

## GENERAL SITE NOTES:

- THE CONTRACTOR SHALL OBTAIN AND HAVE AVAILABLE COPIES OF THE APPLICABLE GOVERNING AGENCY STANDARDS AT THE JOB SITE DURING THE RELATED CONSTRUCTION OPERATIONS.
- CONTRACTOR SHALL ENSURE THAT ALL NECESSARY PERMITS HAVE BEEN OBTAINED PRIOR TO COMMENCING WORK.
- 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.
- 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.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE APPROPRIATE UTILITIES INVOLVED PRIOR TO CONSTRUCTION.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.

## HORIZONTAL CONTROL NOTE:

CONTRACTOR SHALL HAVE ALL PROPERTY LINES, CURB, SIDEWALK, STRUCTURES, CONCRETE PADS AND ANY OTHER ABOVE GROUND PERMANENT STRUCTURE DEPICTED ON THESE PLANS STAKED FOR CONSTRUCTION BY A LICENSED SURVEYOR. LICENSED SURVEYOR SHALL STAKE ALL ITEMS USING COORDINATE GEOMETRY (RECTIFIED TO SITE CONTROL) CONTAINED IN CAD DRAWING FILES PROVIDED BY BARGHAUSEN CONSULTING ENGINEERS, INC. IT IS THE CONTRACTOR'S RESPONSIBILITY TO RETRIEVE LATEST CAD FILES FROM BARGHAUSEN CONSULTING ENGINEERS, INC., REFLECTING ANY ISSUED PLAN REVISIONS. BARGHAUSEN CONSULTING ENGINEERS SHALL IMMEDIATELY BE NOTIFIED OF ANY DISCREPANCIES PRIOR TO THE START OF CONSTRUCTION.

## MONUMENT PROTECTION NOTE:

CONTRACTOR SHALL FIELD LOCATE ALL MONUMENTS WITHIN THE AREA OF DISTURBANCE PRIOR TO CONSTRUCTION AND PROTECT FROM DISTURBANCE/DESTRUCTION TO THE MAXIMUM EXTENT FEASIBLE. IF IT IS NECESSARY TO REMOVE OR REPLACE A MONUMENT DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE LOCAL JURISDICTION HAVING AUTHORITY (ROW 58.24.040) AND BE FULLY RESPONSIBLE FOR OBTAINING PERMITS FROM THE WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES PRIOR TO DISTURBANCE, DESTRUCTION, OR RELOCATION (WAC 332-120). APPLICATIONS MUST BE COMPLETED BY A REGISTERED LAND SURVEYOR AND MAY BE OBTAINED FROM THE WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES:

WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES  
PUBLIC LAND SURVEY OFFICE  
1111 WASHINGTON STREET S.E.  
P.O. BOX 47060  
OLYMPIA, WASHINGTON 98504-7060  
(206) 902-1190

UPON COMPLETION OF CONSTRUCTION, ALL MONUMENTS DISPLACED, REMOVED, OR DESTROYED THAT ARE ABLE TO BE REPLACED, 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 REPLACEMENTS OF SAID MONUMENTATION SHALL ALSO BE THE RESPONSIBILITY OF THE CONTRACTOR.

## UTILITY PROTECTION NOTE:

APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN ON THESE PLANS. CONTRACTOR TO COORDINATE WITH PURVEYOR AND USE EXTREME CAUTION WHEN EXCAVATING ON-SITE, UNTIL EXISTING GAS AND POWER SERVICE LOCATIONS ARE CONFIRMED. CONTRACTOR TO ORDER INDEPENDENT UTILITY LOCATES (INCLUDING GAS AND POWER) FOR THE FULL SCOPE OF WORK PRIOR TO CONSTRUCTION OR ANY GROUND DISTURBING ACTIVITIES.

## UTILITY CONFLICT NOTE:

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 AT 811 48 HOURS IN ADVANCE 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 NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

## SURVEY INFORMATION

HORIZONTAL DATUM - BASIS OF BEARINGS:  
NAD 83/2011 WASHINGTON STATE COORDINATE SYSTEM, SOUTH ZONE, ESTABLISHED BY GPS OBSERVATION UTILIZING THE WASHINGTON STATE REFERENCE NETWORK. THE BASIS OF BEARINGS IS N 00°33'46" E BETWEEN THE FOUND 2" BRASS DISK AT THE INTERSECTION OF S. MERIDIAN & 15TH AVE SW AND THE FOUND 2" IRON PIPE W/TACK IN MONUMENT CASE AT THE INTERSECTION OS S. MERIDIAN & THE ON/OFF RAMP TO SR 512.

VERTICAL DATUM  
VERTICAL DATUM FOR THIS SURVEY IS NAVD88 ESTABLISHED FROM WSDOT MONUMENT ID NO. 247. ELEVATION = 80.449' (NAV088)

LOT AREA  
52,078± SF (1.20± AC) (BEFORE DEDICATION)

ADDRESS  
1402 S. MERIDIAN, PUYALLUP, WA 98371

TAX PARCEL NUMBER  
773000-028-1 & 773000-028-8: TITLE PARCEL A  
773000-003-1 & 773000-002-1: TITLE PARCEL B

### REFERENCE SURVEYS:

- PIERCE COUNTY SHORT PLAT OF MERIDIAN CENTER - AFN 77-315 (1977)
- PLAT OF SOURWINE'S ACRE LOTS - VOL 8 PLATS, PAGE 10 (1905)
- PIERCE COUNTY SHORT PLAT - AFN 8706010381 (1987)
- WSDOT SR 512 96TH ST TO JCT. SR 167, DATED MAY 23, 1968

### DATE OF SURVEY:

THIS SURVEY REPRESENTS VISIBLE PHYSICAL IMPROVEMENT CONDITIONS EXISTING ON MARCH 22, 2022. ALL SURVEY CONTROL INDICATED AS "FOUND" WAS RECOVERED FOR THIS PROJECT IN MARCH OF 2022.

### FLOOD INFORMATION:

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) INFORMATION: FIRM (FLOOD INSURANCE RATE MAP) MAP NO. 53053C0341E PANEL 341 OF 1375, DATED MARCH 7, 2017, THE SUBJECT PROPERTY IS IN ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

### ZONING INFORMATION:

(A ZONING REPORT WAS NOT FURNISHED FOR THIS SITE)

### LEGAL DESCRIPTION

(PER ABOVE REFERENCED TITLE REPORT)

PARCEL A: (773000-028-1 & 773000-028-8)  
LOT 1 AND THE NORTH 15 FEET OF THE EAST 178.33 FEET OF "COMMON ACCESS TRACT A", OF PIERCE COUNTY SHORT PLAT RECORDED UNDER RECORDING NO. 77-315, RECORDS OF PIERCE COUNTY WASHINGTON, FORMERLY BEING DESCRIBED AS THE NORTH 161.5 FEET OF THE WEST 178.33 FEET OF THE EAST 188.33 FEET OF LOT 20, SOURWINE'S ACRE LOTS, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 8 OF PLATS, PAGE 10, RECORDS OF PIERCE COUNTY, WASHINGTON; TOGETHER WITH THAT PORTION OF 14TH AVENUE SW, VACATED BY ORDINANCE NO. 2304 ABUTTING THEREON AND ATTACHED THERETO, RECORDED UNDER RECORDING NO. 9206040385.  
PARCEL A1:  
RIGHTS TO USE THAT PORTION OF THE WITHIN DESCRIBED PROPERTY LYING WITHIN COMMON ACCESS TRACT "A" OF SIDE SHORT PLAT, FOR INGRESS, EGRESS, AND INSTALLATION AND MAINTENANCE OF UTILITIES, AS SET FORTH AND DELINEATED ON PIERCE COUNTY SHORT PLAT NO. 77-315;  
EXCEPT ANY PORTION LYING WITHIN PARCEL A ABOVE.  
PARCEL A2:  
AN EASEMENT FOR INGRESS AND EGRESS AS SET FORTH IN DOCUMENTS ENTITLED "STATUTORY WARRANTY DEED" AS RECORDED UNDER RECORDING NUMBERS 2741876 AND 2792268.  
PARCEL B: (773000-003-1 & 773000-002-1)  
LOT 2, SOURWINE'S ACRE LOTS, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 8 OF PLATS, PAGE 10, RECORDS OF PIERCE COUNTY, WASHINGTON; EXCEPT THAT PORTION LYING WITHIN STATE HIGHWAY NO. SR-512, 96TH STREET TO JUNCTION SR-167; TOGETHER WITH THAT PORTION OF 14TH AVENUE SW, VACATED BY ORDINANCE NO. 2304 ABUTTING THEREON AND ATTACHED THERETO, RECORDED UNDER RECORDING NO. 9206040385.  
SITUATE IN THE COUNTY OF PIERCE, STATE OF WASHINGTON.

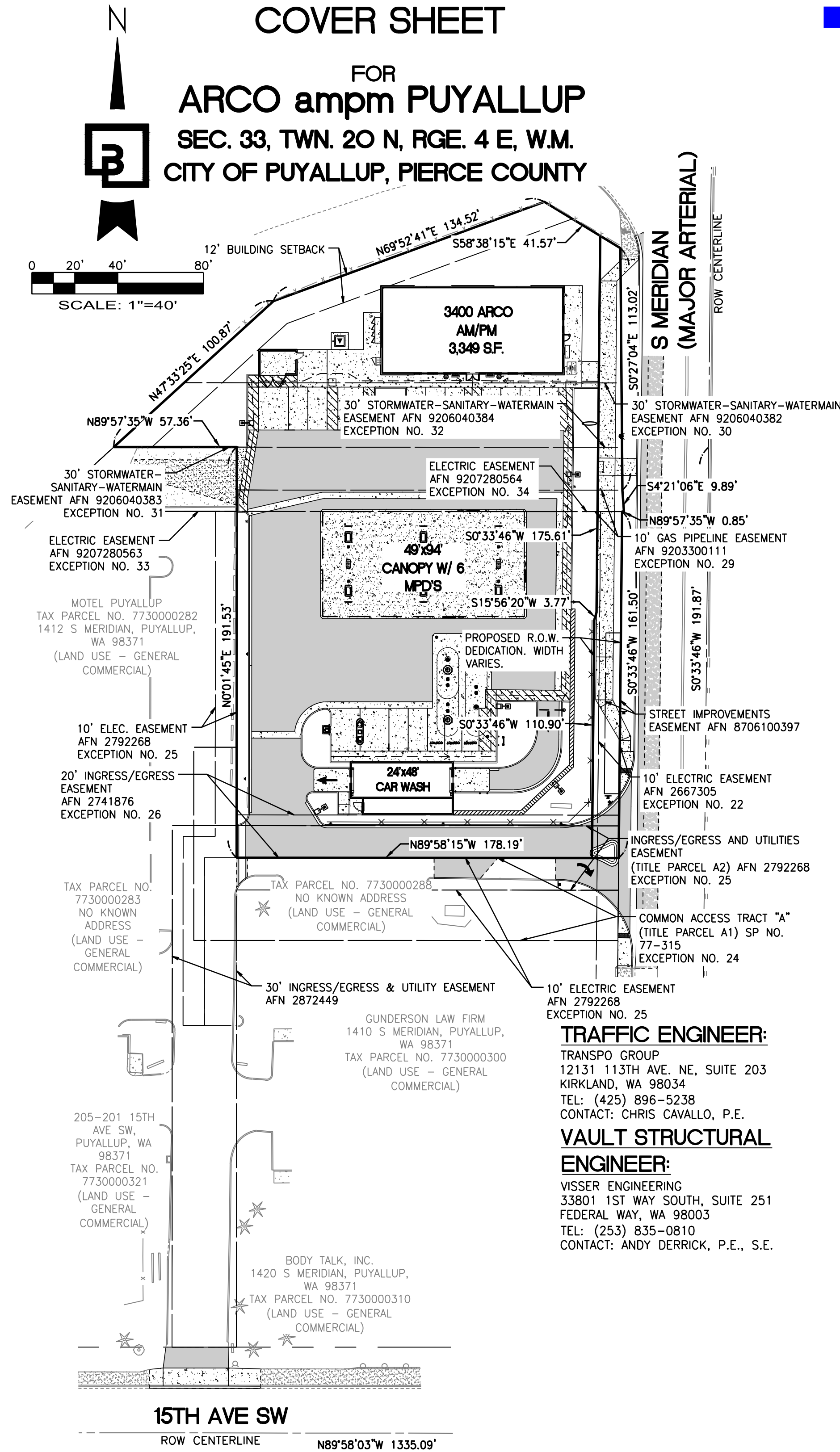
# COVER SHEET

## FOR

# ARCO ampm PUYALLUP

## SEC. 33, TWN. 20 N, RGE. 4 E, W.M.

### CITY OF PUYALLUP, PIERCE COUNTY



## SHEET SET

- CIVIL:
- C1.0 - COVER SHEET
  - C2.0 - CITY OF PUYALLUP GENERAL NOTES
  - C3.0 - SITE PLAN
  - C4.0 - GRADING PLAN - NORTH
  - C4.1 - GRADING PLAN - SOUTH
  - C4.2 - GRADING NOTES AND DETAILS
  - C5.0 - DRAINAGE PLAN - NORTH
  - C5.1 - DRAINAGE PLAN - SOUTH
  - C5.2 - DETENTION VAULT PLAN
  - C5.3 - DETENTION VAULT CROSS SECTIONS
  - C5.4 - DRAINAGE NOTES AND DETAILS
  - C5.5 - DRAINAGE DETAILS
  - C5.6 - DRAINAGE DETAILS
  - C5.7 - DRAINAGE DETAILS
  - C5.8 - DRAINAGE PROFILE - CB #4 TO SDMH #1
  - C5.9 - DRAINAGE PROFILE - CB #3 TO SDMH #3
  - C6.0 - UTILITY PLAN - NORTH
  - C6.1 - UTILITY PLAN - SOUTH
  - C6.2 - UTILITY NOTES AND DETAILS
  - C6.3 - UTILITY DETAILS
  - C6.4 - UTILITY DETAILS
  - C6.5 - UTILITY DETAILS
  - C6.6 - SEWER PROFILE - BUILDING & TRASH ENCLOSURE
  - C6.7 - SEWER PROFILE - CANOPY & CAR WASH
  - C7.0 - CONSTRUCTION DETAILS
  - C7.1 - CONSTRUCTION DETAILS
  - C7.2 - CONSTRUCTION DETAILS
  - C8.0 - S MERIDIAN - PLAN OVER PROFILE
  - C8.1 - RIGHT-OF-WAY GRADING DETAILS
  - C8.2 - 15TH AVE. SE - DRIVEWAY PLAN
  - C8.3 - RIGHT-OF-WAY DETAILS
  - C8.4 - RIGHT-OF-WAY DETAILS
  - C9.0 - SIGHT DISTANCE EXHIBIT
  - C9.1 - TANKER PATH EXHIBIT
  - C9.2 - FIRE ACCESS EXHIBIT

- SURVEY
- 1 OF 2 - ALTA & NSPS LAND TITLE SURVEY
  - 2 OF 2 - ALTA & NSPS LAND TITLE SURVEY

### LANDSCAPE:

- L1 - LANDSCAPE PLAN
  - L2 - LANDSCAPE NOTES AND PLANT SCHEDULE
  - L3 - LANDSCAPE DETAILS
  - L4 - IRRIGATION PLAN
  - L5 - IRRIGATION DETAILS
  - L6 - IRRIGATION DETAILS
- EXHIBIT - LANDSCAPING RENDERING: REAR ELEVATION

## APPLICANT/DEVELOPER

BP FUELS, NA  
P.O. BOX 696049  
SAN ANTONIO, TX 78269-9931  
CONTACT: RANDALL ARNOLD

## ENGINEER/SURVEYOR

BARGHAUSEN CONSULTING ENGINEERS, INC.  
18215 72ND AVE. SOUTH  
KENT, WA 98032  
TEL: (425) 251-6222  
FAX: (425) 251-8782  
CONTACT: CHRIS JENSEN, P.E./DAVE WILLIAMS

## ARCHITECT

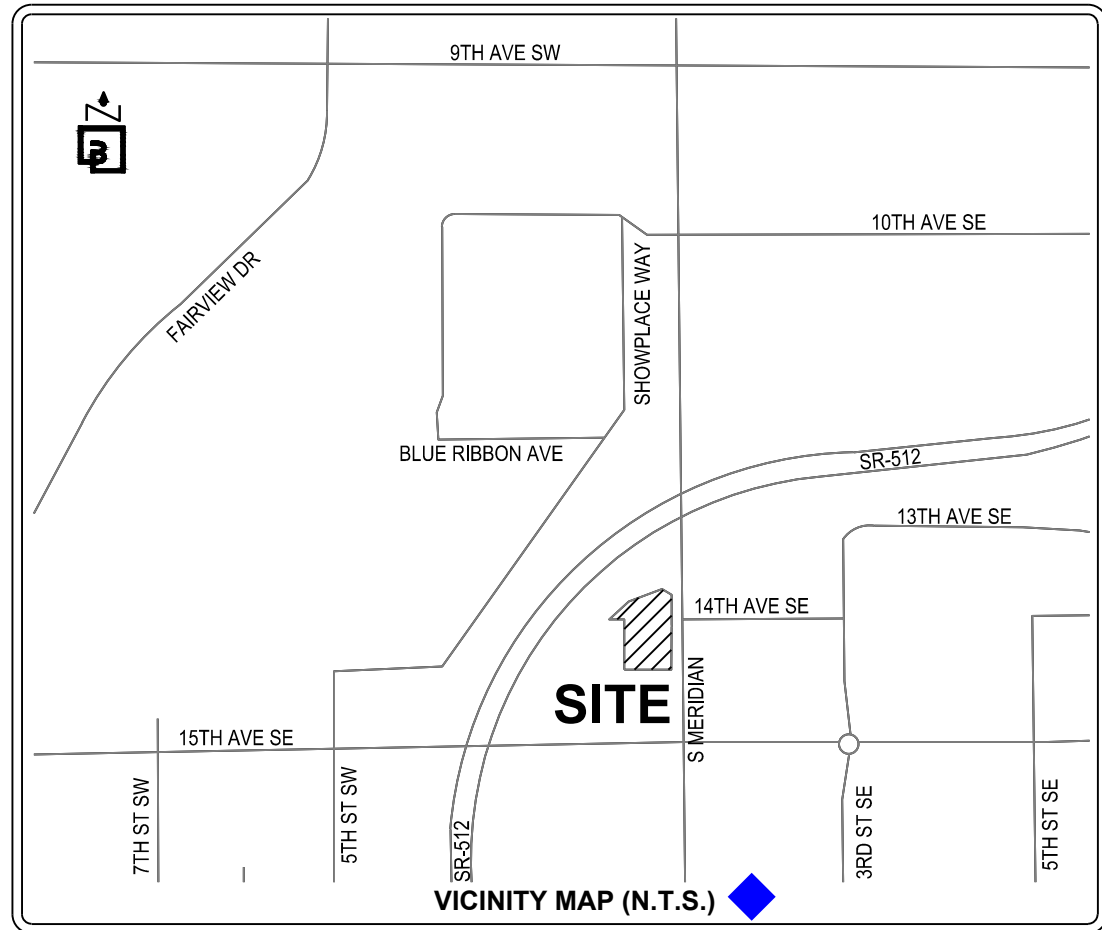
BARGHAUSEN CONSULTING ENGINEERS, INC.  
18215 72ND AVE. SOUTH  
KENT, WA 98032  
TEL: (425) 251-6222  
FAX: (425) 251-8782  
CONTACT: DAN GOALWIN, R.A.

## LANDSCAPE ARCHITECT

BARGHAUSEN CONSULTING ENGINEERS, INC.  
18215 72ND AVE. SOUTH  
KENT, WA 98032  
TEL: (425) 251-6222  
FAX: (425) 251-8782  
CONTACT: JEFF VARLEY, R.L.A.

## GEOTECHNICAL ENGINEER:

KRAZAN & ASSOCIATES, INC.  
825 CENTER STREET, STE A  
TACOMA, WASHINGTON 98409  
PHONE: (253) 939-2500  
CONTACT: VIJAY CHAUDARY



## SOILS REPORT NOTES:

- THE FOLLOWING SOILS REPORT FOR THE SITE SHALL BE CONSIDERED PART OF THESE CONSTRUCTION DOCUMENTS:

GEOTECHNICAL ENGINEERING STUDY  
ARCO AMPM REFUELING STATION  
1402 S MERIDIAN AVENUE  
PUYALLUP, WASHINGTON 98371  
DATED MAY 6, 2022

KRAZAN & ASSOCIATES, INC.  
825 CENTER STREET, STE A  
TACOMA, WASHINGTON 98409  
PHONE: (253) 939-2500

- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL PROVISIONS OF THE SOILS REPORT FOR THE SITE BE OBSERVED AND COMPLIED WITH DURING ALL PHASES OF THE SITE PREPARATION, GRADING OPERATIONS, FOUNDATION, SLAB, DETENTION VAULT, AND PAVING CONSTRUCTION.

- ANY PROVISIONS OF THE SOILS REPORT WHICH CONFLICT WITH INFORMATION SHOWN ELSEWHERE ON THESE DRAWINGS, OR WHICH REQUIRE FURTHER CLARIFICATION, SHALL BE BROUGHT TO THE ATTENTION OF BARGHAUSEN CONSULTING ENGINEERS, INC.

- A REPRESENTATIVE OF THE SOILS ENGINEER SHALL BE AVAILABLE TO OBSERVE AND APPROVE THE EARTHWORK OPERATIONS AND TO VERIFY FIELD CONDITIONS AS WORK PROCEEDS. THE SOILS ENGINEER SHALL SUBMIT FIELD REPORTS DOCUMENTING THAT THE METHODS AND MATERIALS OF THE EARTHWORK OPERATIONS WERE IN ACCORDANCE WITH THE RECOMMENDATION OF THE SOILS INVESTIGATION AND THAT THE WORK WAS PERFORMED TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR SHALL MAKE ALL PROVISIONS FOR SOILS INSPECTIONS AS RECOMMENDED WITHIN THE SOILS REPORT. AT A MINIMUM, THIS INCLUDES THE OBSERVATIONS OF THE FOLLOWING BY A SOILS ENGINEER:
  - A. OVER-EXCAVATION RECOMMENDATIONS
  - B. PLACEMENT OF STRUCTURAL FILL MATERIAL BENEATH PAVEMENT
  - C. SUBGRADE PREPARATION OF STRUCTURAL FOOTINGS
  - D. EXCAVATION FOR UNDERGROUND STORAGE TANKS AND STORMWATER FACILITIES

- THE CONTRACTOR SHALL QUALIFY ANY LIMITATIONS TO SOILS INSPECTIONS WITHIN BID PROPOSAL.

LEGEND			
	EXISTING	PROPOSED	
CURB AND GUTTER	=====	=====	STORM LINE
BARRIER CURB	=====	=====	CATCH BASIN TYPE 1
CONCRETE	=====	=====	CATCH BASIN TYPE 2
ASPHALT	=====	=====	SANITARY SEWER LINE
PAINT STRIPING	=====	=====	SANITARY SEWER MANHOLE
DIRECTIONAL ARROW	=====	=====	CLEANOUT (AS NOTED)
SAWCUT	=====	=====	POWER OVERHEAD
BOLLARD	=====	=====	POWER UNDERGROUND
SIGN	=====	=====	POWER METER
BUILDING LINE	=====	=====	UTILITY POLE
CONTOURS	-----432-----	-----432-----	JUNCTION BOX (TYPE 1,2,3)
WATER LINE	-----W-----	-----W-----	LUMINAIRE
FIRE HYDRANT	=====	=====	YARD LIGHT
WATER METER	=====	=====	TELEPHONE
WATER VALVE	=====	=====	GAS
FIRE DEPARTMENT CONN.	=====	=====	GAS METER
POST INDICATOR VALVE	=====	=====	GAS VALVE
PEDESTRIAN ACCESS PATH	=====	=====	PROPERTY LINE
FENCE	=====	=====	

Mark-up Legend	
Building Review	
Engineering Review	
Fire Review	
Planning Review	
Public Works Review	
Traffic Review	
APPROVED	
BY	CITY OF PUYALLUP DEVELOPMENT ENGINEERING
DATE	
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.	

CLIENT:

BP WEST COAST PRODUCTS, LLC

Barghausen Consulting Engineers, Inc.

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

NO.	DATE	REVISION DESCRIPTION
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SEAL:

1/12/24

DEVELOPMENT INFORMATION:

ARCO NTI

3400 am/pm FUEL CANOPY w/ 6 MPD's

SITE ADDRESS:

1402 S. MERIDIAN  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

FACILITY #TBD

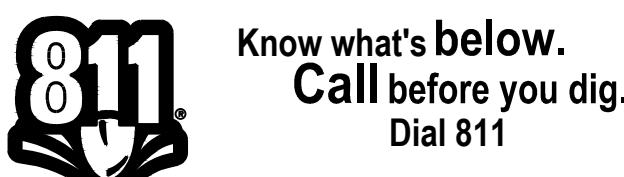
DESIGNED BY: JDF  
CHECKED BY: AW  
DRAWN BY: JDF  
PERSON:

ALLIANCE ZBOM:  
BP REP:  
ALLIANCE PM:  
PROJECT NO.: 21730

DRAWING TITLE:  
COVER SHEET

SHEET NO:

C1.0



<u>LAND COVERAGE</u>			
<u>(AFTER ROW DEDICATION)</u>			
<u>EXISTING PROJECT SITE SURFACE AREAS</u>			
TOTAL SITE AREA:	48,776 SF (1.12 AC)		
TOTAL IMPERVIOUS:	45,936 SF (1.05 AC)		
PERVIOUS/LANDSCAPE AREA:	2,840 SF (0.065 AC)		
<u>PROPOSED PROJECT SITE SURFACE AREAS</u>			
TOTAL SITE AREA:	48,776 SF (1.12 AC)		
TOTAL IMPERVIOUS (ON-SITE):	36,774 SF (0.843 AC)		
PERVIOUS/LANDSCAPE AREA:	12,002 SF (0.277 AC)		
<u>ESTIMATED EARTHWORK QUANTITIES:</u>			
CUT: 7,400 CY (EXPORT)			
FILL: 3,600 CY (IMPORT)			
AREA TO BE DISTURBED = 1.28 AC			
<u>EARTHWORK CALCULATIONS</u>			
CUT	FILL		
SITE PREP:	3,200 CY	SITE PREP:	3,600 CY
UST EXCAVATION:	1,000 CY		
VAULT EXCAVATION:	3,200 CY		
TOTAL:	7,400 CY	TOTAL:	3,600 CY
EARTHWORK QUANTITIES ARE APPROXIMATE AND HIGHLY DEPENDENT ON SOIL CONDITIONS ENCOUNTERED DURING CONSTRUCTION. TOTAL <b>DOES NOT</b> ASSUME RE-USE OF EXISTING SOILS. CONTRACTOR SHOULD PERFORM INDEPENDENT			

STORMWATER IMPERVIOUS AREA TABLE	
ON-SITE (AFTER DEDICATION)	
PROPOSED IMPERVIOUS SURFACES	36,774 SF (0.84 AC)
ROOF CANOPY (COLLECTED)	10,106 SF (0.23 AC)
CURBS/ASPHALT/CONCRETE (COLLECTED)	26,668 SF (0.61 AC)
PROPOSED LANDSCAPING	12,002 SF (0.28 AC)
TOTAL AREA	48,776± SF (1.120± AC)
OFFSITE (ADJACENT PROPERTY)	
REPLACED ASPHALT DRIVEWAY SECTION (COLLECTED)	741 SF (0.017 AC)
EXISTING IMPERVIOUS SURFACE (COLLECTED, BYPASS TRADE-OFF)	2,284 SF (0.052 AC)
TOTAL AREA	3,025 SF (0.069 AC)
NOTE: WWHM CALCS ONLY INCLUDE AREA REQUIRED TO PROVIDE BYPASS TRADE OFF.	



