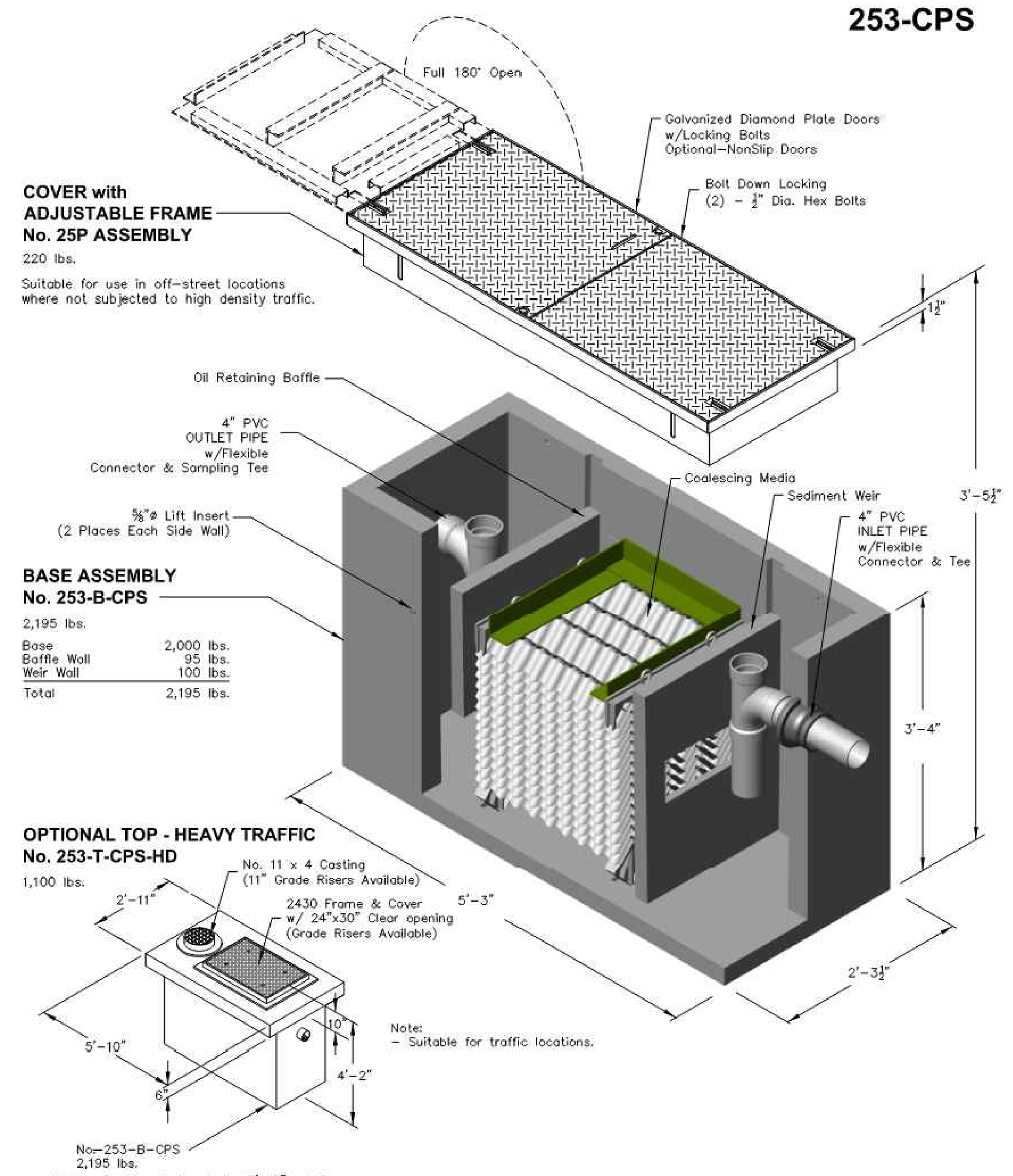
CITY OF PUYALLUP
PUBLIC WORKS AND DEVELOPMENT ENGINEERING

COMMERCIAL SIDE SEWER CONNECTION WITH SAMPLING CONNECTION

(NOT TO SCALE)

