

PARCEL A:

BEGINNING AT THE SOUTHWEST CORNER OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER, SECTION 16, TOWNSHIP 20, RANGE 4 EAST, W.M., IN PIERCE COUNTY, WASHINGTON;

THE OLD PACIFIC HIGHWAY WHICH IS 219 FEET NORTHWESTERLY OF THE INTERSECTION OF THE SOUTHWESTERLY LINE OF SAID ROAD AND THE

THENCE NORTHWESTERLY ALONG SAID ROAD 96 FEET MORE OR LESS: THENCE SOUTHWESTERLY TO A POINT 70 FEET NORTH OF BEGINNING;

EXCEPT THAT PORTION CONVEYED TO PIERCE COUNTY BY DEED RECORDED RECORDING NUMBER 9204090448.

PARCEL B:

TOGETHER WITH THE FOLLOWING DESCRIBED PROPERTY:

THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 16, TOWNSHIP 20 NORTH, RANGE 4 EAST, W.M., IN PIERCE COUNTY, WASHINGTON; THENCE EAST 140 FEET TO THE TRUE POINT OF BEGINNING;

THENCE NORTHEASTERLY TO A POINT ON THE SOUTHWESTERLY LINE OF

- THE OLD PACIFIC HIGHWAY WHICH IS 219 FEET NORTHWESTERLY OF THE INTERSECTION OF THE SOUTHWESTERLY LINE OF SAID ROAD AND THE SOUTH LINE OF SECTION 16; THENCE SOUTHEASTERLY ALONG SAID ROAD 96 FEET
- THENCE SOUTHWESTERLY TO A POINT THAT LIES 55 FEET NORTH OF A POINT THAT IS 120 FEET WEST OF THE INTERSECTION OF THE SOUTH LINE OF SECTION 16 AND THE SOUTHWESTERLY LINE OF OLD PACIFIC HIGHWAY; THENCE SOUTH TO SAID POINT;
- THENCE WEST 320 FEET, MORE OR LESS, TO THE TRUE POINT OF BEGINNING;

EXCEPT THAT PORTION THEREOF CONVEYED TO PIERCE COUNTY BY DEED RECORDED UNDER

RECORDING NUMBER 9111010472.

ALL SITUATE IN THE SOUTHWEST QUARTER OF SECTION 16, TOWNSHIP 20 NORTH, RANGE 4

EAST, W.M., CITY OF PUYALLUP, COUNTY OF PIERCE, STATE OF WASHINGTON; (ALSO KNOWN AS REVISED PARCEL A OF DELARATION OF LOT COMBINATION RECORDED UNDER RECORDING NO. 202209270351, RECORDS OF PIERCE COUNTY, WASHINGTON)

2535731. SHOWN HEREON.

A POWER EASEMENT RECORDED UNDER RECORDING NUMBER 2535733. SHOWN HEREON. 7-22. NON-SURVEY RELATED ITEMS.

BEGINNING AT SAID SOUTHWEST CORNER OF THE SOUTHWEST QUARTER OF SURVEYOR'S NOTES

1) THE MONUMENT CONTROL SHOWN FOR THIS SITE WAS ACCOMPLISHED BY FIELD TRAVERSE UTILIZING A TWO (2) SECOND THEODOLITE WITH INTEGRAL ELECTRONIC DISTANCE MEASURING METER (TRIMBLE S-6) AND REAL TIME KINEMATIC (RTK) / STATIC GLOBAL POSITIONING SYSTEM (TRIMBLE R-12). LINEAR AND ANGULAR CLOSURE OF THE TRAVERSES MEET THE STANDARDS OF WAC 332-130-090.

2) UTILITIES OTHER THAN THOSE SHOWN MAY EXIST ON THIS SITE. ONLY THOSE WHICH ARE VISIBLE OR HAVING VISIBLE EVIDENCE OF THEIR INSTALLATION ARE SHOWN HEREON.

3) THIS SURVEY REPRESENTS PHYSICAL IMPROVEMENT CONDITIONS AS THEY EXISTED FEBRUARY 9, 2022, THE DATE OF THIS FIELD SURVEY.

4) FULL RELIANCE FOR LEGAL DESCRIPTIONS AND RECORDED EASEMENTS HAVE BEEN PLACED ON THE TITLE REPORT FROM FIDELITY NATIONAL TITLE INSURANCE COMPANY COMMITMENT ORDER NO. 611301826-SECOND DATED NOVEMBER 9, 2021 AT 8:00 AM. NO

ADDITIONAL RESEARCH HAS BEEN ATTEMPTED. 5) OFFSET DIMENSIONS SHOWN HEREON ARE MEASURED PERPENDICULAR

6) THE PURPOSE OF THIS SURVEY IS TO SUPPORT FUTURE DEVELOPMENT. 7) ELEVATION CONTOURS SHOWN HEREON ARE DERIVED FROM FIELD MEASUREMENTS AND MEET OR EXCEED THE MINIMUM ACCURACY CRITERIA OF THE NATIONAL MAPPING STANDARD, BEING ONE-HALF THE CONTOUR INTERVAL.

0.9999747156 WAS APPLIED TO THE GRID COORDINATES FOR SHOWN GROUND DISTANCES.

VERTICAL DATUM

BASE: HELD STATION TACO AS PUBLISHED ON WASHINGTON STATE REFERENCE NETWORK WEBSITE (http://www.wsrn3.org/) ELEVATION: 541.54' (NAVD88)

SITE #1: CE 601 SET HUB AND MAG ON THE EAST SIDE OF VALLEY AVENUE EAST AS SHOWN HEREON. ELEVATION: 42.68' (NAVD88)

SITE #2: CE 604 SET HUB AND MAG EAST OF THE SOUTHEAST CORNER OF 1106 VALLEY AVENUE EAST AS SHOWN HEREON. ELEVATION: 35.72' (NAVD88)

PROJECT INFORMATION

PARCEL NUMBERS: 0420163077 AND 0420163042 ADDRESS: 1042 VALLEY AVE NW, PUYALLUP, WA 98371 JURISDICTION: CITY OF PUYALLUP ZONING: LIMITED MANUFACTURING (ML) TOTAL SITE AREA: 1.70 AC (PARCEL #0420163077) 0.14 AC (PARCEL #0420163042)

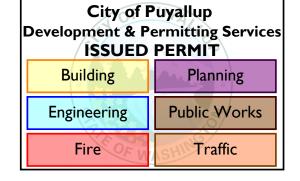
TOTAL: 79,953 SF (1.84 AC) TOTAL NEW HARD SURFACE: 63,746 SF (1.46 AC) TOTAL DISTURBED: 81,603 SF (1.87 AC)

CONTOUR ENGINEERING LLC

P.O. BOX 949 GIG HARBOR, WA 98335 PHONE: (253) 857-5454

GEOTECHNICAL ENGINEER

GEORESOURCES, LLC 4809 PACIFIC HIGHWAY E. FIFE, WA 98424 PHONE: (253) 896-1011



SHEET INDEX

C1 COVER C2 SITE PLAN

C3 TESC PLAN C4 TESC NOTES & DETAILS C5 TEMPORARY SEDIMENT POND C6 DEMOLITION PLAN

C7 GRADING PLAN C8 ADA GRADING PLAN C9 DRAINAGE PLAN C10 DRAINAGE PLAN & PROFILE

C11 DRAINAGE NOTES & DETAILS C12 DRAINAGE NOTES & DETAILS C13 DRAINAGE NOTES & DETAILS

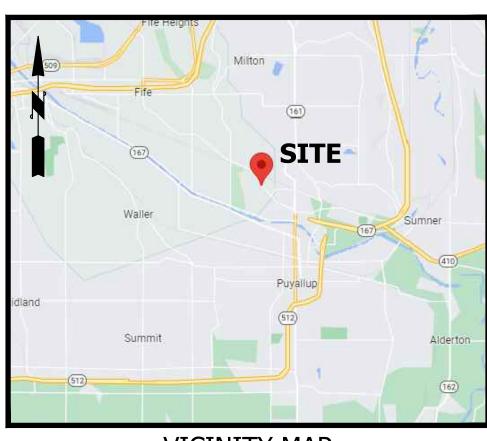
C14 SEWER PLAN & PROFILE

C15 WATER PLAN C16 SEWER & WATER NOTES & DETAILS

C17 SIGHT DISTANCE ANALYSIS L1 PLANTING PLAN

L2 LANDSCAPE DETAILS & NOTES

CALL 811 AT LEAST 48 **HOURS BEFORE YOU DIG**



VICINITY MAP

NOT TO SCALE

LEGEND PROPOSED SURVEY CONTOURS PROPERTY LINE/RIGHT-OF-WAY RIGHT-OF-WAY DEDICATION RIGHT-OF-WAY CENTERLINE EASEMENT _____ **BUILDING SETBACK** STORM DRAIN LINE —— SD — SANITARY SEWER LINE SANITARY SEWER FORCE MAIN LINE ——FM—— **OVERHEAD POWER LINE** — OHP — UNDERGROUND POWER LINE **GAS LINE** WATER LINE TYPE 2 CATCHBASIN TYPE 1/TYPE 1L CATCHBASIN

SANITARY SEWER MANHOLE

SANITARY SEWER CLEANOUT (SSCO) **HYDRANT** WATER VALVE WATER METER FIRE DEPARTMENT CONNECTION (FDC) GAS MARKING POST GAS METER (GM) GAS VALVE (GV) MONUMENT

POWER POLE (PP) GUY WIRE (GW) WATER MARKING POST (WMP) LIGHT STANDARD/YARD LIGHT (LS/YL)

> POWER MANHOLE (PMH) POWER VAULT TRANSFORMER PAD TELEPHONE JUNCTION BOX CABLE JUNCTION BOX (CJB)

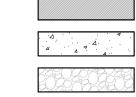
> > SIGNAL BOX (SB)

MONITORING WELL

BOLLARD **ASPHALT** CONCRETE

PV

TP

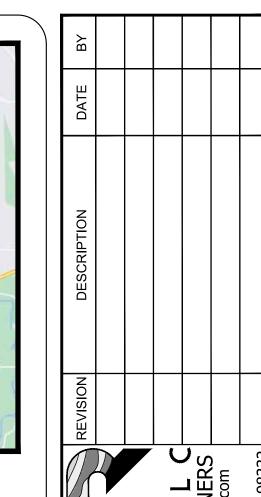


VERIFICATION NOTE

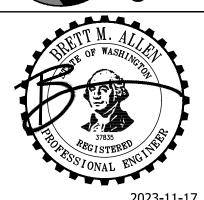
ALL EXISTING UTILITIES IN THE CONSTRUCTION AREA SHALL BE IDENTIFIED AND VERIFIED FOR DEPTH AND LOCATION PRIOR TO ANY CONSTRUCTION ACTIVITIES SO TO IDENTIFY ANY POTENTIAL CONFLICTS WITH PROPOSED CONSTRUCTION. CONTACT PROJECT ENGINEER IMMEDIATELY IF ANY CONFLICTS ARE IDENTIFIED.

GRAVEL

PRIOR TO ANY CONSTRUCTION ACTIVITIES, VERIFY EXISTING TOPOGRAPHY IS CONSISTENT WITH WHAT IS SHOWN ON PLANS AND IF THERE ARE ANY POTENTIAL CONFLICTS WITH PROPOSED CONSTRUCTION ACTIVITIES. CONTACT PROJECT ENGINEER IMMEDIATELY IF ANY CONFLICTS ARE IDENTIFIED.







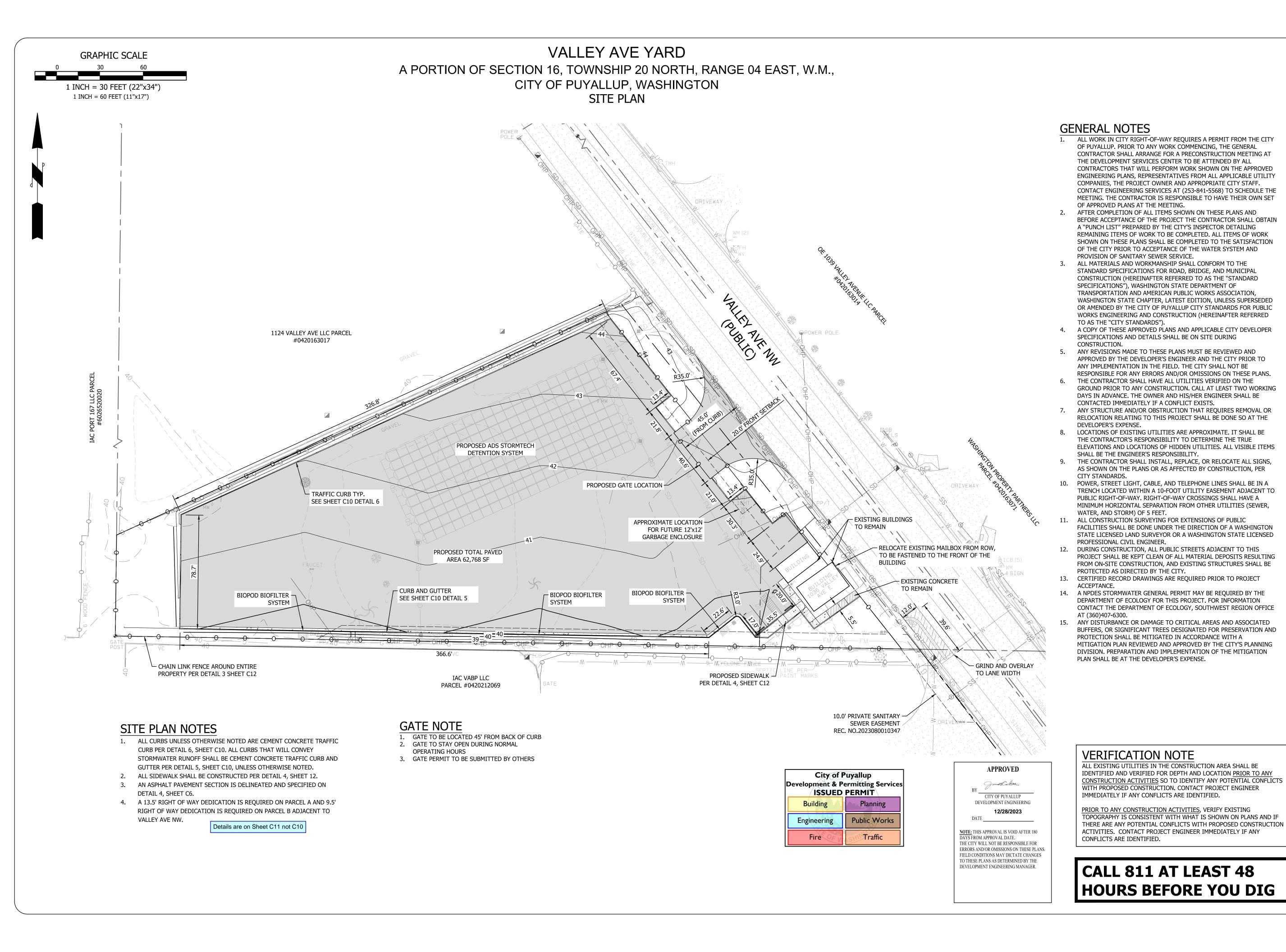
2023-11-17

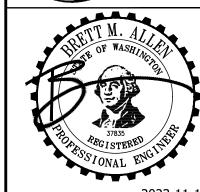
COVER

DESIGNER: K. MAUREN ENGINEER: B. ALLEN DRAWN: K. MAUREN S16 T20N R04E WM DATE: 2023-08-10 REVISED: -.--.--

PROJECT: 21-247 DWG NAME: 21-247-C

SHEET REV. 1 OF 17





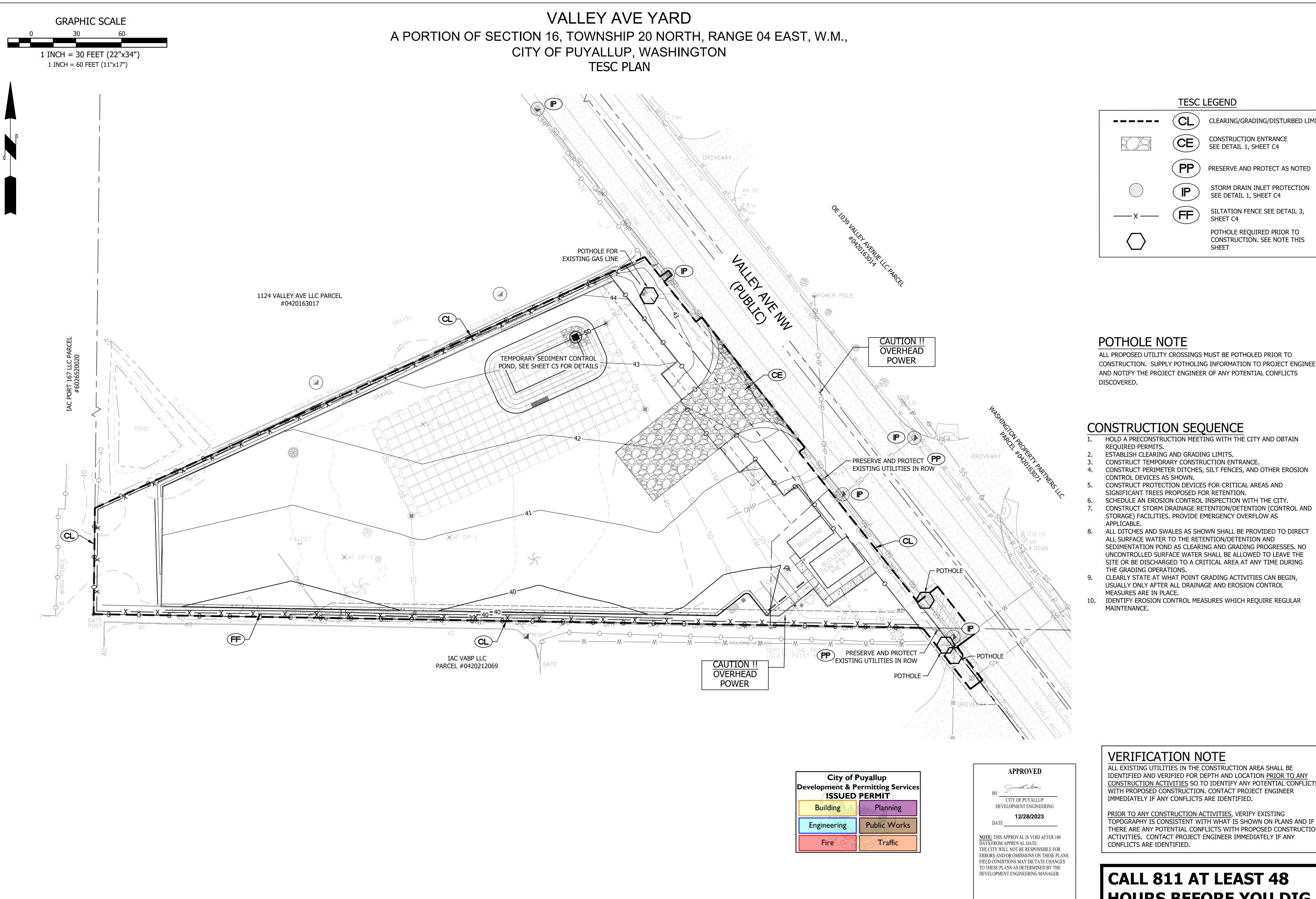
2023-11-17

SITE

DESIGNER: K. MAUREN ENGINEER: B. ALLEN DRAWN: K. MAUREN S16 T20N R04E WM DATE: 2023-08-10 REVISED: -.--

PROJECT: 21-247 DWG NAME: 21-247-C SHEET

2 OF 17



CLEARING/GRADING/DISTURBED LIMITS PRESERVE AND PROTECT AS NOTED

SILTATION FENCE SEE DETAIL 3,

POTHOLE REQUIRED PRIOR TO CONSTRUCTION. SEE NOTE THIS

ALL PROPOSED UTILITY CROSSINGS MUST BE POTHOLED PRIOR TO CONSTRUCTION. SUPPLY POTHOLING INFORMATION TO PROJECT ENGINEER, AND NOTIFY THE PROJECT ENGINEER OF ANY POTENTIAL CONFLICTS

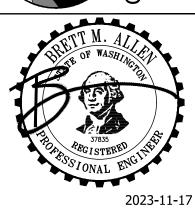
- CONSTRUCT PERIMETER DITCHES, SILT FENCES, AND OTHER EROSION

- ALL DITCHES AND SWALES AS SHOWN SHALL BE PROVIDED TO DIRECT SEDIMENTATION POND AS CLEARING AND GRADING PROGRESSES. NO UNCONTROLLED SURFACE WATER SHALL BE ALLOWED TO LEAVE THE SITE OR BE DISCHARGED TO A CRITICAL AREA AT ANY TIME DURING
- 10. IDENTIFY EROSION CONTROL MEASURES WHICH REQUIRE REGULAR