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 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. BACTERIOLOGICAL (COLIFORM AND IRON BACTERIA) TEST SAMPLES WILL BE TAKEN BY THE CITY (OR FWMC, VW OR TCW WHEN SERVED BY THAT PURVEYOR) AND PAID 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 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 FWMC, 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 CONFIRMING 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 PIPELINES, 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 FWMC, 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

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 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.)

25.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 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).

25.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 EXIST HYDRANT OR BLOWOFF). CUSTOMERS SHALL BE NOTIFIED AFTER THE WATER MAIN IS FLUSHED AND REPAIRS HAVE BEEN COMPLETED, AS OUTLINE IN THE "WATER MAIN BREAK PROCEDURE."

26. NEW WATER MAIN INSTALLATION:

26.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.

PIPE DIAMETER (INCHES)	PIPE VOLUME PER 18 FEET (GAL)	5-GRAM TABLETS PER PIPE SECTION	HYPOCHLORITE GRANULES OUNCES PER 500 FEET	TEASPOON NS PER 18 FEET	MAXIMUM 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	1.4	350
16	141	6	27	2.5	600

26.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 CHLORINE IS CONTACTED, DISSOLVED AND SPREAD RELATIVELY UNIFORM THROUGH THE LENGTH OF THE 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. THE CHLORINATED WATER WILL BE ALLOWED TO REMAIN IN CONTACT WITH THE NEW WATER MAIN SYSTEM 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 CIRCUMSTANCES SHALL "SUPER" CHLORINATED WATER BE ALLOWED TO SITE WITHIN A NEW WATER MAIN FOR MORE THAN 5 DAYS.

26.c. PRESSURE TESTING INCLUDES TESTING AGAINST NEW VALVES AND HYDRANTS. EACH VALVE SHALL BE TESTED BY LOSING EACH IN TURN AND REDUCING THE PRESSURE BEYOND THE VALVE. THE PRESSURE ON THE ABACK SIDE OF THE VALVE SHOULD NOT BE ELIMINATED. CARE MUST BE TAKEN THAT, DURING THIS PROCESS, POSITIVE PRESSURE REMAINS THROUGHOUT THE SYSTEM BEING TEST 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.

26.e. AFTER SUCCESSFUL PRESSURING 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) WITH A MINIMUM VELOCITY DEVELOPED WITHIN THE PIPE WHILE FLUSHING OF 2.5 FEET PER SECOND
- CITY OF PUYALLUP GENERAL NOTES
- FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY
- (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 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. SAMPLES FOR BACTERIOLOGICAL ANALYSIS SHALL BE COLLECTED AFTER FLUSHING AND AGAIN 24 HOURS AFTER THE FIRST SET OF SAMPLES.

26.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.

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.
- CITY OF PUYALLUP – 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").

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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 LICENSE 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.

26.f. 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.

26.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.
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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").

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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. 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 PE 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 PI 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 CHANNELLED 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 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
- CITY OF PUYALLUP – 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 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. 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 NO. 06.01.01.

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 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). VANE 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.
- Include a construction sequence. City design standard 501.6 may be used as the basis. [civils, sheet C2.0]
- UTILITY CONFLICT NOTE:
- 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 AT 811 48 HOURS IN ADVANCE AND THEN POTHOLOG 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 NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.
- CLIENT:
- 
- 
- 
- Barghausen  
Consulting Engineers, Inc.
- 18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222  
barghausen.com
- | NO. | DATE | REVISION DESCRIPTION |
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- SEAL:
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- 1/12/24
- DEVELOPMENT INFORMATION:
- ARCO NTI
- 3400 am/pm
- FUEL CANOPY w/ 6 MPD's
- SITE ADDRESS:
- 1402 S. MERIDIAN  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON
- FACILITY #TBD
- DESIGNED BY: JDF ALLIANCE ZBDK:
- CHECKED BY: AW BP REP:
- DRAWN BY: JDF ALLIANCE PM:
- VERSION: PROJECT NO:
- 21730
- DRAWING TITLE:
- CITY OF PUYALLUP GENERAL  
NOTES
- SHEET NO:
- C2.0
- APPROVED

BY \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING

DATE \_\_\_\_\_

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.
- P:\21000s\21730\Engineering\21730-0.dwg 1/12/2024 3:25 PM JFL/EAH/RY



CONSTRUCTION NOTES:

1. PROPOSED CONVENIENCE STORE. CONFIRM ALL DIMENSIONS WITH ARCHITECTURAL PLANS. SEE ARCHITECTURAL PLANS FOR DETAILS.
2. PROPOSED CAR WASH. CONFIRM ALL DIMENSIONS WITH ARCHITECTURAL PLANS. SEE ARCHITECTURAL PLANS FOR DETAILS.
3. PROPOSED LOCATION OF FUEL CANOPY. CONFIRM ALL DIMENSIONS WITH THE ARCHITECTURAL AND FUEL PLANS. SEE ARCHITECTURAL PLANS AND FUEL PLANS FOR DETAILS.
4. PROPOSED 25K AND 22K SPLIT UNDERGROUND STORAGE TANKS. SEE FUEL PLANS FOR DETAILS.
5. PROPOSED TRASH ENCLOSURE AND CONCRETE TRASH ENCLOSURE SLAB. SEE ARCHITECTURAL PLANS FOR DETAILS.
6. PROPOSED ON-SITE ASPHALT PAVEMENT. SEE DETAIL 1/C7.0.
7. PROPOSED ON-SITE CONCRETE PAVEMENT. SEE DETAIL 2/C7.0. PROVIDE EXPANSION AND CONTROL JOINTS PER SHEET C7.0.
8. PROPOSED BARRIER CURB. SEE DETAIL 4/C7.0.
9. PROPOSED CURB AND GUTTER. SEE DETAIL 3/C7.0.
10. PROPOSED CONCRETE SIDEWALK, WIDTH VARIES. SEE DETAIL 5/C7.0.
11. PROPOSED ACCESSIBLE PARKING STALL AND AISLE. SEE DETAIL 1/C7.1.
12. PROPOSED BOLLARD MOUNTED ACCESSIBLE PARKING STALL SIGNAGE. SEE DETAIL 2/C7.1.
13. PROPOSED PARKING STALL WITH 4" WIDE WHITE REFLECTIVE PAINT STRIPE (TYP.). SEE DETAIL 4/C7.1.
14. PROPOSED BOLLARD (TYP.). SEE DETAIL 3/C7.2.
15. PROPOSED LOT LIGHT. SEE DETAIL ON-SITE PHOTOMETRIC PLANS FOR MORE DETAILS. COORDINATE ALL CONDUIT RUNS, WIRING REQUIREMENTS, ETC. WITH ELECTRICAL PLANS. SEE DETAIL 1/C7.2.
16. PROPOSED AIR/WATER UNIT. SEE ARCHITECTURAL PLANS FOR DETAILS.
17. PROPOSED BICYCLE STORAGE. SEE DETAIL 4/C7.2.
18. PROPOSED SEATING BENCH. SEE ARCHITECTURAL PLANS FOR DETAILS.
19. PROPOSED LANDSCAPING. SEE LANDSCAPE PLANS.
20. PROPOSED CONCRETE TANK FUEL SLAB. SEE FUEL PLANS FOR DESIGN.
21. PROPOSED UNDER CANOPY CONCRETE SLAB. SEE ARCHITECTURAL PLANS FOR DETAILS.
22. PROPOSED FUEL DISPENSERS WITH HOOP BOLLARDS (TYP.). SEE FUEL PLANS FOR DETAILS.
23. PAVEMENT MARKINGS - 4" WIDE WHITE PAINTED STRIPES @ 2' O.C./45° ANGLE. SEE DETAIL 5/C7.1.
24. PROPOSED VACUUM UNIT. SEE ARCHITECTURAL PLANS FOR DETAILS.
25. PROPOSED FUTURE VAN ACCESSIBLE AND STANDARD EV CHARGING STATION. FREEWIRE EV CHARGING STATION TO BE INSTALLED, SEE DETAIL 2/C7.2.
26. PROPOSED TRASH RECEPTACLE (TYP.).
27. PROPOSED ACCESSIBLE PATH. REFER TO ACCESSIBLE PATH NOTE THIS SHEET.
28. PROPOSED BLOCK RETAINING WALL. REFER TO STRUCTURAL ENGINEERING PLANS FOR DETAILS.
29. PROPOSED ON-SITE MONUMENT SIGN.
30. PROPOSED SITE FENCE. REFER TO ARCHITECTURAL PLANS FOR MORE DETAILS.
31. PROPOSED DIRECTIONAL ARROWS. SEE DETAIL 6/C7.1.
32. PROPOSED BUS STOP BENCH PER PIERCE TRANSIT STANDARD BENCH. SEE DETAIL 6/C8.3. CONTRACTOR TO GIVE PIERCE TRANSIT TWO (2) WEEKS NOTICE PRIOR TO CONSTRUCTION TO ALLOW PIERCE TRANSIT TO REMOVE THE BUS STOP SIGN AND BENCH. UPON COMPLETION OF CONSTRUCTION CONTRACTOR TO COORDINATE REINSTALLATION OF BUS STOP WITH PIERCE TRANSIT.
33. EXISTING FIRE HYDRANT TO REMAIN.
34. EXISTING ASPHALT TO REMAIN.
35. EXISTING SIGN TO BE RE-SET. FINAL LOCATION TO BE APPROVED WITH ROW INSPECTOR.
36. EXISTING CURB TO REMAIN.
37. RESTORE GRAVEL SURFACE.
38. PROPOSED TRANSFORMER.
39. PROPOSED MOUNTABLE CURB ISLAND. SEE DETAIL 7/C7.1.
40. PROPOSED 12"x18" "NO PARKING FIRE LANE" SIGN (TYP. OF 8).
41. PROPOSED "DO NOT ENTER" SIGN.
42. PROPOSED "RIGHT TURN ONLY" SIGN.
43. PROPOSED CONCRETE SWALE. SEE DETAIL 1/C5.4.
44. PROPOSED FIRE HYDRANT. REFER TO SHEET C6.0 FOR MORE DETAILS.

UTILITY CONFLICT NOTE:

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Know what's below.  
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Dial 811

Make a note referencing that temporary erosion control measures are mitigated under clear, fill and grading permit PRGR20231482. [civils, sheet C3.0]

Why is this pedestrian access path being provided? The pathway ends at a landscape island/concrete swale rather than a sidewalk. [civils, sheet C3.0]

Reference Wall building permit per PRRWF20231581. [civils, sheet C3.0]

Provide a detail for the proposed fence within the civil plan set. [civils, sheet C3.0]

Reference Canopy building permit per PRCNC20240010 [civils, sheet C3.0]

Reference Fire Construction Plans per PRFI20240124. [civils, sheet C3.0]

Apply for a separate building permit for the trash enclosure. [civils, sheet C3.0]

Reference Canopy building permit per PRCNC20240010 [civils, sheet C3.0]

SITE PLAN  
FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY

ACCESSIBLE PATH OF TRAVEL NOTE:  
WALKWAYS ALONG ACCESSIBLE ROUTES OF TRAVEL SHALL BE CONTINUOUSLY ACCESSIBLE. BE A MINIMUM OF 48" IN WIDTH (PER PAR REQUIREMENTS FOUND IN PROWAG), HAVE A MAXIMUM 2.0% CROSS SLOPE, AND SHALL HAVE RAMPS COMPLYING WITH ACCESSIBILITY STANDARDS (SECTION 405) WHERE NECESSARY TO CHANGE ELEVATION AT A LONGITUDINAL SLOPE EXCEEDING 5% (1:20).

SCALE: 1"=20'

30' STORMWATER-SANITARY-WATERMAIN EASEMENT AFN 9206040382 EXCEPTION NO. 30

ELECTRIC EASEMENT AFN 9207280563 EXCEPTION NO. 33

MOTEL PUYALLUP  
TAX PARCEL NO. 7730000282  
1412 S MERIDIAN, PUYALLUP, WA 98371  
(LAND USE - GENERAL COMMERCIAL)

CONTRACTOR TO SAWCUT ASPHALT ON PROPERTY LINE. PROPOSED WORK MAY ENCRUCH ON ADJACENT PROPERTY. CONTRACTOR TO OBTAIN ALL NECESSARY PERMISSIONS OR TEMPORARY CONSTRUCTION EASEMENTS WITH ADJACENT PROPERTY OWNER PRIOR TO CONSTRUCTION.

10' ELEC. EASEMENT AFN 2792268 EXCEPTION NO. 25

TAX PARCEL NO. 7730000283  
NO KNOWN ADDRESS  
(LAND USE - GENERAL COMMERCIAL)

INGRESS/EGRESS AND UTILITIES EASEMENT (TITLE PARCEL A2) AFN 2792268 EXCEPTION NO. 25

GUNDERSON LAW FIRM  
1410 S MERIDIAN, PUYALLUP, WA 98371  
TAX PARCEL NO. 7730000300  
(LAND USE - GENERAL COMMERCIAL)

If the project has two threshold discharge areas, the project may want to rebuild this driveway section or grind and overlay as it is in rough shape. [civils, sheet C3.0]

MATCHLINE - SEE LEFT FOR CONTINUATION

30' INGRESS/EGRESS & UTILITY EASEMENT AFN 2872449

205-201 15TH AVE SW, PUYALLUP, WA 98371  
TAX PARCEL NO. 7730000321  
(LAND USE - GENERAL COMMERCIAL)

BODY TALK, INC.  
1420 S MERIDIAN, PUYALLUP, WA 98371  
TAX PARCEL NO. 7730000310  
(LAND USE - GENERAL COMMERCIAL)

S MERIDIAN (MAJOR ARTERIAL)

15TH AVE SW  
ROW CENTERLINE

APPROVED  
BY: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING  
DATE: \_\_\_\_\_  
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.

CLIENT: bp

ARCO  
BP WEST COAST PRODUCTS, LLC

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

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SEAL: ALEX WHITE  
STATE OF WASHINGTON  
PROFESSIONAL ENGINEER  
1/12/24

DEVELOPMENT INFORMATION:  
ARCO NTI  
3400 am/pm  
FUEL CANOPY w/ 6 MPD's

SITE ADDRESS:  
1402 S. MERIDIAN  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

FACILITY #TBD

DESIGNED BY: JDF  
CHECKED BY: AW  
DRAWN BY: JDF  
VERSION: 1  
PROJECT NO: 21730  
DRAWING TITLE: SITE PLAN  
SHEET NO:

C3.0

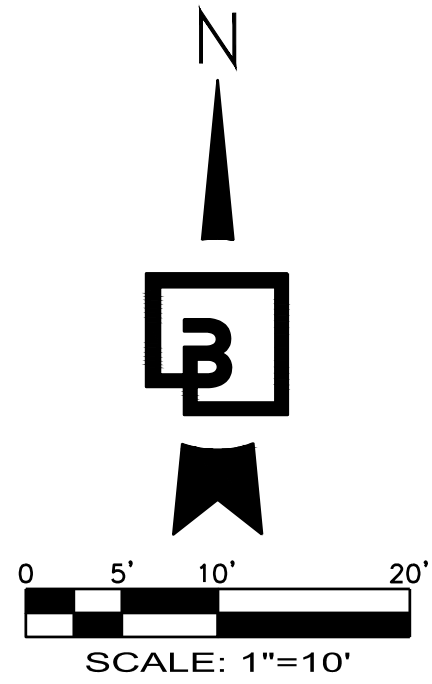


GRADING LEGEND:	
PROPOSED CONTOUR	--- 30 ---
EXISTING CONTOUR	--- 30 ---
PROPOSED GRADE BREAK	--- GB ---
PROPOSED RIDGE LINE	--- RIDGE ---
SWALE FLOWLINE	--->---
PROPOSED GRADING SLOPE	1.00%
SPOT ELEVATION	30.01
FLUSH ELEVATION	30.01 FC
MATCH EXISTING ELEVATION	30.01± ME
TOP OF PAVEMENT/TOP OF CURB	30.01 TA 30.51 TC
FLOW/GUTTER LINE/TOP OF CURB	30.01 FL 30.51 TC

Show existing grading to match the proposed grade on the tesc plan submitted with the clear, fill and grade permit. This NW corner is proposing upwards of 4' of fill. [civils, sheet C4.0]

## GRADING PLAN - NORTH

FOR  
**ARCO ampm PUYALLUP**  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



### GRADING NOTES:

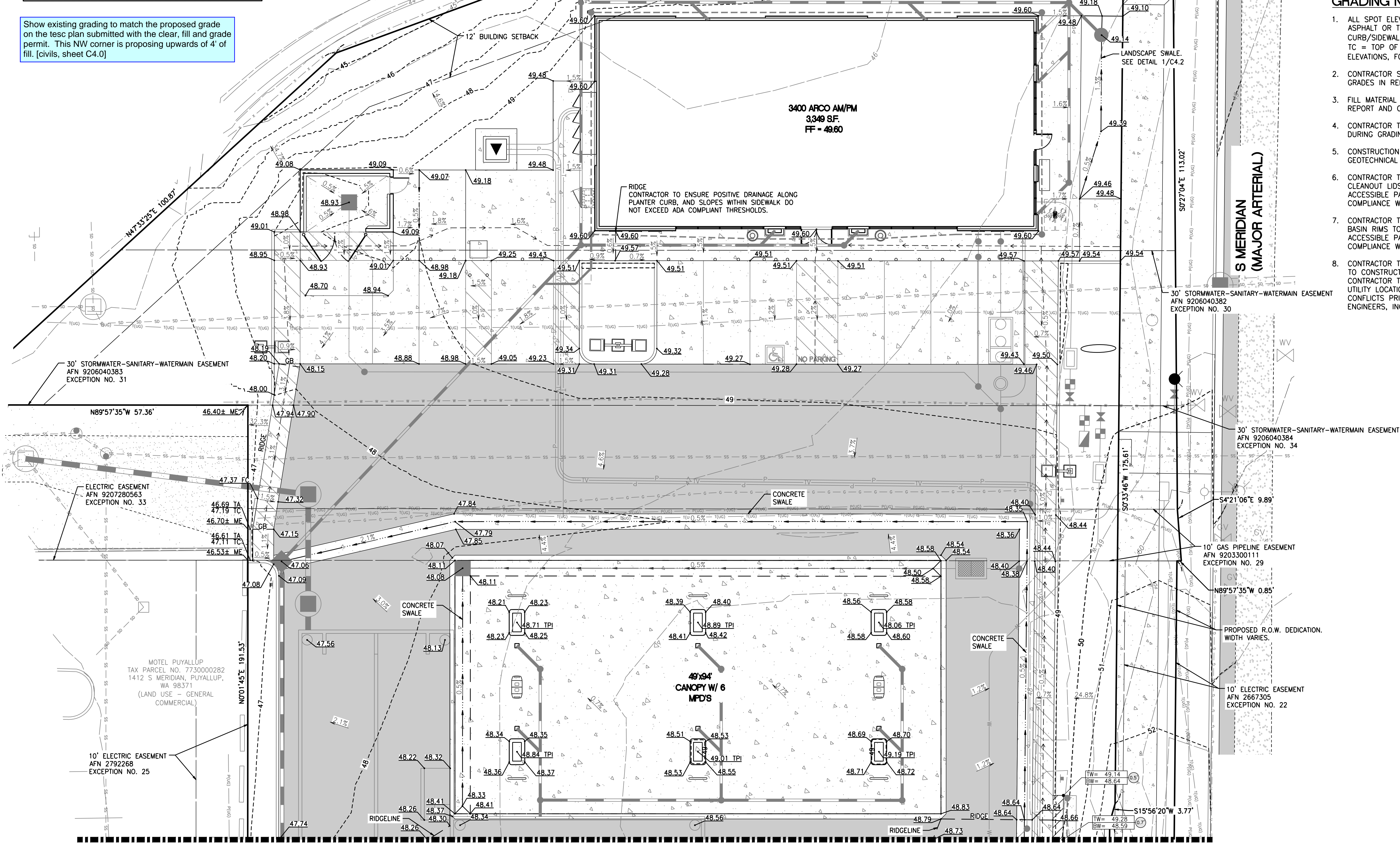
- ALL SPOT ELEVATIONS SHOWN ARE TO FINISH SURFACE (TOP OF ASPHALT OR TOP OF CONCRETE PAVEMENT, NOT TOP OF CURB/SIDEWALK) UNLESS OTHERWISE NOTED. (TA = TOP OF PAVEMENT, TC = TOP OF CONCRETE SIDEWALK/CURB, ME = MATCH EXISTING ELEVATIONS, FC = FLUSH CURB, FL = FLOW LINE, GB = GRADE BREAK)
- CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL PROPOSED GRADES IN RELATIONSHIP TO SURVEYED BASIS OF ELEVATION.
- FILL MATERIAL AND COMPACTION SHALL CONFORM TO THE GEOTECHNICAL REPORT AND CITY OF PUYALLUP REQUIREMENTS.
- CONTRACTOR TO PROTECT AND MAINTAIN EROSION CONTROL FACILITIES DURING GRADING OPERATIONS.
- CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT AND CITY OF PUYALLUP REQUIREMENTS.
- CONTRACTOR TO RAISE AND ADJUST PROPOSED SANITARY SEWER CLEANOUT LIDS TO FINAL GRADE AS NECESSARY. CLEANOUTS WITHIN ADA ACCESSIBLE PATHS SHALL BE ADJUSTED TO FINAL ELEVATIONS IN COMPLIANCE WITH CURRENT ADA REQUIREMENTS.
- CONTRACTOR TO RAISE AND ADJUST ALL EXISTING AND PROPOSED CATCH BASIN RIMS TO FINAL GRADE AS NECESSARY. CATCH BASINS WITHIN ADA ACCESSIBLE PATHS SHALL BE ADJUSTED TO FINAL ELEVATIONS IN COMPLIANCE WITH CURRENT ADA STANDARDS.
- CONTRACTOR TO ORDER LOCATES AND FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION TO ENSURE THAT UTILITY CONFLICTS DO NOT EXIST. CONTRACTOR TO REVIEW UTILITY ASBUILTS IN ORDER TO VERIFY EXISTING UTILITY LOCATIONS. CONTRACTOR SHALL POT HOLE ALL POTENTIAL UTILITY CONFLICTS PRIOR TO CONSTRUCTION. NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. OF ANY CONFLICTS.

### WALL CALL NOTE:

WALL ELEVATIONS  
TW=TOP OF WALL

EXPOSED WALL HEIGHT  
BW=BOTTOM OF WALL AT EXPOSED FACE  
(NOT TOP OF FOOTING SEE STRUCTURAL PLANS FOR BURY DEPTH)

ELEVATIONS SHOWN OF THE TOP AND BOTTOM OF WALL ARE AT THE EXPOSED FACE OF THE WALL, AND DO NOT INCLUDE HEIGHT OF THE WALL FOUNDATION OR EMBEDMENT DEPTH.

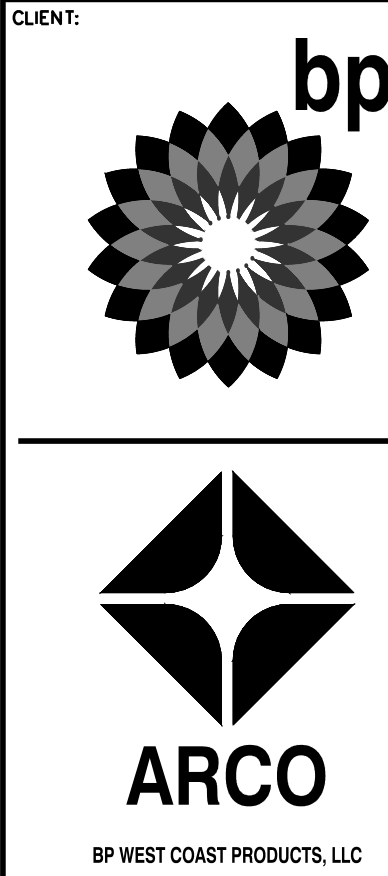


### UTILITY CONFLICT NOTE:

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Know what's below.  
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Dial 811



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

NO.	DATE	REVISION DESCRIPTION
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1/12/24

DEVELOPMENT INFORMATION:  
**ARCO NTI**  
3400 am/pm  
FUEL CANOPY w/ 6 MPD'S

SITE ADDRESS:  
**1402 S. MERIDIAN**  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

FACILITY #TBD

DESIGNED BY: JDF  
CHECKED BY: AW  
DRAWN BY: JDF  
VERSION: 1  
PROJECT NO: 21730

DRAWING TITLE:  
**GRADING PLAN - NORTH**

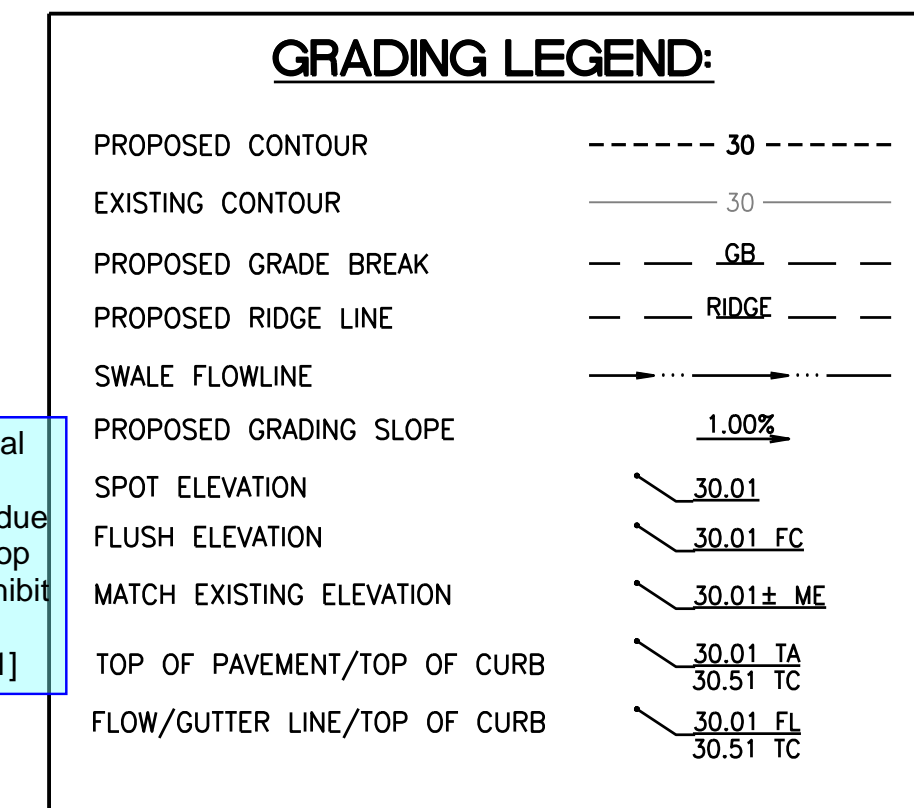
SHEET NO:

**C4.0**

**APPROVED**  
BY: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING  
DATE: \_\_\_\_\_  
**NOTE:** THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE.  
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FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



1. ALL SPOT ELEVATIONS SHOWN ARE TO FINISH SURFACE (TOP OF ASPHALT OR TOP OF CONCRETE PAVEMENT, NOT TOP OF CURB/SIDEWALK) UNLESS OTHERWISE NOTED. (TA = TOP OF PAVEMENT, TC = TOP OF CONCRETE SIDEWALK/CURB, ME = MATCH EXISTING ELEVATIONS, FC = FLUSH CURB, FL = FLOW LINE, GB = GRADE BREAK).
2. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL PROPOSED GRADES IN RELATIONSHIP TO SURVEYED BASIS OF ELEVATION.
3. FILL MATERIAL AND COMPACTION SHALL CONFORM TO THE GEOTECHNICAL REPORT AND CITY OF PUYALLUP REQUIREMENTS.
4. CONTRACTOR TO PROTECT AND MAINTAIN EROSION CONTROL FACILITIES DURING GRADING OPERATIONS.
5. CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT AND CITY OF PUYALLUP REQUIREMENTS.
6. CONTRACTOR TO RAISE AND ADJUST PROPOSED SANITARY SEWER CLEANOUT LIDS TO FINAL GRADE AS NECESSARY. CLEANOUTS WITHIN ADA ACCESSIBLE PATHS SHALL BE ADJUSTED TO FINAL ELEVATIONS IN COMPLIANCE WITH CURRENT ADA REQUIREMENTS.
7. CONTRACTOR TO RAISE AND ADJUST ALL EXISTING AND PROPOSED CATCH BASIN RIMS TO FINAL GRADE AS NECESSARY. CATCH BASINS WITHIN ADA ACCESSIBLE PATHS SHALL BE ADJUSTED TO FINAL ELEVATIONS IN COMPLIANCE WITH CURRENT ADA STANDARDS.
8. CONTRACTOR TO ORDER LOCATES AND FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION TO ENSURE THAT UTILITY CONFLICTS DO NOT EXIST. CONTRACTOR TO REVIEW UTILITY ASBUILTS IN ORDER TO VERIFY EXISTING UTILITY LOCATIONS. CONTRACTOR SHALL POTHOLE ALL POTENTIAL UTILITY CONFLICTS PRIOR TO CONSTRUCTION. NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. OF ANY CONFLICTS.