CITY STANDARD 04.03.04

253-CPS



Oldcastle Precast
PO Box 323, Wilsonville, Oregon 97070-0323
Tel: (503) 682-2844 Fax: (503) 682-2657

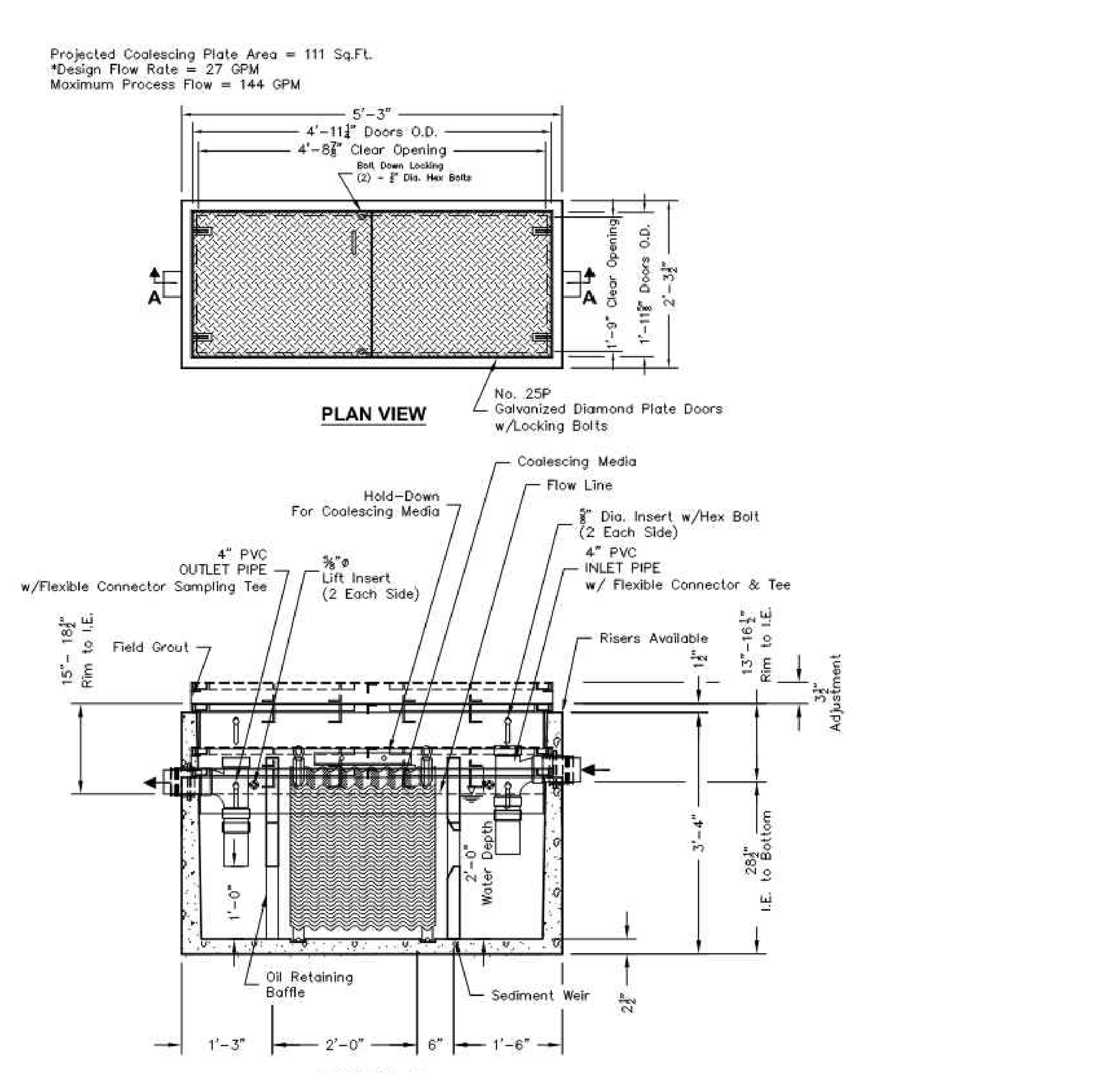
253-CPS
File Name: 020-253CPS
Issue Date: 2018
oldcastleprecast.com/wilsonville