ALL EXISTING UTILITIES IN THE CONSTRUCTION AREA SHALL BE IDENTIFIED AND VERIFIED FOR DEPTH AND LOCATION PRIOR TO ANY CONSTRUCTION ACTIVITIES SO TO IDENTIFY ANY POTENTIAL CONFLICTS WITH PROPOSED CONSTRUCTION. CONTACT PROJECT ENGINEER

TOPOGRAPHY IS CONSISTENT WITH WHAT IS SHOWN ON PLANS AND IF THERE ARE ANY POTENTIAL CONFLICTS WITH PROPOSED CONSTRUCTION ACTIVITIES. CONTACT PROJECT ENGINEER IMMEDIATELY IF ANY

HOURS BEFORE YOU DIG



DESIGNER: K. MAUREN ENGINEER: B. ALLEN DRAWN: K. MAUREN S16 T20N R04E WM DATE: 2023-08-10 REVISED: -.--. PROJECT: 21-247

DWG NAME: 21-247-C SHEET

C3 3 OF 17

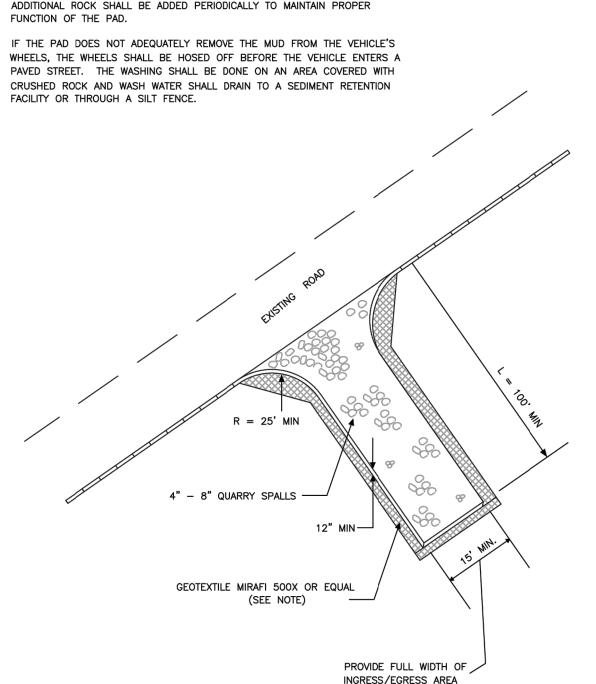
A PORTION OF SECTION 16, TOWNSHIP 20 NORTH, RANGE 04 EAST, W.M., CITY OF PUYALLUP, WASHINGTON **TESC NOTES & DETAILS**

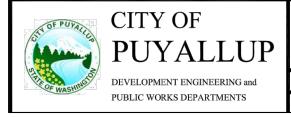
2. ADDITIONAL ROCK SHALL BE ADDED PERIODICALLY TO MAINTAIN PROPER

ENTIRETY OF THE TEMPORARY ENTRANCE.

1. GEOTEXTILE MIRAFI 500 X OR APPROVED EQUAL SHALL BE PLACED UNDER THE

3. IF THE PAD DOES NOT ADEQUATELY REMOVE THE MUD FROM THE VEHICLE'S





TEMPORARY CONSTRUCTION **ENTRANCE**

CONSTRUCTION ENTRANCE

PERMANENT STABILIZATION NOTES

- ALL EXPOSED SLOPES SHALL BE SEEDED AFTER CONSTRUCTION HAS BEEN COMPLETED. SILT FENCE SHALL REMAIN FOR A MINIMUM OF 30 DAYS AFTER THE FINAL STABILIZATION OF THE SLOPES HAS OCCURRED.
- 2. DRIVEWAY SHALL HAVE ALL WEATHER SURFACE.
- 3. ALL TEMPORARY EROSION CONTROL BMP'S SHALL BE REMOVED 30 DAYS AFTER FINAL STABILIZATION HAS OCCURRED.

SEEDING NOTES

1. SEED MIXTURE SHALL BE AS BELOW AND SHALL BE APPLIED AT THE RATE RECOMMENDED BY THE SUPPLIER

GERMINATION REDTOP (AGROSTIS ALBA) 10 PERCENT (LOLIUM MULTIFLORUM) **40 PERCENT** ANNUAL RYE CHEWING FESCUE (FESTUCA RUBRA COMMUTATA) 40 PERCENT

(<u>JAMESTOWN</u>, <u>BANNER</u>, <u>SHODOW</u>, OR <u>KOKET</u>)

WHITE DUTCH CLOVER (TRIFOLIUM REPENS) 10 PERCENT 2. SEED BEDS PLANTED BETWEEN MAY 1 AND OCTOBER 31 WILL REQUIRE IRRIGATION AND OTHER MAINTENANCE AS NECESSARY TO FOSTER AND PROTECT THE ROOT STRUCTURE.

3. FOR SEED BEDS PLANTED BETWEEN OCTOBER 31 AND APRIL 30, ARMORING OF THE SEED BED WILL BE NECESSARY. (E.G., GEOTEXTILES, JUTE MAT, CLEAR PLASTIC COVERING).

4. BEFORE SEEDING, INSTALL NEEDED SURFACE RUNOFF CONTROL MEASURES SUCH AS GRADIENT TERRACES, INTERCEPTOR DIKES, SWALES, LEVEL SPREADERS AND SEDIMENT BASINS.

5. THE SEEDBED SHALL BE FIRM WITH A FAIRLY FINE SURFACE, FOLLOWING SURFACE ROUGHENING. PERFORM ALL OPERATIONS ACROSS OR AT RIGHT ANGLES TO THE SLOPE.

6. FERTILIZERS ARE TO BE USED ACCORDING TO SUPPLIER'S RECOMMENDATIONS. AMOUNTS USED SHOULD BE MINIMIZED, ESPECIALLY ADJACENT TO WATER BODIES AND WETLANDS.

INLET PROTECTION NOTES

1. FILTERS SHALL BE INSPECTED AFTER EACH STORM EVENT AND CLEANED OR REPLACED WHEN 1/3 FULL. 2. ALL CATCH BASINS WITHIN 500' DOWNSLOPE OF PROJECT SITE SHALL INSTALL INLET PROTECTION, AS WELL AS ANY OTHER CATCH BASINS THAT COULD POSSIBLE RECEIVE RUNOFF FROM THE CONSTRUCTION SITE SHALL HAVE INLET PROTECTION INSTALLED AND MAINTAINED

CONTRACTOR TESC NOTES

- 1. SILTATION FENCE SHALL BE INSTALLED AS NEEDED OR AS PER CITY INSPECTOR, AND SHALL BE PER DETAIL 2 LOCATED ON THIS SHEET.
- 2. NO TRACKING OF DIRT OR MUD IS ALLOWED ONTO THE COUNTY ROAD. ROADWAY SHALL BE SWEPT IF THIS OCCURS OR AS NEEDED. A WHEEL WASH MAY NEED TO BE INSTALLED IS CONDITIONS WARRANT.
- ADJACENT PROPERTIES, PUBLIC RIGHT-OF-WAYS AND CRITICAL AREAS AND BUFFERS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION OF THE PROJECT.

REQUIRED INSPECTIONS FOR TESC FACILITIES

AFTER EVERY RAINFALL OR ONCE A WEEK, THE TESC LEAD SHALL INSPECT ALL OF THE FOLLOWING AND KEEP A RECORD/LOG:

- 1. FILTER FENCE SHALL BE INSPECTED FOR SEDIMENT ACCUMULATION AND TEARS IN FABRIC (IF
- INTERCEPTOR DITCHES SHALL BE INSPECTED FOR EROSION (IF APPLICABLE). IF EROSION IS OCCURRING CONTRACTOR SHALL INSTALL ROCK CHECK DAMS AS NEEDED TO PREVENT
- 3. FILL/CUT SLOPES SHALL BE INSPECTED FOR EROSION.
- 4. TESC LEAD RESPONSIBLE FOR NOTIFYING ENGINEER IF ADDITIONAL MEASURES ARE

PLASTIC COVERING NOTES

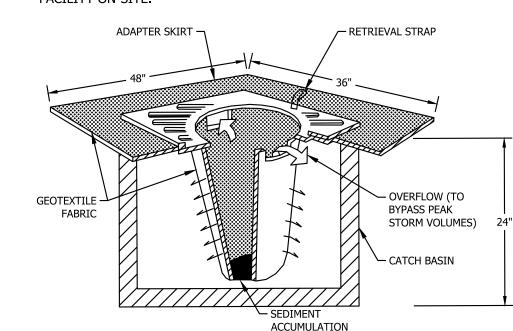
- 1. PLASTIC SHEETING SHALL HAVE A MINIMUM THICKNESS OF 6 MILS AND SHALL MEET THE REQUIREMENTS OF THE STATE STANDARD SPECIFICATIONS SECTION 9-14.5
- 2. COVERING SHALL BE INSTALLED AND MAINTAINED TIGHTLY IN PLACE BY USING SANDBAGS OR TIRES ON ROPES WITH A MAXIMUM 10-FOOT GRID SPACING IN ALL DIRECTIONS. ALL SEAMS SHALL BE TAPED OR WEIGHTED DOWN FULL LENGTH AND THERE SHALL BE A LEAST A 12 INCH OVERLAP OF ALL SEAMS.
- 3. CLEAR PLASTIC COVERING SHALL BE INSTALLED IMMEDIATELY ON AREAS SEEDED BETWEEN NOVEMBER 1 AND MARCH 31 AND REMAIN UNTIL VEGETATION IS FIRMLY ESTABLISHED.
- 4. WHEN THE COVERING IS USED ON UN-SEEDED SLOPES, IT SHALL BE KEPT IN PLACE UNTIL THE NEXT SEEDING PERIOD.
- 5. PLASTIC COVERING SHEETS SHALL BE BURIED TWO FEET AT THE TOP OF SLOPES IN ORDER TO PREVENT SURFACE WATER FLOW BENEATH SHEETS
- 6. PROPER MAINTENANCE INCLUDES REGULAR CHECKS FOR RIPS AND DISLODGED ENDS.

CONTRACTOR NOTES

INLET PROTECTION SHALL BE INSTALLED IN ALL NEWLY CONSTRUCTED CATCH BASINS PER DETAIL 3 ON THIS SHEET.

INLET PROTECTION SHALL BE INSTALLED ALONG ALL IMPACTED FRONTAGE AND OFFSITE AREAS PER THE REQUIREMENTS OF THE CITY INSPECTOR.

- 2. CONSTRUCTION FENCE CAN BE UTILIZED IN PLACE OF FILTER FABRIC FENCE ONLY IN AREAS WHERE THE GRADES DO NOT ALLOW THE POTENTIAL FOR ANY STORMWATER TO LEAVE THE SITE.
- 3. BASED ON THE NATIVE SOILS ONSITE, IT IS ASSUMED THAT IF THE SITE IS WORKED IT THE THE 'DRY SEASON' SILT FENCE SHALL BE ADEQUATE TO CONTROL ORMWATER AND AND SEDIMENTATION. IF SITE WORK IS PERFORMED IN THE 'WET SEASON' ADDITIONAL EROSION AND SEDIMENT CONTROL BMPs MAY BE
- 4. ALL AREAS THAT WILL BE UNWORKED FOR MORE THAN SEVEN (7) DAYS DURING THE DRY SEASON OR TWO (2) DAYS DURING THE WET SEASON, SHALL BE COVERED WITH STRAW, WOOD FIBER MULCH, COMPOST, PLASTIC SHEETING, OR OTHER EQUIVALENT BMP MEASURES.
- 5. CONTRACTOR SHALL DESIGNATE A WASHINGTON DEPT OF ECOLOGY CERTIFIED EROSION CONTROL LEAD PERSON, AND SHALL COMPLY WITH THE CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED FOR THE
- 6. SEDIMENT LADEN RUNOFF SHALL NOT BE ALLOWED TO DISCHARGE BEYOND THE LIMITS OF THE IMPROVEMENTS. ADDITIONAL MEASURES SHALL BE INSTALLED AS
- 7. 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.





NEWLY GRADED OR DISTURBED SIDE SLOPE 20 GAGE WIRE TIEBACK *FILTER FABRIC-2x4 DOUGLAS MATERIAL NOTES: SILT FENCE SHALL BE BURY BOTTOM OF INSTALLED ON CONTOUR FILTER FABRIC OTHER INSTALLATIONS ARE MATERIAL -NOT EXCEPTABLE. PROVIDE 3/4" - 1.5" *FILTER FABRIC TO BE WASHED GRAVEL BACKFILL DETERMINED BY DESIGN IN TRENCH AND ON BOTH ENGINEER SIDES OF FILTER FENCE FABRIC ON THE SURFACE-TYPICAL CROSS SECTION STAPLES OR WIRE WIRE FABRIC (TYP) *FILTER FABRIC MATERIAL - 2"x2"x14 GA WELDED MIRAFI 140 BIDIM OR EQUAL

BURY BOTTOM OF FILTER FABRIC

MATERIAL ON 8"x8" TRENCH

SILTATION FENCE

SILTATION FENCE

FILTER FABRIC FENCE NOTES

CITY OF

PUBLIC WORKS DEPARTMENTS

1. FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL AND CUT TO THE LENGTH OF THE BARRIER TO AVOID USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6-INCH OVERLAP, AND SECURELY FASTENED AT BOTH ENDS

2"x4" DOUGLAS FIR AT 4' O.C.

ELEVATION

NO. 1 GRADE OR EQUAL

- POSTS SHALL BE SPACED A MAXIMUM OF 6 FEET APART AND DRIVEN SECURELY INTO THE GROUND
- (MINIMUM OF 30 INCHES). 3. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 8 INCHES WIDE AND 12 INCHES DEEP ALONG THE LINE
- OF POSTS AND UP SLOPE FROM THE BARRIER. THIS TRENCH SHALL BE BACKFILLED WITH WASHED GRAVEL 4. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 1 INCH LONG, TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 4 INCHES
- AND SHALL NOT EXTEND MORE THAN 24 INCHES ABOVE THE ORIGINAL GROUND SURFACE. 5. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 20 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 24 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING
- WHEN EXTRA-STRENGTH FILTER FABRIC AND CLOSER POST SPACING IS USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS WITH ALL OTHER PROVISIONS OF ABOVE NOTES APPLYING.
- STABILIZED. 8. FILTER FABRIC FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY

7. FILTER FABRIC FENCES SHALL NOT BE REMOVED BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY

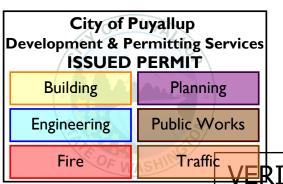
- DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
- SILT FENCES WILL BE INSTALLED PARALLEL TO ANY SLOPE CONTOURS. CONTRIBUTING LENGTH TO FENCE WILL NOT BE GREATER THAN 100 FEET.
- 11. DO NOT INSTALL BELOW AN OUTLET PIPE OR WEIR. 12. INSTALL DOWNSLOPE OF EXPOSED AREAS.
- 13. DO NOT DRIVE OVER OR FILL OVER SILT FENCES.

MULCHING NOTES

- 1. MULCH MATERIALS USED SHALL BE STRAW OR HAY, AND SHALL BE APPLIED AT THE RATE OF 75-100 POUNDS PER 1000 SQ. FT. (APPX 2" THICK).
- 2. MULCHES SHALL BE APPLIED IN ALL AREAS WITH EXPOSED SLOPES GREATER THAN 2:1.
- 3. MULCHING SHALL BE USED IMMEDIATELY AFTER SEEDING OR IN AREAS WHICH CANNOT BE SEEDED BECAUSE OF THE SEASON.
- 4. ALL AREAS NEEDING MULCH SHALL BE COVERED BY NOVEMBER 1.

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.
- 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.
- 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 (HERINAFTER REFERRED TO AS THE "CITY STANDARDS").
- A COPY OF THESE APPROVED PLANS AND APPLICABLE CITY DEVELOPER SPECIFICATIONS AND DETAILS SHALL BE ON SITE DURING CONSTRUCTION
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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
- 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.
- 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.



APPROVED Jone Calous CITY OF PUYALLUP DEVELOPMENT ENGINEERING 12/28/2023

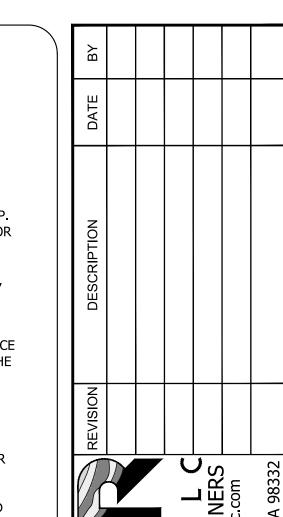
NOTE: THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER

VERIFICATION NOTE

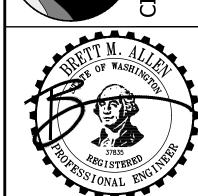
ALL EXISTING UTILITIES IN THE CONSTRUCTION AREA SHALL BE IDENTIFIED AND VERIFIED FOR DEPTH AND LOCATION PRIOR TO ANY CONSTRUCTION ACTIVITIES SO TO IDENTIFY ANY POTENTIAL CONFLICTS WITH PROPOSED CONSTRUCTION. CONTACT PROJECT ENGINEER IMMEDIATELY IF ANY CONFLICTS ARE IDENTIFIED.

PRIOR TO ANY CONSTRUCTION ACTIVITIES, VERIFY EXISTING TOPOGRAPHY IS CONSISTENT WITH WHAT IS SHOWN ON PLANS AND IF THERE ARE ANY POTENTIAL CONFLICTS WITH PROPOSED CONSTRUCTION ACTIVITIES. CONTACT PROJECT ENGINEER IMMEDIATELY IF ANY CONFLICTS ARE IDENTIFIED.