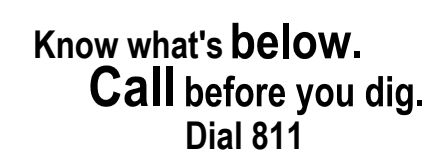
WALL ELEVATIONS  
TW=TOP OF WALL

EXPOSED WALL HEIGHT

BW=BOTTOM OF WALL AT EXPOSED FACE  
(NOT TOP OF FOOTING SEE STRUCTURAL PLANS FOR BURY DEPTH)

ELEVATIONS SHOWN OF THE TOP AND BOTTOM OF WALL ARE AT THE EXPOSED FACE OF THE WALL AND NOT INCLUDING HEIGHT OF THE WALL FOUNDATION OR EMBEDMENT DEPTH.

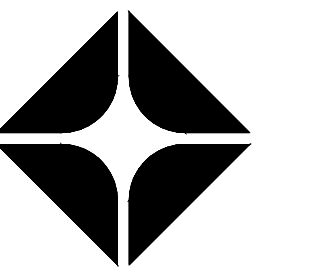

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT BY POTHOLES THE UTILITIES AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE AT 811 48 HOURS IN ADVANCE AND THEN POTHOLES 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 RECORDS AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL NOTIFY MARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.



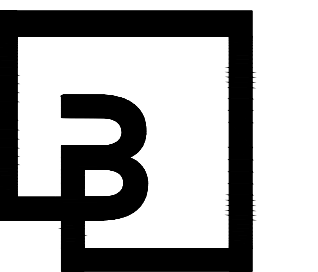
BY \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING

DATE \_\_\_\_\_

**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.



P WEST COAST PRODUCTS, LLC



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

SEAL:

DEVELOPMENT INFORMATION:

**ARCO NTI**

**3400 am/pm**

**FUEL CANOPY w/ 6 MPD's**

**SITE ADDRESS:**  
**1402 S. MERIDIAN**  
**@ HIGHWAY 512**  
**PUYALLUP, WASHINGTON**

FACILITY #TBD

DESIGNED BY: JDF	ALLIANCE Z&DM:
CHECKED BY: AW	BP REPM:
DRAWN BY: JDF	ALLIANCE PM:
VERSION: -	PROJECT NO: <b>21730</b>

DRAWING TITLE:  
GRADING PLAN SOUTH

### GRADING PLAN - SOUTH

**Abstract**

SHEET NO:

[illegible][illegible]

C4 1

#### C4.1

## C4.1

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GRADING NOTES AND DETAILS

FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY

GEOTECHNICAL RECOMMENDATIONS

THE FOLLOWING NOTES HAVE BEEN REFERENCED FROM THE REPORT TITLED "GEOTECHNICAL ENGINEERING INVESTIGATION" DATED MAY 6, 2022, PREPARED BY KRAZAN & ASSOCIATES, INC. REFER TO THE COMPLETE REPORT FOR ALL EARTHWORK REQUIREMENTS.

**SITE PREPARATION:**  
GENERAL SITE CLEARING SHOULD INCLUDE REMOVAL OF TOPSOIL MATERIAL, ASPHALTIC CONCRETE, ABANDONED UTILITIES, AND STRUCTURES INCLUDING FOUNDATIONS, SLABS, RUBBLE, AND TRASH, DOWN TO NATIVE SUITABLE SOILS. IN ADDITION, ANY BURIED STRUCTURES, SUCH AS GREASE TRAPS, SEPTIC TANKS, UNDERGROUND STORAGE TANKS, DEBRIS PITS, CESSPOOLS, OR SIMILAR STRUCTURES, SHOULD BE COMPLETELY REMOVED AND BACKFILLED WITH STRUCTURAL FILL. THE UNDOCUMENTED FILL AND THE NATIVE VERY LOOSE SANDS AND VERY SOFT TO MEDIUM STIFF ORGANIC SILT/PEAT, CLAY, AND SANDY OR CLAYEY SILT ENCOUNTERED IN OUR FIELD EXPLORATIONS ARE CONSIDERED UNSUITABLE FOR SUPPORT OF THE AM/PM BUILDING, FUEL CANOPY STRUCTURE, CAR WASH STRUCTURE, FLOOR SLABS AND EXTERIOR SLABS-ON-GRADE, AND PAVEMENT LOADS.

BASED ON THE SHALLOW GROUNDWATER LEVELS ENCOUNTERED IN OUR EXPLORATIONS CONDUCTED IN MARCH 2022, TEMPORARY DEWATERING MEASURES WILL LIKELY BE REQUIRED TO CONDUCT THE OVER-EXCAVATION OF UNSUITABLE SOILS, ESPECIALLY IF CONSTRUCTION TAKES PLACE DURING THE "WET WEATHER" SEASON.

KRAZAN & ASSOCIATES RECOMMEND THE UNDOCUMENTED FILL AND UNSUITABLE NATIVE SOILS BE OVER-EXCAVATED TO A DEPTH OF AT LEAST 2 FEET BELOW THE FOOTING BEARING LEVEL FOR SHALLOW FOUNDATIONS OR THE PLANNED SUBGRADE ELEVATION FOR SLABS-ON-GRADE OR PAVEMENTS. DEEPER EXCAVATIONS MAY BE REQUIRED IF SOFT AND YIELDING SOIL CONDITIONS ARE EXPOSED AT THE BOTTOM OF THE OVER-EXCAVATION. A LAYER OF ROCK SPALLS SHOULD BE PLACED ON THE EXCAVATION BOTTOM AND TAMPED IN-PLACE TO PROVIDE A STABLE WORKING SURFACE FOR PLACEMENT OF STRUCTURAL FILL. KRAZAN & ASSOCIATES RECOMMEND A HIGH-STRENGTH GEOTEXTILE SEPARATION FABRIC, SUCH AS MIRAFI 600X OR EQUIVALENT, THEN BE PLACED OVER THE ROCK SPALLS. AFTER THE FABRIC IS PLACED, THE AREA SHOULD BE FILLED TO THE PLANNED PAVEMENT SUBGRADE ELEVATION WITH STRUCTURAL FILL. THE STRUCTURAL FILL SHOULD BE COMPACTED TO AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY (ASTM D1557) AND TO WITHIN 2 PERCENT OF THE OPTIMUM MOISTURE CONTENT. IN-PLACE DENSITY TESTS SHOULD BE PERFORMED TO VERIFY PROPER MOISTURE CONTENT AND ADEQUATE COMPACTION LEVELS ARE ACHIEVED IN THE STRUCTURAL FILL. AN EXISTING RESTAURANT BUILDING IS LOCATED WITHIN THE EASTERN CENTRAL PORTION OF THE PROPERTY WHERE THE CANOPY AND FUEL PUMPS ARE PLANNED, AND EXTENDS INTO PART OF THE PROPOSED AREA OF THE FUTURE USTS. THE DEBRIS FROM DEMOLITION OF THE EXISTING BUILDING SHOULD BE HAULED OFF-SITE. AS-BUILT RECORDS FOR THE EXISTING BUILDING WERE NOT AVAILABLE AT THE TIME OF THIS REPORT. ASSUMING THE RESTAURANT IS SUPPORTED ON A SHALLOW FOUNDATION SYSTEM, THEN EXISTING CONCRETE FOOTINGS SHOULD BE COMPLETELY REMOVED WITHIN THE FOOTPRINT OF THE CANOPY STRUCTURE, AND TO A DEPTH OF AT LEAST 1-FOOT BELOW THE PLANNED SUBGRADE ELEVATION IN NEW PAVEMENT OR EXTERIOR SLAB-ON-GRADE AREAS. IF THE EXISTING BUILDING IS PILE SUPPORTED, THE TYPE AND LOCATION OF THE PILES WILL NEED TO BE EVALUATED PRIOR TO OR DURING CONSTRUCTION AS INFORMATION BECOMES AVAILABLE TO DETERMINE IF THE PILES SHOULD BE LEFT IN-PLACE, OR PARTIALLY OR COMPLETELY REMOVED. KRAZAN & ASSOCIATES SHOULD BE ONSITE FULL-TIME DURING THE DEMOLITION ACTIVITIES TO DOCUMENT THAT ALL BELOW-GRADE STRUCTURES HAVE BEEN PROPERLY REMOVED AND BACKFILLED WITH PROPERLY PLACED AND COMPACTED STRUCTURAL FILL, AND THAT THE RESULTING DEBRIS FROM THE DEMOLITION ACTIVITIES HAS BEEN HAULED OFF-SITE AND NOT RE-USED AS FILL AT ANY LOCATION ON THE PROPERTY.

**WET SEASON**  
DURING WET WEATHER CONDITIONS, SUBGRADE STABILITY PROBLEMS AND GRADING DIFFICULTIES MAY DEVELOP DUE TO THE EXCESS MOISTURE, DISTURBANCE OF SENSITIVE SOILS, SHALLOW GROUNDWATER LEVELS, AND/OR THE PRESENCE OF PERCHED GROUNDWATER. CONSTRUCTION DURING EXTENDED PERIODS OF WET WEATHER COULD RESULT IN THE NEED TO REMOVE WET DISTURBED SOILS IF THEY CANNOT BE SUITABLY COMPACTED DUE TO ELEVATED MOISTURE CONTENTS. THE PREPARED SUBGRADE SHOULD BE PROTECTED FROM CONSTRUCTION TRAFFIC AND SURFACE WATER SHOULD BE DIVERTED AROUND THE PREPARED SUBGRADE. SOILS THAT HAVE BECOME UNSTABLE MAY REQUIRE OVER-EXCAVATION, OR DRYING AND RECOMPACTION. SELECTIVE DRYING MAY BE ACCOMPLISHED BY SCARIFYING OR WINDROWING SURFICIAL MATERIAL DURING EXTENDED PERIODS OF DRY, WARM WEATHER (TYPICALLY DURING THE SUMMER MONTHS). IF THE SOILS CANNOT BE DRIED BACK TO A WORKABLE MOISTURE CONDITION, REMOVAL OF THE UNSTABLE SOILS OR THE USE OF REMEDIAL MEASURES MAY BE REQUIRED. THESE REMEDIAL MEASURES COULD INCLUDE PLACEMENT OF A BLANKET OF ROCK SPALLS TO PROTECT THE EXPOSED SUBGRADE AND CONSTRUCTION TRAFFIC AREAS. THE LATERAL EXTENT AND DEPTH OF ROCK SPALLS, IF REQUIRED, SHOULD BE DETERMINED BASED ON EVALUATION OF THE NEAR SURFACE SOIL CONDITIONS AT THE TIME OF CONSTRUCTION. GENERAL PROJECT SITE WINTERIZATION SHOULD CONSIST OF THE PLACEMENT OF AGGREGATE BASE AND THE PROTECTION OF EXPOSED SOILS DURING THE CONSTRUCTION PHASE.

**GROUNDWATER:**  
POREWATER PRESSURE DISSIPATION TESTS CONDUCTED ON MARCH 30, 2022 IN THE CPTS INDICATED A GROUNDWATER LEVEL RANGING BETWEEN 1.2 TO 3.7 FEET BGS. SHALLOW GROUNDWATER WAS ALSO ENCOUNTERED IN THE TEST PITS; HOWEVER, AFTER WAITING 3 HOURS THE WATER LEVEL WAS STILL RISING SO THE TEST PITS WERE BACKFILLED FOR SAFETY REASONS. TWO MONITORING WELLS INSTALLED BY OTHERS, ONE NEAR CPT-1 AND THE OTHER NEAR CPT-4, INDICATED WATER LEVELS AT 4.6 AND 1.5 FEET BGS. A MANHOLE COVER FOR THE COMMUNICATIONS LINE AT THE NORTHEAST SIDE OF THE SITE WAS REMOVED DURING OUR MARCH 28, 2022 SITE VISIT AND THE WATER LEVEL WAS MEASURED AT A DEPTH OF ABOUT 5.5 FEET BG.

**DEWATERING**  
SUMP PIT AND PUMPING METHODS MAY BE ABLE TO HANDLE GROUNDWATER ENCOUNTERED IN SHALLOW EXCAVATIONS DEPENDING ON THE TIME OF YEAR CONSTRUCTION TAKES PLACE, THE PLANNED EXCAVATION DEPTH, AND THE SOILS ENCOUNTERED WITHIN THE EXCAVATION. THE TEST PITS CONDUCTED FOR THIS EXPLORATION ENCOUNTERED GROUNDWATER AS SHALLOW AS 1.5 FEET BGS, AND CAVE-IN OF THE PIT SIDEWALLS OCCURRED IN THE VERY LOOSE TO LOOSE SOILS AT ABOUT THE LEVEL GROUNDWATER WAS ENCOUNTERED. DEEPER EXCAVATIONS, SUCH AS FOR INSTALLATION OF THE USTS, WILL REQUIRE MORE A MORE AGGRESSIVE DEWATERING METHOD, SUCH AS WELL POINTS. TO MAINTAIN THE STABILITY OF THE EXCAVATION BOTTOM, GROUNDWATER LEVELS SHOULD BE DRAWN DOWN A MINIMUM OF 2 FEET BELOW THE LOWEST PORTION OF THE EXCAVATION. THE GROUNDWATER LEVEL SHOULD BE MAINTAINED BELOW THE RECOMMENDED LEVEL UNTIL THE BACKFILL HAS BEEN PLACED AND COMPACTED.

**TEMPORARY EXCAVATIONS**  
THE ONSITE SOILS HAVE VARIABLE FRICTION AND COHESION STRENGTHS, THEREFORE THE SAFE ANGLES TO WHICH THESE MATERIALS MAY BE CUT FOR TEMPORARY EXCAVATIONS IS VARIABLE, AS THE SOILS MAY BE PRONE TO CAVING AND SLOPE FAILURES IN TEMPORARY EXCAVATIONS DEEPER THAN ABOUT 2 FEET OR AT THE LEVEL WHERE GROUNDWATER IS ENCOUNTERED. TEMPORARY EXCAVATIONS IN THE FILL MATERIAL AND UNDERLYING NATIVE SOILS SHOULD BE SLOPED NO STEEPER THAN 2H:1V (HORIZONTAL TO VERTICAL) WHERE ROOM PERMITS. DEPENDING ON SITE SOIL AND GROUNDWATER CONDITIONS, IT MAY BE NECESSARY TO FLATTEN THE SIDE SLOPES OF THE EXCAVATION AND LOWER THE GROUNDWATER LEVEL AS NECESSARY TO ACHIEVE STABLE CONDITIONS. SLOPE CUTS INTO EXCAVATIONS GREATER THAN 20 FEET IN DEPTH SHOULD BE DESIGNED BY A PROFESSIONAL ENGINEER FOR THE CONTRACTOR.

**UTILITY TRENCHING AND BACKFILL**  
THE ONSITE UNDOCUMENTED FILL AND NATIVE SOILS ARE CONSIDERED UNSUITABLE FOR RE-USE AS TRENCH BACKFILL. STRUCTURAL FILL SHOULD BE USED AS BACKFILL. TRENCH BACKFILL LIFTS SHOULD BE PLACED IN EQUAL MEASURES ON EACH SIDE OF THE UTILITY PIPE TO THE TOP OF THE PIPE. TRENCH BACKFILL LIFTS SHOULD NOT EXCEED 8 INCHES IN LOOSE THICKNESS PRIOR TO COMPACTION, WITH THE EXCEPTION THAT THE FIRST LIFT PLACED OVER THE PIPE MAY BE UP TO 14 INCHES IN LOOSE THICKNESS. EACH LIFT OF TRENCH BACKFILL SHOULD BE MOISTURE CONDITIONED TO WITHIN 2 PERCENT OF ITS OPTIMUM MOISTURE CONTENT AND COMPACTED TO THE REQUIRED RELATIVE DENSITY PRIOR TO PLACEMENT OF ADDITIONAL FILL LIFTS. A FIRM AND UNYIELDING SUBGRADE (I.E. BEARING SOILS AT BOTTOM OF TRENCH) SHOULD ALLOW FOR THE PROPER PLACEMENT OF SUBSURFACE UTILITIES. IF UNSTABLE SOILS ARE ENCOUNTERED AT THE UTILITY TRENCH BOTTOM, WE RECOMMEND PLACEMENT OF GEOTEXTILE AND QUARRY ROCK (ROCK SPALLS) ON THE BOTTOM OF UTILITY TRENCHES PRIOR TO PLACEMENT OF PIPE BEDDING TO PROVIDE A STABLE SUBGRADE FOR PLACEMENT OF THE PIPE BEDDING, UTILITY, AND TRENCH BACKFILL. THE THICKNESS OF THE ROCK SPALL LAYER WILL DEPEND ON THE INSTABILITY OF THE SUBGRADE SOILS AT THE TIME OF EXCAVATION. PIPE BEDDING SHOULD BE IN ACCORDANCE WITH THE PIPE MANUFACTURER'S RECOMMENDATION.

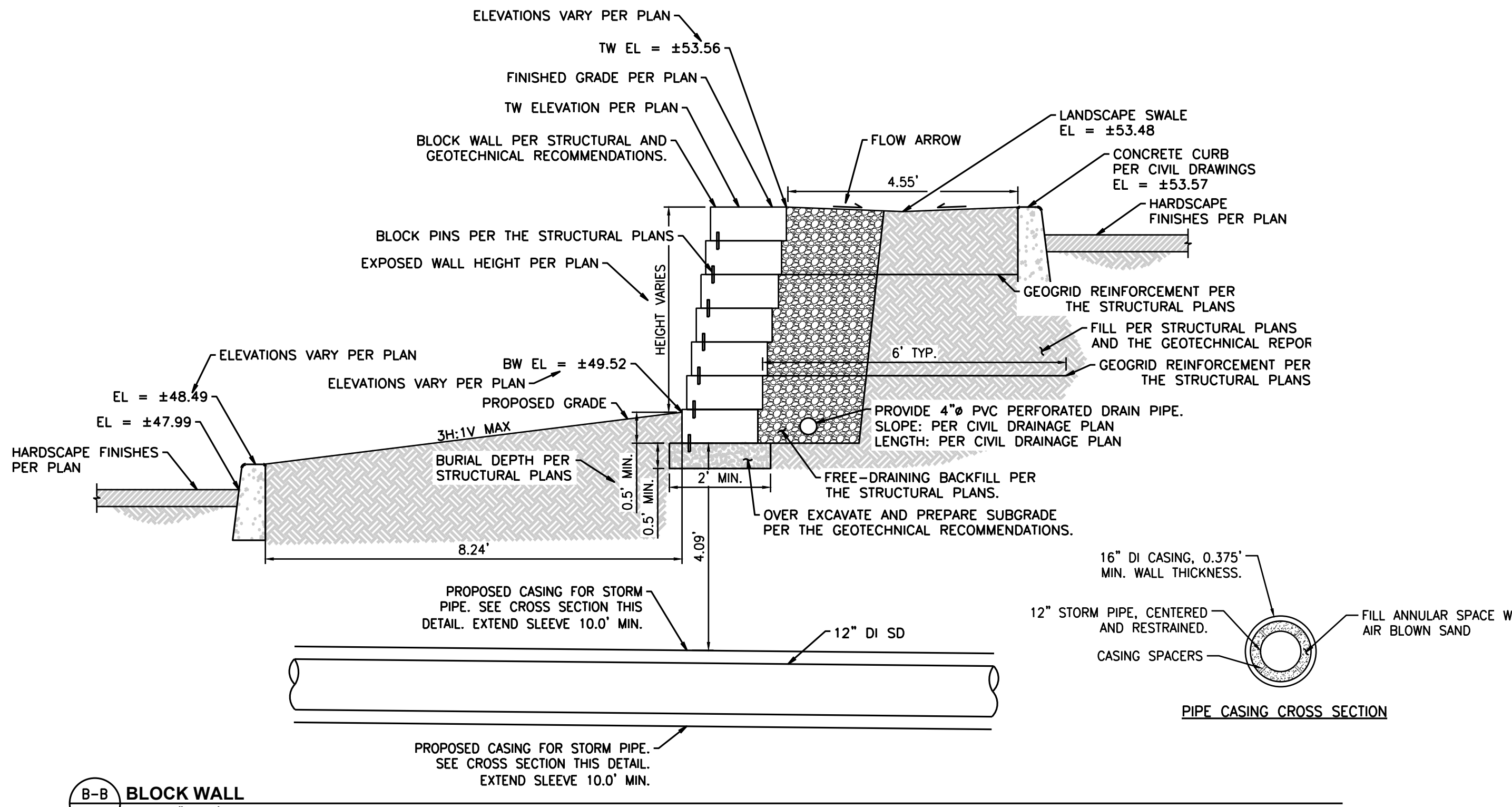
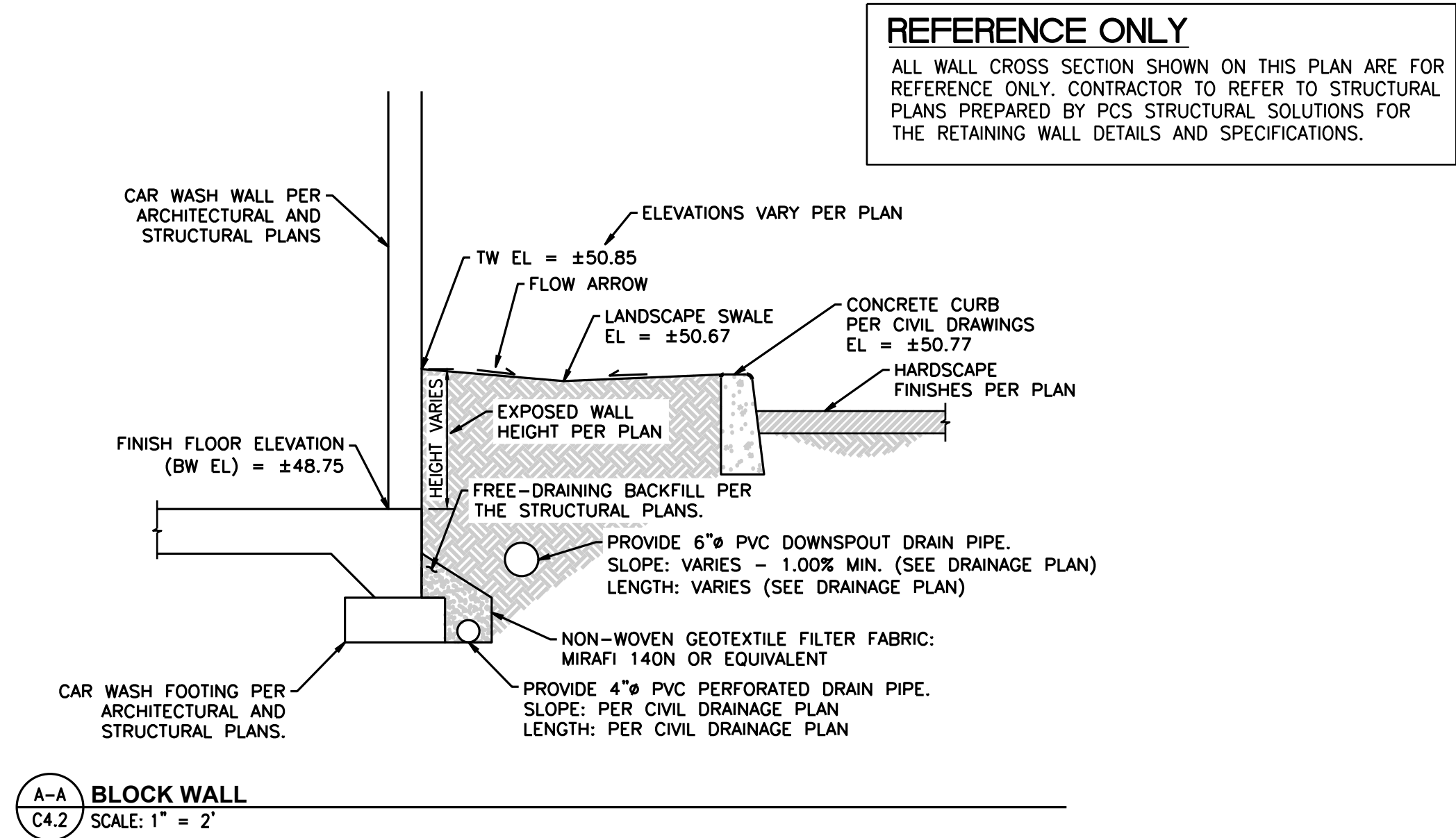
STRUCTURAL FILL

BASED ON THE FIELD EXPLORATION, THE UNDOCUMENTED FILL AND NATIVE SOIL THAT WILL BE ENCOUNTERED WITHIN ROUGHLY THE UPPER 10 FEET DURING SITE DEVELOPMENT ARE CONSIDERED UNSUITABLE FOR RE-USE AS STRUCTURAL FILL MATERIAL DUE TO THEIR HIGH FINES CONTENT (PERCENT SILT AND/OR CLAY MATERIAL PASSING THE NO. 200 SIEVE), AS WELL AS ORGANIC CONTENT FOR THE SHALCAR MUCK ENCOUNTERED IN OUR EXPLORATIONS. THESE SOILS ARE CONSIDERED EXTREMELY MOISTURE-SENSITIVE AND WILL LIKELY DISTURB EASILY IN WET CONDITION.