253-CPS OIL / WATER SEPARATOR COALESCING - 27 GPM

4.0

253-CPS

Projected Coalescing Plate Area = 111 Sq.Ft.
*Design Flow Rate = 27 GPM
Maximum Process Flow = 144 GPM



*DESIGN FLOW RATE	EFFLUENT QUALITY	100% COLLECTED SIZE
27 GPM	10 ppm	60 Micron

Basic Design Information: *
Influent Characteristics
– Oil Specific Gravity = 0.88
– Operating Temperature = 50°
– Influent Oil Concentration = 100 ppm
– Mean Oil Droplet Size = 130 Microns
– .033 ft/min. Critical Oil Droplet Predicted Rise Rate

*Basic Design Information per Washington State Department of Ecology. User to Adjust Estimates for Variations in Real Conditions.

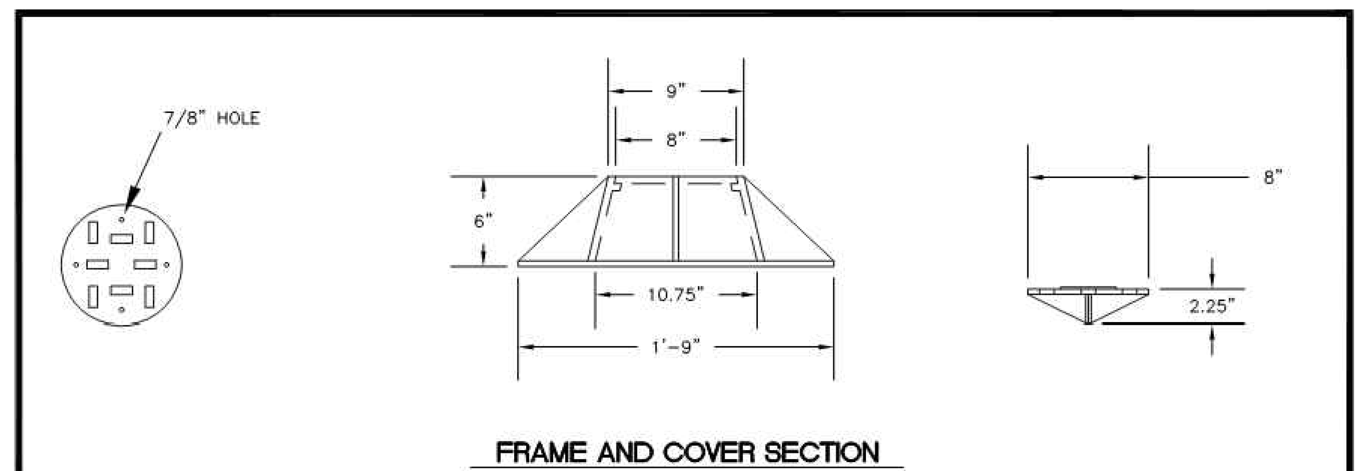
Notes:
– Static Water Depth = 2'-0"
– Prior to "Startup" of system, fill with clean water to bottom of outlet pipe. For best results, fill to flow line.
– Follow Regular Inspection, Cleaning, & Maintenance Schedule (See Clean Out & Maintenance).