| CALL 811 AT LEAST 48 **HOURS BEFORE YOU DIG**







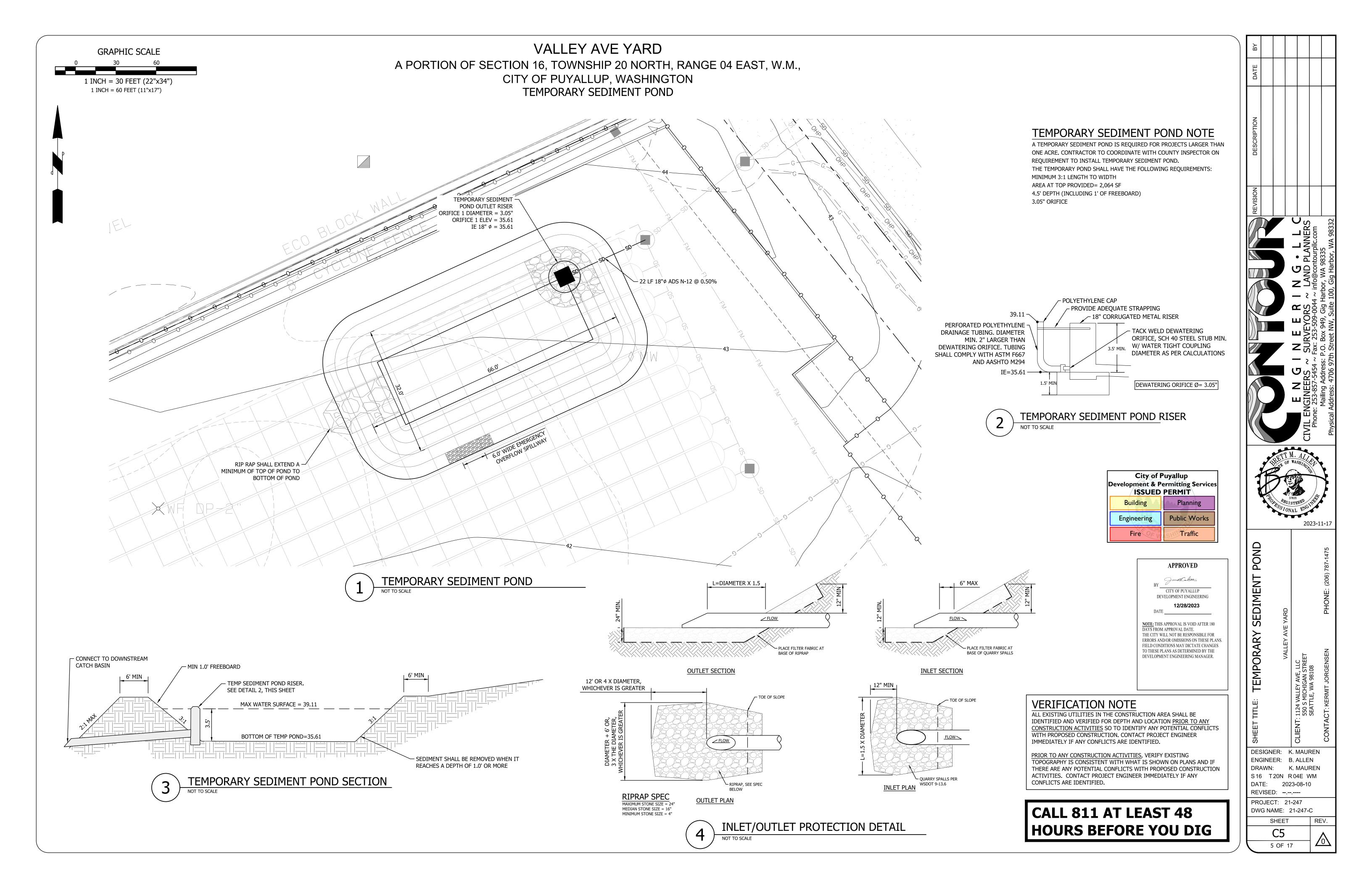
2023-11-17

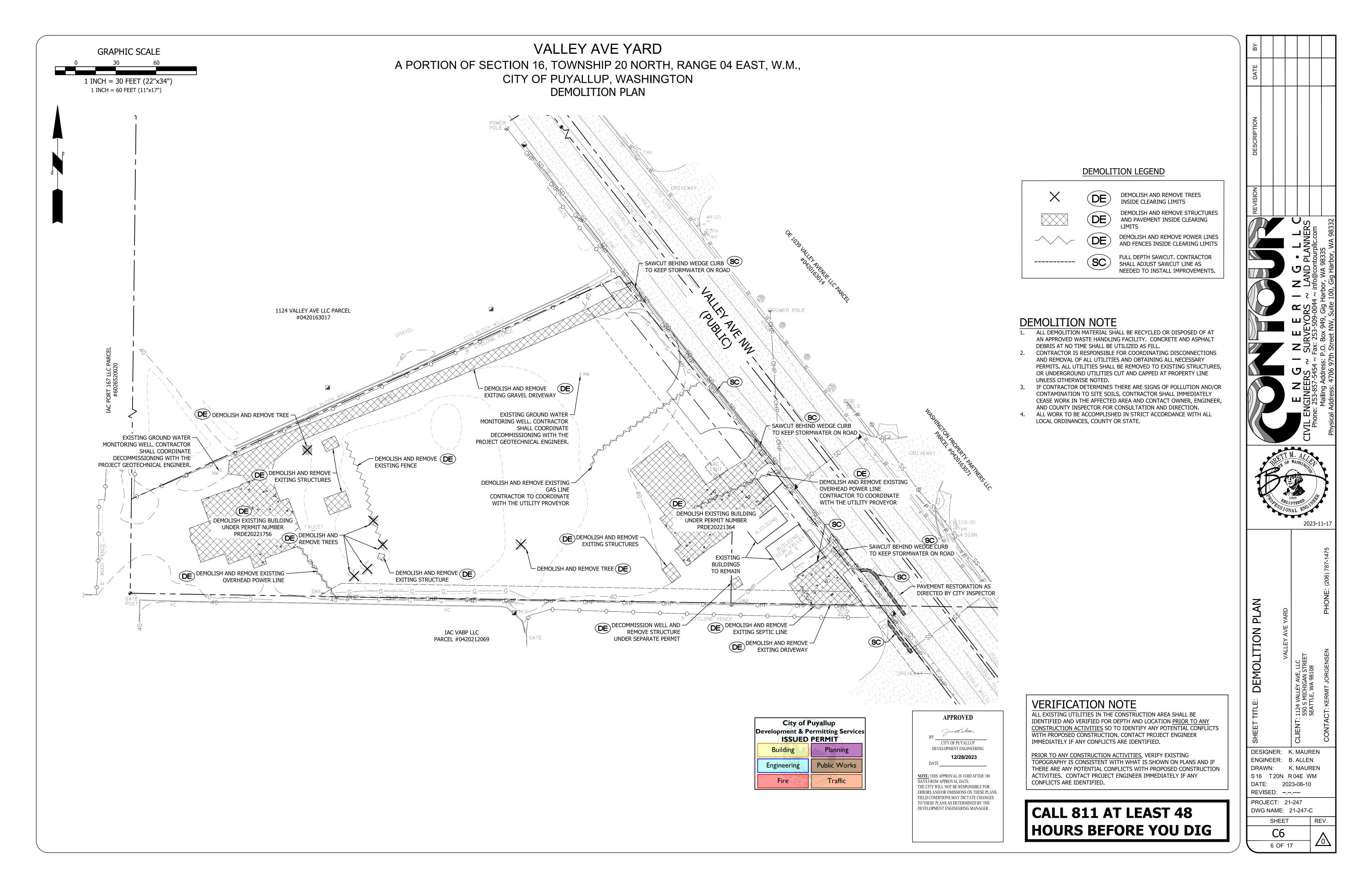
ಶ

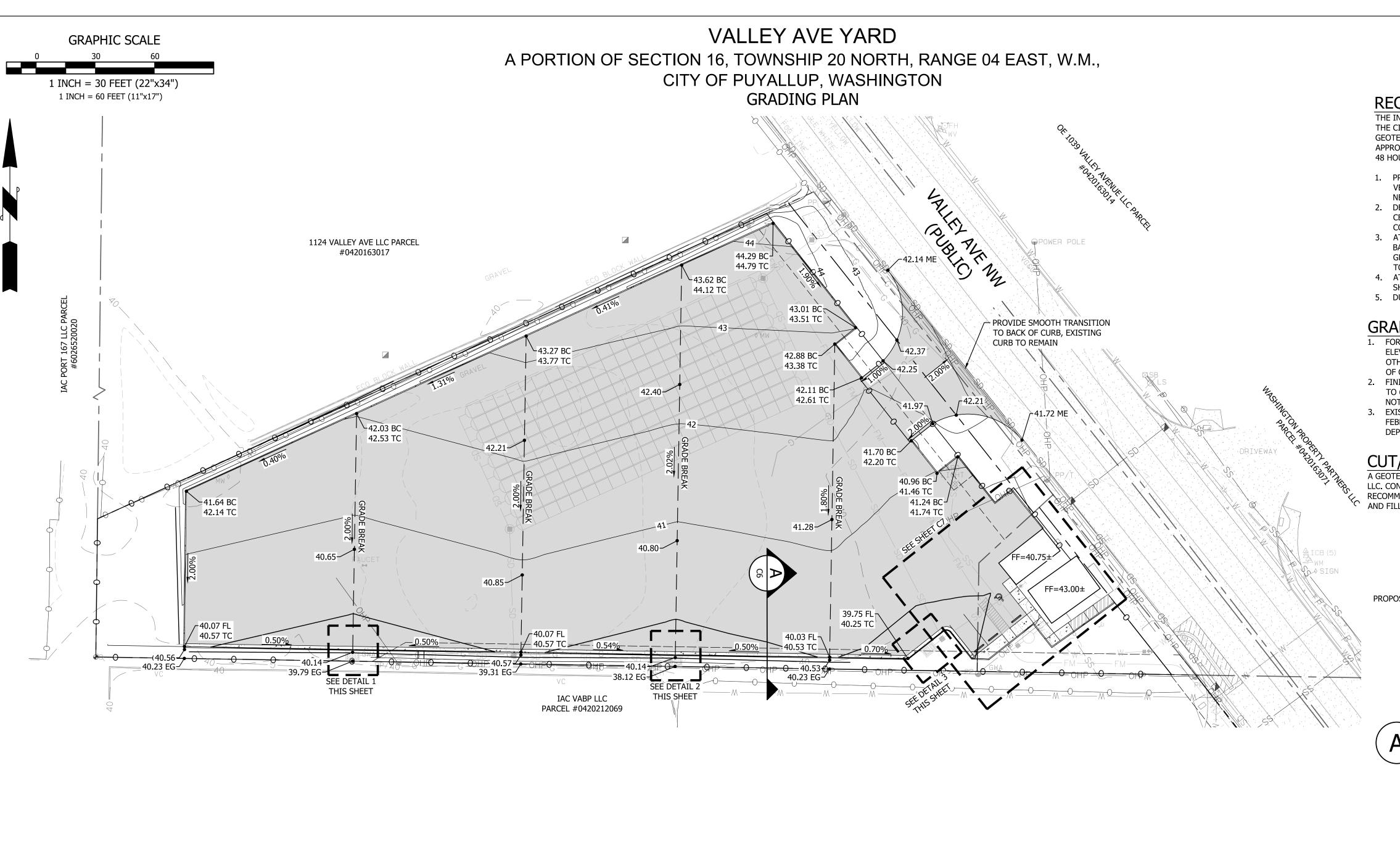
DESIGNER: K. MAUREN ENGINEER: B. ALLEN DRAWN: K. MAUREN S16 T20N R04E WM DATE: 2023-08-10 REVISED: -.--.

PROJECT: 21-247 DWG NAME: 21-247-C

> SHEET REV. 4 OF 17







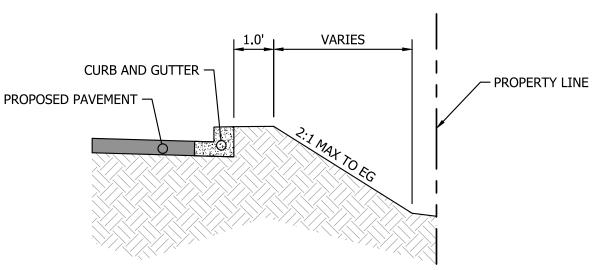
- REQUIRED INSPECTIONS
 THE INSPECTIONS LISTED BELOW ARE IN ADDITION TO THOSE REQUIRED BY PERMIT OR BY THE CITY INSPECTOR. THESE INSPECTIONS MAY BE ACCOMPLISHED BY THE PROJECT GEOTECHNICAL ENGINEER OR MATERIALS TESTING COMPANY WITH DIRECTION AND APPROVAL BY THE PROJECT ENGINEER. REQUEST FOR INSPECTIONS SHALL BE MADE AT LEAST 48 HOURS IN ADVANCE.
- 1. PRIOR TO PLACING ANY FILL, ALL EXPOSED BEARING SURFACES SHALL BE INSPECTED TO VERIFY SOIL CONDITIONS ARE AS EXPECTED AND SUITABLE FOR THE SUPPORT OF THE
- 2. DENSITY TESTING IS REQUIRED FOR ALL PLACED STRUCTURAL FILL AND SHALL BE CERTIFIED BY THE PROJECT GEOTECHNICAL ENGINEER. CONTRACTOR SHALL COORDINATE TESTING WITH THE PROJECT GEOTECHNICAL ENGINEER.
- 3. AT A STATE AFTER SUBGRADE HAS BEEN COMPACTED AND PRIOR TO PLACING GRAVEL BASE. NO PLACEMENT OF GRAVEL SHALL OCCUR WITHOUT APPROVAL FROM THE PROJECT GEOTECHNICAL ENGINEER. GEOTECHNICAL ENGINEER SHALL PROVIDE WEEKLY REPORTS TO ENGINEER DURING CONSTRUCTION AND NOTE ANY DEFICIENCIES.
- 4. AT A STATE AFTER GRAVEL BASE HAS BEEN PLACED AND PRIOR TO PAVING. NO PAVING SHALL OCCUR WITHOUT APPROVAL FROM THE PROJECT GEOTECHNICAL ENGINEER.
- 5. DURING PAVING ACTIVITIES.

GRADING NOTES

- 1. FOR PLAN READABILITY PURPOSES ONLY BOTTOM OF CURB (BC) OR FLOW LINE (FL) ELEVATIONS HAVE BEEN PROVIDED. ALL CONCRETE CURBS ARE 0.5' HIGH UNLESS OTHERWISE NOTED, ELEVATIONS NOTED WITH TC/BC HAVE THE SAME BOTTOM AND TOP
- FINISH GROUND ELEVATIONS ALONG THE EXTERIOR OF STRUCTURES SHALL BE GRADED TO 6-INCH BELOW THE ASSOCIATED FINISH FLOOR ELEVATION UNLESS OTHERWISE
- 3. EXISTING TOPOGRAPHY DEPICTED IS FROM A TOPOGRAPHIC SURVEY PERFORMED ON FEBRUARY 2022. CONTRACTOR SHALL VERIFY THAT THE EXISTING TOPOGRAPHY DEPICTED IS CONSISTENT WITH THE PLANS PRIOR TO CONSTRUCTION.

CUT/FILL SLOPE AND GRADING NOTES

A GEOTECHNICAL REPORT HAS BEEN PREPARED FOR THE PROJECT SITE BY GEORESOURCES LLC. CONTRACTOR SHALL REVIEW THE REPORT PRIOR TO CONSTRUCTION AND ADHERE TO RECOMMENDATIONS REGARDING EXCAVATIONS, SITE PREPARATION, STRUCTURAL FILL, CUT AND FILL SLOPES, WET WEATHER CONSTRUCTION CONSIDERATIONS, ETC.





- **ACRONYMS** ME MATCH EXISTING
- EG EXISTING GRADE FG FINISH GRADE PC POINT OF CURVATURE
- PT POINT OF TANGENCY MP MID POINT FL FLOWLINE
- TC TOP OF CURB BC BOTTOM OF CURB
- TW TOP OF WALL BW BOTTOM OF WALL CL CENTERLINE **ROW RIGHT OF WAY**

APPROVED Jan Calous CITY OF PUYALLUP DEVELOPMENT ENGINEERING 12/28/2023 **NOTE:** THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE. THE CITY WILL NOT BE RESPONSIBLE FOR

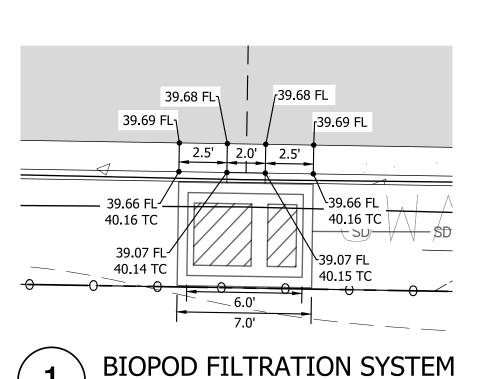
VERIFICATION NOTE

CONSTRUCTION ACTIVITIES SO TO IDENTIFY ANY POTENTIAL CONFLICTS

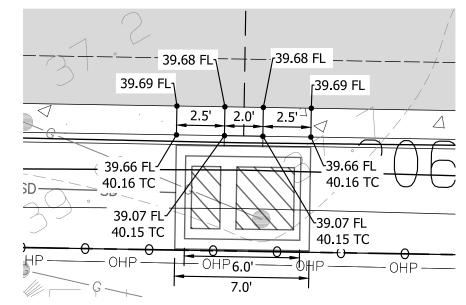
ALL EXISTING UTILITIES IN THE CONSTRUCTION AREA SHALL BE IDENTIFIED AND VERIFIED FOR DEPTH AND LOCATION PRIOR TO ANY WITH PROPOSED CONSTRUCTION. CONTACT PROJECT ENGINEER IMMEDIATELY IF ANY CONFLICTS ARE IDENTIFIED.

PRIOR TO ANY CONSTRUCTION ACTIVITIES, VERIFY EXISTING TOPOGRAPHY IS CONSISTENT WITH WHAT IS SHOWN ON PLANS AND IF THERE ARE ANY POTENTIAL CONFLICTS WITH PROPOSED CONSTRUCTION ACTIVITIES. CONTACT PROJECT ENGINEER IMMEDIATELY IF ANY CONFLICTS ARE IDENTIFIED.

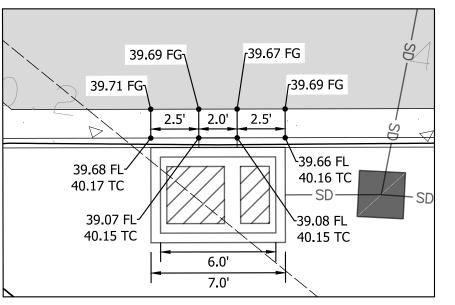
CALL 811 AT LEAST 48 **HOURS BEFORE YOU DIG**



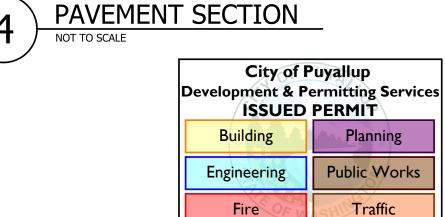
OLDCASTLE INFRASTRUCTURE







BIOPOD FILTRATION SYSTEM OLDCASTLE INFRASTRUCTURE



HOT MIX ASPHALT (½ CLASS)

COMPACTED SUBGRADE TO THE

APPROVAL OF THE PROJECT GEOTECHNICAL ENGINEER

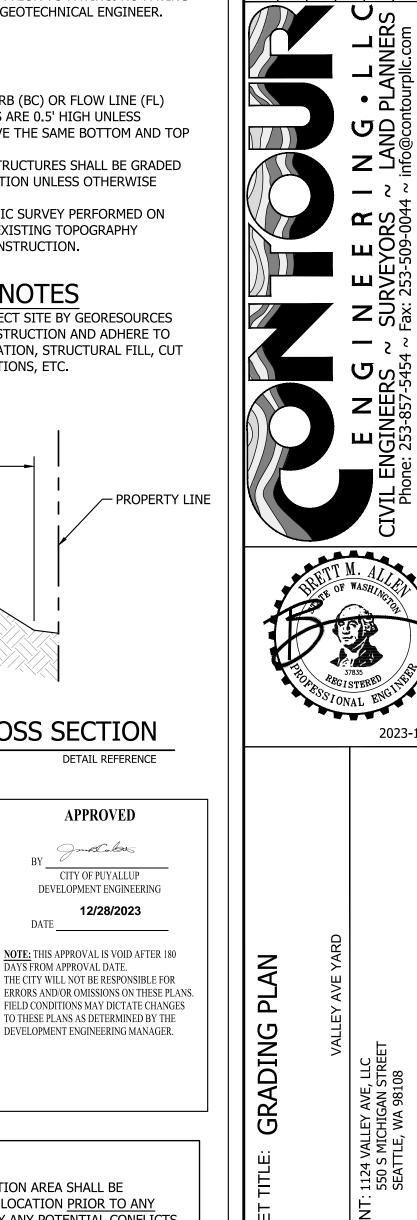
6.0" MINIMUM DEPTH

STANDARD ASPHALT PAVEMENT SECTION

PAVEMENT SECTION MAY BE ALTERED AS DIRECTED BY OWNER.

6.0" MINIMUM COMPACTED DEPTH

- CRUSHED SURFACING BASE/TOP COURSE



2023-11-17

DESIGNER: K. MAUREN

DRAWN: K. MAUREN

S16 T20N R04E WM

DATE: 2023-08-10 REVISED: -.--.