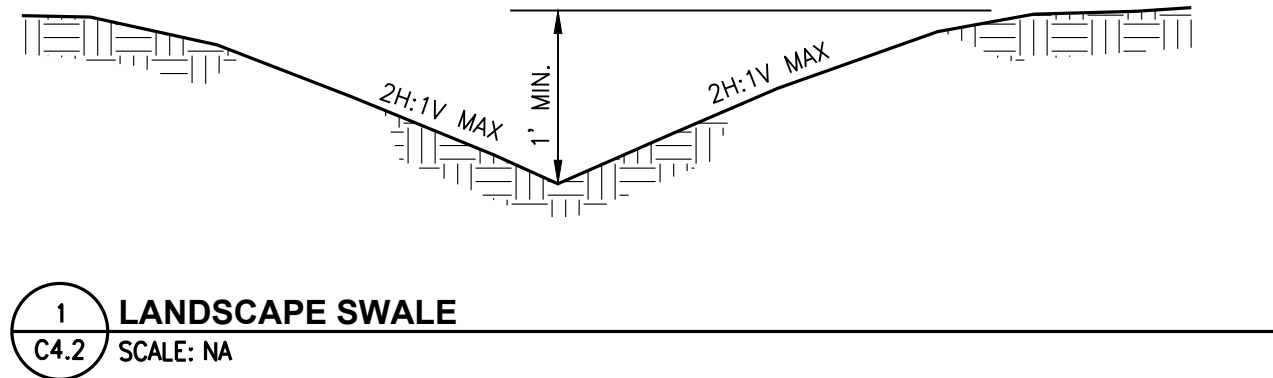
IMPORTED FILL MATERIAL SHOULD BE ALL-WEATHER STRUCTURAL FILL CONSISTING OF WELL-GRADED GRAVEL OR A SAND AND GRAVEL MIXTURE WITH A MAXIMUM GRAIN SIZE OF 3 INCHES AND LESS THAN 5 PERCENT FINES (MATERIAL PASSING THE U.S. STANDARD NO. 200 SIEVE). STRUCTURAL FILL MAY ALSO CONSIST OF CRUSHED ROCK, ROCK SPALLS, OR CONTROLLED DENSITY FILL (CDF).

ALL STRUCTURAL FILL MATERIAL SHOULD BE SUBMITTED FOR APPROVAL TO THE GEOTECHNICAL ENGINEER AT LEAST 48 HOURS PRIOR TO DELIVERY TO THE SITE. FILL SOILS SHOULD BE PLACED IN HORIZONTAL LIFTS NOT EXCEEDING 8 INCHES LOOSE THICKNESS, MOISTURE-CONDITIONED AS NECESSARY (MOISTURE CONTENT OF SOIL SHALL NOT VARY BY MORE THAN ±2 PERCENT OF ITS OPTIMUM MOISTURE CONTENT), AND COMPACTED TO AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY BASED ON ASTM TEST METHOD D1557 (MODIFIED PROCTOR). IN-PLACE DENSITY TESTS SHOULD BE PERFORMED ON ALL STRUCTURAL FILL TO DOCUMENT PROPER MOISTURE CONTENT AND ADEQUATE COMPACTION LEVELS HAVE BEEN ATTAINED. ADDITIONAL FILL LIFTS SHOULD NOT BE PLACED IF THE PREVIOUS LIFT DID NOT MEET THE COMPACTION REQUIREMENTS OR IF SOIL CONDITIONS ARE NOT CONSIDERED STABLE. PLACING SEVERAL LIFTS OF FILL AND THEN POTHOLES DOWN TO EACH LIFT TO CONDUCT COMPACTION TESTING IS NOT ACCEPTABLE, AND WILL REQUIRE COMPLETE REMOVAL OF THE FILL DOWN TO THE FIRST LIFT. PONDING OR JETTING THE SOIL IS NOT AN APPROVED METHOD OF SOIL COMPACTION

During the next submittal, provide a draft right of way dedication form to review. The template form can be found here: <chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.cityofpuyllup.org/DocumentCenter/View/7331/Appendix-C-?bidId=civils, sheet C3.0>



The detail section views for the walls on this sheet state the slope and length will be provided per civil drainage plan. The drainage plan references the structural plans. Revise accordingly. [civils, sheet C4.2]



UTILITY CONFLICT NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT BY POTHOLES THE UTILITIES AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE AT 811 48 HOURS IN ADVANCE AND THEN POTHOLES 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 NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.



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



**APPROVED**  
BY \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING  
DATE \_\_\_\_\_  
**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.

CLIENT:

BP WEST COAST PRODUCTS, LLC

**Barghausen Consulting Engineers, Inc.**

18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222  
[barghausen.com](http://barghausen.com)

NO.	DATE	REVISION	DESCRIPTION
1			
2			
3			
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7			
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9			
10			
11			
12			

SEAL:

1/12/24

DEVELOPMENT INFORMATION:

**ARCO NTI**

**3400 am/pm**

**FUEL CANOPY w/ 6 MPD's**

SITE ADDRESS:

**1402 S. MERIDIAN**  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

**FACILITY #TBD**

DESIGNED BY: JDF	ALLIANCE Z&B:
CHECKED BY: AW	BP REP:
DRAWN BY: JDF	ALLIANCE PM:
VERSION:	PROJECT NO:
	<b>21730</b>

DRAWING TITLE:

**GRADING NOTES AND DETAILS**

SHEET NO:

**C4.2**

P:\21000s\21730\engineering\21730-C.dwg 1/12/2024 3:39 PM JPLEAHATY



STORMWATER STRUCTURES
CB #3, TYPE 1, W/STANDARD GRATE RIM=47.06 IE=44.41 (6" NE) IE=44.41 (8" S)
FDCO #10, W/SOLID LOCKING ADA COMPLIANT LID RIM=49.59 IE=48.10 (4" N) IE=48.10 (4" E) IE=48.10 (4" S)
FDCO #11, W/SOLID LOCKING LID RIM=49.23 IE=48.10 (4" E) IE=48.10 (4" S)
FDCO #12, W/SOLID LOCKING LID RIM=49.55 IE=48.10 (4" W) IE=48.10 (4" S)
FDCO #13, W/SOLID LOCKING ADA COMPLIANT LID RIM=49.59 IE=48.10 (4" N) IE=48.10 (4" W)
SDCO #1, W/SOLID LOCKING ADA COMPLIANT LID RIM=49.54 IE=45.25 (6" N) IE=45.25 (6" E) IE=45.25 (6" SW)
SDCO #2, W/SOLID LOCKING LID RIM=48.09 IE=45.72 (6" E) IE=45.72 (6" S)
SDCO #3, W/SOLID LOCKING LID RIM=49.35 IE=46.67 (6" SE) IE=46.67 (6" SW) IE=46.67 (6" S)
SDCO #4, W/SOLID LOCKING ADA COMPLIANT LID RIM=49.50 IE=47.01 (6" SW) IE=47.01 (6" N)
SDCO #5, W/SOLID LOCKING ADA COMPLIANT LID RIM=49.56 IE=47.06 (6" NE) IE=47.06 (6" W)
SDCO #6, W/SOLID LOCKING ADA COMPLIANT LID RIM=48.45 IE=43.50 (6" E) IE=43.50 (6" N) IE=43.50 (6" S)
SDCO #7, W/SOLID LOCKING ADA COMPLIANT LID RIM=48.30 IE=43.75 (6" NW) IE=43.75 (6" S)
SDCO #8, W/SOLID LOCKING ADA COMPLIANT LID RIM=48.61 IE=43.85 (6" E) IE=43.85 (6" N) IE=43.85 (6" W)
SDCO #9, W/SOLID LOCKING ADA COMPLIANT LID RIM=48.47 IE=44.10 (6" NW) IE=44.10 (6" S)
SDCO #10, W/SOLID LOCKING ADA COMPLIANT LID RIM=48.78 IE=44.90 (6" N) IE=44.90 (6" W)
SDCO #11, W/SOLID LOCKING ADA COMPLIANT LID RIM=48.65 IE=45.15 (6" NW) IE=45.15 (6" S)
SDMH #1, TYPE 2 - 48" W/SOLID LOCKING TRAFFIC RATED LID RIM=47.48 IE=39.80 (12" S) IE=39.80 (12" W)
SDMH #2, TYPE 2 - 54" W/SOLID LOCKING TRAFFIC RATED LID RIM=47.41 IE=39.90 (12" S) IE=39.90 (12" N)
YARD DRAIN #1, W/BEEHIVE GRATE RIM=49.15 IE=46.76 (6" NW)

#### # - DRAINAGE NOTES:

1. DETENTION VAULT WITH 5.1' LIVE STORAGE. SEE PLAN, SHEET C5.2 TOP OF LIVE STORAGE = 45.00 BOTTOM OF LIVE STORAGE = 39.90
2. DETENTION VAULT ACCESS RISER WITH SOLID LOCKING LID.
3. PROPOSED YARD DRAIN PER CITY OF PUYALLUP STANDARD DETAIL 02.05.02. SEE DETAIL 2/C5.4.
4. 5'x10' DETENTION VAULT ACCESS SOLID REMOVABLE PANEL.
5. CATCH BASIN TYPE I PER CITY OF PUYALLUP STANDARD DETAIL 02.01.03. SEE DETAIL 2/C5.7.
6. CATCH BASIN TYPE II PER CITY OF PUYALLUP STANDARD DETAIL 02.01.04. SEE DETAIL 1/C5.6.
7. PROPOSED CONCRETE SWALE. SEE DETAIL 1/C5.4 AND SHEET C4.0 FOR ELEVATIONS.
8. CONTRACTOR TO PROVIDE NECESSARY FITTINGS TO FACILITATE CONNECTION TO ROOF/CANOPY DOWNSPOUTS.
9. BUILDING FOOTING DRAIN 4" PERF SCH-40 PVC PIPE WRAPPED IN NON-WOVEN GEOTEXTILE FABRIC: MIRAFI 140N OR EQUIVALENT. IE = 48.10
10. CONNECT PROPOSED FOOTING DRAIN TO THE PROPOSED ON-SITE CONVEYANCE. CONTRACTOR SHALL MAKE CONNECTION DOWNSTREAM OF ALL DOWNSPOUT CONNECTION AT SUFFICIENT DISTANCE FROM BUILDING AS DETERMINED BY SITE INSPECTOR.
11. PROPOSED RETAINING WALL FOOTING DRAIN AND CLEANOUT. REFER TO SEPARATE RETAINING PERMIT FOR MORE INFORMATION

Show the trash enclosure roof downspouts being connected to the detention system and bypassing treatment as discussed within the stormwater report. [civils, sheet C5.]

#### PIPE MATERIALS AND COVER:

CONTRACTOR SHALL USE PIPE/FITTING MATERIALS IN ACCORDANCE WITH CITY OF PUYALLUP REQUIREMENTS AND MANUFACTURER SPECIFICATIONS.

PVC PIPE SHALL BE SDR-35 WITH 3.0' MIN COVER WHERE SUBJECT TO VEHICULAR LOADING SHALL.

ALL DUCTILE IRON PIPE WITH 1.0' MIN COVER SHALL BE CLASS 52.

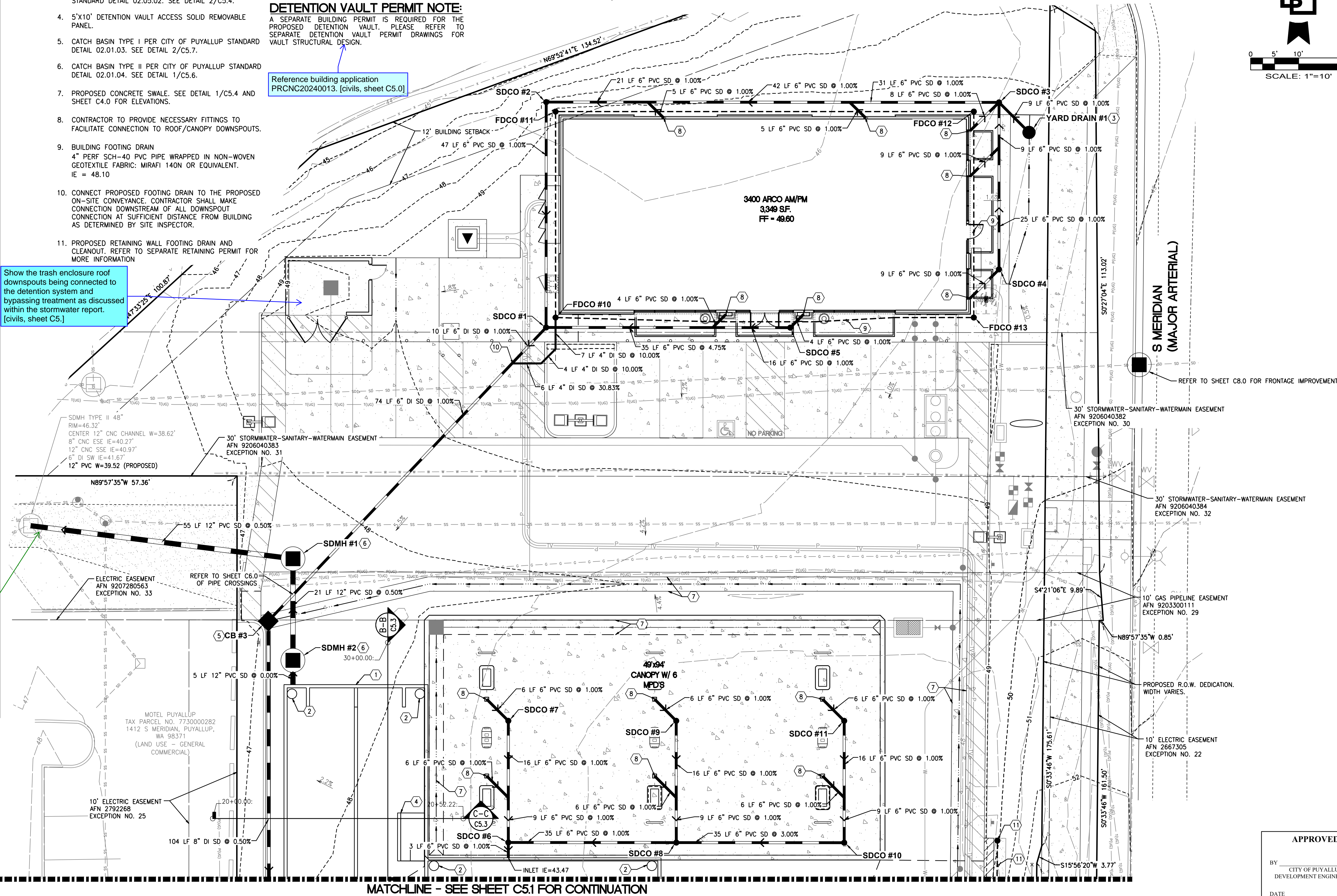
#### DETENTION VAULT PERMIT NOTE:

A SEPARATE BUILDING PERMIT IS REQUIRED FOR THE PROPOSED DETENTION VAULT. PLEASE REFER TO SEPARATE DETENTION VAULT PERMIT DRAWINGS FOR VAULT STRUCTURAL DESIGN.

Reference building application PRCNC20240013. [civils, sheet C5.0]

## DRAINAGE PLAN - NORTH

FOR  
**ARCO ampm PUYALLUP**  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



The collections division prefers that the stormwater from this proposed system discharges to the existing 30 inch storm pipe and not this manhole. This is the older of the two systems and it is unknown as to the full condition downstream. [civil resub, sheet 5.0]

Revise storm pipe discharger per collection's department comment. [civils, sheet C5.0]

#### UTILITY CONFLICT NOTE:

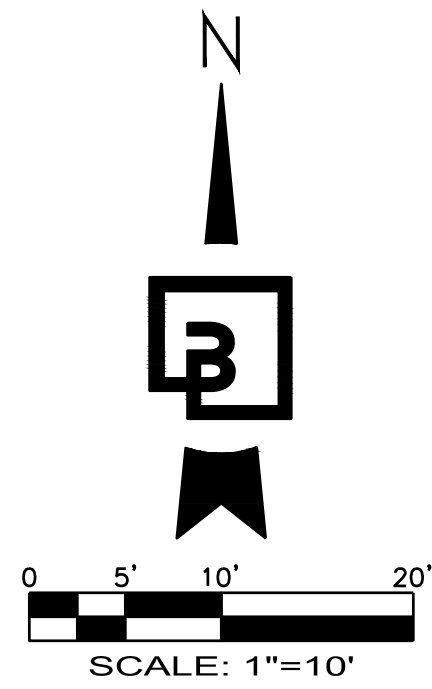
THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT BY POTHOLING THE UTILITIES AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE AT 811 48 HOURS IN ADVANCE AND THEN POTHOLOING 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 NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.



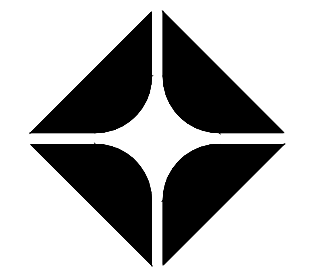
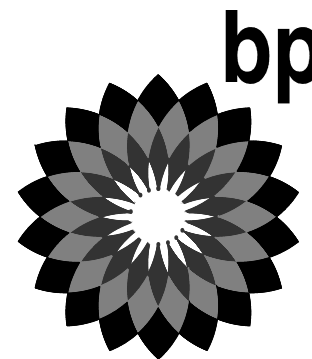
Know what's below.  
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Dial 811

#### UTILITY PROTECTION NOTE:

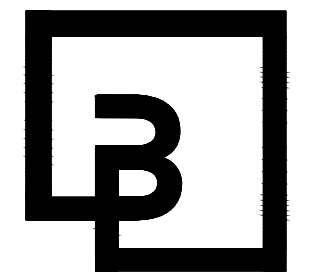
APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN ON THESE PLANS. CONTRACTOR TO COORDINATE WITH PURVEYOR AND USE EXTREME CAUTION WHEN EXCAVATING ON-SITE. UNTIL EXISTING GAS AND POWER SERVICE LOCATIONS ARE CONFIRMED, CONTRACTOR TO ORDER INDEPENDENT UTILITY LOCATES (INCLUDING GAS AND POWER) FOR THE FULL SCOPE OF WORK PRIOR TO CONSTRUCTION OR ANY GROUND DISTURBING ACTIVITIES.



CLIENT:



BP WEST COAST PRODUCTS, LLC



**Barghausen Consulting Engineers, Inc.**

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

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SEAL:



1/12/24

#### DEVELOPMENT INFORMATION:

**ARCO NTI**  
3400 am/pm  
FUEL CANOPY w/ 6 MPD's

#### SITE ADDRESS:

**1402 S. MERIDIAN**  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

#### FACILITY #TBD

DESIGNED BY: JDF  
CHECKED BY: AW  
DRAWN BY: JDF  
VERSION: 1  
PROJECT NO: 21730

#### DRAWING TITLE:

**DRAINAGE PLAN - NORTH**

#### SHEET NO:

**C5.0**

**APPROVED**  
BY: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING  
DATE: \_\_\_\_\_  
**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.



DRAINAGE PLAN - SOUTH

FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY

PIPE MATERIALS AND COVER:

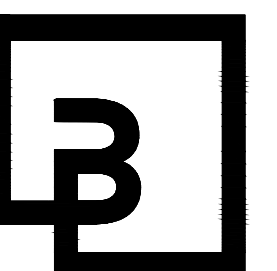
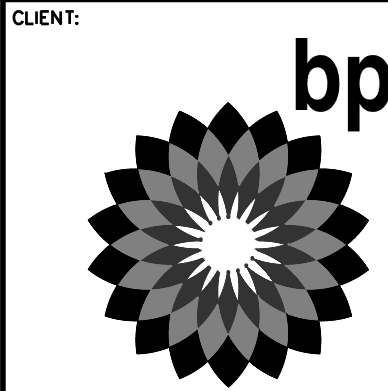
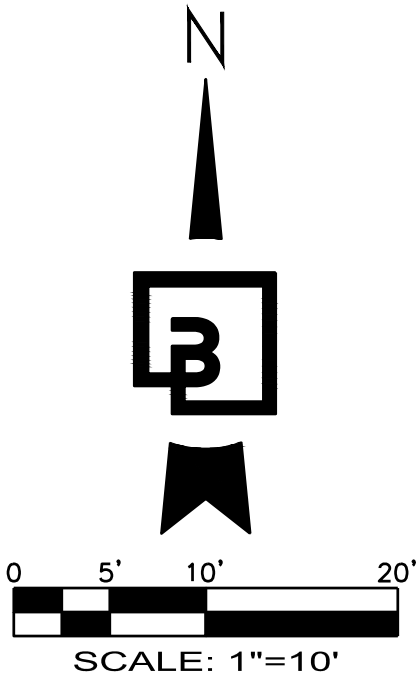
CONTRACTOR SHALL USE PIPE/FITTING MATERIALS IN ACCORDANCE WITH CITY OF PUYALLUP REQUIREMENTS AND MANUFACTURER SPECIFICATIONS.

PVC PIPE SHALL BE SDR-35 WITH 3.0' MIN COVER WHERE SUBJECT TO VEHICULAR LOADING SHALL.

ALL DUCTILE IRON PIPE WITH 1.0' MIN COVER SHALL BE CLASS 52.

# - DRAINAGE NOTES:

1. DETENTION VAULT WITH 5.1' LIVE STORAGE.  
SEE PLAN, SHEET C5.2  
TOP OF LIVE STORAGE = 45.00  
BOTTOM OF LIVE STORAGE = 39.90
2. DETENTION VAULT ACCESS RISER WITH SOLID LOCKING LID.
3. BUILDING FOOTING DRAIN  
4" PERF SCH-40 PVC PIPE WRAPPED IN NON-WOVEN GEOTEXTILE FABRIC: MIRAFI 140N OR EQUIVALENT.  
IE = 46.75.
4. PROPOSED OIL/WATER SEPARATOR  
(OLDCASTLE PRECAST 577-CPS OR APPROVED EQUAL)  
SEE DETAIL 1/C5.7  
RIM: 47.53  
IE: 44.48 (IN 8" SE)  
IE: 45.00 (OUT 8" NW)
5. 8" EMERGENCY SHUT OFF VALVE W/ RISER & VALVE BOX.  
VALVE SHALL BE INSTALLED IN TRAFFIC RATED BOX.
6. CONTECH MODULAR WETLAND: MWS-L-8-8-V  
SEE DETAIL 2/C5.6  
RIM: 47.57  
IE: 44.97 (IN 8" SE)  
IE: 43.20 (OUT 8" NW)
7. CATCH BASIN TYPE I PER CITY OF PUYALLUP STANDARD  
DETAIL 02.01.03. SEE DETAIL 1/C5.7.
8. CATCH BASIN TYPE II PER CITY OF PUYALLUP STANDARD  
DETAIL 02.01.04. SEE DETAIL 1/C5.6.
9. CONTRACTOR TO PROVIDE NECESSARY FITTINGS TO FACILITATE CONNECTION TO ROOF/CANOPY DOWNSPOUTS.
10. PROPOSED CONCRETE SWALE. SEE DETAIL 1/C5.4 AND SHEET C4.1 FOR ELEVATIONS.
11. PROPOSED PIPE CASING, SEE WALL DETAIL 2/C4.2.  
CONTRACTOR TO ENSURE 0.5' SEPARATION BETWEEN TOP OF PIPE AND BOTTOM OF WALL FOOTING FOR 10' ON EITHER SIDE OF INTERSECTION.
12. CONNECT PROPOSED FOOTING DRAIN TO THE PROPOSED ON-SITE CONVEYANCE. CONTRACTOR SHALL MAKE CONNECTION DOWNSTREAM OF ALL DOWNSPOUT CONNECTION AT SUFFICIENT DISTANCE FROM BUILDING AS DETERMINED BY SITE INSPECTOR.
13. PROPOSED YARD DRAIN PER CITY OF PUYALLUP STANDARD  
DETAIL 02.05.02. SEE DETAIL 2/C5.4.
14. PROPOSED RETAINING WALL FOOTING DRAIN AND CLEANOUT.  
REFER TO SEPARATE RETAINING PERMIT FOR MORE INFORMATION.
15. FREE-DRAINING WALL BACKFILL PER THE STRUCTURAL PLANS. REFER TO RETAINING WALL PERMIT FOR MORE INFORMATION.



Barghausen  
Consulting Engineers, Inc.