Oldcastle Precast
PO Box 323, Wilsonville, Oregon 97070-0323
Tel: (503) 682-2844 Fax: (503) 682-2657

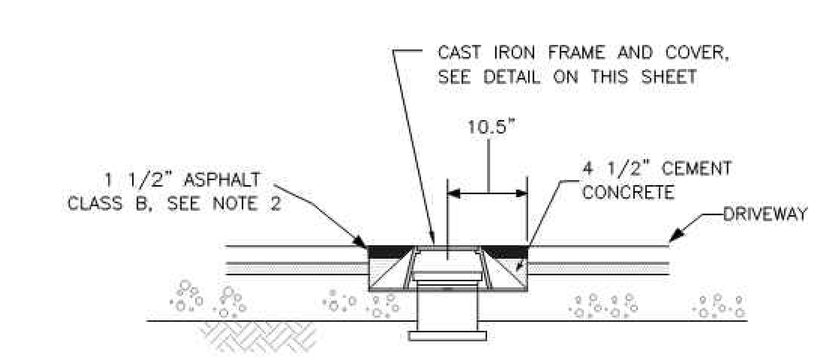
253-CPS
File Name: 020-253CPS
Issue Date: 2018
oldcastleprecast.com/wilsonville

253-CPS OIL / WATER SEPARATOR COALESCING - 27 GPM

4.1



SCALE 1:1



NOTES

1. NEAT LINE CUT SHALL BE SEALED AT THE TOP WITH A HOT PAVING GRADE ASPHALT AND FACE OF CUT TACKED.
2. ALL MATERIAL SHALL CONFORM TO THE 1991 STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION PREPARED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND AMERICAN PUBLIC WORKS ASSOCIATION, WASHINGTON STATE CHAPTER.
3. MACHINE BEARING FACES OF FRAME AND COVER TO INSURE POSITIVE FIT.
4. EACH CLEAN OUT ASSEMBLY SHALL CONSIST OF: ONE CLEAN OUT ADAPTOR (HUB X FEMALE INSIDE PIPE THREAD, P.V.C. SLIP IN), AND ONE CLEAN OUT PLUG (MALE OUTSIDE PIPE THREAD WITH RAISED NUT, P.V.C. SDR35).

SCALE 1:2

CITY OF PUYALLUP
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

SIDE SEWER CLEAN OUT WHEN PLACED IN DRIVEWAY

CITY STANDARD 04.03.05

Title: SEWER DETAILS FOR CIVIL PLANS PHASE 2 - WESLEY BRADLEY PARK

For: WESLEY HOMES
815 SOUTH 216TH STREET
DES MOINES, WA 98190
(206) 870-1209

DANIEL K. BALMELLI, STATE OF WASHINGTON, 25672, REGISTERED PROFESSIONAL ENGINEER
9/3/24

Scale: Horizontal N/A, Vertical N/A

Designed CK
Drawn BGK
Checked CMV
Approved DKB
Date 9/3/24

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
425.251.6222
barghausen.com