PROJECT: 21-247

DWG NAME: 21-247-C

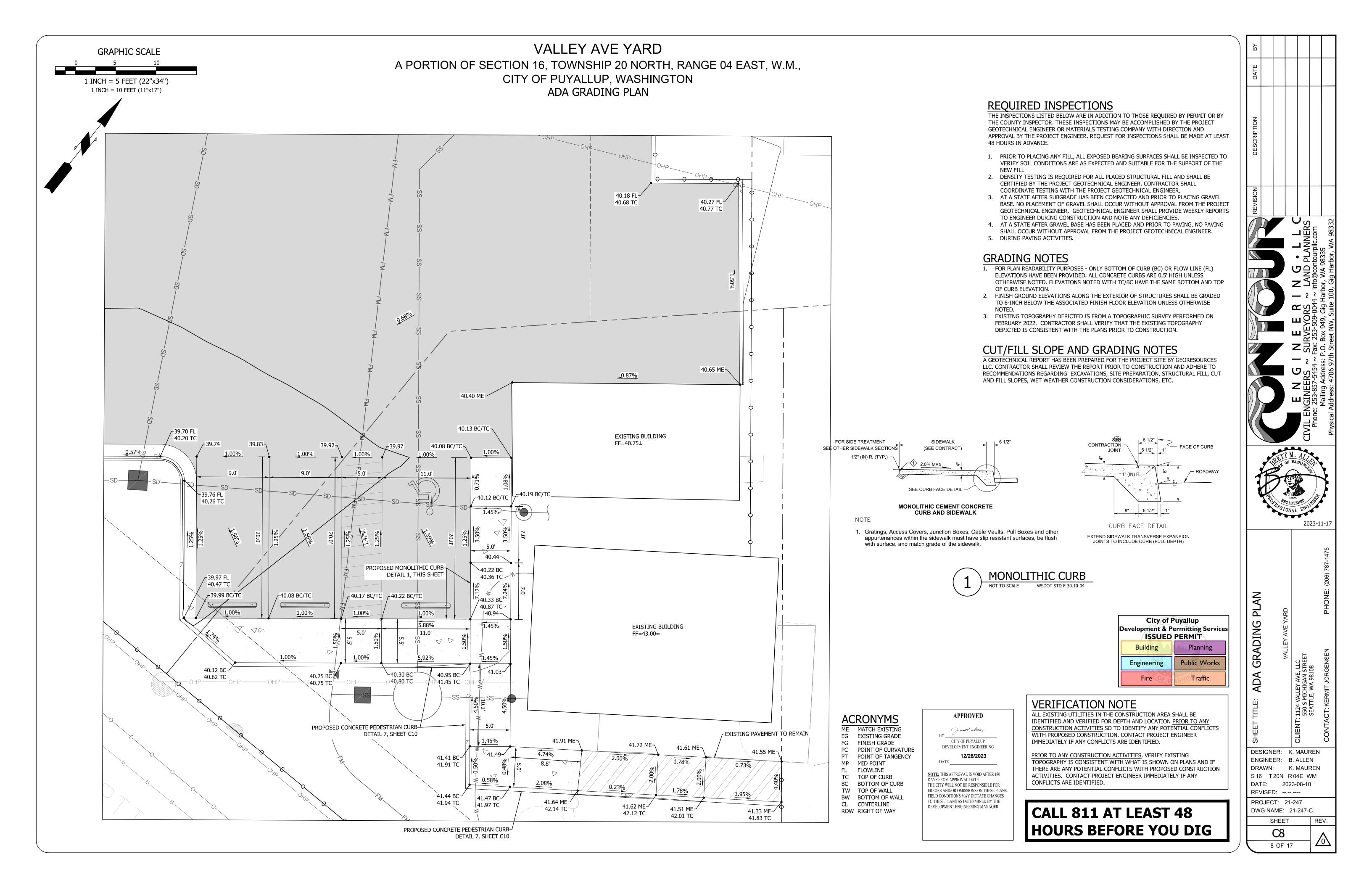
SHEET

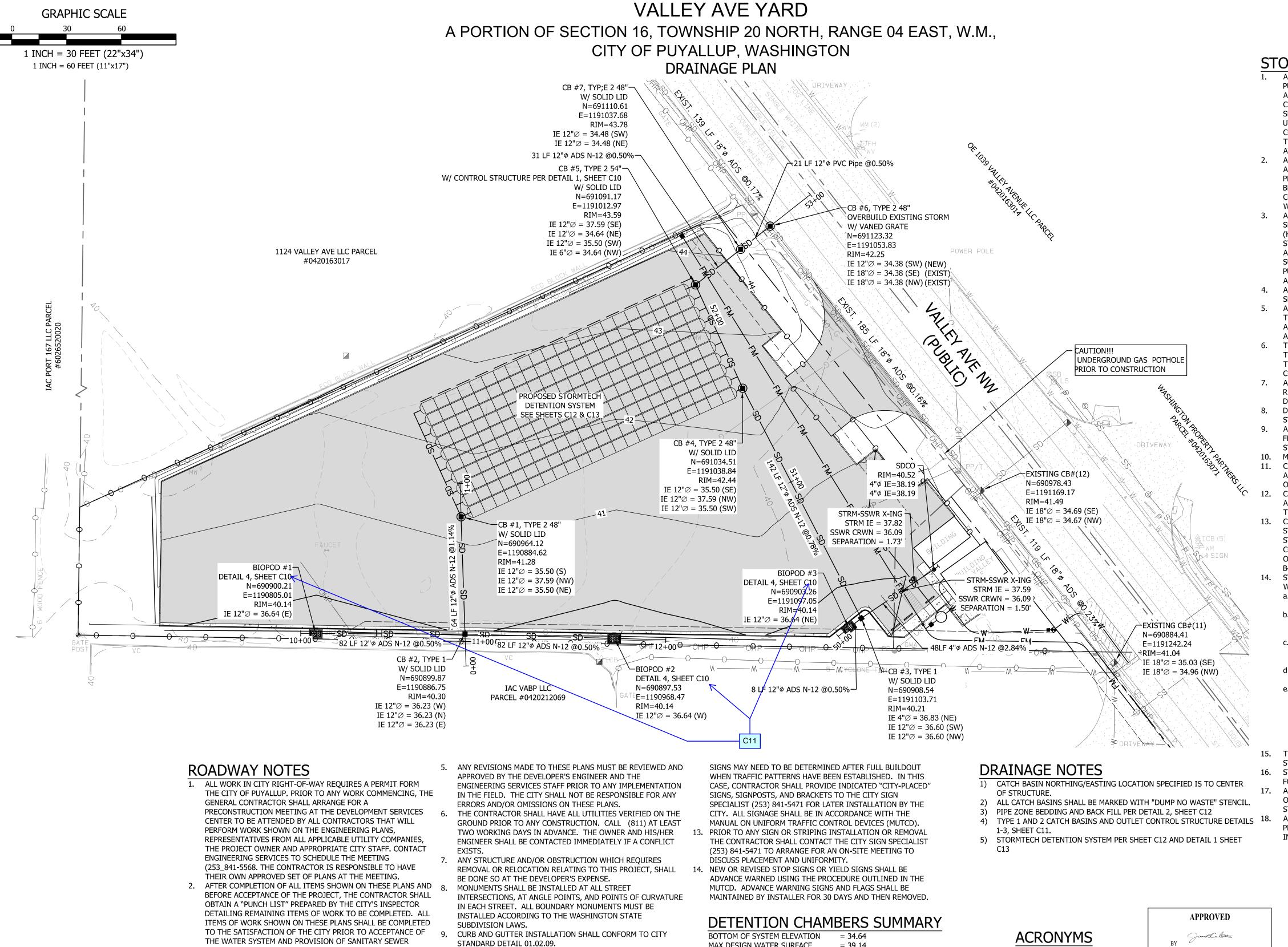
C7

7 OF 17

REV.

ENGINEER: B. ALLEN





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

11. THE SURROUNDING GROUND (5 FEET BEYOND THE BASE) FOR

ALL POWER TRANSFORMERS, TELEPHONE/TV PEDESTALS, AND

CERTIFICATE OF OCCUPANCY OR PLAT APPROVAL. HOWEVER, IN

LARGER DEVELOPMENTS, EXACT LOCATIONS OF STOP AND YIELD

STREET LIGHT MAIN DISCONNECTS SHALL BE GRADED TO A

12. SIGNAGE AND TRAFFIC CONTROL DEVICES ARE SAFETY ITEMS

AND SHALL BE INSTALLED PRIOR TO ISSUANCE OF ANY

POSITIVE 2 PERCENT SLOPE FROM TOP OF CURB.

DETAIL 01.02.10.

MAX DESIGN WATER SURFACE = 39.14 10. SIDEWALKS AND DRIVEWAYS SHALL BE INSTALLED AS LOTS ARE TOP OF SYSTEM ELEVATION = 40.14TOP OF GRAVEL = 35.39DESIGN STORAGE VOLUME = 35,327 CF

OUTLET CONTROL STRUCTURE

RIM ELEVATION = 43.59RISER DIAMETER = 18 INCH = 0.625 INCHRESTRICTOR PLATE DIAMETER = 0.875 INCH ORIFICE #2 DIAMETER ORIFICE #2 ELEVATION = 37.44 = 0.75 INCH ORFICIE #3 DIAMETER ORIFICE #3 ELEVATION = 37.84 TOP OF RISER = 39.14

ME MATCH EXISTING EG EXISTING GRADE

FG FINISH GRADE PC POINT OF CURVATURE

POINT OF TANGENCY PT MID POINT

MΡ FLOWLINE TOP OF CURB

BOTTOM OF CURB TW TOP OF WALL BW BOTTOM OF WALL CL CENTERLINE ROW RIGHT OF WAY

CITY OF PUYALLUP DEVELOPMENT ENGINEERING

12/28/2023

NOTE: THIS APPROVAL IS VOID AFTER 180 DAYS 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 DEVELOPMENT ENGINEERING MANAGER

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 SHAI 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 PLAI 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.
- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (HEREINAFTER REFERRED TO AS THE "STANDARD SPECIFICATIONS"), WASHINGTO 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").
- A COPY OF THESE APPROVED PLANS AND APPLICABLE CITY DEVELOPER SPECIFICATIONS AND DETAILS SHALL BE ON SITE DURING CONSTRUCTION.
- 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.
- 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.
- DURING CONSTRUCTION, ALL EXISTING AND NEWLY INSTALLED DRAINAGE STRUCTURES SHALL BE PROTECTED FROM SEDIMENTS.
- ALL STORM MANHOLES SHALL CONFORM TO CITY STANDARD DETAIL NO. 02.01.0 FLOW CONTROL MANHOLE/OIL WATER SEPARATOR SHALL CONFORM TO CITY STANDARD DETAIL NO. 02.01.06 AND 02.01.07.
- MANHOLE RING AND COVER SHALL CONFORM TO CITY STANDARD DETAIL 06.01.0 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 T OF THE GRATE TO THE INVERT OF THE STORM PIPE.
- 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 GRAT 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.
 - THE USE OF ANY OTHER TYPE SHALL BE REVIEWED AND APPROVED BY THE ENGINEERING SERVICES STAFF PRIOR TO INSTALLATION.
- 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 P PIPE SHALL BE 3.0 FEET.
- 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.
- DUCTILE IRON PIPE SHALL BE CLASS 50, CONFORMING TO AWWA C151.
- MINIMUM COVER ON DUCTILE IRON PIPE SHALL BE 1.0 FOOT. 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 SHALI MEET OR EXCEED ASTM F2881 AND AASHTO M330, TYPE S, OR TYPE D. TESTING SHALL BE PER ASTM F1417. MINIMUM COVER OVER POLYPROPYLE PIPE SHALL BE 3-FEET.
- TRENCHING, BEDDING, AND BACKFILL FOR PIPE SHALL CONFORM TO CITY
- STANDARD DETAIL NO. 06.01.01. PER DETAIL 2 SHEET C12. 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 A OUTLINED IN SECTION 406 OF THE CITY OF PUYALLUP SANITARY SEWER SYSTEM STANDARDS.
 - 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.

VERIFICATION NOTE

ALL EXISTING UTILITIES IN THE CONSTRUCTION AREA SHALL BE IDENTIFIED AND VERIFIED FOR DEPTH AND LOCATION PRIOR TO ANY CONSTRUCTION ACTIVITIES SO TO IDENTIFY ANY POTENTIAL CONFLICTS WITH PROPOSED CONSTRUCTION. CONTACT PROJECT ENGINEER IMMEDIATELY IF ANY CONFLICTS ARE IDENTIFIED.

PRIOR TO ANY CONSTRUCTION ACTIVITIES, VERIFY EXISTING TOPOGRAPHY IS CONSISTENT WITH WHAT IS SHOWN ON PLANS AND IF THERE ARE ANY POTENTIAL CONFLICTS WITH PROPOSED CONSTRUCTION ACTIVITIES. CONTACT PROJECT ENGINEER IMMEDIATELY IF ANY CONFLICTS ARE IDENTIFIED.

CALL 811 AT LEAST 48 **HOURS BEFORE YOU DIG**

	B	
	DATE	
ALL	DESCRIPTION	
NS " D	DESC	
ON	REVISION	
)		
₹		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Ē.		
1.		Z - U
OP TOP TTE		Z ш
)		THE M
Ē VC	7	TO WASH
D L ENE		
S I	E DRAINAGE PLAN	VALLEY AVE YARD
\neg		VALLEY AVE, LLC

2023-11-17

DESIGNER: K. MAUREN ENGINEER: B. ALLEN DRAWN: K. MAUREN S16 T20N R04E WM DATE: 2023-08-10 REVISED: -.--.

PROJECT: 21-247 DWG NAME: 21-247-C

> SHEET REV. 9 OF 17

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

SERVICE.

STANDARDS").

DURING CONSTRUCTION.

ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE

DEPARTMENT OF TRANSPORTATION AND AMERICAN PUBLIC

WORKS ASSOCIATION, WASHINGTON STATE CHAPTER, LATEST

EDITION, UNLESS SUPERSEDED OR AMENDED BY THE CITY OF

DEVELOPER SPECIFICATIONS AND DETAILS SHALL BE ON SITE

PUYALLUP CITY STANDARDS FOR PUBLIC WORKS ENGINEERING

AND CONSTRUCTION (HEREINAFTER REFERRED TO AS THE "CITY

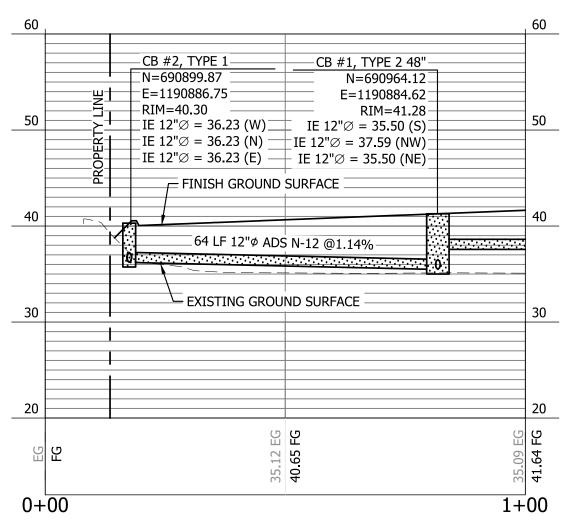
CONSTRUCTION (HEREINAFTER REFERRED TO AS THE

"STANDARD SPECIFICATIONS"), WASHINGTON STATE

4. A COPY OF THESE APPROVED PLANS AND APPLICABLE CITY

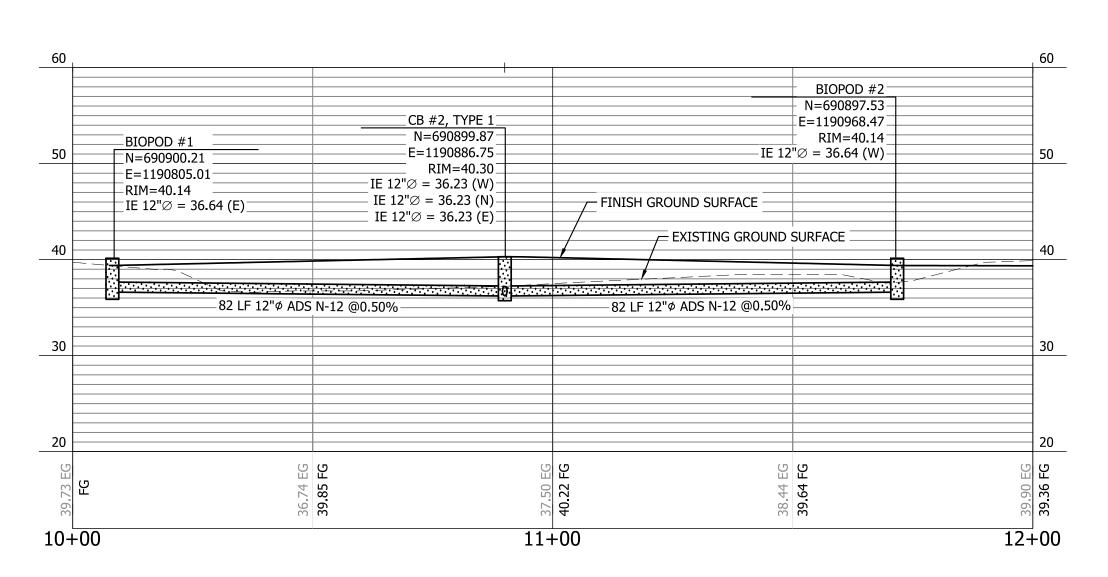
STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL

A PORTION OF SECTION 16, TOWNSHIP 20 NORTH, RANGE 04 EAST, W.M., CITY OF PUYALLUP, WASHINGTON DRAINAGE PLAN & PROFILE



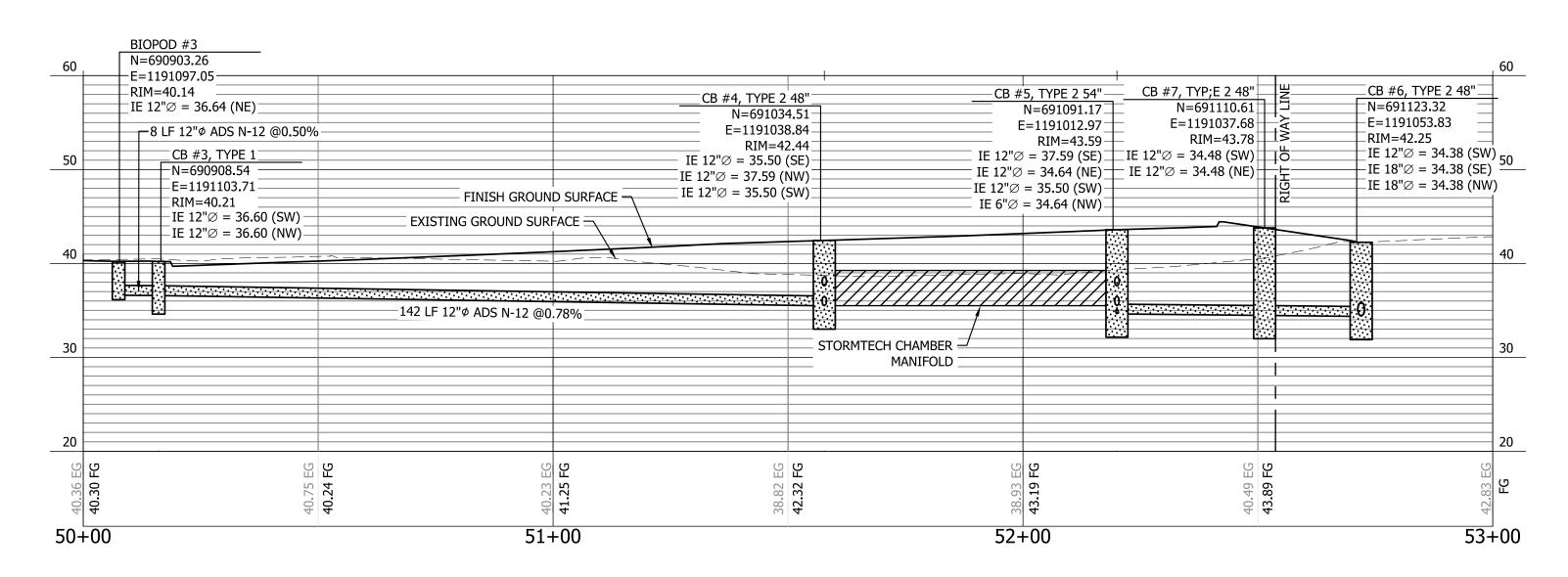
WEST STORMWATER PROFILE

HORIZONTAL SCALE: 1"=20' VERTICAL SCALE: 1"=10'



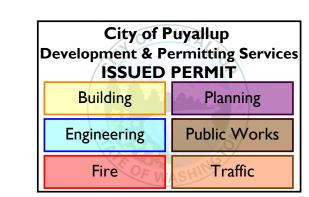
WEST STORMWATER PROFILE

HORIZONTAL SCALE: 1"=20' VERTICAL SCALE: 1"=10'



ON-SITE EAST STORMWATER PROFILE

HORIZONTAL SCALE: 1"=20' VERTICAL SCALE: 1"=10'



APPROVED Jmb Calous CITY OF PUYALLUP DEVELOPMENT ENGINEERING 12/28/2023 NOTE: THIS APPROVAL IS VOID AFTER 180 DAYS 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

DEVELOPMENT ENGINEERING MANAGER.

VERIFICATION NOTE

ALL EXISTING UTILITIES IN THE CONSTRUCTION AREA SHALL BE IDENTIFIED AND VERIFIED FOR DEPTH AND LOCATION PRIOR TO ANY CONSTRUCTION ACTIVITIES SO TO IDENTIFY ANY POTENTIAL CONFLICTS WITH PROPOSED CONSTRUCTION. CONTACT PROJECT ENGINEER IMMEDIATELY IF ANY CONFLICTS ARE IDENTIFIED.

PRIOR TO ANY CONSTRUCTION ACTIVITIES, VERIFY EXISTING TOPOGRAPHY IS CONSISTENT WITH WHAT IS SHOWN ON PLANS AND IF THERE ARE ANY POTENTIAL CONFLICTS WITH PROPOSED CONSTRUCTION ACTIVITIES. CONTACT PROJECT ENGINEER IMMEDIATELY IF ANY CONFLICTS ARE IDENTIFIED.