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SEAL:



DEVELOPMENT INFORMATION:

ARCO NTI  
3400 am/pm  
FUEL CANOPY w/ 6 MPD's

SITE ADDRESS:

1402 S. MERIDIAN  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

FACILITY #TBD

DESIGNED BY: JDF  
CHECKED BY: AW  
DRAWN BY: JDF  
VERSION: 1  
PROJECT NO: 21730

DRAWING TITLE:

DRAINAGE PLAN - SOUTH

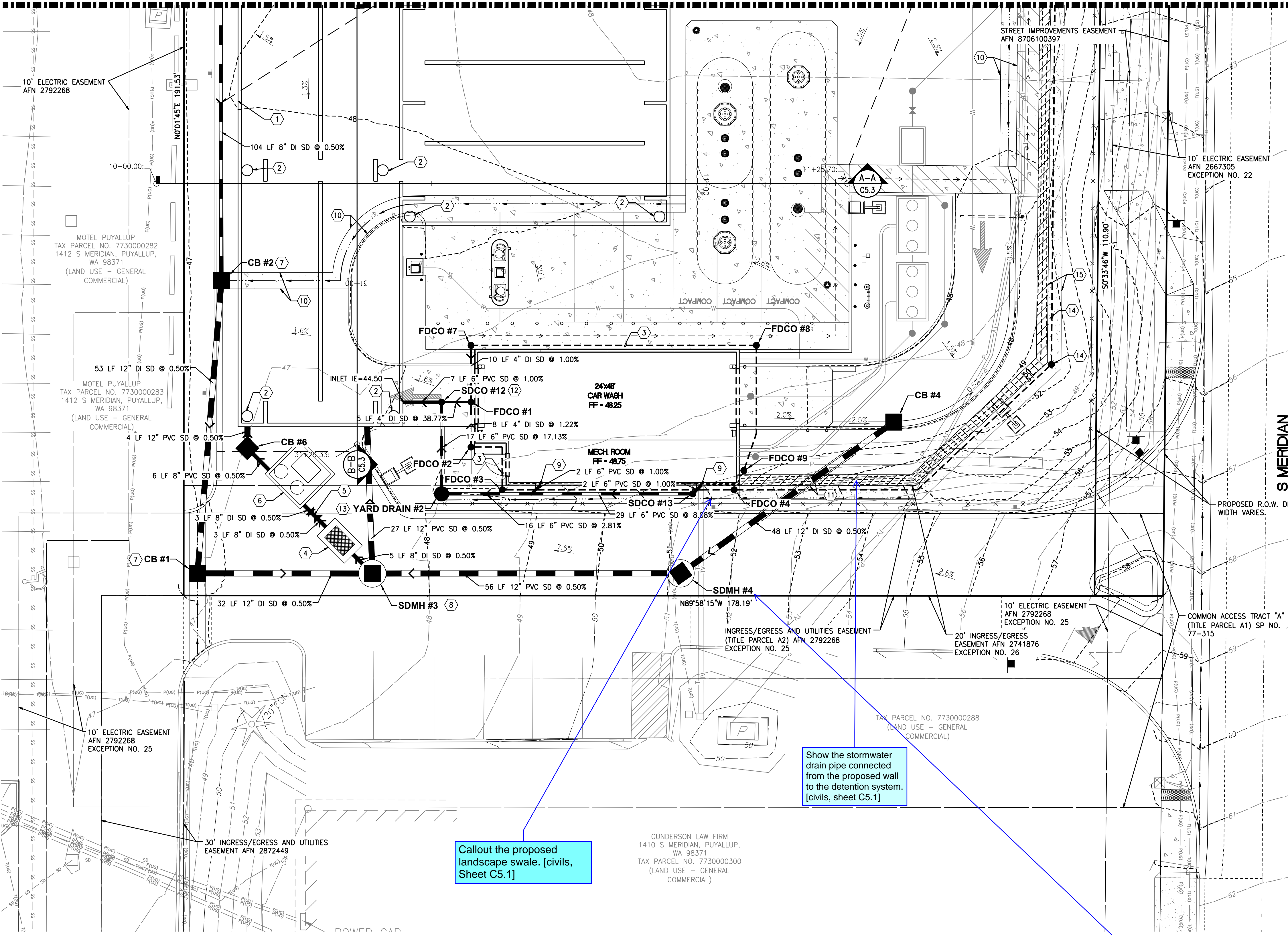
SHEET NO:

C5.1

DETENTION VAULT PERMIT NOTE:

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MATCHLINE - SEE SHEET C5.0 FOR CONTINUATION



Show the stormwater drain pipe connected from the proposed wall to the detention system. [civils, sheet C5.1]

Callout the proposed landscape swale. [civils, Sheet C5.1]

SDMH #3 and #4 plans and stormwater structural table do not match the callouts. SDMH #3 is proposing the flow splitter. [civils, sheet C5.1]

UTILITY CONFLICT NOTE:

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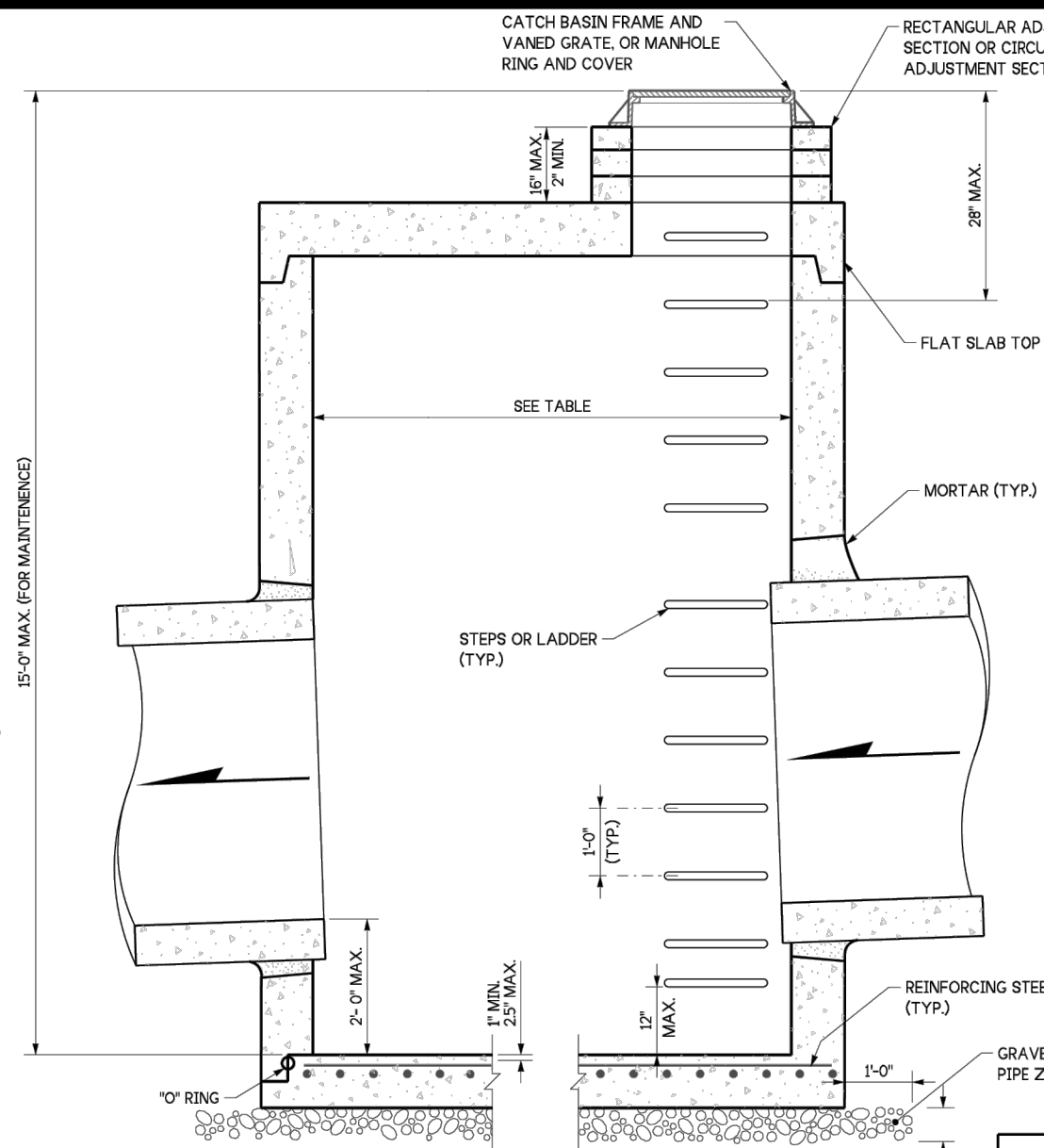
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DETENTION VAULT PLAN

FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



NOTES:

- No steps are required when height is 4' or less.
- The bottom of the precast catch basin may be sloped to facilitate cleaning.
- The rectangular frame and grate may be installed with the flange up or down. The frame may be cast into the adjustment section.
- Knockouts shall have a wall thickness of 2" (in) minimum to 2.5" (in) maximum. Provide a 1.5" (in) minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with Standard Specification Section 9-04.3.
- Pipe allowances will vary depending on the pipe material used. Contact the Region Hydraulics Engineer for assistance.

CATCH BASIN DIMENSIONS					
CATCH BASIN DIAMETER	MIN WALL THICKNESS	MIN BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS	
48"	4"	6"	36"	8"	
54"	4.5"	8"	42"	8"	
60"	5"	8"	48"	8"	
72"	6"	8"	60"	12"	
84"	8"	12"	72"	12"	
96"	8"	12"	84"	12"	
120"	10"	12"	96"	12"	
144"	12"	12"	108"	12"	

PIPE ALLOWANCES					
CATCH BASIN DIAMETER	PIPE MATERIAL WITH MAXIMUM INSIDE DIAMETER				
	CONCRETE	ALL METAL	CHSP (1) PP (4)	SOLID WALL PVC (2)	PROFILE WALL PVC (3)
48"	24"	30"	24"	30"	30"
54"	30"	36"	30"	36"	36"
60"	36"	42"	36"	42"	42"
72"	42"	54"	42"	48"	48"
84"	54"	60"	54"	48"	48"
96"	60"	72"	60"	48"	48"
120"	66"	84"	60"	48"	48"
144"	78"	96"	60"	48"	48"

(1) Corrugated Polyethylene Storm Sewer Pipe (See Standard Specification Section 9-05.20)  
(2) (See Standard Specification Section 9-05.12(1))  
(3) (See Standard Specification Section 9-05.12(2))  
(4) Polypropylene Pipe (See Standard Specification Section 9-05.24)



CATCH BASIN TYPE 2

STANDARD PLAN B-10-20-03

SHEET 1 OF 1 SHEET



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DEVELOPMENT INFORMATION:  
**ARCO NTI**  
**3400 am/pm**  
**FUEL CANOPY w/ 6 MPD's**

SITE ADDRESS:  
**1402 S. MERIDIAN**  
**@ HIGHWAY 512**  
**PUYALLUP, WASHINGTON**

**FACILITY #TBD**

DESIGNED BY: JDF  
CHECKED BY: AW  
DRAWN BY: JDF  
VERSION: 1  
PROJECT NO: 21730

DRAWING TITLE:  
**DETENTION VAULT PLAN**

SHEET NO:

**C5.2**

VAULT AREA:

- CELL AREAS:
  - (3) 665.51 SF
  - (2) 1,618.66

TOTAL AREA = 5,236.85 SF

CONCRETE NOTE:

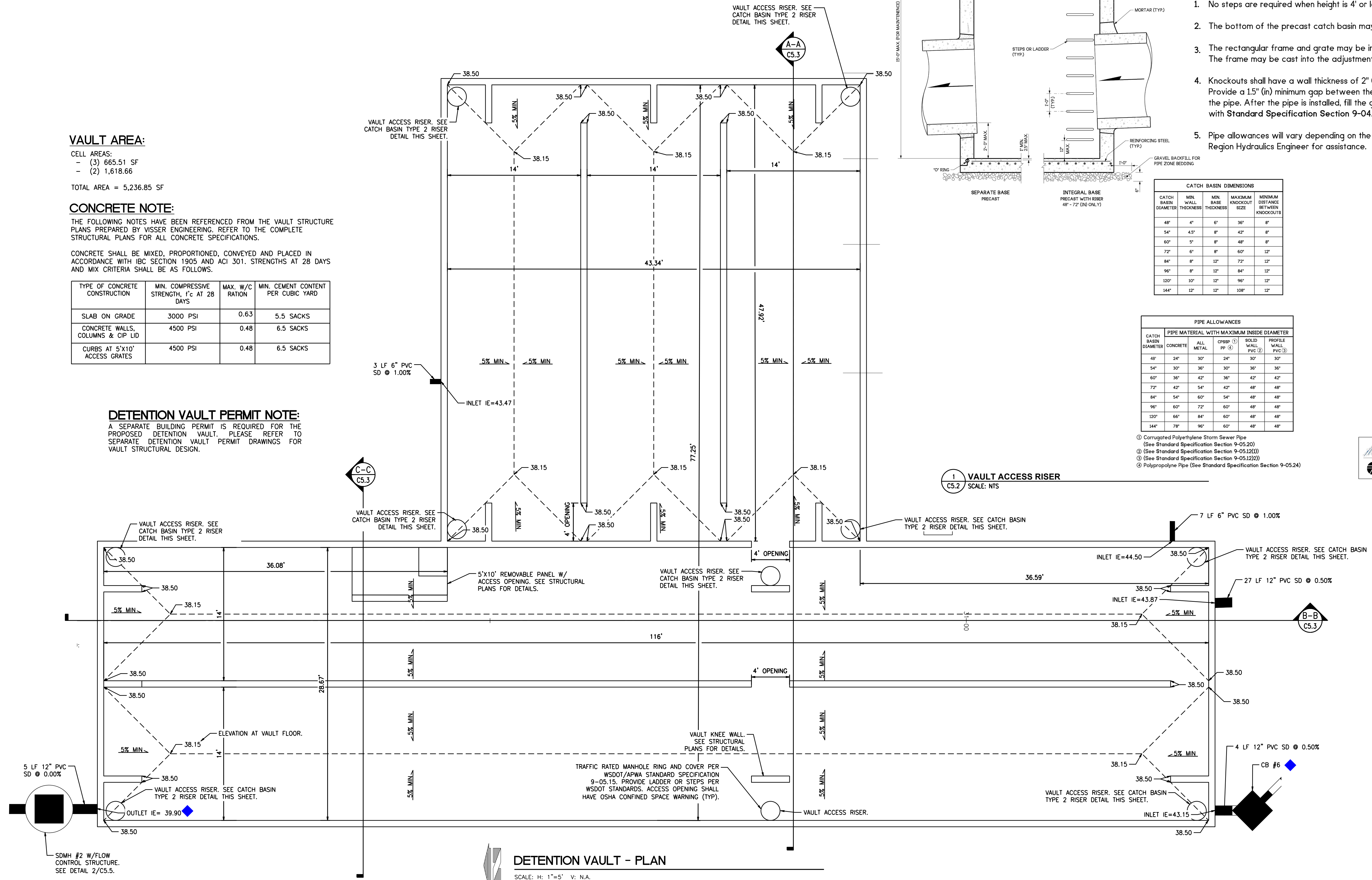
THE FOLLOWING NOTES HAVE BEEN REFERENCED FROM THE VAULT STRUCTURE PLANS PREPARED BY VISSER ENGINEERING. REFER TO THE COMPLETE STRUCTURAL PLANS FOR ALL CONCRETE SPECIFICATIONS.

CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH IBC SECTION 1905 AND ACI 301. STRENGTHS AT 28 DAYS AND MIX CRITERIA SHALL BE AS FOLLOWS.

TYPE OF CONCRETE CONSTRUCTION	MIN. COMPRESSIVE STRENGTH, f'c AT 28 DAYS	MAX. W/C RATION	MIN. CEMENT CONTENT PER CUBIC YARD
SLAB ON GRADE	3000 PSI	0.63	5.5 SACKS
CONCRETE WALLS, COLUMNS & CIP LID	4500 PSI	0.48	6.5 SACKS
CURBS AT 5'X10' ACCESS GRATES	4500 PSI	0.48	6.5 SACKS

DETENTION VAULT PERMIT NOTE:

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DETENTION VAULT - PLAN

SCALE: H: 1"=5' V: N.A.

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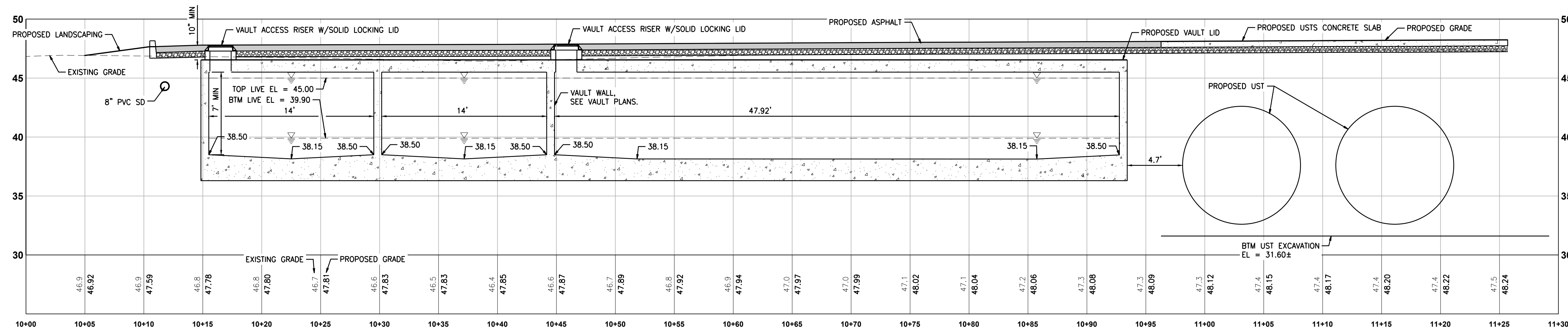


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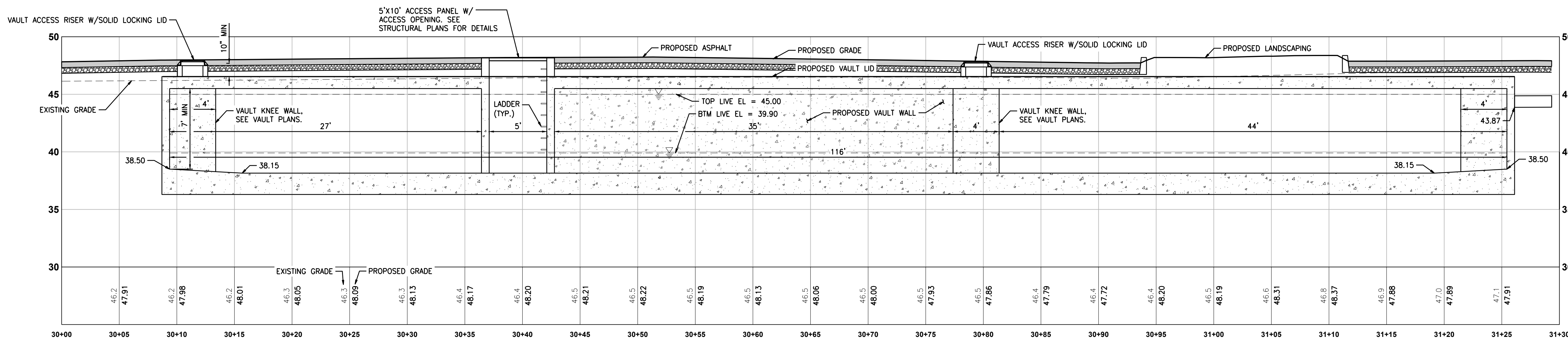


# DETENTION VAULT CROSS SECTIONS

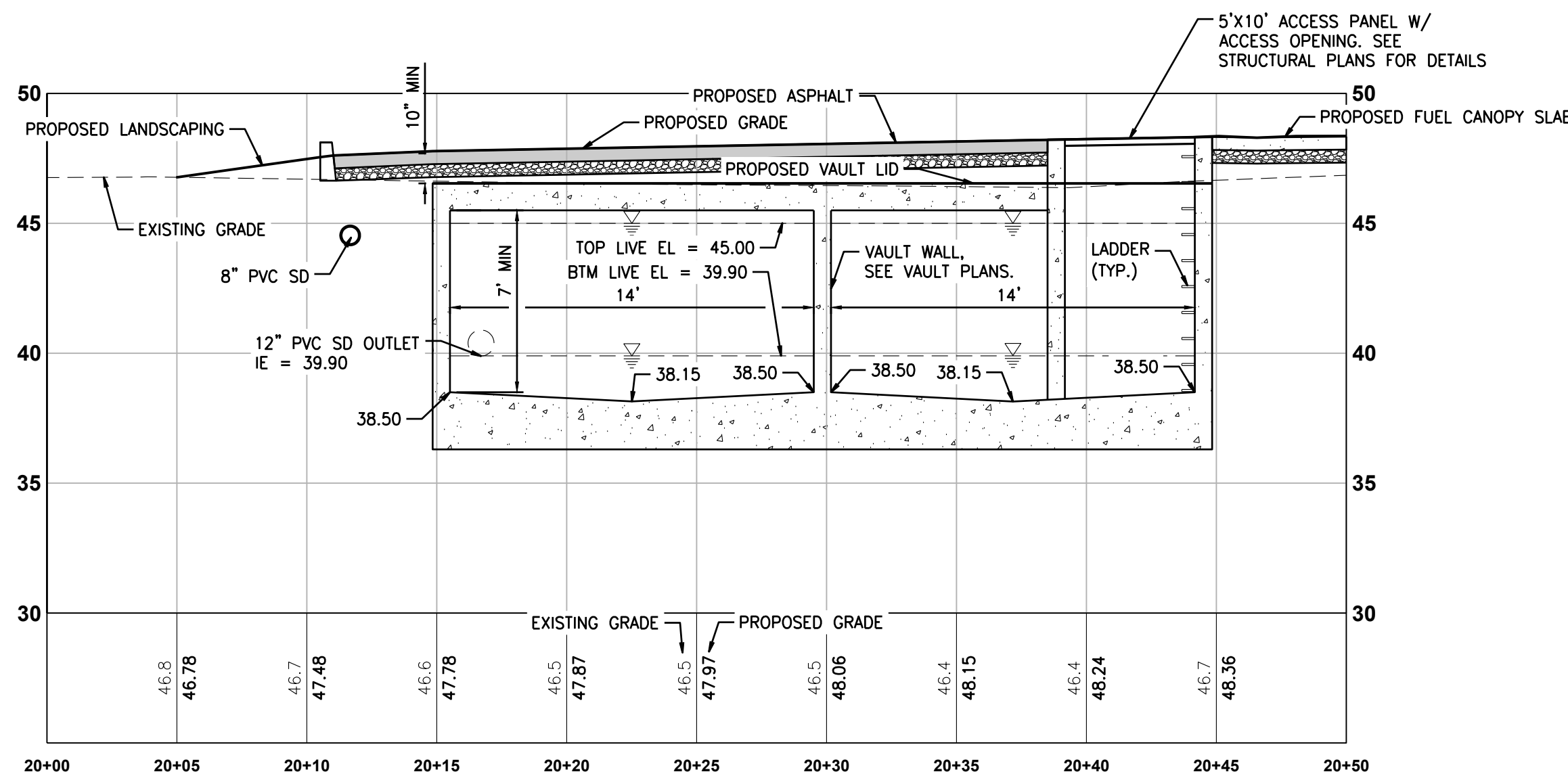
FOR  
**ARCO ampm PUYALLUP**  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



**A-A VAULT SECTION A-A - LOOKING NORTH**  
C5.3 SCALE: H: 1" = 5', V: 1" = 5'



**B-B VAULT SECTION B-B - LOOKING EAST**  
C5.3 SCALE: H: 1" = 5', V: 1" = 5'



**C-C VAULT SECTION B-B - LOOKING NORTH**  
C5.3 SCALE: H: 1" = 5', V: 1" = 5'

## UTILITY CONFLICT NOTE:

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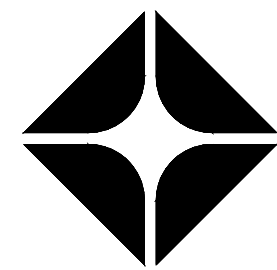
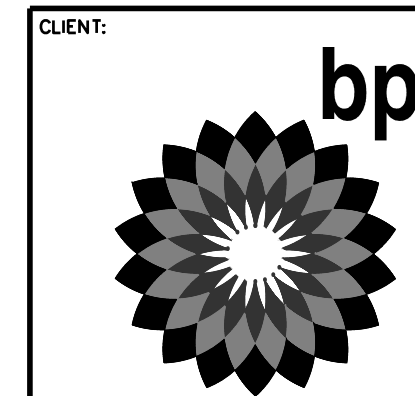
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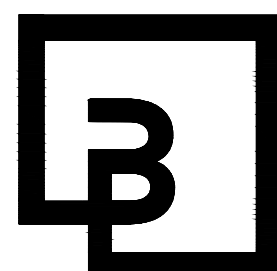
## APPROVED

BY \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING  
DATE \_\_\_\_\_

NOTE: THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE.  
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BP WEST COAST PRODUCTS, LLC



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SEAL:



1/12/24

## DEVELOPMENT INFORMATION:

**ARCO NTI**  
**3400 am/pm**  
**FUEL CANOPY w/ 6 MPD's**

## SITE ADDRESS:

**1402 S. MERIDIAN**  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

## FACILITY #TBD

DESIGNED BY: JDF ALLIANCE ZBDW  
CHECKED BY: AW BP REP:  
DRAWN BY: JDF ALLIANCE PM:  
VERSION: PROJECT NO:  
21730

DRAWING TITLE:  
**DETENTION VAULT CROSS SECTIONS**

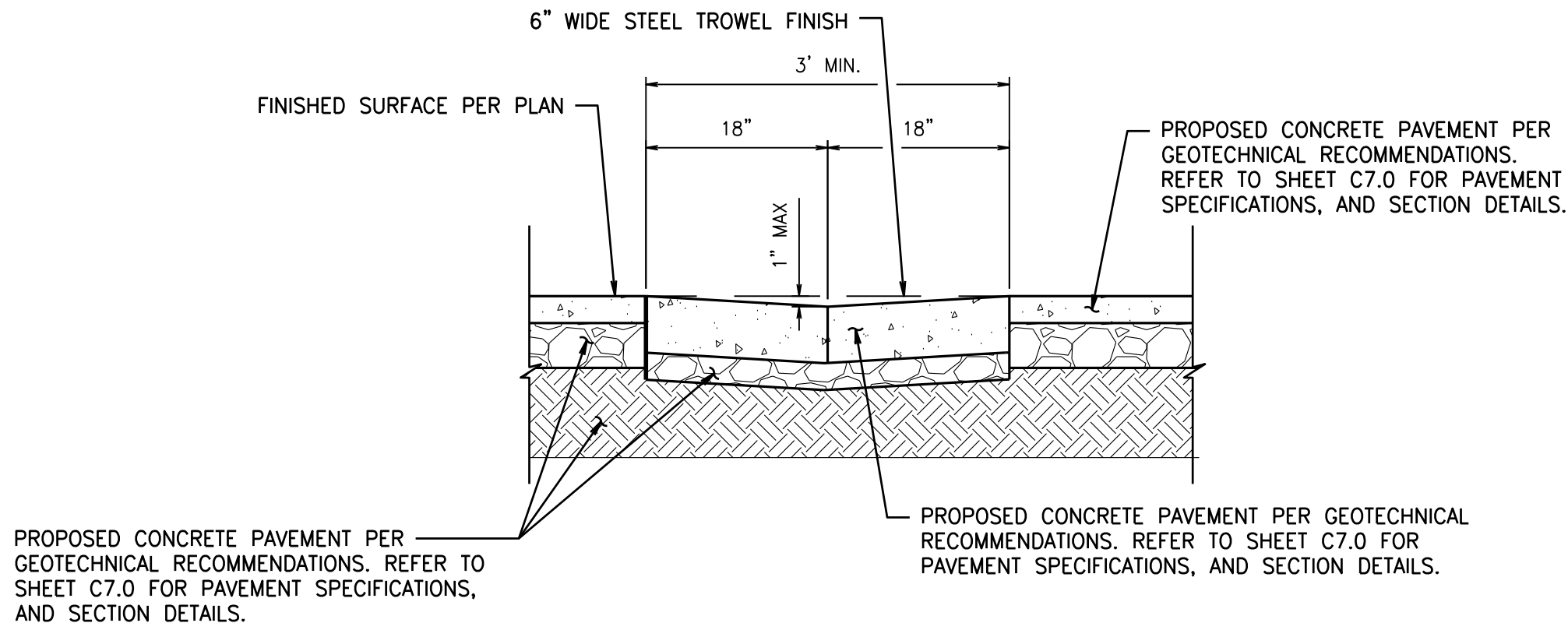
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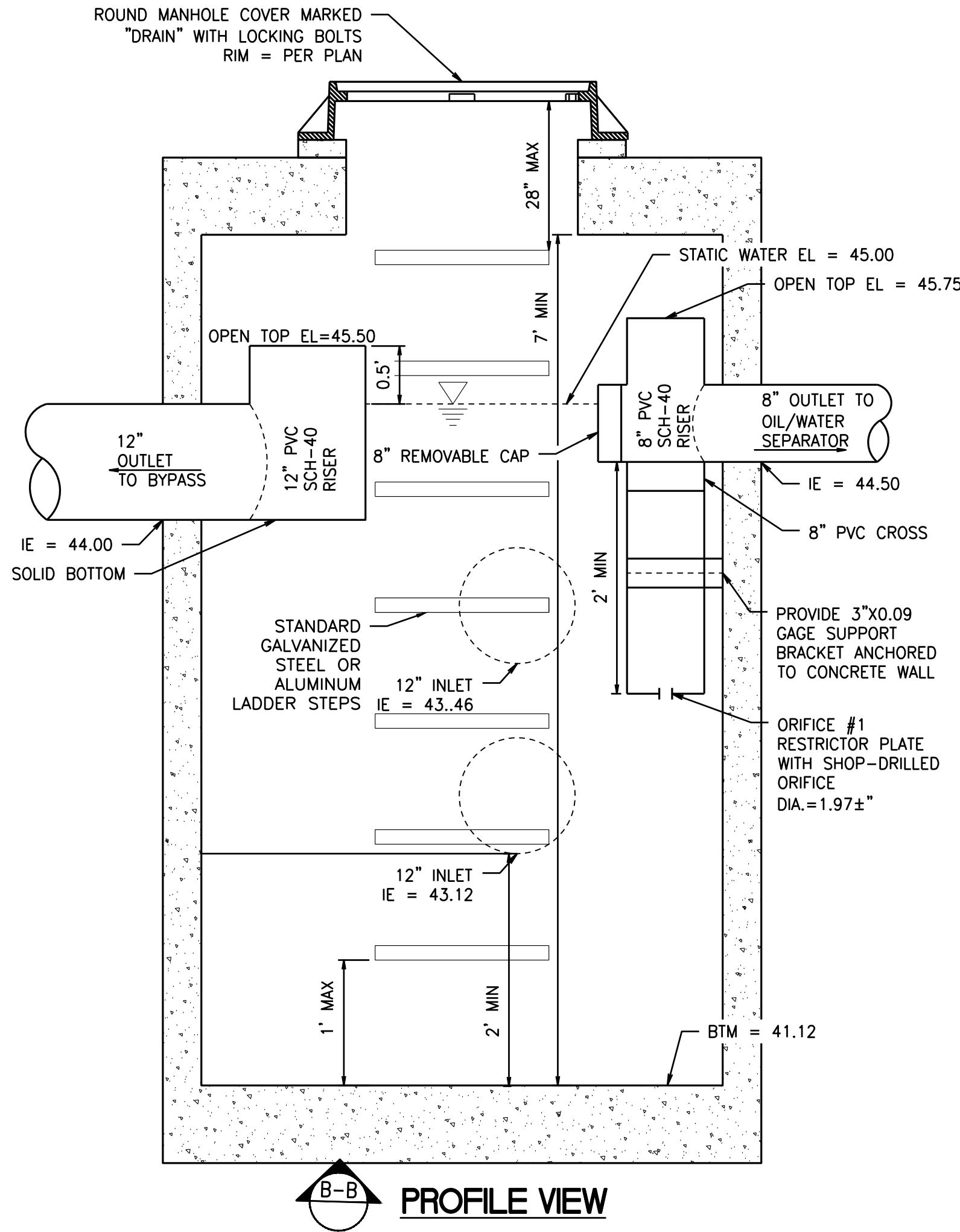


DRAINAGE NOTES AND DETAILS

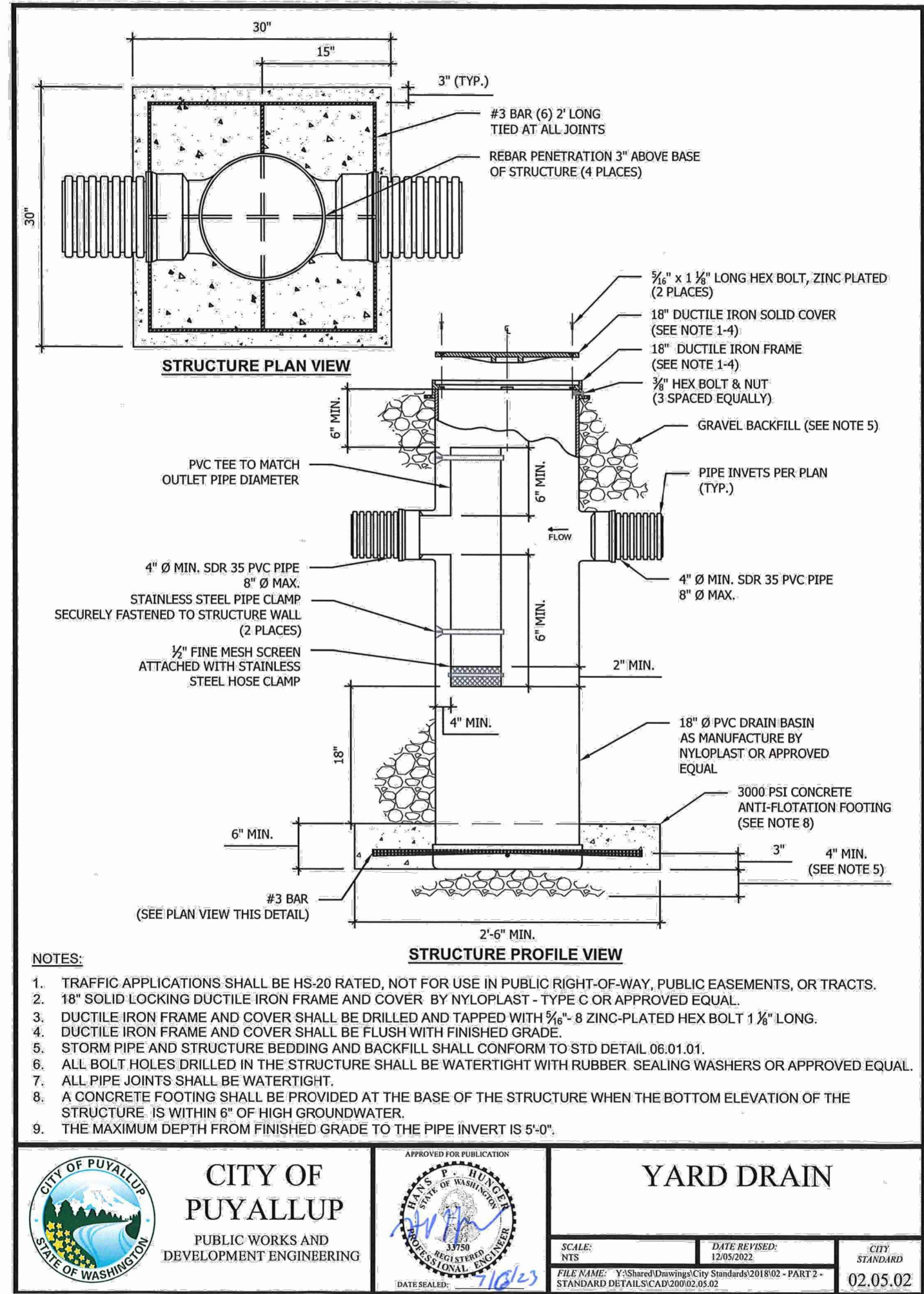
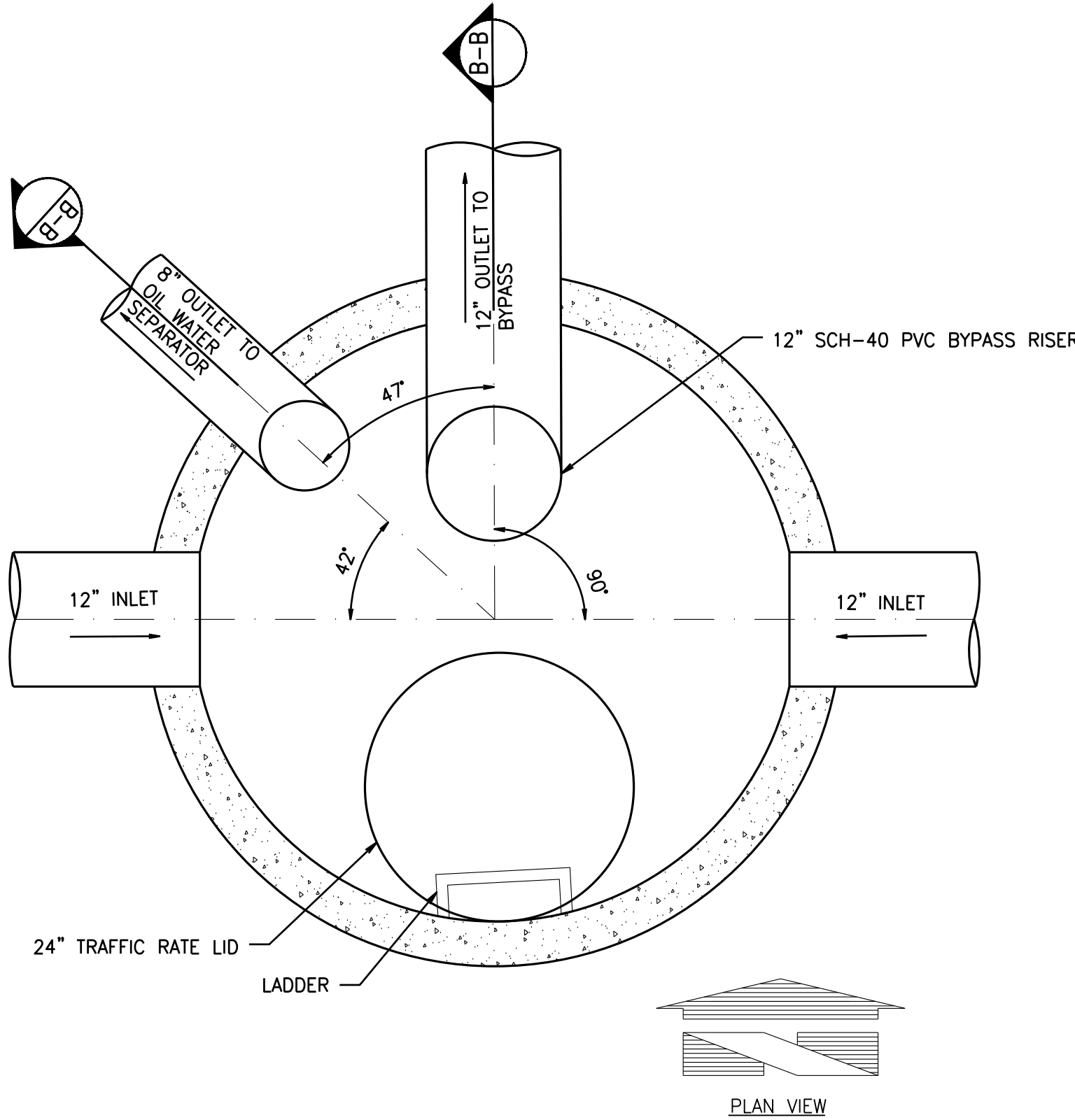
FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



1 CONCRETE DRAINAGE SWALE  
C5.4 SCALE: NTS



3 SDMH #3 - TYPE 2 - 54" FLOW SPLITTER  
C5.4 SCALE: NTS



2 CITY OF PUYALLUP YARD DRAIN  
C5.4 SCALE: NTS

Provide a detail from the proposed beehive grate. [civils, sheet C5.4]

**UTILITY CONFLICT NOTE:**  
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**APPROVED**  
BY: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING  
DATE: \_\_\_\_\_  
**NOTE:** THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE.  
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CLIENT:  
  
  
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VERSION: 1  
PROJECT NO: 21730  
ALLIANCE ZONE:  
BP REP:  
ALLIANCE PM:

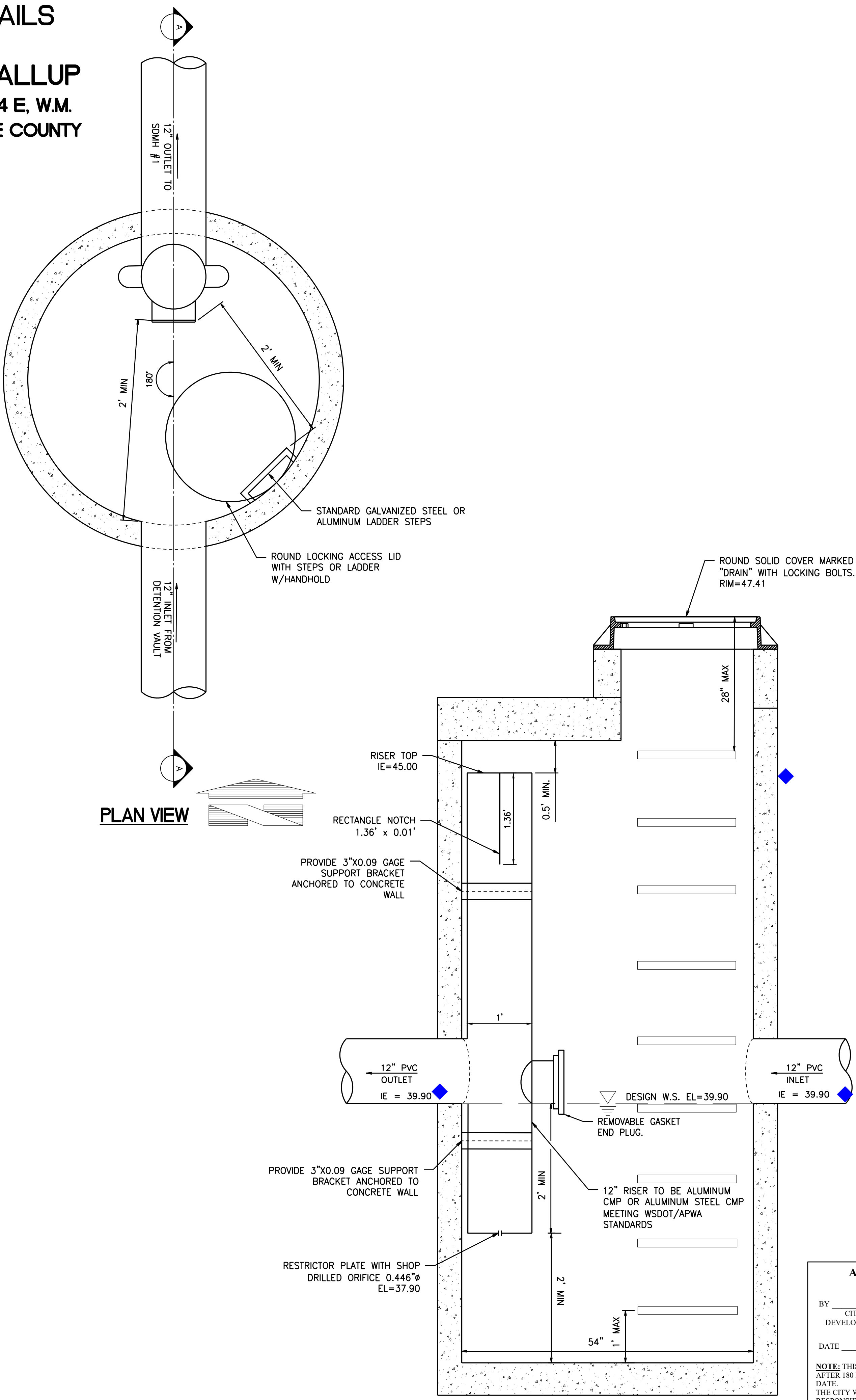
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**DRAINAGE NOTES AND DETAILS**

SHEET NO:

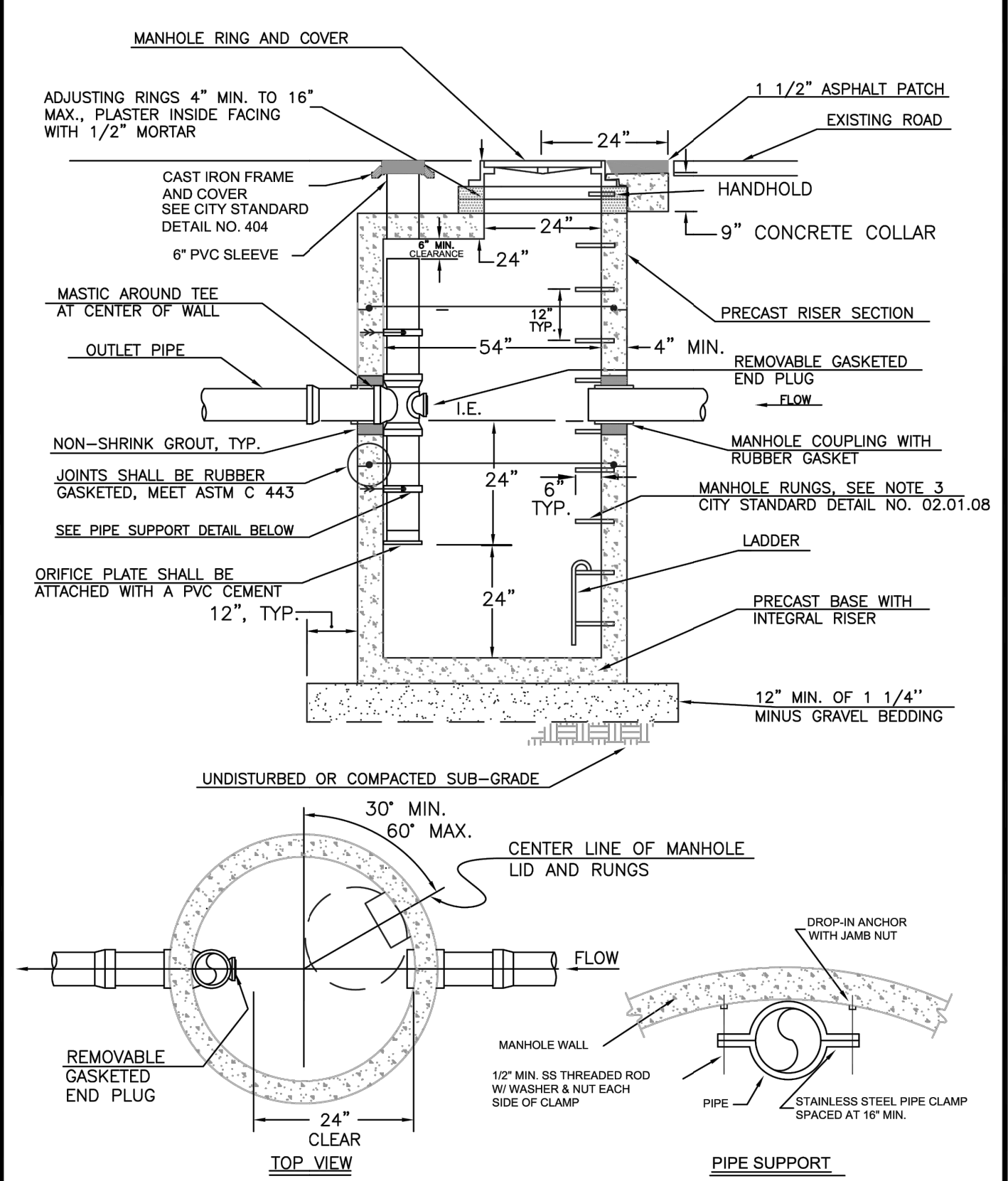
C5.4



DRAINAGE DETAILS  
FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



- NOTES FOR FLOW CONTROL MANHOLE:
- NEAT LINE CUTS SHALL BE AT TOP WITH A HOT PAVING GRADE ASPHALT AND FACE OF CUT TACKED.
  - FLOW CONTROL MANHOLES SHALL BE USED AS A SINGLE USE STRUCTURE.
  - MANHOLE RUNG SHALL CONFORM TO SECTION R, ASTM C 478 (ASSHTO M-199) AND MEET ALL WISHA REQUIREMENTS. MANHOLE RUNGS SHALL BE PARALLEL OR APPROXIMATELY RADIAL AT THE OPTION OF THE MANUFACTURER, EXCEPT THAT ALL STEPS IN ANY MANHOLE SHALL BE SIMILAR. PENETRATION OF OUTER WALL BY A RUNG LEG IS PROHIBITED. SEE MANHOLE STEP AND LADDER DETAIL, CITY STANDARD DETAIL NO. 06.01.04.
  - PRECAST RISER SECTION SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE WALL THICKNESS OF TWO (2) INCHES MINIMUM. KNOCKOUT OR CUTOUT HOLE SIZE IS EQUAL TO PIPE OUTER DIAMETER PLUS MANHOLE WALL THICKNESS. MINIMUM DISTANCE BETWEEN HOLES IS EIGHT (8) INCHES.
  - PRECAST CONCRETE MANHOLE COMPONENTS SHALL CONFORM TO ASTM C 478.
  - FLEXIBLE JOINTS SHALL BE RUBBER GASKETED IN ACCORDANCE WITH THE WSDOT STANDARD SPECIFICATIONS. MORTARED, DRY-PACKED, OR CAST-IN-PLACE JOINTS WILL BE PERMITTED FOR CONNECTIONS TO OR THROUGH MANHOLES. A FLEXIBLE GASKETED JOINT SHALL BE INSTALLED WITHIN ONE (1) FOOT OF EACH CONNECTION TO OR THROUGH SAID MANHOLES. CONNECTIONS TO MANHOLE WITH PVC PIPE SHALL UTILIZE A MANHOLE COUPLING AND RUBBER GASKET.
  - THE COVER ON THE MANHOLE SHALL BE MARKED WITH "STORM" OR "DRAIN" IN TWO (2) INCH RAISED LETTERS. SEE MANHOLE RING AND COVER DETAIL, CITY STANDARDS DETAIL NO. 06.01.02 AND 06.01.03.
  - STAINLESS STEEL PIPE CLAMP WITH 1/2" DIAMETER STAINLESS STEEL THREADED ROD WITH WASHER AND NUT EACH SIDE OF CLAMP. PROVIDE 1/2" DIAMETER DROP-IN ANCHOR WITH JAMB NUT AT WALL. PIPE CLAMPS SHALL BE PLACED AT SIXTEEN (16) INCHES ON CENTER.
  - FLOW CONTROL UNIT SHALL BE MADE FROM PVC PIPE AND SHALL CONFORM TO THE STANDARD PIPE SPECIFICATIONS.



CITY OF PUYALLUP		FLOW CONTROL MANHOLE WITH FLAT TOP	
DRAWN BY LINDA LIAW	CHECKED BY LINDA LIAW	APPROVED BY COLLEEN BARBER	NOTED BY JESSIE
FILE NAME F:\PWC\COMMON\STDCITY\009902_020401.01	DATE APPROVED 06/01/2003	DATE NOTED 06/01/2003	SCALE NTS
CITY STANDARD		02.01.07	

CITY OF PUYALLUP		FLOW CONTROL MANHOLE NOTES	
DRAWN BY LINDA LIAW	CHECKED BY LINDA LIAW	APPROVED BY COLLEEN BARBER	NOTED BY JESSIE
FILE NAME F:\PWC\COMMON\STDCITY\009902_020401.01	DATE APPROVED 06/01/2003	DATE NOTED 06/01/2003	SCALE NTS
CITY STANDARD		02.01.08	

1 CITY OF PUYALLUP FLOW CONTROL DETAIL - FOR REFERENCE ONLY  
C5.5 SCALE: NTS

**UTILITY CONFLICT NOTE:**  
THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT BY POT-HOLING THE UTILITIES AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE AT 811 48 HOURS IN ADVANCE AND THEN POT-HOLING 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 NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

**811**  
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2 SDMH #2 - FLOW CONTROL MANHOLE - TYPE II-54"  
C5.5 SCALE: NTS

**APPROVED**  
BY \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING  
DATE \_\_\_\_\_  
**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.