Job Number 16718

Sheet C19 of C21

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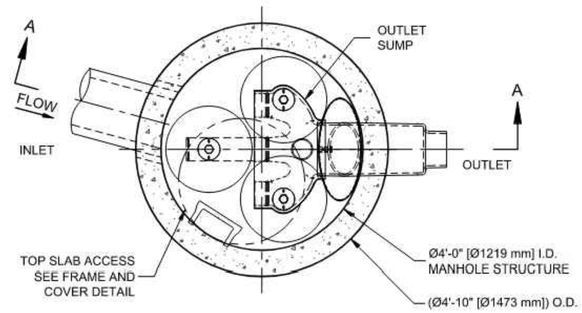
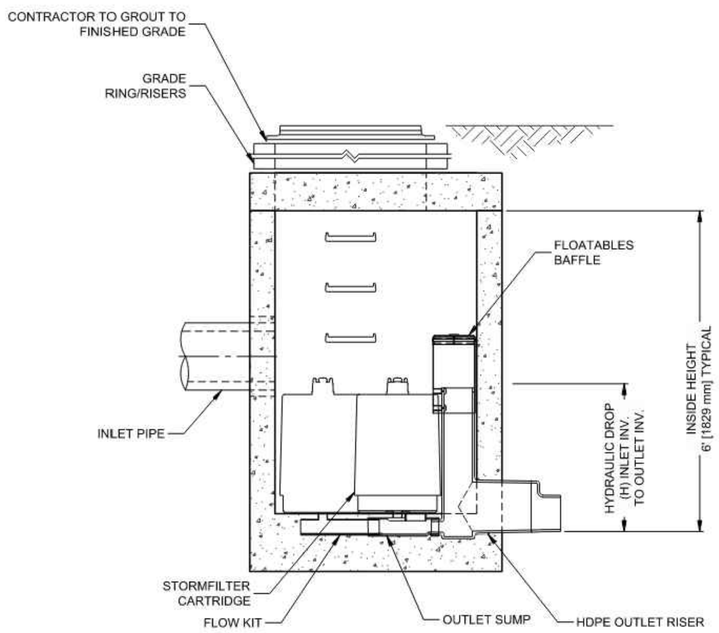
WATER QUALITY DETAIL
FOR
PHASE 2 - WESLEY BRADLEY PARK

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning
Engineering | Public Works
Fire | Traffic

APPROVED
BY _____
CITY OF PUYALLUP
ENGINEERING SERVICES
DATE 09/19/2024
NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.
THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE ENGINEERING SERVICES MANAGER.



PLAN VIEW
STANDARD OUTLET RISER
FLOWKIT: 40A



SECTION A-A

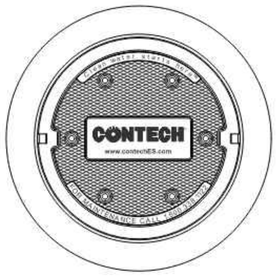
STORMFILTER DESIGN NOTES

STORMFILTER TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. THE STANDARD MANHOLE STYLE IS SHOWN WITH THE MAXIMUM NUMBER OF CARTRIDGES (3). VOLUME SYSTEM IS ALSO AVAILABLE WITH MAXIMUM 3 CARTRIDGES.
Ø4 [1219 mm] MANHOLE STORMFILTER PEAK HYDRAULIC CAPACITY IS 1.0 CFS [28.3 L/s] . IF THE SITE CONDITIONS EXCEED 1.0 CFS [28.3 L/s] AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

CARTRIDGE SELECTION

CARTRIDGE HEIGHT	27" [686 mm]			18" [458 mm]			LOW DROP		
RECOMMENDED HYDRAULIC DROP (H)	[930			2.3' [700 mm]			[650		
SPECIFIC FLOW RATE (gpm/sf) [L/s/m²]	2 [1.30]		1 [0.65]	2 [1.30]	1.67* [1.08]	1 [0.65]	2 [1.30]		1 [0.65]
CARTRIDGE FLOW RATE (gpm) [L/s]	[1.42]	18.79 [1.19]	11.2 [0.71]	15 [0.95]	12.53 [0.79]	7.5 [0.44]	[0.53]	8.35 [0.54]	5 [0.32]

* 1.67 gpm/sf [1.08 L/s/m²] SPECIFIC FLOW RATE IS APPROVED WITH PHOSPHOSORB® (PSORB) MEDIA ONLY



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	STORMFILTER #1
WATER QUALITY FLOW RATE (cfs) [L/s]	0.0162
PEAK FLOW RATE (cfs) [L/s]	<1.8 CFS
RETURN PERIOD OF PEAK FLOW (yrs)	2 YR
CARTRIDGE HEIGHT (SEE TABLE ABOVE)	18"
NUMBER OF CARTRIDGES REQUIRED	1
CARTRIDGE FLOW RATE	7.5
MEDIA TYPE (PERLITE, ZPG, PSORB)	ZPG

PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE #1	454.99	PVC	12"
INLET PIPE #2	454.99	PVC	8"
OUTLET PIPE	452.69	PVC	12"

RIM ELEVATION	459.20

ANTI-FLOTATION BALLAST	WIDTH	HEIGHT
	*	*

NOTES/SPECIAL REQUIREMENTS:

* PER ENGINEER OF RECORD

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
3. FOR SITE SPECIFIC DRAWINGS WITH DETAILED VAULT DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
4. STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
5. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 5' [1524 mm] AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
6. FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. RADIAL MEDIA DEPTH SHALL BE 7-INCHES [178 mm]. FILTER MEDIA CONTACT TIME SHALL BE AT LEAST 38 SECONDS.
7. SPECIFIC FLOW RATE IS EQUAL TO THE FILTER TREATMENT CAPACITY (gpm) [L/s] DIVIDED BY THE FILTER CONTACT SURFACE AREA (sq ft)[m²].
8. STORMFILTER STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET PIPE(S).
E. CONTRACTOR TO PROVIDE AND INSTALL CONNECTOR TO THE OUTLET RISER STUB. STORMFILTER EQUIPPED WITH A DUAL DIAMETER HDPE OUTLET STUB AND SAND COLLAR. IF OUTLET PIPE IS LARGER THAN 8 INCHES [200 mm], CONTRACTOR TO REMOVE THE 8 INCH [200 mm] OUTLET STUB AT MOLDED-IN CUT LINE. COUPLING BY FERNCO OR EQUAL AND PROVIDED BY CONTRACTOR.
F. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.

The Stormwater Management StormFilter®
THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS: 5,322,629; 5,524,576; 5,707,527; 5,985,157; 6,027,639; 6,649,048. RELATED FOREIGN PATENTS. OR OTHER PATENTS PENDING.

CONTECH ENGINEERED SOLUTIONS LLC
www.contechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

SFMH48
STORMFILTER
STANDARD DETAIL

I:\STORMWATER\COMMOPS\10 STORMFILTER\40 STANDARD DRAWINGS\MANHOLE\SFMH48-DTL.DWG 4/5/2019 10:54 AM

No. | Date | By | Ckd. | Appr. | Revision

Title: WATER QUALITY DETAIL FOR CIVIL PLANS PHASE 2 - WESLEY BRADLEY PARK

For: WESLEY HOMES
815 SOUTH 216TH STREET
DES MOINES, WA 98190
(206) 870-1209

DANIEL K. BALMELLI — STATE OF WASHINGTON — 25672 — REGISTERED PROFESSIONAL ENGINEER
9/3/24

Scale: Horizontal N/A Vertical N/A
Designed CK Drawn BGK Checked CMV Approved DKB Date 9/3/24

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
425.251.6222 barghausen.com