CALL 811 AT LEAST 48 **HOURS BEFORE YOU DIG**

	ВУ					
	DATE					
	DESCRIPTION					
	REVISION					
					CIVII FNGINFERS ~ SURVEYORS ~	
	444	H	RET STE		ALLISHINGTO	
			PESSI	ONAL	ENG 20	23-1
	<u> </u>					

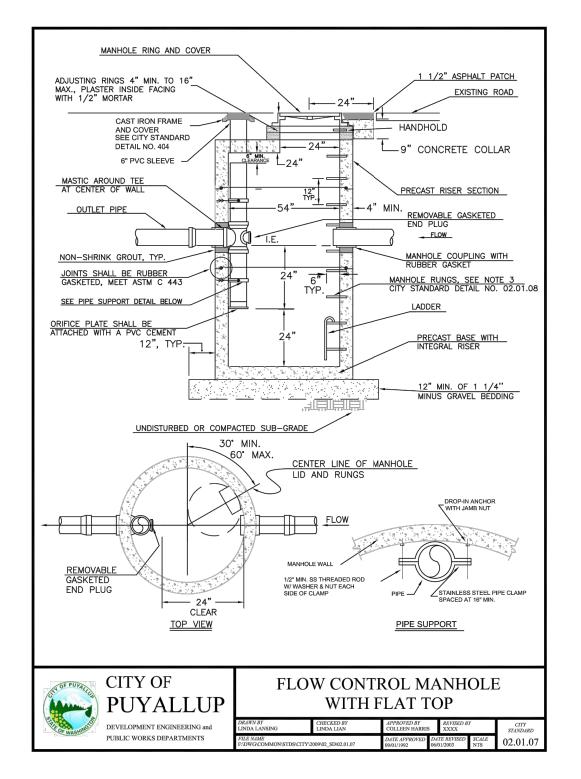
PROFIL ಶ AN DRAINAGE

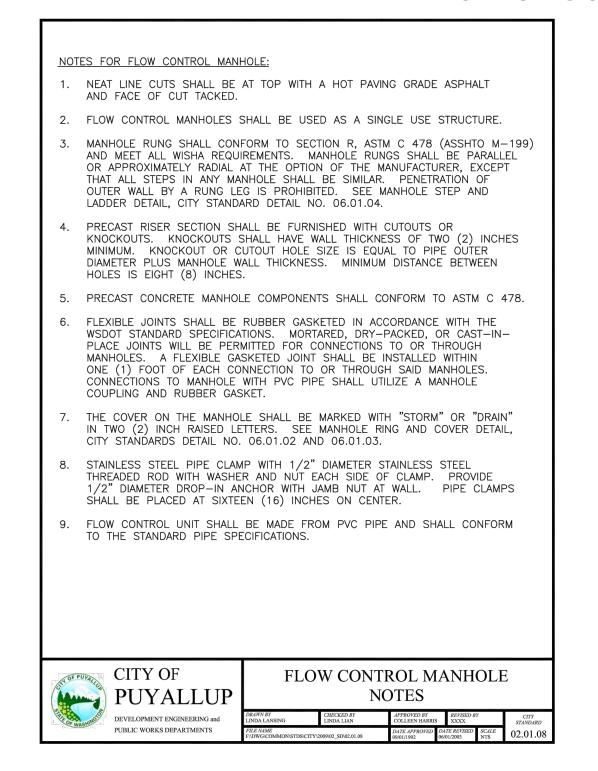
DESIGNER: K. MAUREN ENGINEER: B. ALLEN DRAWN: K. MAUREN S16 T20N R04E WM DATE: 2023-08-10 REVISED: -.--.

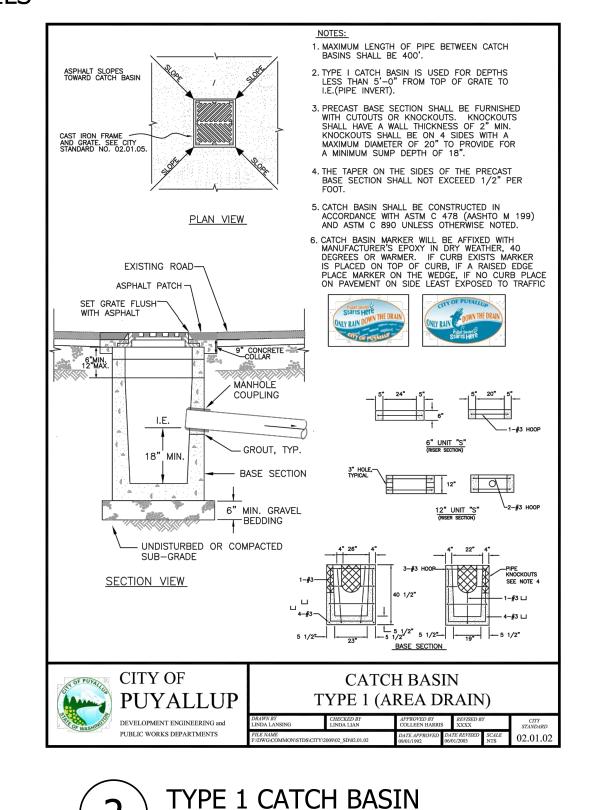
PROJECT: 21-247 DWG NAME: 21-247-C SHEET

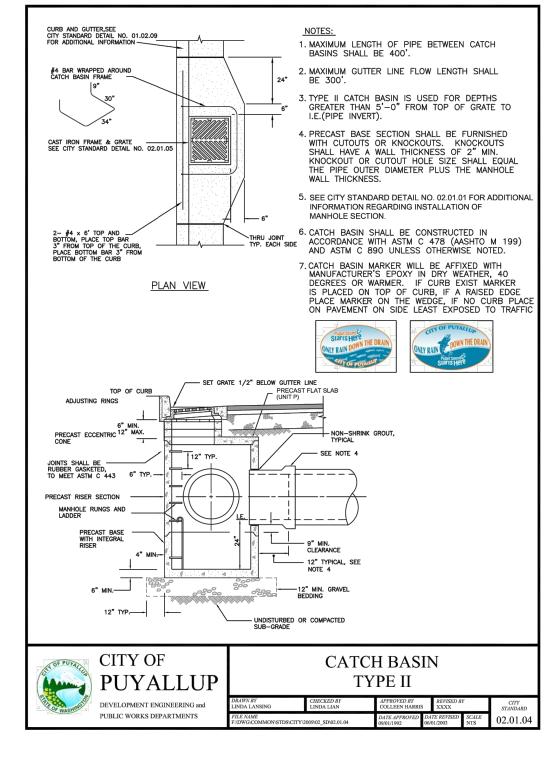
C10 10 OF 17

A PORTION OF SECTION 16, TOWNSHIP 20 NORTH, RANGE 04 EAST, W.M., CITY OF PUYALLUP, WASHINGTON **DRAINAGE NOTES & DETAILS**











OUTLET CONTROL STRUCTURE

RIM ELEVATION RISER DIAMETER RESTRICTOR PLATE DIAMETER ORIFICE #2 DIAMETER **ORIFICE #2 ELEVATION ORFICIE #3 DIAMETER ORIFICE #3 ELEVATION** TOP OF RISER

eatment Flow Rate (cfs)

 Rim Elevation
 40.14

 Pipe Data
 Pipe Location
 Pipe Size
 Pipe Type
 Invert Type

 Outlet
 EAST
 12"
 ADS
 36.64

PERFORMANCE SPECIFICATIONS

NJDEP 80% Removal, 75 micron 0.083 cfs

SITE SPECIFIC DATA

PERFORMANCE SPECIFICATIONS

NJDEP 80% Removal, 75 micron 0.083 cfs

WA Ecology GULD - Basic, Enhanced & Phosphorus 0.074 cfs Bypass Capacity 2.0 cfs

SITE SPECIFIC DATA

0.074 cfs

0.0609

0.6172

0.074 cfs

WA Ecology GULD - Basic,

Enhanced & Phosphorus

Bypass Capacity

Peak Flow Rate (cfs)

eak Flow Rate (cfs)

= 43.59= 18 INCH = 0.625 INCH = 0.875 INCH = 37.44= 0.75 INCH = 37.84 = 39.14

DETENTION CHAMBERS SUMMARY

----6'-0"---

ノた

2'-0"-2'-0"-2'-0"-

PLAN VIEW

4'-0"

- 1'-0" -

INLET CONTOUR RACK WITH

OPENING TO BIOFILTRATION CHAMBER -

BYPASS WEIR/OUTLET BAY

18"X36" ACCESS HATCH -

- ALTERNATE INLET

- CURB INLET WITH 6" NOSING

7 24"x7" OPENING FOR CURB INLET

- 36"X36" ACCESS HATCH

LOCATIONS AVAILABLE

BOTTOM OF SYSTEM ELEVATION = 34.64 MAX DESIGN WATER SURFACE = 39.14 TOP OF SYSTEM ELEVATION = 40.14= 35.39TOP OF GRAVEL DESIGN STORAGE VOLUME = 35,327 CF

ALTERNATE OUTLET -

Ø12" RCP MAX. OUTLET -

4"-6" RECOMMENDED

OPENING

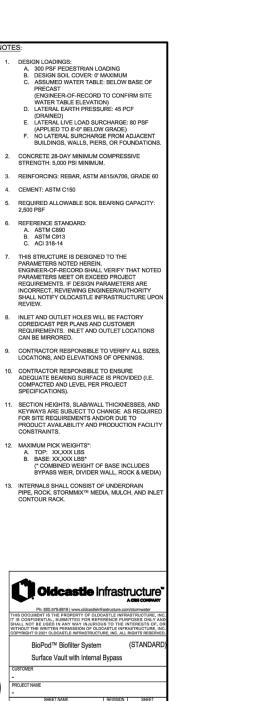
GUTTER BY OTHERS

CURB INLET DETAIL

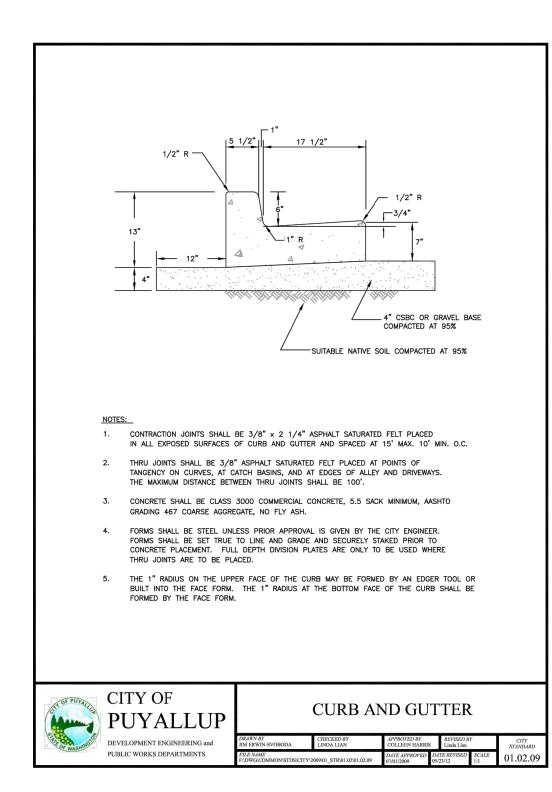
SEE CURB INLET DETAIL

THIS SHEET





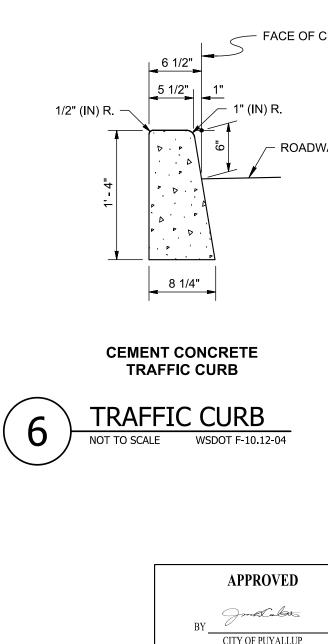
Specifier Drawing BPS-46IB



CURB AND GUTTER

NOT TO SCALE

CITY OF PUYALLUP



12/28/2023

NOTE: THIS APPROVAL IS VOID AFTER 180

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

DEVELOPMENT ENGINEERING MANAGER.

DAYS FROM APPROVAL DATE.

DATE

CITY OF PUYALLUP

City of Puyallup

Development & Permitting Services

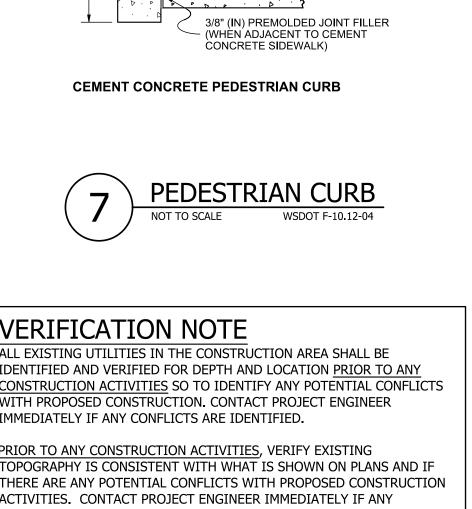
ISSUED PERMIT

Public Works

Traffic

Engineering

Fire



eggional eng,

ಶ

DRAINAGE

DESIGNER: K. MAUREN

K. MAUREN

REV.

ENGINEER: B. ALLEN

S16 T20N R04E WM

DWG NAME: 21-247-C

SHEET

11 OF 17

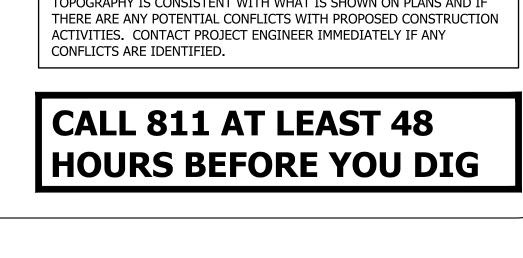
DATE: 2023-08-10

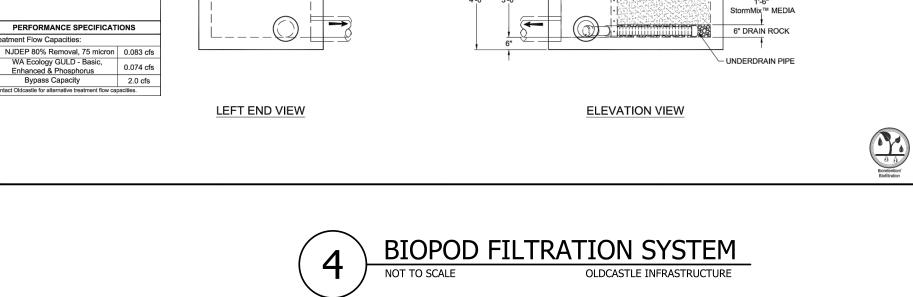
REVISED: -.--

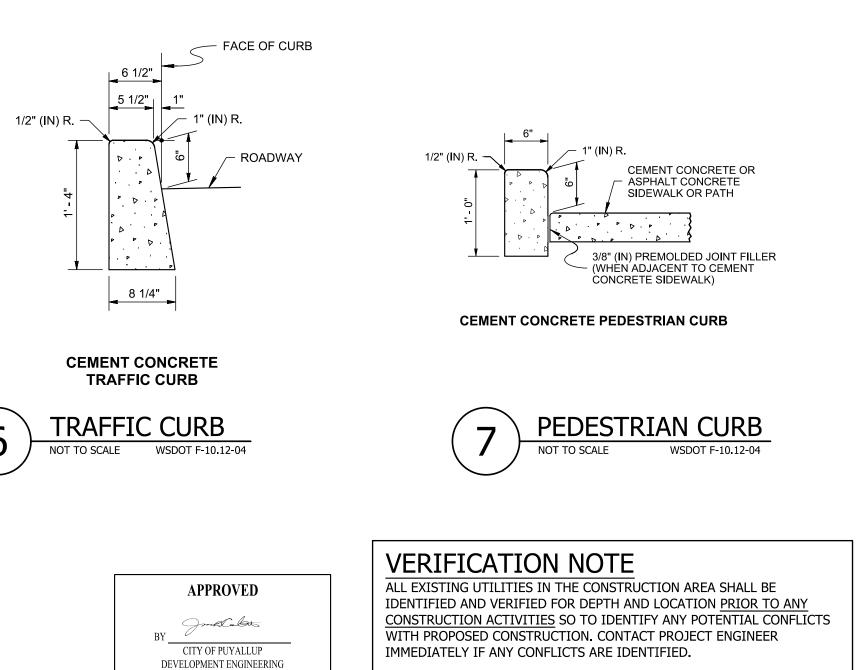
PROJECT: 21-247

DRAWN:

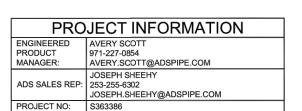
2023-11-17







A PORTION OF SECTION 16, TOWNSHIP 20 NORTH, RANGE 04 EAST, W.M., CITY OF PUYALLUP, WASHINGTON **DRAINAGE NOTES & DETAILS**







VALLEY AVENUE YARD

PUYALLUP. WA

MC-3500 STORMTECH CHAMBER SPECIFICATIONS

- 1. CHAMBERS SHALL BE STORMTECH MC-3500.
- 2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED. TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787. "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBE LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION: TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING
- STACKING LUGS. TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS
- TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION. a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE DUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
- THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER. THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR
- DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE. THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- 9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM

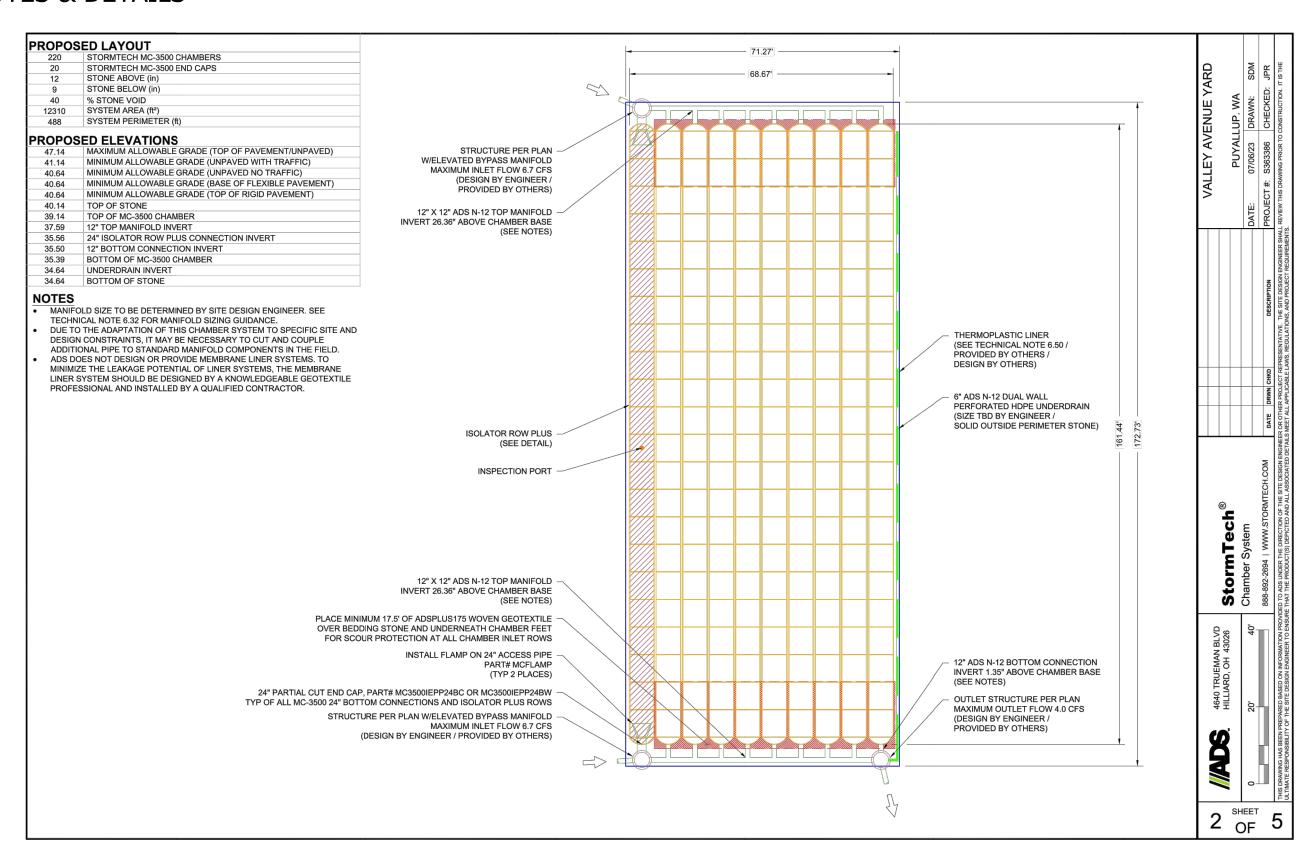
- 1. STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A
- 2. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE". CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS.
- STORMTECH RECOMMENDS 3 BACKFILL METHODS: STONESHOOTER LOCATED OFF THE CHAMBER BED.
 BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- 5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- 6. MAINTAIN MINIMUM 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
- 7. INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3
- 9. STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING. 10. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN
- 11. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE
- TORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