CLIENT:

BP WEST COAST PRODUCTS, LLC

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

NO.	DATE	REVISION	DESCRIPTION
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SEAL:

1/12/24

DEVELOPMENT INFORMATION:

**ARCO NTI**  
**3400 am/pm**  
**FUEL CANOPY w/ 6 MPD's**

SITE ADDRESS:

**1402 S. MERIDIAN**  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

**FACILITY #TBD**

DESIGNED BY: JDF  
CHECKED BY: AW  
DRAWN BY: JDF  
VERSION: -  
PROJECT NO: 21730

ALLIANCE Z&M:  
BP REP:  
ALLIANCE PM:  
PROJECT NO: 21730

DRAWING TITLE:

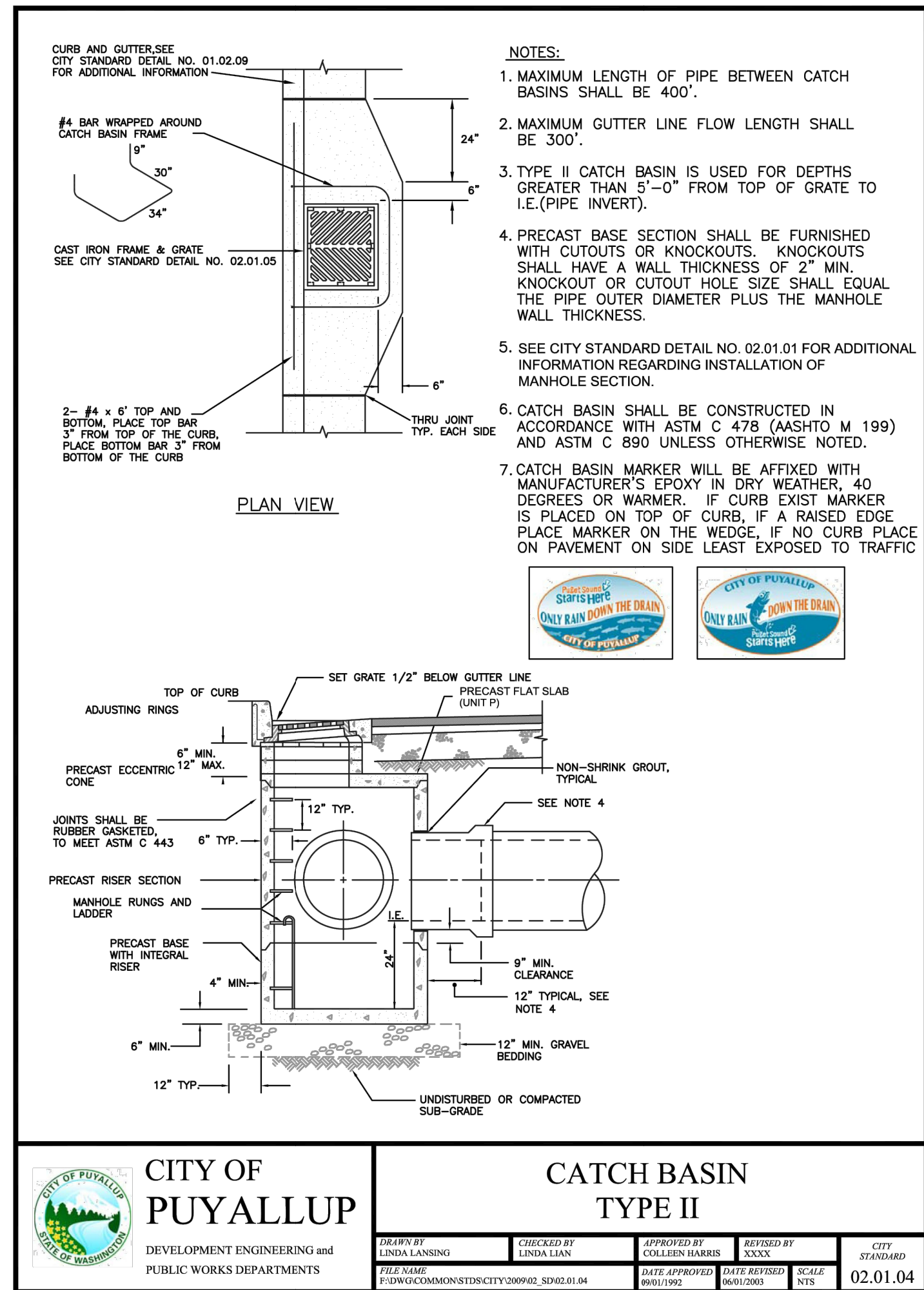
**DRAINAGE DETAILS**

SHEET NO:

**C5.5**



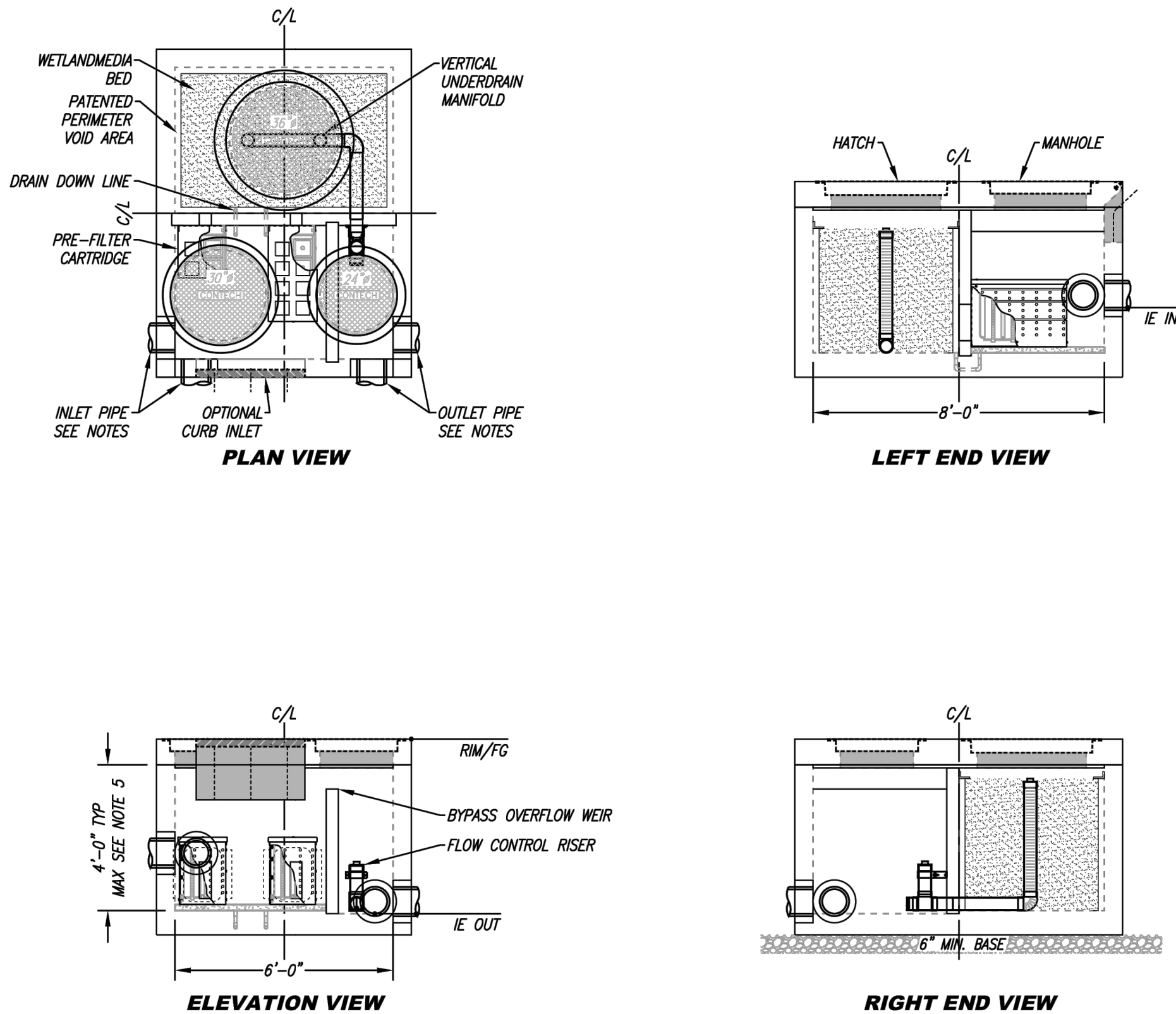
DRAINAGE DETAILS  
FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



SITE SPECIFIC DATA				
PROJECT NUMBER	773709			
PROJECT NAME	Arco Puyallup (BCE# 21730)			
PROJECT LOCATION	Puyallup, WA			
STRUCTURE ID	MWS			
TREATMENT REQUIRED				
TREATMENT FLOW (CFS)				0.074
PRETREATMENT LOADING RATE (GPM/SF)				2.1 GPM/SF
WETLAND MEDIA LOADING RATE (GPM/SF)				1.0
PEAK BYPASS REQUIRED (CFS) - IF APPLICABLE				0.8523 (CFS)
PIPE DATA	I.E.	MATERIAL	DIAMETER	
INLET PIPE 1	44.97'			
INLET PIPE 2				
OUTLET PIPE	43.20'			
	PRETREATMENT	BIOFILTRATION	DISCHARGE	
RIM ELEVATION	47.56'	47.56'	47.56'	
SURFACE LOAD	HS-20			
NOTES: Treatment HGL = 44.95' Peak HGL = 45.15'				

INSTALLATION NOTES

1. CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE SYSTEM AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURER'S SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURER'S CONTRACT.
2. UNIT MUST BE INSTALLED ON LEVEL BASE. MANUFACTURER RECOMMENDS A MINIMUM 6" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PROJECT ENGINEER'S RECOMMENDED BASE SPECIFICATIONS.
3. CONTRACTOR TO SUPPLY AND INSTALL ALL EXTERNAL CONNECTING PIPES. ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE (PIPES CANNOT INTRUDE BEYOND FLUSH). INVERT OF OUTFLOW PIPE MUST BE FLUSH WITH DISCHARGE CHAMBER FLOOR. ALL PIPES SHALL BE SEALED WATERTIGHT PER MANUFACTURER'S STANDARD CONNECTION DETAIL.
4. CONTRACTOR RESPONSIBLE FOR CONTACTING CONTECH FOR ACTIVATION OF UNIT. MANUFACTURER'S WARRANTY IS VOID WITHOUT PROPER ACTIVATION BY A CONTECH REPRESENTATIVE.
5. VERTICAL HEIGHT VARIES BASED ON SITE SPECIFIC REQUIREMENTS.



1  
C5.6 TYPE 2 CATCH BASIN  
SCALE: NTS

2  
C5.6 MODULAR WETLAND UNIT  
SCALE: NTS

UTILITY CONFLICT NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT BY POT-HOLING THE UTILITIES AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE AT 811 48 HOURS IN ADVANCE AND THEN POT-HOLING 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 NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.



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APPROVED

BY \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING

DATE \_\_\_\_\_

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.

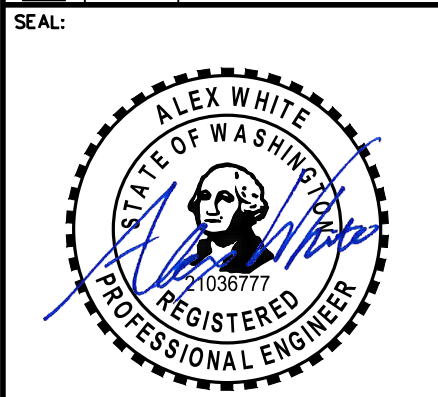
CLIENT:

**bp**

**ARCO**  
BP WEST COAST PRODUCTS, LLC

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

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1/12/24

DEVELOPMENT INFORMATION:

**ARCO NTI**  
3400 am/pm  
FUEL CANOPY w/ 6 MPD's

SITE ADDRESS:

**1402 S. MERIDIAN**  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

FACILITY #TBD

DESIGNED BY: JDF  
CHECKED BY: AW  
DRAWN BY: JDF  
VERSION: -  
PROJECT NO: 21730

ALLIANCE Z&M:  
BP REP:  
ALLIANCE PM:

DRAWING TITLE:  
**DRAINAGE DETAILS**

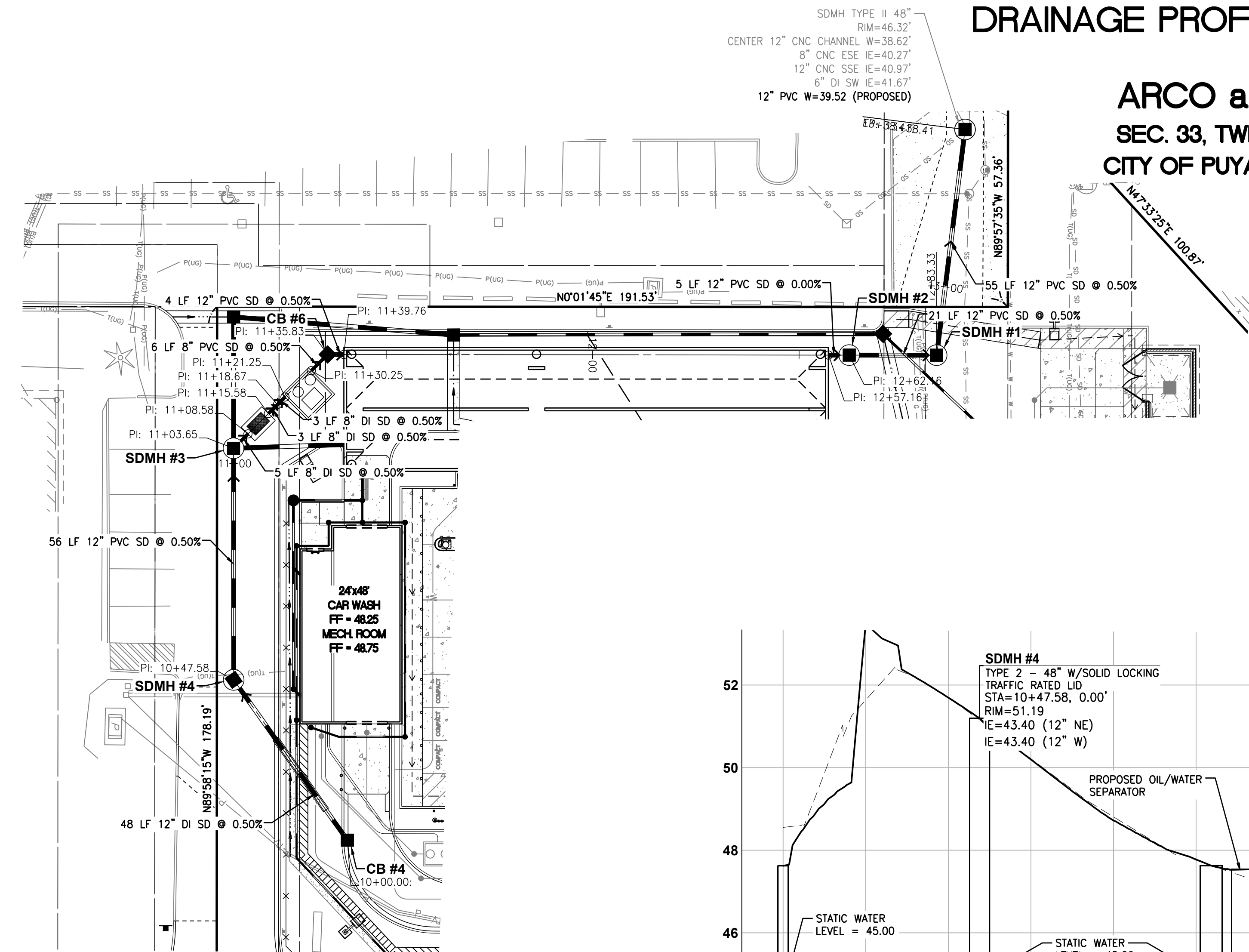
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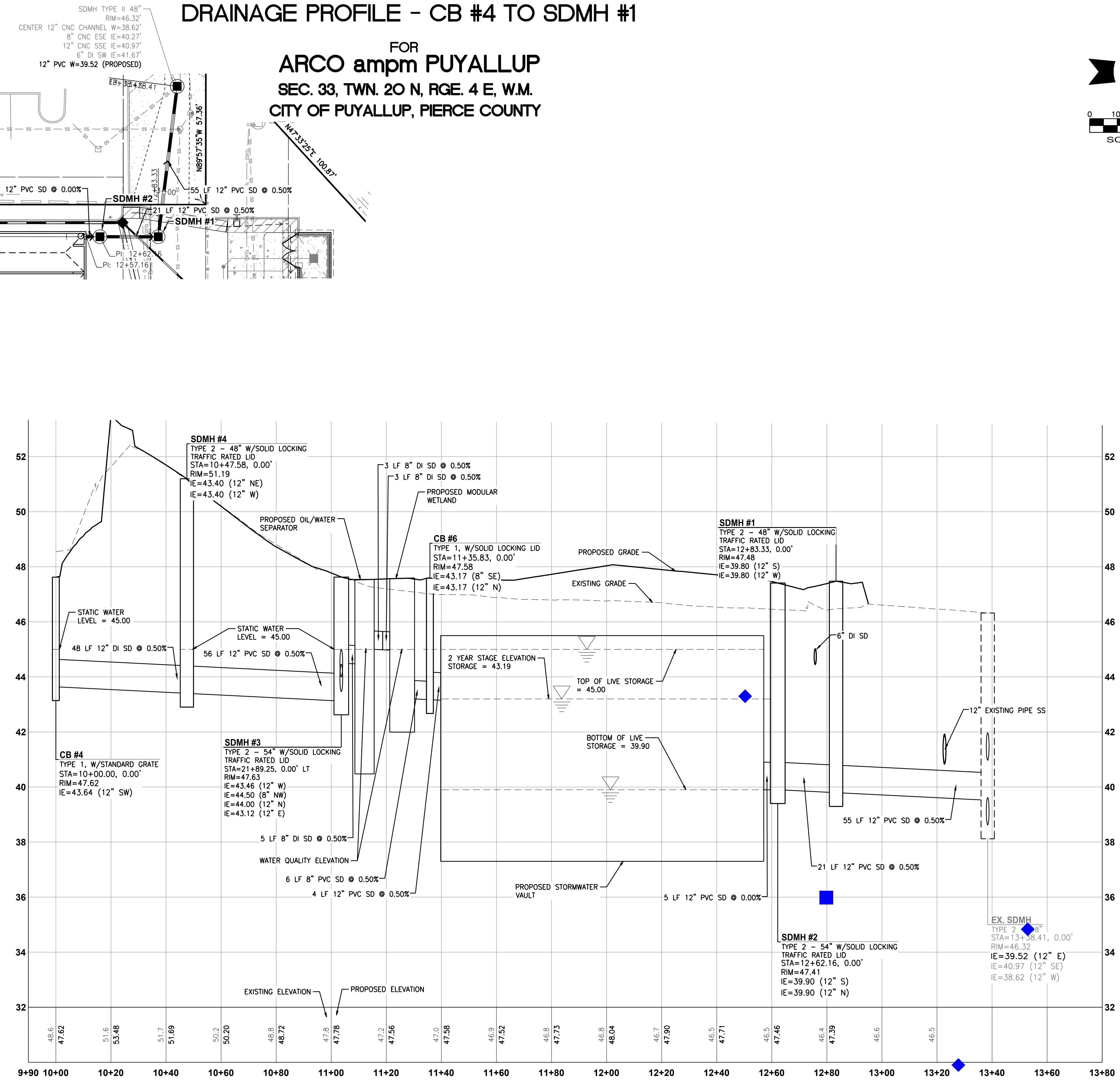






STORMWATER ALIGNMENT EXHIBIT - CB #4 TO SDMH #1

HORIZONTAL SCALE: 1"=20'



STORMWATER PROFILE - CB #4 TO SDMH #1

HORIZONTAL SCALE: 1"=20', VERTICAL SCALE: 1" = 2'

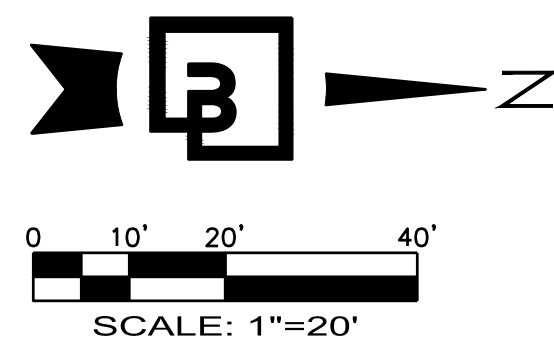
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DRAINAGE PROFILE - CB #4 TO SDMH #1

FOR  
**ARCO ampm PUYALLUP**  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



CLIENT:

BP WEST COAST PRODUCTS, LLC

**Barghausen Consulting Engineers, Inc.**  
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Kent, WA 98032  
425.251.6222  
barghausen.com

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SEAL:

1/12/24

DEVELOPMENT INFORMATION:

**ARCO NTI**  
3400 am/pm  
FUEL CANOPY w/ 6 MPD's

SITE ADDRESS:

1402 S. MERIDIAN  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

FACILITY #TBD

DESIGNED BY: JDF  
CHECKED BY: AW  
DRAWN BY: JDF  
VERSION: 1  
ALLIANCE Z&M:  
BP REP:  
ALLIANCE PM:  
PROJECT NO.: 21730

DRAWING TITLE:

**DRAINAGE PROFILE - CB #4 TO SDMH #1**

SHEET NO:

**C5.8**

APPROVED

BY: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING

DATE: \_\_\_\_\_

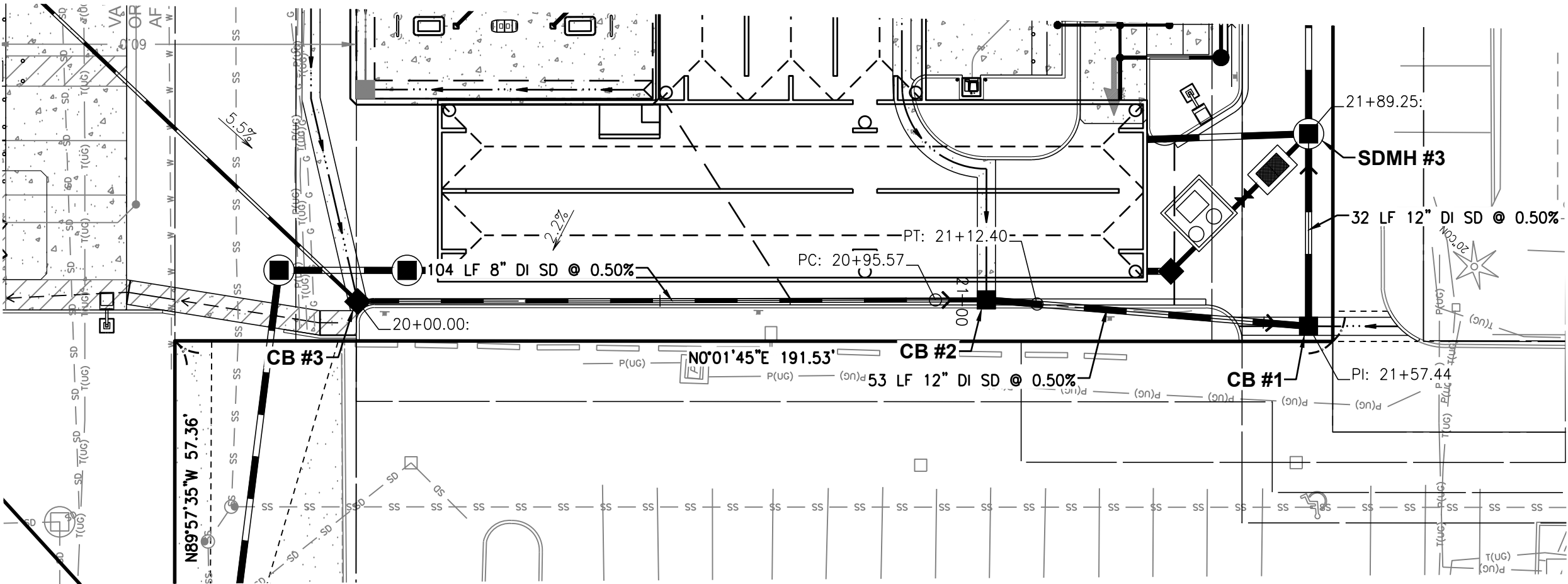
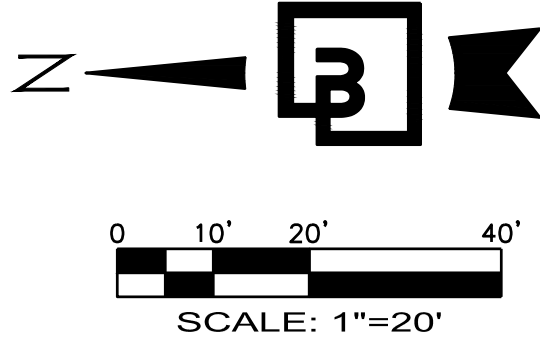
**NOTE:** THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE.  
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FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.

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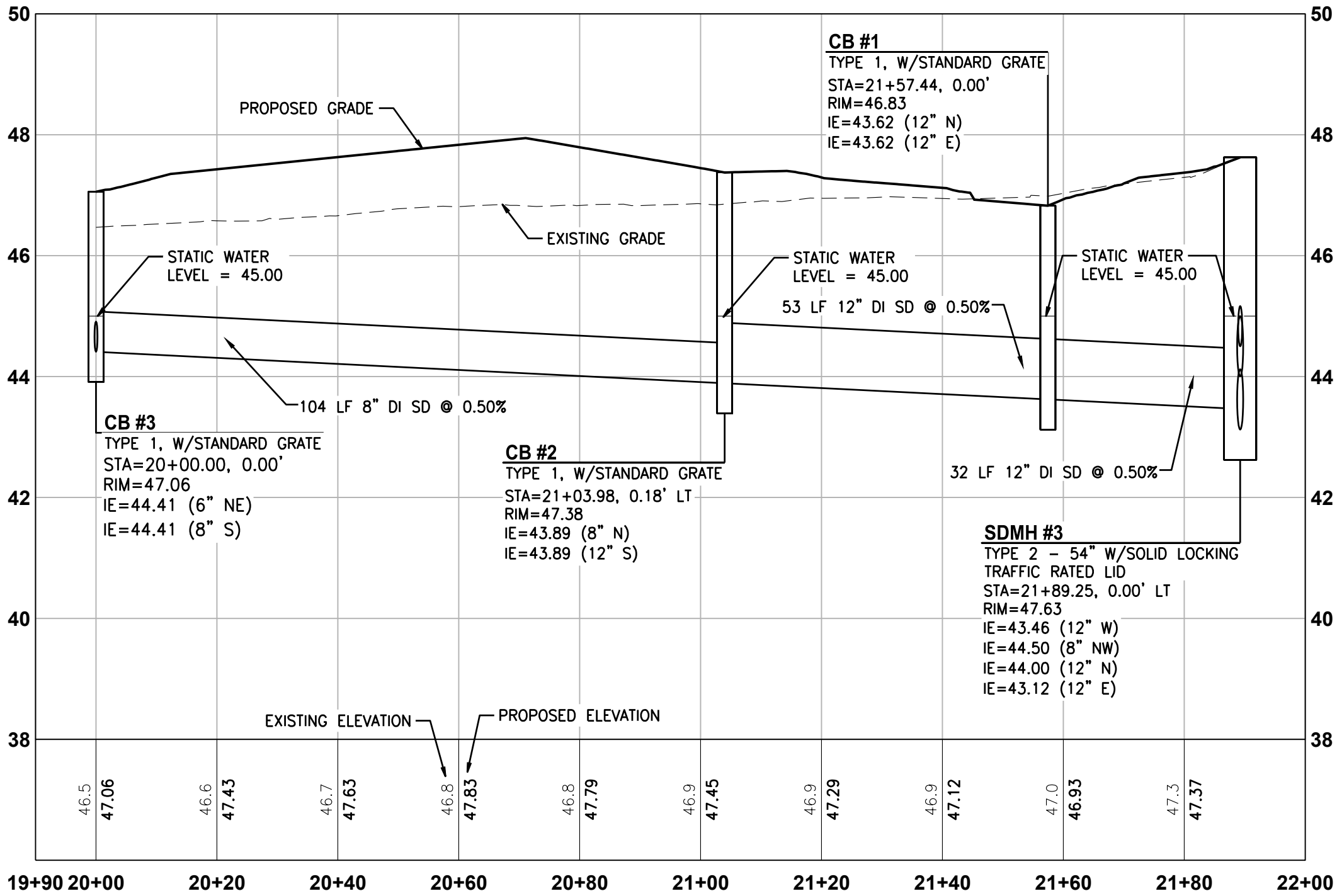
DRAINAGE PROFILE - CB #3 TO SDMH #3

FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



STORMWATER ALIGNMENT EXHIBIT - CB #3 TO SDMH #3

HORIZONTAL SCALE: 1"=20'



STORMWATER PROFILE - CB #3 TO SDMH #3

HORIZONTAL SCALE: 1"=20', VERTICAL SCALE: 1" = 2'

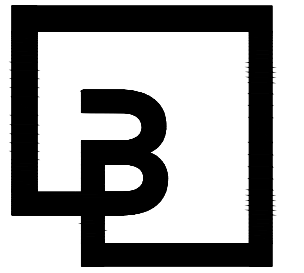
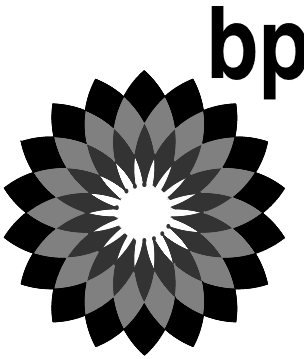
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Consulting Engineers, Inc.  
18215 72nd Avenue South  
Kent, WA 98032  
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SEAL:



1/12/24

DEVELOPMENT INFORMATION:  
**ARCO NTI**  
**3400 am/pm**  
**FUEL CANOPY w/ 6 MPD's**

SITE ADDRESS:  
**1402 S. MERIDIAN**  
**@ HIGHWAY 512**  
**PUYALLUP, WASHINGTON**

**FACILITY #TBD**

DESIGNED BY: JDF  
CHECKED BY: AW  
DRAWN BY: JDF  
VERSION: -  
PROJECT NO: 21730

DRAWING TITLE:  
**DRAINAGE PROFILE - CB #3 TO SDMH #3**

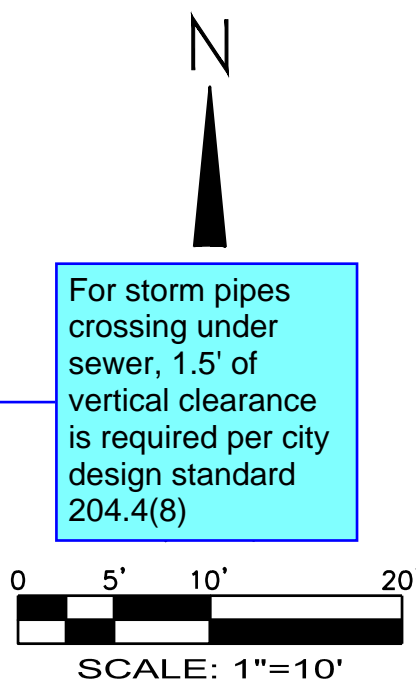
SHEET NO:

C5.9

**APPROVED**  
BY: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING  
DATE: \_\_\_\_\_  
**NOTE:** THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE.  
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UTILITY CROSSING TABLE				
TOP UTILITY	TOP EL.	BOTTOM UTILITY	BOTTOM EL.	SEPARATION
1 STORM DRAIN	44.65'	SEWER	41.44'	3.20'
2 SEWER	47.07'	STORM DRAIN	42.80'	4.27'
3 SEWER	46.75'	STORM DRAIN	45.46'	1.30'
4 SEWER	45.94'	STORM DRAIN	42.80'	3.15'
5 SEWER	40.83'	STORM DRAIN	40.65'	0.18'
6 SEWER	45.92'	STORM DRAIN	42.80'	3.12'
7 STORM DRAIN	44.44'	STORM DRAIN	41.10'	3.34'
8 STORM DRAIN	45.04'	STORM DRAIN	42.80'	2.24'



**PIPE MATERIALS AND COVER:**  
CONTRACTOR SHALL USE PIPE/FITTING MATERIALS IN ACCORDANCE WITH CITY OF PUYALLUP REQUIREMENTS AND MANUFACTURER SPECIFICATIONS.  
PVC PIPE SHALL BE SDR-35 WITH 3.0' MIN COVER WHERE SUBJECT TO VEHICULAR LOADING SHALL.  
ALL DUCTILE IRON PIPE WITH 1.0' MIN COVER SHALL BE CLASS 52.