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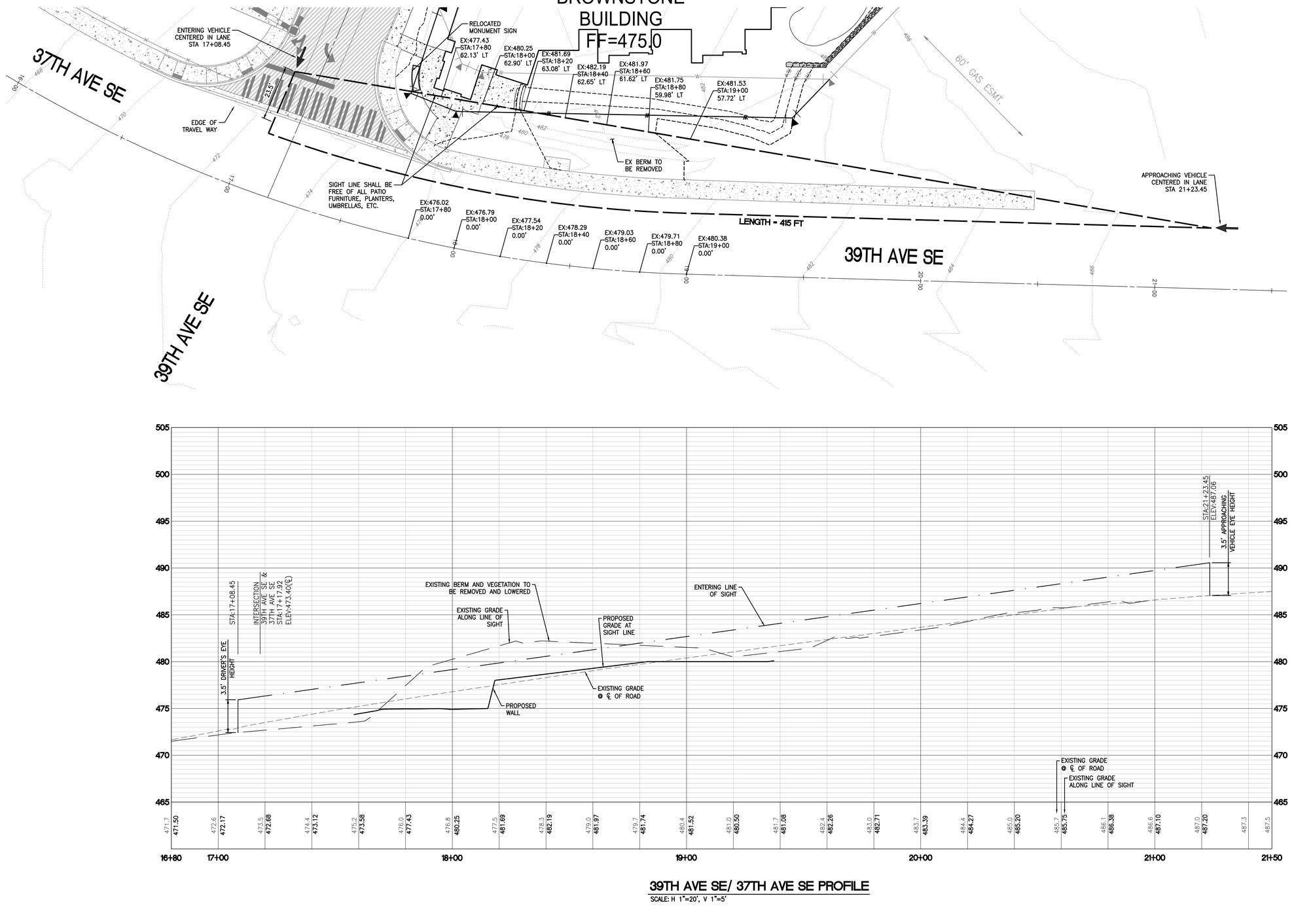
Job Number 16718
Sheet C20 of C21

ENTERING SIGHT DISTANCE
FOR
PHASE 2 - WESLEY BRADLEY PARK

1"=20'

0 10 20 40



39TH AVE SE/ 37TH AVE SE PROFILE

SCALE: H 1"=20', V 1"=5'

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

APPROVED
BY _____
CITY OF PUYALLUP
ENGINEERING SERVICES
DATE 09/19/2024

NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.
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No.	Date	By	Ckd.	Appr.	Revision

Title: ENTERING SIGHT DISTANCE FOR CIVIL PLANS PHASE 2 - WESLEY BRADLEY PARK

For: WESLEY HOMES
815 SOUTH 216TH STREET
DES MOINES, WA 98190
(206) 870-1209

DANIEL K. BALMELLI
STATE OF WASHINGTON
25672
REGISTERED PROFESSIONAL ENGINEER
9/3/24

Scale: Horizontal 1" = 20' Vertical 1" = 5'

Designed CK
Drawn BGK
Checked CMV
Approved DKB
Date 9/3/24

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18215 72nd Avenue South
Kent, WA 98032
425.251.6222 barghausen.com

Job Number 16718

Sheet C21 of C21

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