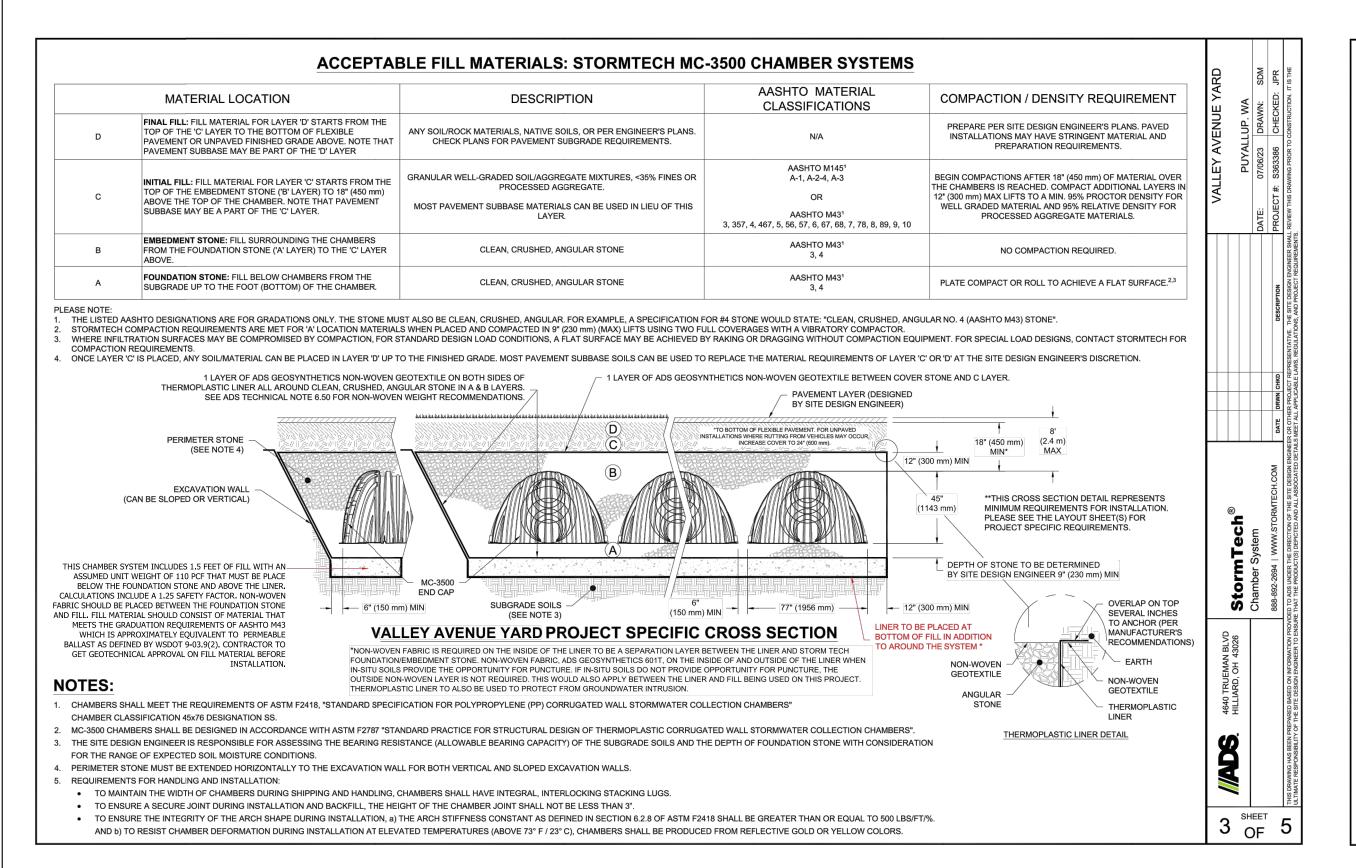
NOTES FOR CONSTRUCTION EQUIPMENT

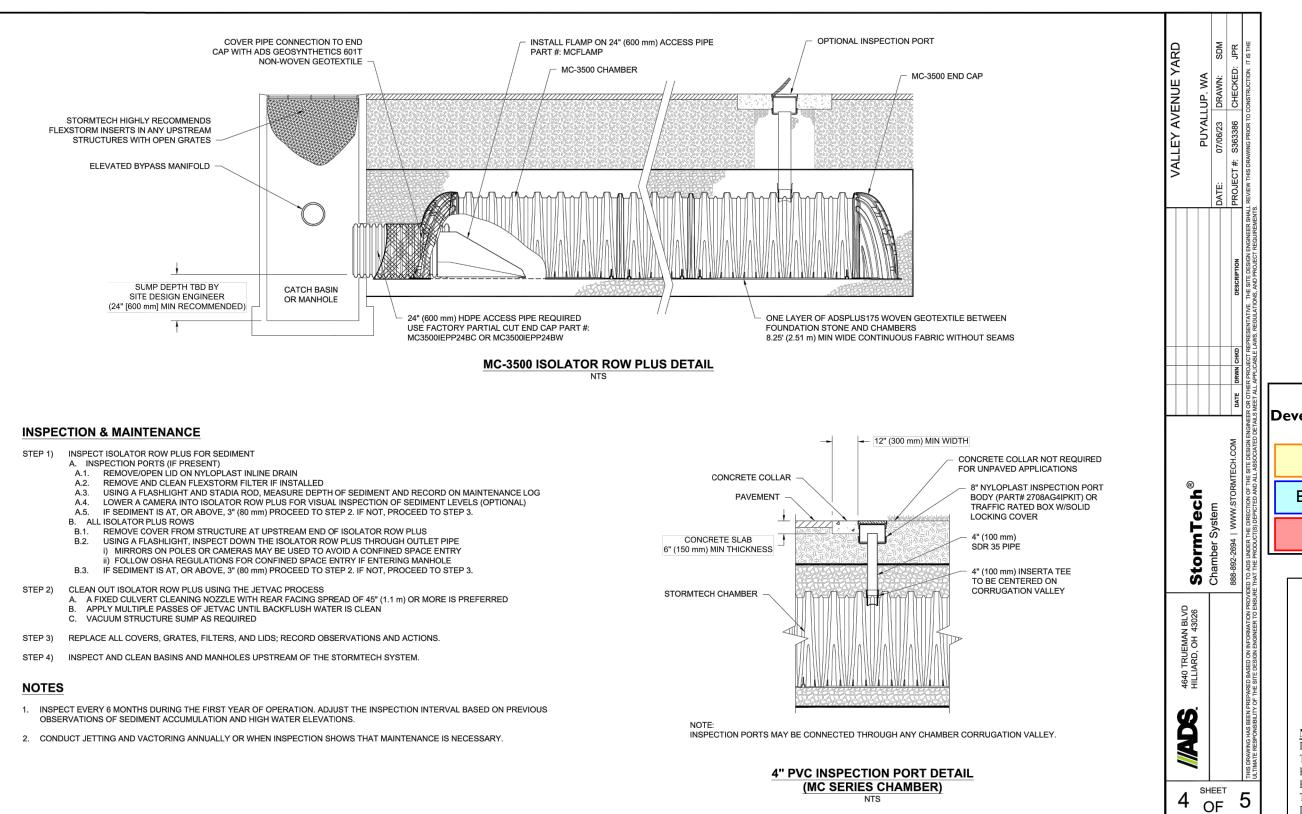
- 1. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- 2. THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:
- NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE. WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE"
- WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE". 3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

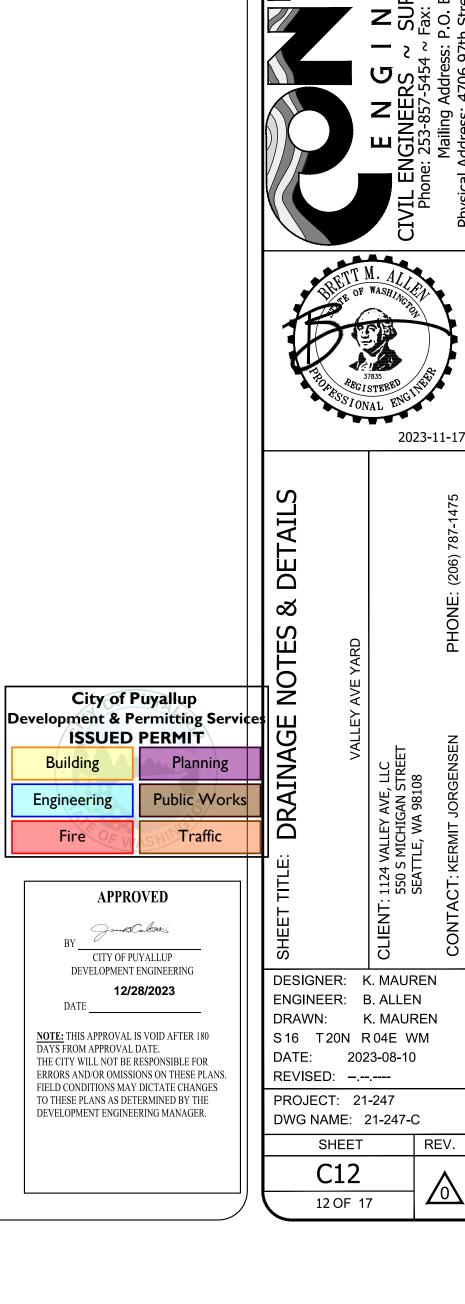
USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

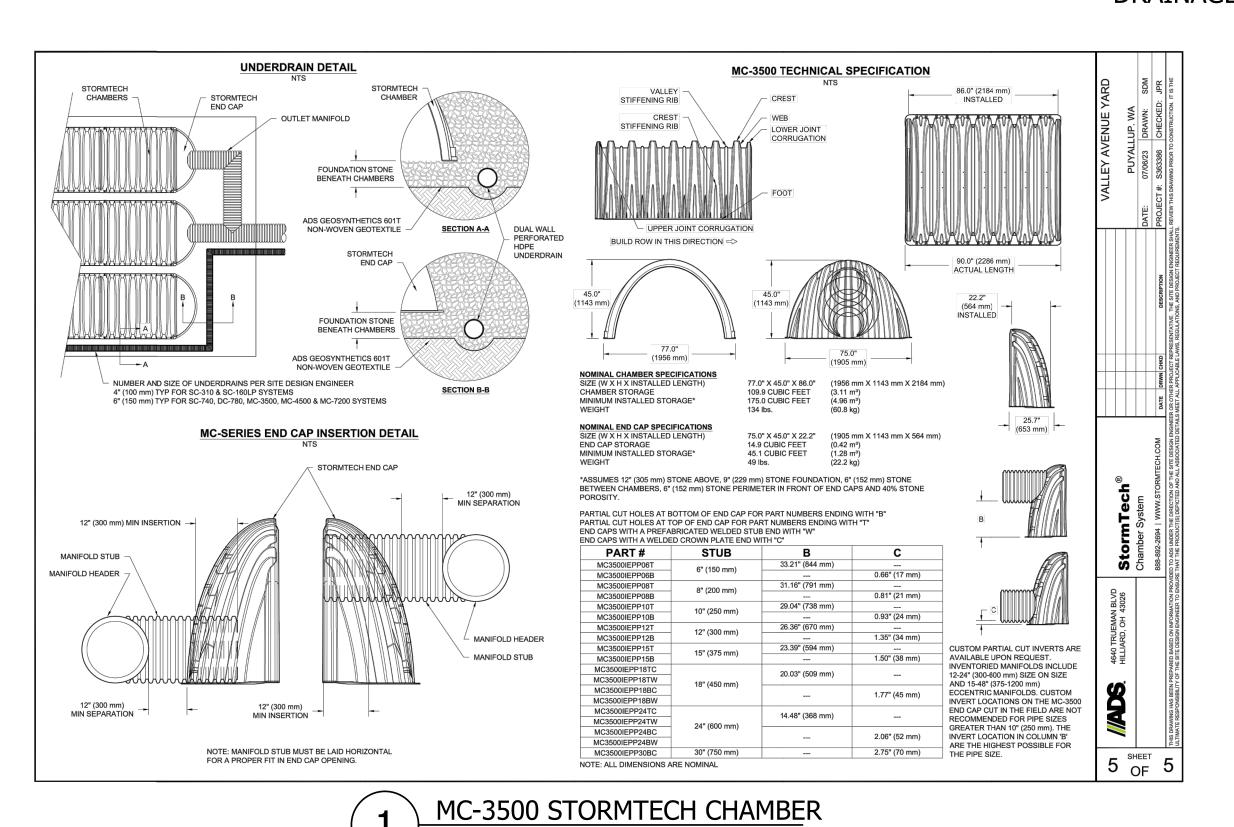


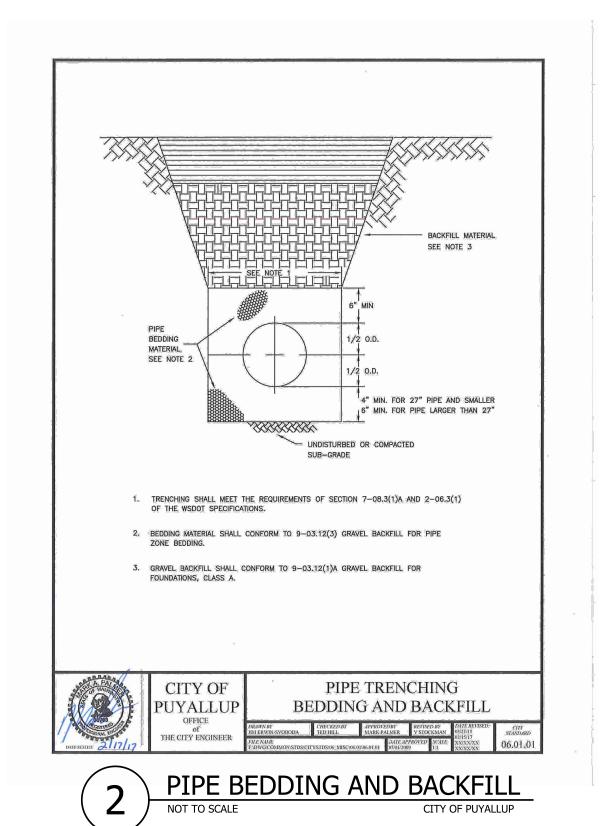


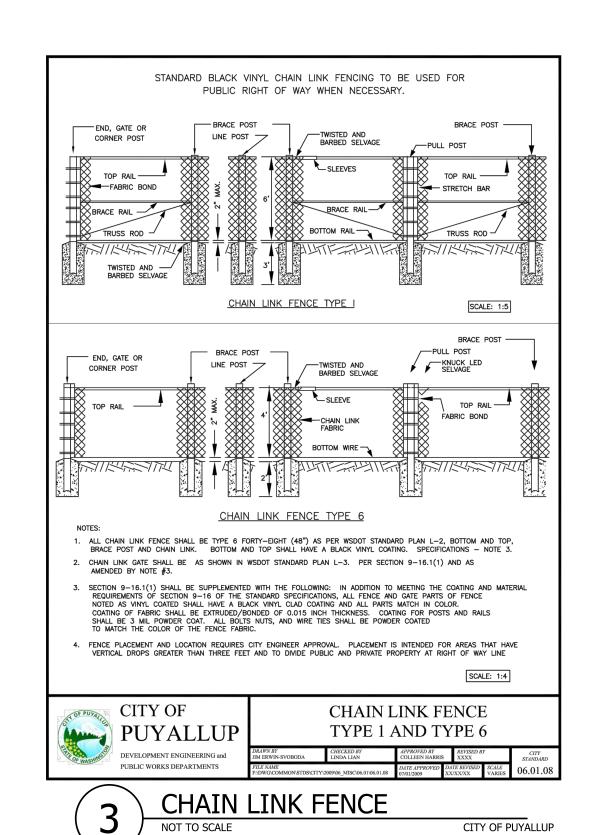


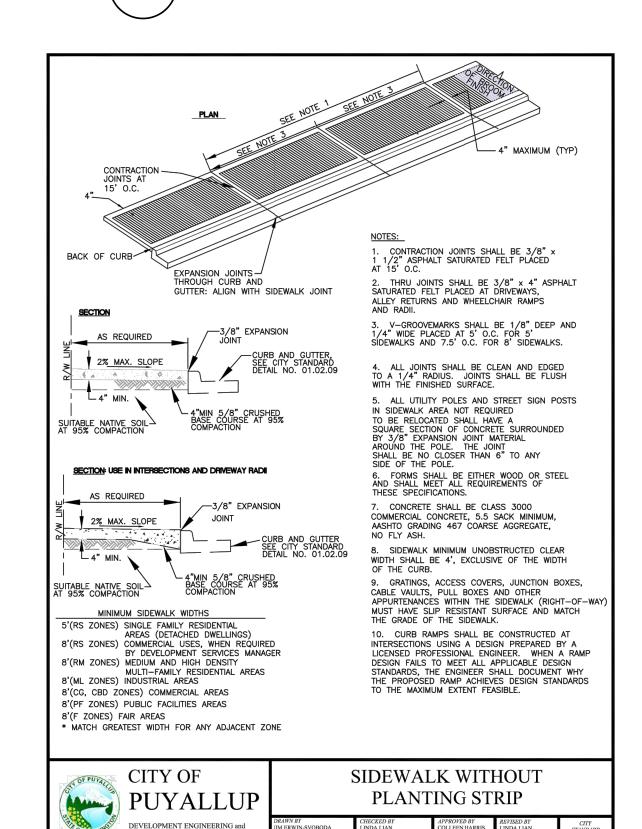


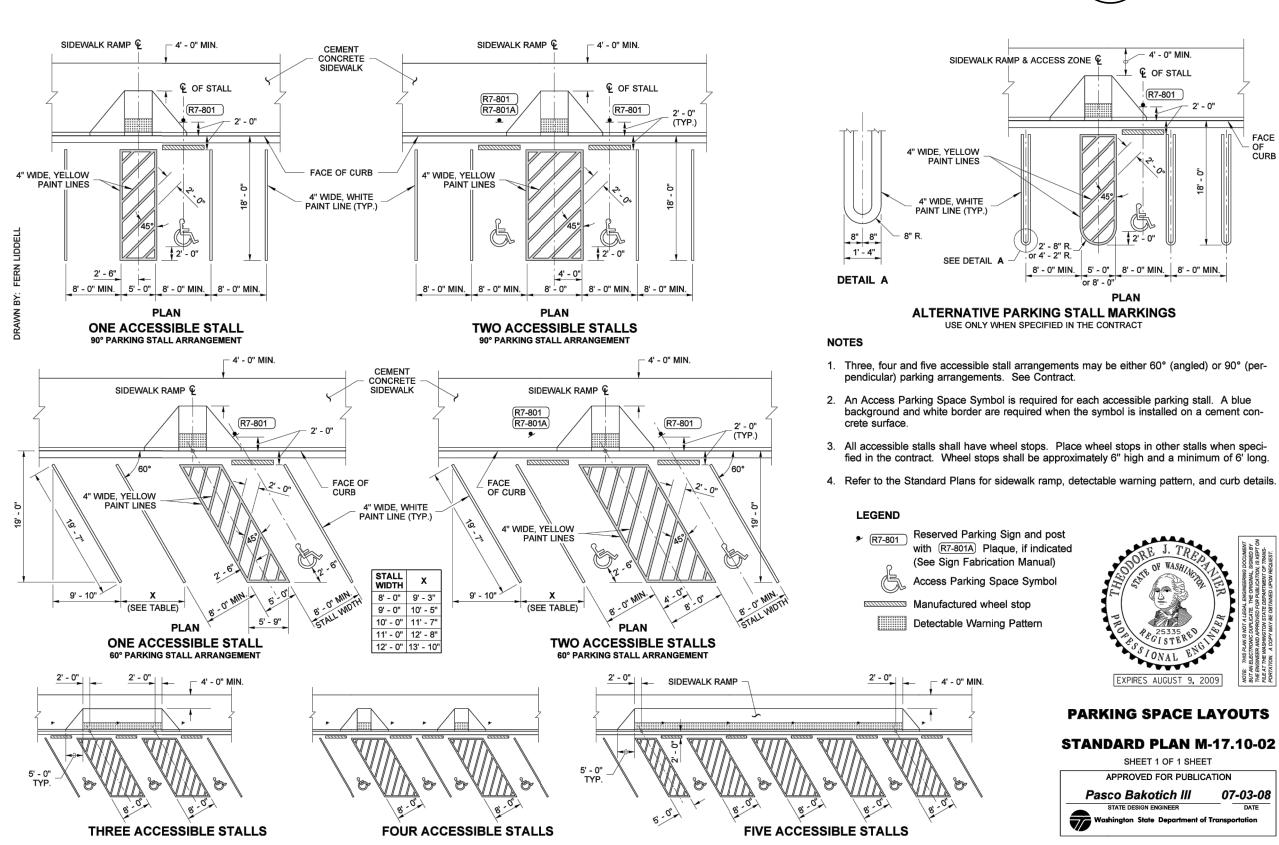
A PORTION OF SECTION 16, TOWNSHIP 20 NORTH, RANGE 04 EAST, W.M., CITY OF PUYALLUP, WASHINGTON DRAINAGE NOTES & DETAILS



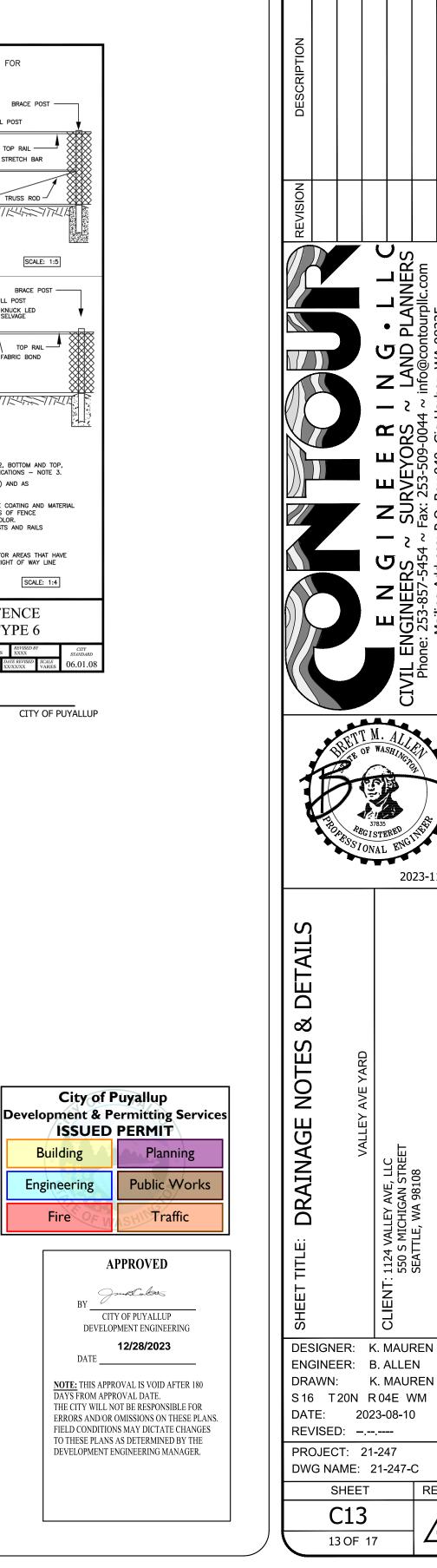






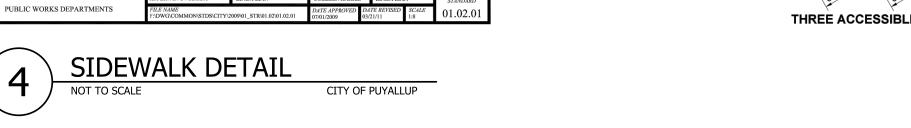


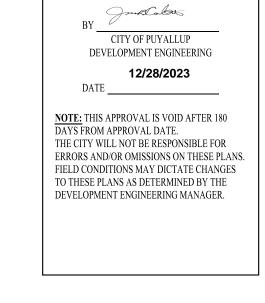
ADA PARKING DETAIL



2023-11-17

REV.





City of Puyallup

ISSUED PERMIT

Engineering

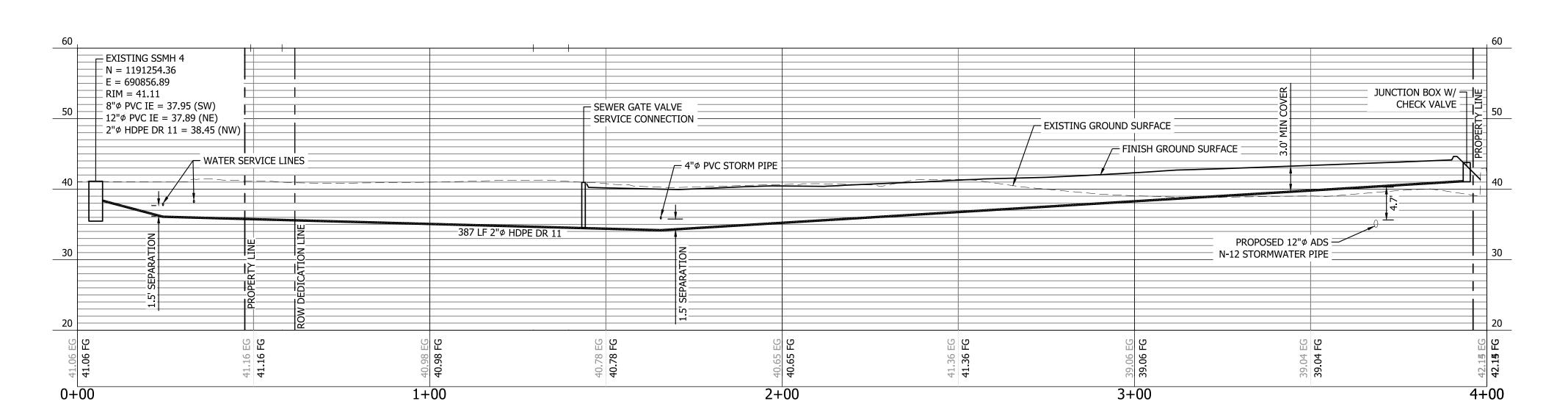
Fire

Planning

Traffic

APPROVED

VALLEY AVE YARD **GRAPHIC SCALE** A PORTION OF SECTION 16, TOWNSHIP 20 NORTH, RANGE 04 EAST, W.M., CITY OF PUYALLUP, WASHINGTON 1 INCH = 20 FEET (22"x34")SEWER PLAN & PROFILE 1 INCH = 40 FEET (11"x17")→ PROPOSED GATE VALVE CONNECT TO 2"\$\phi\$ HDPE DR \(-\) ENCASE VALVE AT SURFACE 11 SEWER SERVICE LINE WITH CONCRETE RING 5 LF 1.25" HDPE DR 11 STRM-SSWR X-ING JUNCTION BOX W/ CHECK 4 STRM IE = 37.59 VALVE AND GATE VAVLVE SSWR CRWN = 36.09-PROPOSED 387 LF 2"Ø HDPE SEPARATION = 1.50' E1 GRINDER PUMP -DR 11 FORCE MAIN SEWER SEE DETAIL 1, SHEET C12 WATER-SSWR X-ING -RIM=41.10 WATER IE = 38.34 IE 4" ϕ =35.35 (IN) (N,E) SSWR CRWN = 36.84IE $1.25''\phi = 36.54$ (OUT)(W) SEPARATION = 1.50' MIN - STRM-SSWR X-ING − 102 LF 4"¢ PVC @ 2.0% 9 LF 4"ø PVC @ 5.56% MIN ≁ STRM IE = 37.82W/ LOCATE WIRE WATER-SSWR X-ING -WATER-SSWR X-ING > SSWR CRWN = 36.10WATER IE = 37.94WATER IE = 38.07° SEPARATION = 1.72'SSWR CRWN = 36.44SSWR CRWN = 36.57SEPARATION = 1.50' MIN SEPARATION = 1.50'- INSTALL SSCO WITHIN JUNCTION BOX W/ 485 2' OF BUILDING CHECK VALVE RIM=41.22 IE $4''\phi = 35.85$ APPROXIMATE LOCATION CONNECT TO -FOR FUTURE 12'X12' EXISTING MANHOLE GARBAGE ENCLOSURE PROPOSED SIDE SEWER STUB OUT -FOR FUTURE GARBAGE ENCLOSURE CAP END IE = 37.39LINE MANHOLE TO PREVENT CORROSION -VALLEY AVE NW (PUBLIC) SSMH 4 RIM 41.11 8"\$\phi\$ IE=37.95 (SW) (EXIST) 12"\(\phi \) IE=37.89 (NE) (EXIST) 2"\$\phi\$ IE=38.45 (NW) (NEW)



PROPOSED FORCE MAIN SEWER LINE PROFILE

HORIZONTAL SCALE: 1"=20' VERTICAL SCALE: 1"=10'

MINIMUM GRINDER PUMP REQUIREMENTS

LIFT STATION E/ONE WH231-73 STATION PACKAGE:

PUMP TYPE: E/ONE W200P10AAF

SIZE OF PUMP: 1 HP, 1,725 RPM, HIGH TORQUE CAPACITOR START, THERMALLY PROTECTED, 120/240 V /

60HZ, ONE PHASE

1-1/4" PIPE OUTLET:

PIPE SIZE: 1-1/4" (MIN) CONTROL PANEL/ALARM: E/ONE SENTRY

FINISH FLOOR (FT)	WET WELL BASE (FT)	PUMP OFF (FT)	PUMP ON (FT)	ALARM ELEV (FT)	INVERT IN ELEV (FT)	WET WELL TOP (FT)	INVERT OUT ELEV (FT)
43.00	33.64	34.62	34.96	35.62	35.74	42.12	36.77

ACRONYMS

ME MATCH EXISTING EG EXISTING GRADE FG FINISH GRADE

PC POINT OF CURVATURE PT POINT OF TANGENCY MP MID POINT

City of Puyallup

Development & Permitting Services

Planning

Public Works

Traffic

ISSUED PERMIT

Building

Engineering

Fire

FL FLOWLINE TC TOP OF CURB TW TOP OF WALL BW BOTTOM OF WALL

BC BOTTOM OF CURB CL CENTERLINE **ROW RIGHT OF WAY**

APPROVED Jm Calous CITY OF PUYALLUP DEVELOPMENT ENGINEERING 12/28/2023

NOTE: THIS APPROVAL IS VOID AFTER 180

DAYS 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 DEVELOPMENT ENGINEERING MANAGER.

CITY OF PUYALLUP SANITARY SEWER NOTES:

- 1. ALL WORK IN CITY RIGHT-OF-WAY REQUIRES A PERMIT FORM 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
- 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.
- 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").
- A COPY OF THESE APPROVED PLANS AND APPLICABLE CITY DEVELOPER SPECIFICATIONS AND DETAILS SHALL BE ON SITE DURING CONSTRUCTION.
- 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.
- THE CONTRACTOR SHALL HAVE ALL UTILITIES VERIFIED ON THE GROUND PRIOR TO ANY CONSTRUCTION. CALL (811) AT LEAST TWO WORKING DAYS IN ADVANCE. ANY STRUCTURES AND/OR OBSTRUCTION WHICH REQUIRE REMOVAL OR RELOCATION RELATING TO THIS PROJECT SHALL BE DONE SO AT THE DEVLEPOER'S
- MINIMUM GRADE ON ALL 4 INCHES 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. 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 TRIPLED 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. 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 FORM BUILDING FOUNDATIONS AND/OR ROOF LINES WITH THE EXCEPTION OF SIDE SEWERS THAT PROVIDE SERVE TO A SINGLE-FAMILY RESIDENCE. AT THE DISCRETION OF THE REVIEW ENGINEER, A LICENSE 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 FORM 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.

EXISTING UTILITY NOTE

EXISTING UTILITIES DEPICTED BASED UPON FIELD SURVEY. CONTRACTOR

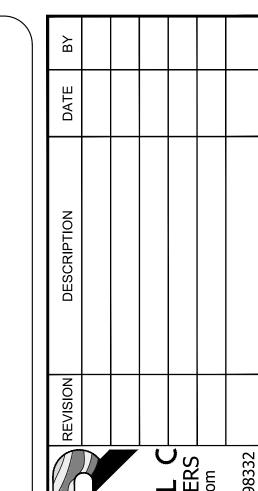
SHALL FIELD VERIFY ALL EXISTING UTILITIES.

VERIFICATION NOTE

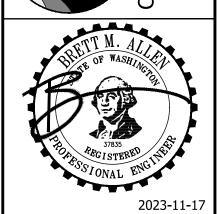
ALL EXISTING UTILITIES IN THE CONSTRUCTION AREA SHALL BE IDENTIFIED AND VERIFIED FOR DEPTH AND LOCATION PRIOR TO ANY CONSTRUCTION ACTIVITIES SO TO IDENTIFY ANY POTENTIAL CONFLICTS WITH PROPOSED CONSTRUCTION. CONTACT PROJECT ENGINEER IMMEDIATELY IF ANY CONFLICTS ARE IDENTIFIED.

PRIOR TO ANY CONSTRUCTION ACTIVITIES, VERIFY EXISTING TOPOGRAPHY IS CONSISTENT WITH WHAT IS SHOWN ON PLANS AND IF THERE ARE ANY POTENTIAL CONFLICTS WITH PROPOSED CONSTRUCTION ACTIVITIES. CONTACT PROJECT ENGINEER IMMEDIATELY IF ANY CONFLICTS ARE IDENTIFIED.

CALL 811 AT LEAST 48 **HOURS BEFORE YOU DIG**







ಶ

SEWER

DESIGNER: K. MAUREN ENGINEER: B. ALLEN DRAWN: K. MAUREN S16 T20N R04E WM DATE: 2023-08-10 REVISED: -.--.

PROJECT: 21-247 DWG NAME: 21-247-C

> SHEET C14 14 OF 17

VALLEY AVE YARD **GRAPHIC SCALE** A PORTION OF SECTION 16, TOWNSHIP 20 NORTH, RANGE 04 EAST, W.M., CITY OF PUYALLUP, WASHINGTON 1 INCH = 30 FEET (22"x34")WATER PLAN 1 INCH = 60 FEET (11"x17")PROPOSED 1" ABOVE GROUND RPBA (C16) - APPROXIMATE CONNECTION POINT TO EXISTING BUILDING PLUMBING CONTRACTOR TO CONFIRM - PROPOSED 1" WATER METER LOCATION PRIOR TO CONSTRUCTION PER DETAIL 1, SHEET C15 WATER-STRM X-ING WATER IE = 38.67STRM CRWN = 36.38SEPARATION = 2.29'WATER-SSWR X-ING WATER IE = 38.07PROPOSED 57 LF 1" POLY PIPE SSWR CRWN = 36.57SEPARATION = 1.50'WATER SERVICE LINE - ROADWAY RESTORATION PER DETAIL 3, SHEET C15 Proposed 81 LF encased 1"ø poly " PIPE WATER SERVICE LINE - CONNECT TO EXISTING 12-INCH D.I. CITY WATER C16 BEFORE THE CROSSING IS MADE. APPROVED APPROVED **VERIFICATION NOTE** AND 03.04.03. ALL EXISTING UTILITIES IN THE CONSTRUCTION AREA SHALL BE mod Calou IDENTIFIED AND VERIFIED FOR DEPTH AND LOCATION PRIOR TO ANY CITY OF PUYALLUP CITY OF PUYALLUP CONSTRUCTION ACTIVITIES SO TO IDENTIFY ANY POTENTIAL CONFLICTS WATER PURVEYOR DEVELOPMENT ENGINEERING WITH PROPOSED CONSTRUCTION. CONTACT PROJECT ENGINEER 12/28/2023 IMMEDIATELY IF ANY CONFLICTS ARE IDENTIFIED. PRIOR TO ANY CONSTRUCTION ACTIVITIES, VERIFY EXISTING NOTE: THIS APPROVAL IS VOID AFTER 180 **NOTE:** THIS APPROVAL IS VOID AFTER 180 TOPOGRAPHY IS CONSISTENT WITH WHAT IS SHOWN ON PLANS AND IF AYS FROM APPROVAL DATE. DAYS FROM APPROVAL DATE. City of Puyallup THERE ARE ANY POTENTIAL CONFLICTS WITH PROPOSED CONSTRUCTION THE CITY WILL NOT BE RESPONSIBLE FOR THE CITY WILL NOT BE RESPONSIBLE FOR ACTIVITIES. CONTACT PROJECT ENGINEER IMMEDIATELY IF ANY ERRORS AND/OR OMISSIONS ON THESE PLANS ERRORS AND/OR OMISSIONS ON THESE PLANS. **Development & Permitting Services** IELD CONDITIONS MAY DICTATE CHANGES FIELD CONDITIONS MAY DICTATE CHANGES CONFLICTS ARE IDENTIFIED. **ISSUED PERMIT** TO THESE PLANS AS DETERMINED BY THE TO THESE PLANS AS DETERMINED BY THE WATER PURVEYOR. DEVELOPMENT ENGINEERING MANAGER. Building Planning

Public Works

Traffic

Engineering

CALL 811 AT LEAST 48

HOURS BEFORE YOU DIG

CITY OF PUYALLUP 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.
- 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.
- 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 OF A NEW PIPE SECTION FOR REPAIR OR CUT IN TEE, ALL NEW FITTINGS AND PIPE 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 PERCENT (5%) CHLORINE SOLUTION AT LEAST 6 FEET IN EACH DIRECTION FROM AS THE "CITY STANDARDS"), OR AS DIRECTED BY FRUITLAND MUTUAL WATER COMPANY (FMWC), VALLEY WATER (VW), OR TACOMA CITY WATER (TCW) IS THE PURVEYOR.
- A COPY OF THESE APPROVED PLANS AND APPLICABLE CITY DEVELOPER SPECIFICATIONS AND DETAILS SHALL BE ON SITE DURING CONSTRUCTION.
- 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.
- 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.
- ANY STRUCTURE AND/OR OBSTRUCTION WHICH REQUIRES REMOVAL OR RELOCATION RELATING TO THIS PROJECT SHALL BE DONE SO AT THE DEVELOPER'S EXPENSE.
- 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.
- 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-OFWAY AND UNIMPROVED EASEMENTS.
- 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.
- 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 EOUAL. 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
- 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
- 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.
- RESILIENT SEATED WEDGE GATE VALVES SHALL BE USED FOR 10-INCH MAINS AND SMALLER. BUTTERFLY VALVES SHALL BE USED FOR MAINS GREATER THAN
- PIPE FITTING FOR WATER MAINS SHALL BE DUCTILE IRON AND SHALL BE
- MECHANICAL JOINT CONFORMING TO AWWA SPECIFICATION C111-72. WATER MAIN PIPE AND SERVICE CONNECTIONS SHALL BE A MINIMUM OF 10
- FEET AWAY FROM BUILDING FOUNDATIONS AND/OR ROOF LINES. 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
- TRENCHING, BEDDING, AND BACKFILL FOR WATER MAINS SHALL BE INSTALLED IN ACCORDANCE WITH CITY STANDARD DETAIL 06.01.01.
- MULTI-FAMILY WATER SERVICE CONNECTIONS SHALL BE PROTECTED BY A DOUBLE CHECK VALVE ASSEMBLY OR A REDUCED PRESSURE BACKFLOW
- 21. ANY LEAD JOINT FITTING DISTURBED DURING CONSTRUCTION SHALL BE
- WHEN HYDRAULIC FIRE FLOW MODELING IS REQUIRED FOR A PROJECT, THE CITY WILL ISSUE A PERMIT. THE HYDRAULIC MODELING CRITERIA IS BASED ON THE PROJECTED 2030 WATER DEMAND, WHILE MAINTAINING A MINIMUM SYSTEM PRESSURE OF 20 POUNDS PER SQUARE INCH 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.

WATER MAIN REPAIRS (REFERENCES: AWWA C651-14 AND WSDOT STANDARD SPECIFICATION SECTION 7-09) (NOTE: A PLANNED WATER MAIN REPAIR SHAI 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 C WATER DEPARTMENT TO REDUCE THE FLOW AND PRESSURE TO THE AREA, BLOWOF 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 FLUSHED TO ACHIEVE THREE PIPE VOLUMES PULLED FROM THE PIPE (DISTANCE MEASURED FROM VALVE OPENED FOR FLUSHING TO THE EXIT HYDRANT OR BLOWOL

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 INSTALLAT SPOOLS SHALL BE SWABBED WITH A FIVE PERCENT (5%) CHLORINE SOLUTION (MINIMUM). THE INTERIOR OF THE EXISTING PIPE SHALL BE SWABBED WITH A FIVE EXPOSED CUT ENDS. THE WATER MAIN IN THE AFFECTED AREA SHALL BE FLUSHED ACHIEVE THREE PIPE VOLUMES PULLED FROM THE PIPE (DISTANCE MEASURED FROM THE VALVE OPENED FOR FLUSHING TO THE EXIT HYDRANT OR BLOWOFF). CUSTOME 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 A STORED ONSITE WITH ENDS PLUGGED. THE PLUGS SHALL REMAIN IN THE PIPE UNTI EACH PARTICULAR SECTION IS INSTALLED. NATIONAL SANITATION FOUNDATION (N APPROVED SIXTY-FIVE PERCENT (65%) CALCIUM HYPOCHLORITE SHALL BE ADDED 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	HYPOCHLORI	MAXIMUM	
				OUNCES PER 500 FEET	TEASPOONS PER 18 FEET	FILL RATE (GPM)
	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	104.0	350
	16	141	6	27.0	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 MATER MAIN CONNECTION TO THE EXISTING WATER

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

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 20. ALL COMMERCIAL AND INDUSTRIAL DEVELOPMENTS, IRRIGATION SYSTEMS, AND 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 ASSEMBLY AS DIRECTED BY THE CITY (OR FMWC, VW OR TCW WHEN SERVED BY IN THE FIELD. THE CONTRACTOR SHALL UTILIZE ONSITE DISPOSAL METHODS, IF THAT PURVEYOR) CONFORMING TO CITY STANDARD DETAILS 03.04.01, 03.04.02, 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 REPLACED WITH A MECHANICAL JOINT FITTING AT THE CONTRACTOR'S EXPENSE. 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. CITY OF PUYALLUP - CITY STANDARDS WATER REVISED 11/2020 300-11

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.

	ВУ
	DATE
) ALL DR	
CITY FFS	DESCRIPTION
. BE	7
FF).	REVISION
TO M ERS ND TIL ISF)	
1 E	

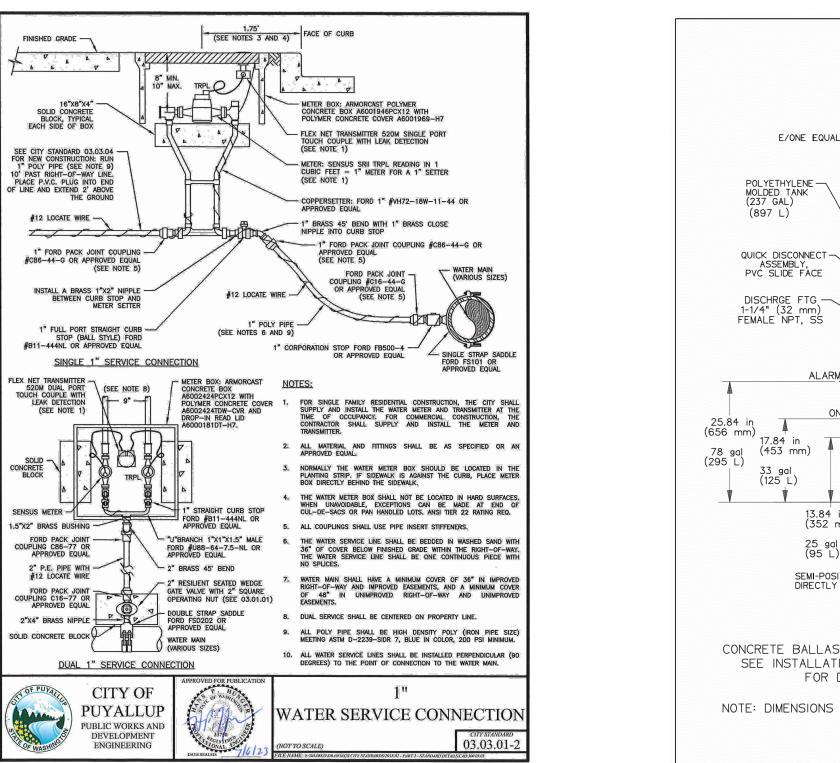
2023-11-17

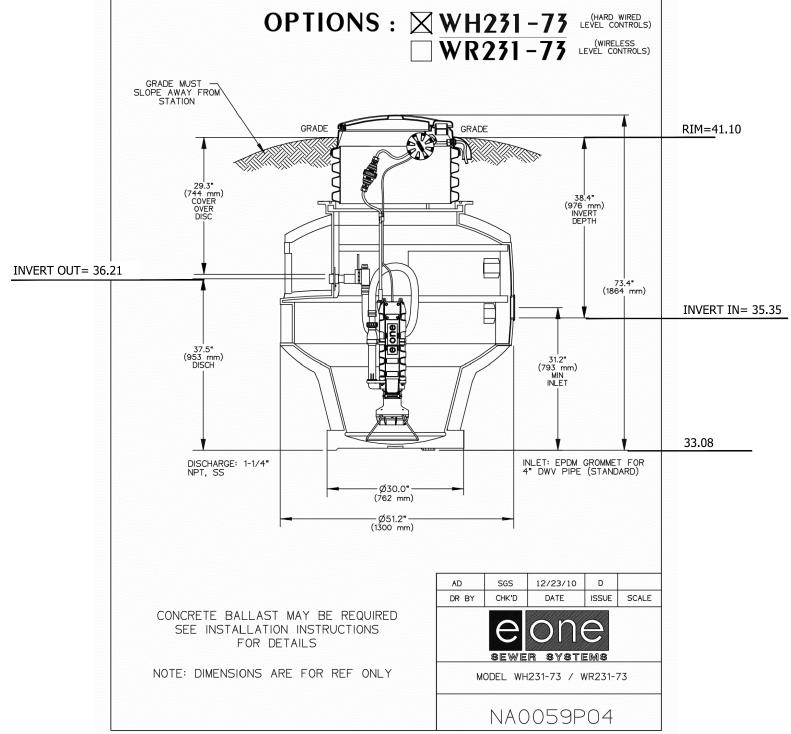
DESIGNER: K. MAUREN ENGINEER: B. ALLEN DRAWN: K. MAUREN S16 T20N R04E WM DATE: 2023-08-10 REVISED: -.--. PROJECT: 21-247

DWG NAME: 21-247-C

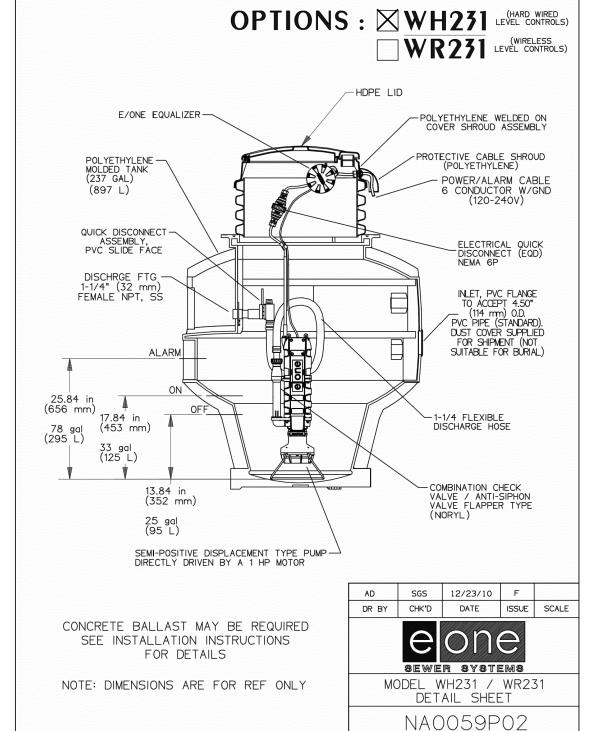
REV. SHEET 15 OF 17

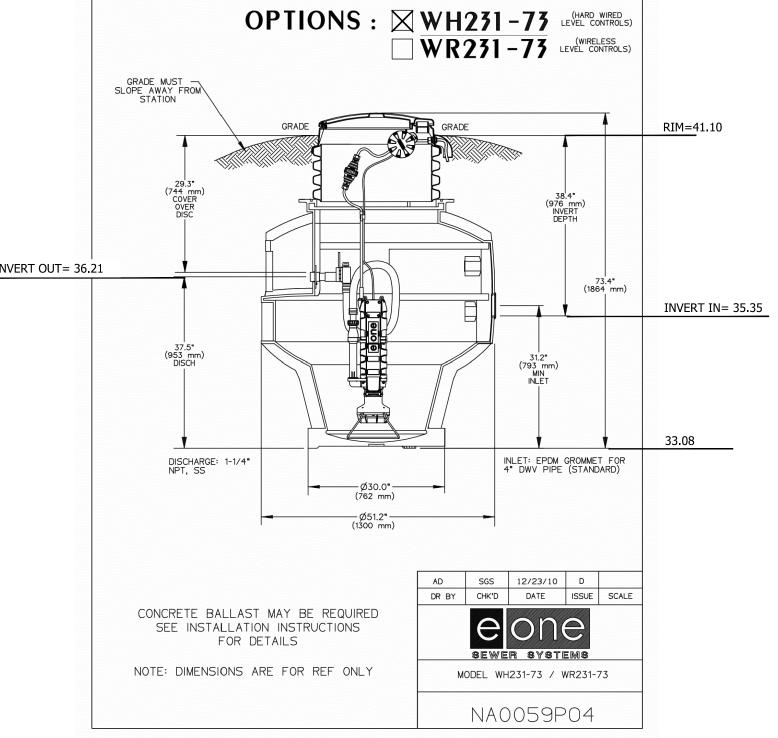
A PORTION OF SECTION 16, TOWNSHIP 20 NORTH, RANGE 04 EAST, W.M., CITY OF PUYALLUP, WASHINGTON **SEWER & WATER NOTES & DETAILS**





E-ONE WH231-73 GRINDER PUMP

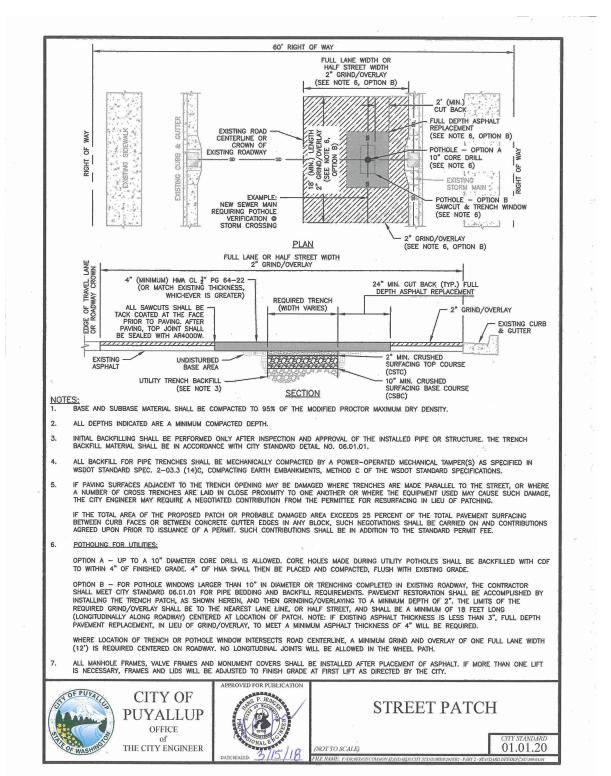




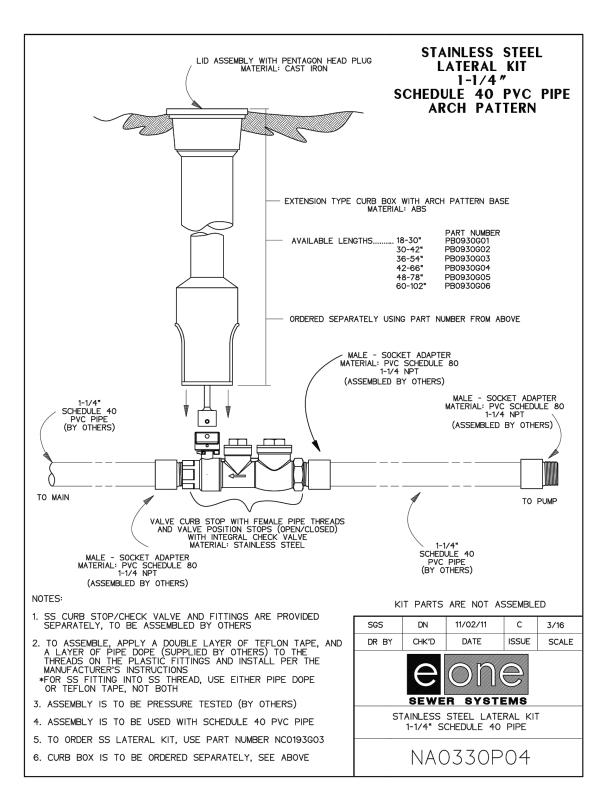
CONSTRUCTION NOTES

- EACH GRINDER SEWER PUMP AND FORCE MAIN SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL CITY CODES AND THE CONDITIONS OF THE APPROVED
- HYDROSTATIC TEST OF FORCE MAIN SHALL BE TESTED AT 150 PERCENT OR 50 PSI HYDROSTATIC PRESSURE. WHICHEVER IS GREATER, FOR PIPE SIZE UP TO 2-INCH INSIDE DIAMETER TESTING SHALL BE A MINIMUM OF 10 MINUTE DURATION WITH NO LOSS OF PRESSURE. HYDROSTATIC TESTING WILL INCLUDE THE PUMP CHECK AND
- AN OPERATIONAL CHECK OF THE PUMP, ON/OFF SWITCH ,FLOAT AND ALARM SHALL BE REQUIRED AS PART OF THE TESTING PROCEDURES.
- ALL PIPES IN NON-DRIVING AREAS ARE REQUIRED TO HAVE A MINIMUM OF 3' COVER. ALL PVC GRAVITY MAINS IN RIGHT-OF WAYS AND DRIVING AREAS AREA REQUIRED TO HAVE A MINIMUM OF 5'. ALL D.I.P. AND CONCRETE PIPES IN DRIVING AREAS OR RIGHT-OF-WAYS AREA REQUIRED TO HAVE A MINIMUM COVER OF 3'.
- GRAVITY SEWER PIPE SHALL BE CONSIDERED AS PART OF THE SEWER PUMP INSTALLATION. TESTING OF GRAVITY LINES SHALL BE COMPLETED AT THE TIME THE FORCE MAIN IS TESTED.
- PEA GRAVEL BEDDING WILL BE PLACED 4" BELOW AND 6" ABOVE PIPE. NO OTHER BEDDING MATERIAL IS ACCEPTABLE.
- HYDROSTATIC TESTING WILL BE DONE IN ACCORDANCE WITH THE PIERCE COUNTY UTILITY SANITARY SEWER SPECIFICATIONS LATEST EDITION.
- INSPECTION SHALL INCLUDE THE RESIDENTIAL PUMP, FORCE, AND GRAVITY SEWER IN IN ACCORDANCE WITH THE APPROVED PLANTS. NO DEVIATION FROM THE APPROVED PLANS WILL BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL OF THE UTILITIES DEPARTMENT ENGINEERING SECTION.
- THE SEWER LINES, FORCE MAIN, AND GRINDER PUMP SHALL REMAINED THE OWNERSHIP OF THE PROPERTY OWNER WHO SHALL BE RESPONSIBLE FOR THEIR OPERATION AND MAINTENANCE.
- THE ALARM MUST BE IN A CONSPICUOUS LOCATION AND MUST BE AUDIO CASUAL
- INTERIOR AND EXTERIOR OF WET WELL VAULT MUST BE WATERPROOFED BY THE MANUFACTURER AT THE PRODUCTION SITE. COATING IS TO BE COAL TAR EPOXY PER SECTION 5.3.9 OF PIERCE COUNTY UTILITY SPECIFICATIONS.
- ALL UTILITIES CROSSING SEWER LINES MUST HAVE PROPER VERTICAL CLEARANCE. THE STANDARD VERTICAL SEPARATION FOR WATER LINES IS 1.5 FEET ABOVE SEWER LINES AND 1 FOOT FOR ALL OTHER UTILITIES.
- PARALLEL SEWER WATER LINES MUCH HAVE 10 FEET OF HORIZONTAL SEPARATION. THE GRINDER PUMP WET WELL SHALL BE INSTALLED ON LEVEL UNDISTURBED SOIL
- WITH A MINIMUM TOTAL LOAD BEARING CAPACITY OF 2000 POUNDS PER SQUARE FOOT. THE GRINDER PUMP WET WELL SHALL BE SET ON A LAYER OF 12 INCHES COMPACTED DEPTH.

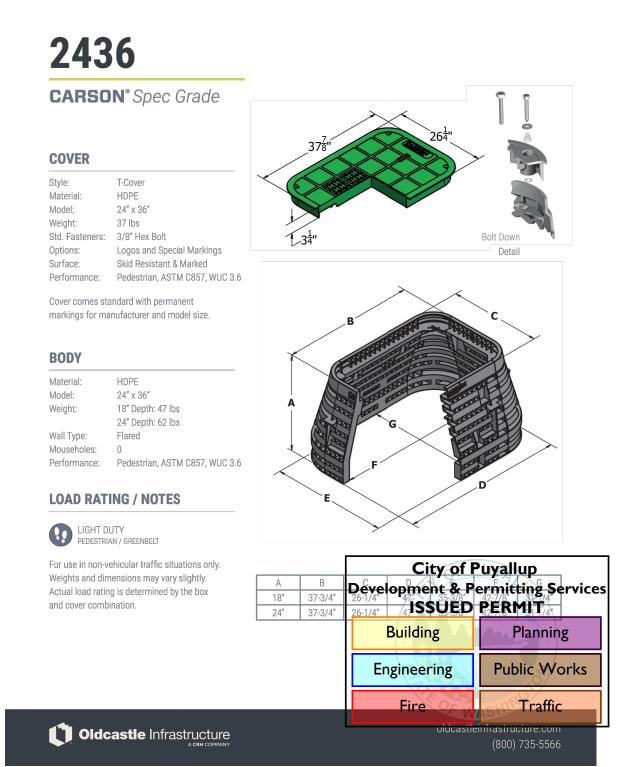




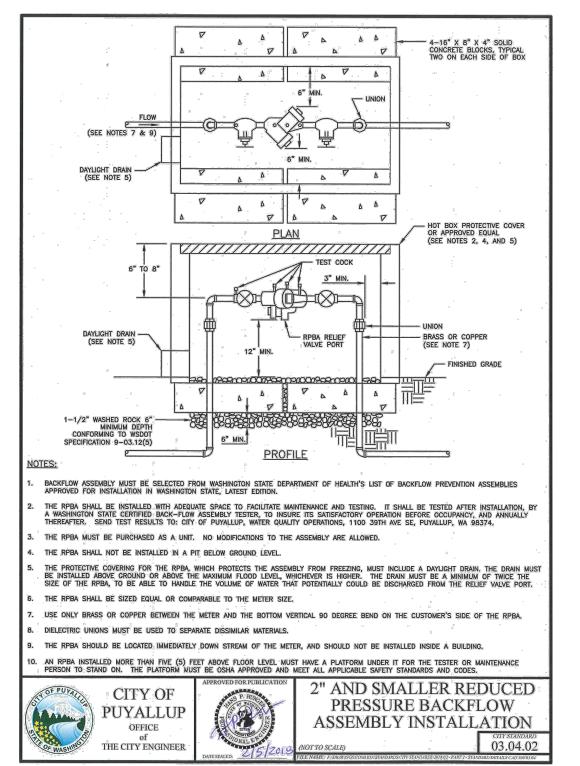




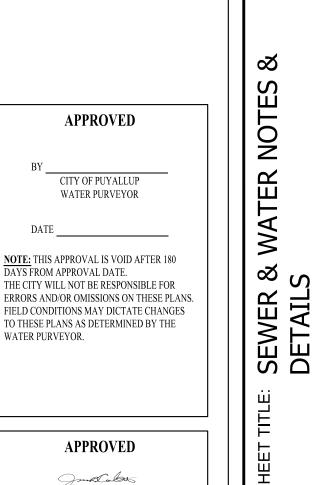












CITY OF PUYALLUP

DEVELOPMENT ENGINEERING

NOTE: THIS APPROVAL IS VOID AFTER 180

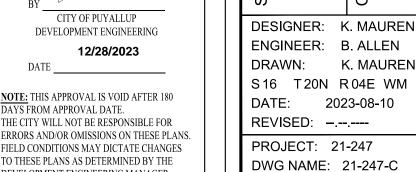
THE CITY WILL NOT BE RESPONSIBLE FOR

FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE

DEVELOPMENT ENGINEERING MANAGER.

DAYS FROM APPROVAL DATE.

12/28/2023



REV. SHEET C16 16 OF 17