## UTILITY PLAN - NORTH

FOR  
**ARCO ampm PUYALLUP**  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY

### - UTILITY CROSSING NOTE:

CONTRACTOR TO MAINTAIN MINIMUM 1.5' VERTICAL SEPARATION BETWEEN WATER SERVICE LINES AND ALL OTHER UTILITIES. A MINIMUM OF 1.0' VERTICAL SEPARATION MUST BE MAINTAINED BETWEEN SIDE SEWER AND ALL OTHER UTILITIES WITH THE EXCEPTION OF WATER SERVICE LINES.

### - DRY UTILITY NOTES:

- APPROXIMATE LOCATION OF POWER, TELEPHONE, AND TELECOMMUNICATION CONNECTION TO BUILDING. SEE ELECTRICAL PLANS FOR FINAL LOCATION ON MAIN SWITCH BOARD. CONTRACTOR TO COORDINATE INSTALLATION WITH PURVEYOR.
- APPROXIMATE LOCATION OF TELECOMMUNICATION CONNECTION TO EXISTING UNDERGROUND TELECOMMUNICATION LINE. CONTRACTOR TO COORDINATE INSTALLATION WITH PURVEYOR.
- PROPOSED LOT LIGHT. CONTRACTOR TO COORDINATE CONDUIT REQUIREMENTS WITH ELECTRICAL PLANS. SEE DETAIL 1/C7.2.
- PROPOSED EV STATION (TYP. OF 1). CONTRACTOR TO COORDINATE CONDUIT REQUIREMENTS WITH ELECTRICAL PLANS.
- PROPOSED TRANSFORMER. REFER TO SEPARATE PSE PLANS FOR CONTRACTOR SCOPE AND SPECS.
- PROPOSED TELECOMMUNICATION LINE.
- PROPOSED TELEPHONE LINE.
- PROPOSED POWER LINE TO PROPOSED TRANSFORMER.
- PROPOSED POWER LINE TO BUILDING.
- PROPOSED POWER LINE TO CAR WASH.

30' STORMWATER-SANITARY-WATERMAIN EASEMENT  
AFN 9206040383  
EXCEPTION NO. 31

SSMH TYPE II 48"  
RIM=46.25'  
12" DI IE SE=39.95'  
12" DI IE E=39.85'  
CENTER CHANNELS=40.05'

SSMH TYPE II 48"  
RIM=46.41'  
12" DI IE NW=40.01'  
12" DI IE E=40.21'  
10" DI IE SE=40.86'  
CENTER CHANNELS=40.16'

ELECTRIC EASEMENT  
AFN 9207280563  
EXCEPTION NO. 33

10' ELECTRIC EASEMENT  
AFN 2792268  
EXCEPTION NO. 25

MOTEL PUYALLUP  
TAX PARCEL NO. 7730000282  
1412 S MERIDIAN, PUYALLUP,  
WA 98371  
(LAND USE - GENERAL  
COMMERCIAL)

10' ELECTRIC EASEMENT  
AFN 2792268  
EXCEPTION NO. 25

10' ELECTRIC EASEMENT  
AFN 2792268  
EXCEPTION NO. 25

10' ELECTRIC EASEMENT  
AFN 2792268  
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EXCEPTION NO. 25

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AFN 2792268  
EXCEPTION NO. 25

10' ELECTRIC EASEMENT  
AFN 2792268  
EXCEPTION NO. 25

MATCHLINE - SEE SHEET C6.1 FOR CONTINUATION



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### UTILITY POTHOLES NOTE:

THE CIRCLED LOCATIONS ARE REQUIRED TO BE POTHOLED TO VERIFY HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITY AND/OR POTENTIAL CONFLICTS WITH EXISTING UTILITIES. POTHOLES SHALL BE PERFORMED PRIOR TO INSTALLING ANY PROPOSED UTILITIES. CONTRACTOR SHALL NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. OF ANY CONFLICTS.

### UTILITY PROTECTION NOTE:

APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN ON THESE PLANS. CONTRACTOR TO COORDINATE WITH PURVEYORS AND USE EXTREME CAUTION WHEN EXCAVATING ON-SITE. UNTIL EXISTING GAS AND POWER SERVICE LOCATIONS ARE CONFIRMED, CONTRACTOR TO ORDER INDEPENDENT UTILITY LOCATES (INCLUDING GAS AND POWER) FOR THE FULL SCOPE OF WORK PRIOR TO CONSTRUCTION OR ANY GROUND DISTURBING ACTIVITIES.

### - SEWER NOTES:

- APPROXIMATE LOCATION OF SEWER CONNECTION TO EXISTING SEWER LINE PER CITY OF PUYALLUP STANDARD DETAIL 04.02.01 - SEWER MAIN TAP. SEE DETAIL 4/C6.4. IE = 40.81
- PROPOSED 1,000 GREASE INTERCEPTOR. SEE CITY OF PUYALLUP STANDARD DETAIL 4.06.01. DETAIL 3/C6.5. RIM = ±49.46 IE = 45.93 (6" N) IE = 45.76 (6" S)
- APPROXIMATE LOCATION OF SEWER CONNECTION TO BUILDING. SEE PLUMBING PLANS FOR CONTINUATION. CONFIRM EXACT LOCATION WITH PLUMBING PLANS. IE = 46.10 (6" S)
- PROPOSED OIL/WATER SEPARATOR PER OLDCASTLE 660-CPS. SEE DETAIL 1/C6.2. RIM = ±48.60 IE = 42.70 (6" W) IE = 42.70 (6" E)
- PROPOSED 6" GATE VALVE (MJ) IN TRAFFIC RATED VALVE BOX.
- 2 - 3" GREASE INTERCEPTOR VENT LINES. REFER TO MEP PLANS FOR MORE DETAIL.
- PROPOSED SAMPLING BOX. SEE DETAIL 4/C6.5 RIM = ±49.36 IE = 45.74
- APPROXIMATE LOCATION OF SEWER CONNECTION TO EXISTING SEWER LINE PER CITY OF PUYALLUP STANDARD DETAIL 04.02.01 - SEWER MAIN TAP. SEE DETAIL 4/C6.4. IE = 40.83
- SANITARY SEWER CATCH BASIN TYPE I PER CITY OF PUYALLUP STANDARD DETAIL 02.01.03. SEE DETAIL 2/C5.7.
- SAMPLING TEE PER CITY OF PUYALLUP STANDARD DETAIL 04.03.04. SEE DETAIL 5/C6.5.

### - WATER NOTES:

- PROPOSED DOMESTIC 1-1/2" WATER METER PER CITY OF PUYALLUP STANDARD DETAILS 03.03.02. SEE DETAIL 2/C6.4.
- PROPOSED 1-1/2" RPBA PER CITY OF PUYALLUP STANDARD DETAIL 03.04.02. SEE DETAIL 3/C6.4.
- PROPOSED IRRIGATION 1" WATER METER PER CITY OF PUYALLUP STANDARD DETAILS 03.03.01-2. SEE DETAIL 1/C6.5.
- PROPOSED 1" DCVA PER CITY OF PUYALLUP STANDARD DETAIL 03.04.01. SEE DETAIL 2/C6.5.
- WATER SUPPLY CONNECTION TO PROPOSED BUILDING. SEE PLUMBING PLANS FOR CONTINUATION. CONTRACTOR TO VERIFY EXACT POINT OF CONNECTION WITH PLUMBING PLANS.
- PROPOSED CAR WASH 1-1/2" WATER METER PER CITY OF PUYALLUP STANDARD DETAIL 03.03.02. SEE DETAIL 2/C6.4.
- 97 LF - 1-1/2" AMERICAN, TYPE K COPPER, RIGID, SEAMLESS PIPE, CONFORMING TO ASTM B88.
- 183 LF - 1-1/2" AMERICAN, TYPE K COPPER, RIGID, SEAMLESS PIPE, CONFORMING TO ASTM B88.
- PROPOSED FIRE HYDRANT ASSEMBLY PER CITY OF PUYALLUP STANDARD DETAIL 03.05.02. SEE DETAIL 2/C6.2.  
1 - 8"x6" TEE (FLxMG)  
1 - 6" AUXILIARY GATE VALVE (FLxMJ)  
5 LF - 6" CL 52 DUCTILE IRON PIPE (MJ)  
CONCRETE TEE THRUST BLOCK PER CITY OF PUYALLUP STANDARD DETAIL 03.02.01. SEE DETAIL 3/C6.2

The city has determined that the private street light conflicts with the existing gas and sewer lines. The sewer line will be replaced in the near future. Relocate this light out of the 30' easement. [civils, sheet C6.0]

FIRE HYDRANT/FDC LOCATION/ACCESS APPROVED  
BY: CITY OF PUYALLUP  
FIRE CODE OFFICIAL  
DATE: \_\_\_\_\_  
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 CITY ENGINEER

Replace water purveyor approval block for fire on this sheet. [civils, sheet C6.0]

APPROVED	APPROVED
BY: CITY OF PUYALLUP WATER PURVEYOR	BY: CITY OF PUYALLUP DEVELOPMENT ENGINEERING
DATE: _____	DATE: _____
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 WATER PURVEYOR.	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.

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

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1/12/24

DEVELOPMENT INFORMATION:

**ARCO NTI**

**3400 am/pm**

**FUEL CANOPY w/ 6 MPD's**

SITE ADDRESS:

**1402 S. MERIDIAN**

@ HIGHWAY 512

PUYALLUP, WASHINGTON

FACILITY #TBD

DESIGNED BY: JDF ALLIANCE 280M

CHECKED BY: AW BP REP:

DRAWN BY: JDF ALLIANCE PM

VERSION: PROJECT NO: 21730

DRAWING TITLE: UTILITY PLAN - NORTH

SHEET NO: C6.0



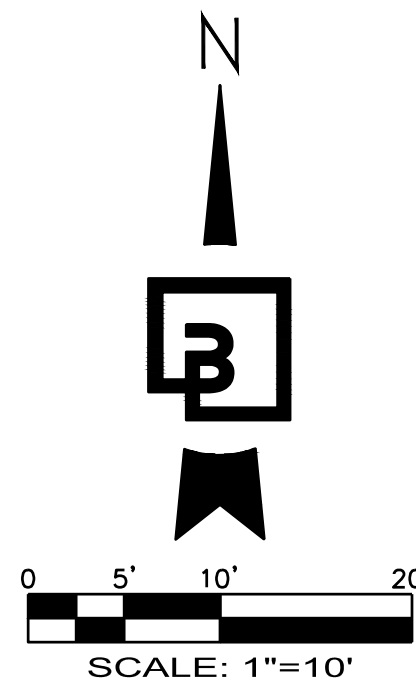
**UTILITY POTHOLING NOTE:**  
THE CIRCLED LOCATIONS ARE REQUIRED TO BE POTHOLED TO VERIFY HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITY AND/OR POTENTIAL CONFLICTS WITH EXISTING UTILITIES. POTHOLING SHALL BE PERFORMED PRIOR TO INSTALLING ANY PROPOSED UTILITIES. CONTRACTOR SHALL NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. OF ANY CONFLICTS.

**UTILITY PROTECTION NOTE:**  
APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN ON THESE PLANS. CONTRACTOR TO COORDINATE WITH PURVEYORS AND USE EXTREME CAUTION WHEN EXCAVATING ON-SITE. UNTIL EXISTING GAS AND POWER SERVICE LOCATIONS ARE CONFIRMED, CONTRACTOR TO ORDER INDEPENDENT UTILITY LOCATES (INCLUDING GAS AND POWER) FOR THE FULL SCOPE OF WORK PRIOR TO CONSTRUCTION OR ANY GROUND DISTURBING ACTIVITIES.

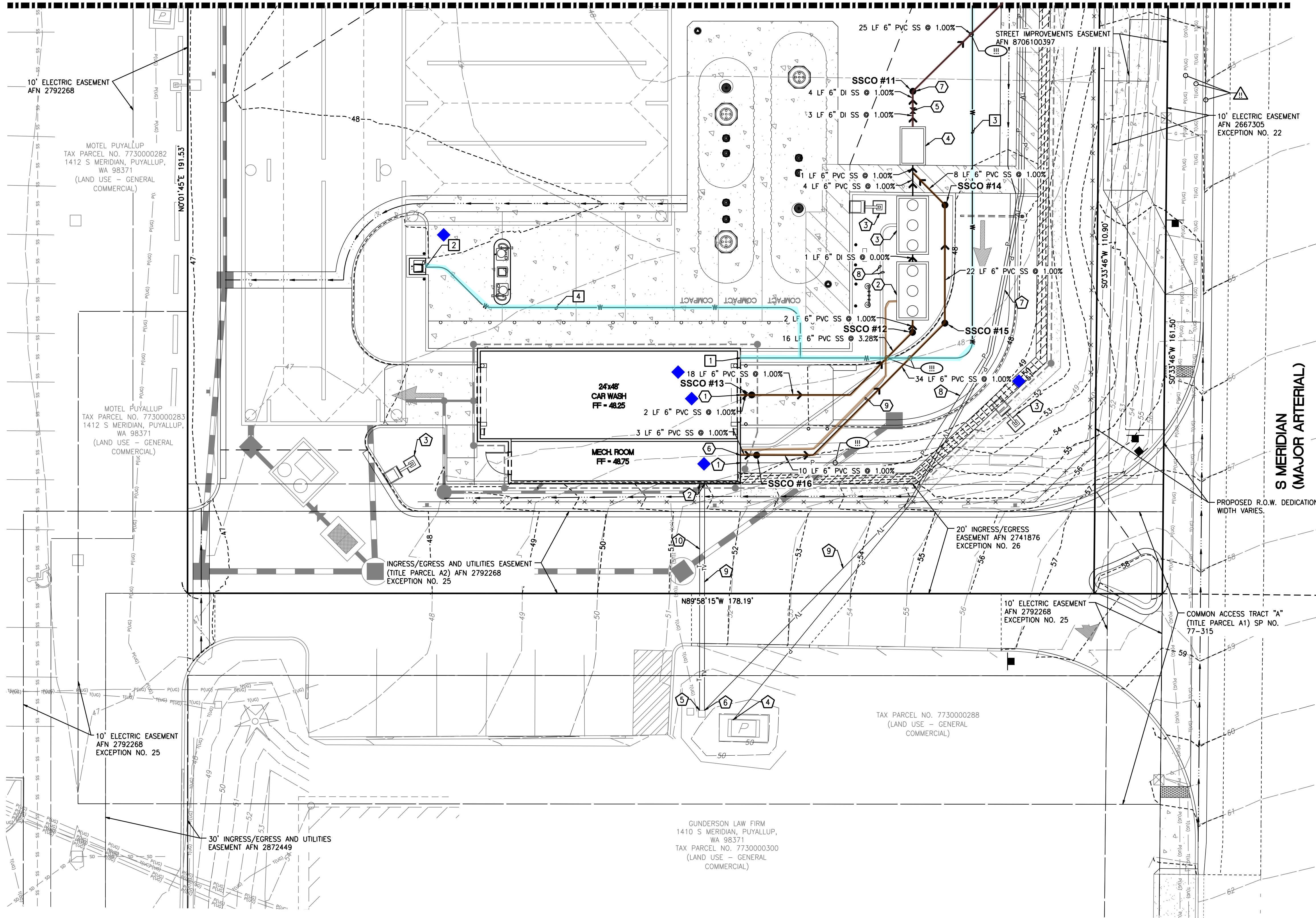
**UTILITY CROSSING NOTE:**  
CONTRACTOR TO MAINTAIN MINIMUM 1.5' VERTICAL SEPARATION BETWEEN WATER SERVICE LINES AND ALL OTHER UTILITIES. A MINIMUM OF 1.0' VERTICAL SEPARATION MUST BE MAINTAINED BETWEEN SIDE SEWER AND ALL OTHER UTILITIES WITH THE EXCEPTION OF WATER SERVICE LINES.

# UTILITY PLAN - SOUTH

FOR  
**ARCO ampm PUYALLUP**  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



MATCHLINE - SEE SHEET C6.0 FOR CONTINUATION



SANITARY SEWER STRUCTURES	
TABLE	
SSCO #11, W/SOLID LOCKING TRAFFIC RATED LID	RIM=48.41 IE=43.39 (6" IN S) IE=43.39 (6" OUT NE)
SSCO #12, W/SOLID LOCKING LID	RIM=48.47 IE=44.02 (6" IN SW) IE=44.02 (6" OUT N)
SSCO #13, W/SOLID LOCKING TRAFFIC RATED LID	RIM=48.21 IE=44.73 (6" IN W) IE=44.73 (6" OUT E)
SSCO #14, W/SOLID LOCKING LID	RIM=48.52 IE=44.06 (6" IN S) IE=44.06 (6" OUT NW)
SSCO #15, W/SOLID LOCKING TRAFFIC RATED LID	RIM=47.91 IE=44.28 (6" IN SW) IE=44.28 (6" OUT N)
SSCO #16, W/SOLID LOCKING LID	RIM=48.67 IE=44.72 (6" IN W) IE=44.72 (6" OUT E)

- SEWER NOTES:**
- APPROXIMATE LOCATION OF SANITARY SEWER TO CAR WASH. SEE PLUMBING PLANS FOR CONTINUATION. CONFIRM EXACT LOCATION WITH PLUMBING PLANS. IE = 44.75 (6" E)
  - RECLAIM TANK #1, SEE DETAIL 1/C6.3 FOR RECLAIM TANK OLD CASTLE PRECAST 1,500 GAL RECLAIM TANK RIM = 48.04 INLET IE = 44.00 (6" S) OUTLET IE = 44.00 (6" N)
  - RECLAIM TANK #2, SEE DETAIL 2/C6.3 FOR RECLAIM TANK OLD CASTLE PRECAST 1,500 GAL RECLAIM TANK RIM = 48.11 INLET IE = 44.00 (6" S) OUTLET IE = 44.00 (6" N)
  - RECLAIM TANK #3, SEE DETAIL 1/C6.4. OLD CASTLE OIL/WATER 577-SA SEPARATOR RIM = 48.25 INLET IE = 43.96 (6" S) OUTLET IE = 43.46 (6" N)
  - PROPOSED GATE VALVE (TYP.) IN TRAFFIC RATED VALVE BOX.
  - APPROXIMATE LOCATION OF SANITARY SEWER TO CAR WASH. SEE PLUMBING PLANS FOR CONTINUATION. CONFIRM EXACT LOCATION WITH PLUMBING PLANS. IE = 44.75 (6" E)
  - PROVIDE ADAPTOR FOR PIPE MATERIAL CHANGE.
  - 2-2" SCHD-80 PVC RECLAIM LINES FROM RECLAIM TANK #2 BACK TO PROPOSED CAR WASH.
  - 1-1" SCHD-80 PVC OZONE SENSOR CONDUIT LINE FROM RECLAIM TANK #1 BACK TO PROPOSED CAR WASH.
- This note appears to be discussing reclaim from tank #3 instead of tank #1. [civil plans, sheet C6.1]

- WATER NOTES:**
- WATER SUPPLY CONNECTION TO PROPOSED CAR WASH. SEE PLUMBING PLANS FOR CONTINUATION. CONTRACTOR TO VERIFY EXACT POINT OF CONNECTION WITH PLUMBING PLANS.
  - WATER SUPPLY CONNECTION TO PROPOSED AIR/WATER UNIT. SEE PLUMBING PLANS FOR CONTINUATION. CONTRACTOR TO VERIFY EXACT POINT OF CONNECTION WITH PLUMBING PLANS.
  - 183 LF - 1-1/2" AMERICAN, TYPE K COPPER, RIGID, SEAMLESS PIPE, CONFORMING TO ASTM B88.
  - 80 LF - 1-1/2" AMERICAN, TYPE K COPPER, RIGID, SEAMLESS PIPE, CONFORMING TO ASTM B88.

- DRY UTILITY NOTES:**
- APPROXIMATE LOCATION OF POWER CONNECTION TO CAR WASH. SEE ELECTRICAL PLANS FOR FINAL LOCATION ON MAIN SWITCH BOARD. CONTRACTOR TO COORDINATE INSTALLATION WITH PURVEYOR.
  - APPROXIMATE LOCATION OF TELEPHONE AND TELECOMMUNICATION CONNECTION TO CAR WASH. CONTRACTOR TO COORDINATE INSTALLATION WITH PURVEYOR.
  - PROPOSED LOT LIGHT (TYP. OF 6). CONTRACTOR TO COORDINATE CONDUIT REQUIREMENTS WITH ELECTRICAL PLANS. SEE DETAIL 1/C7.2.
  - PROPOSED POWER LINE CONNECTION TO EXISTING POWER VAULT. CONTRACTOR TO COORDINATE CONNECTION WITH PURVEYOR.
  - PROPOSED TELECOMMUNICATIONS LINE CONNECTION TO EXISTING TELEPHONE RISER. CONTRACTOR TO COORDINATE CONNECTION WITH PURVEYOR.
  - PROPOSED POWER LINE TO PROPOSED TRANSFORMER.
  - PROPOSED POWER LINE TO CAR WASH.
  - PROPOSED TELECOMMUNICATIONS LINE.
  - PROPOSED TELEPHONE LINE.

**PIPE MATERIALS AND COVER:**  
CONTRACTOR SHALL USE PIPE/FITTING MATERIALS IN ACCORDANCE WITH CITY OF PUYALLUP REQUIREMENTS AND MANUFACTURER SPECIFICATIONS.

PVC PIPE SHALL BE SDR-35 WITH 3.0' MIN COVER WHERE SUBJECT TO VEHICULAR LOADING SHALL.

ALL DUCTILE IRON PIPE WITH 1.0' MIN COVER SHALL BE CLASS 52.

APPROVED	APPROVED
BY CITY OF PUYALLUP WATER PURVEYOR	BY CITY OF PUYALLUP DEVELOPMENT ENGINEERING
DATE	DATE
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 WATER PURVEYOR.	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.

**UTILITY CONFLICT NOTE:**  
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 AT 811 48 HOURS IN ADVANCE 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 NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.



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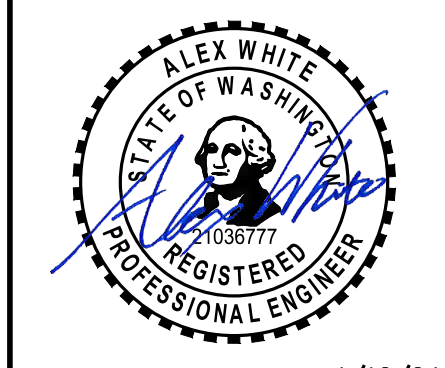
CLIENT:

**bp**

**ARCO**  
BP WEST COAST PRODUCTS, LLC

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

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DEVELOPMENT INFORMATION:

**ARCO NTI**  
3400 am/pm  
FUEL CANOPY w/ 6 MPD's

SITE ADDRESS:

**1402 S. MERIDIAN**  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

**FACILITY #TBD**

DESIGNED BY: JDF ALLIANCE 2800  
CHECKED BY: AW BP REP:  
DRAWN BY: JDF ALLIANCE PM:  
VERSION: PROJECT NO:  
21730

DRAWING TITLE:

**UTILITY PLAN - SOUTH**

SHEET NO:

**C6.1**



# UTILITY NOTES AND DETAILS

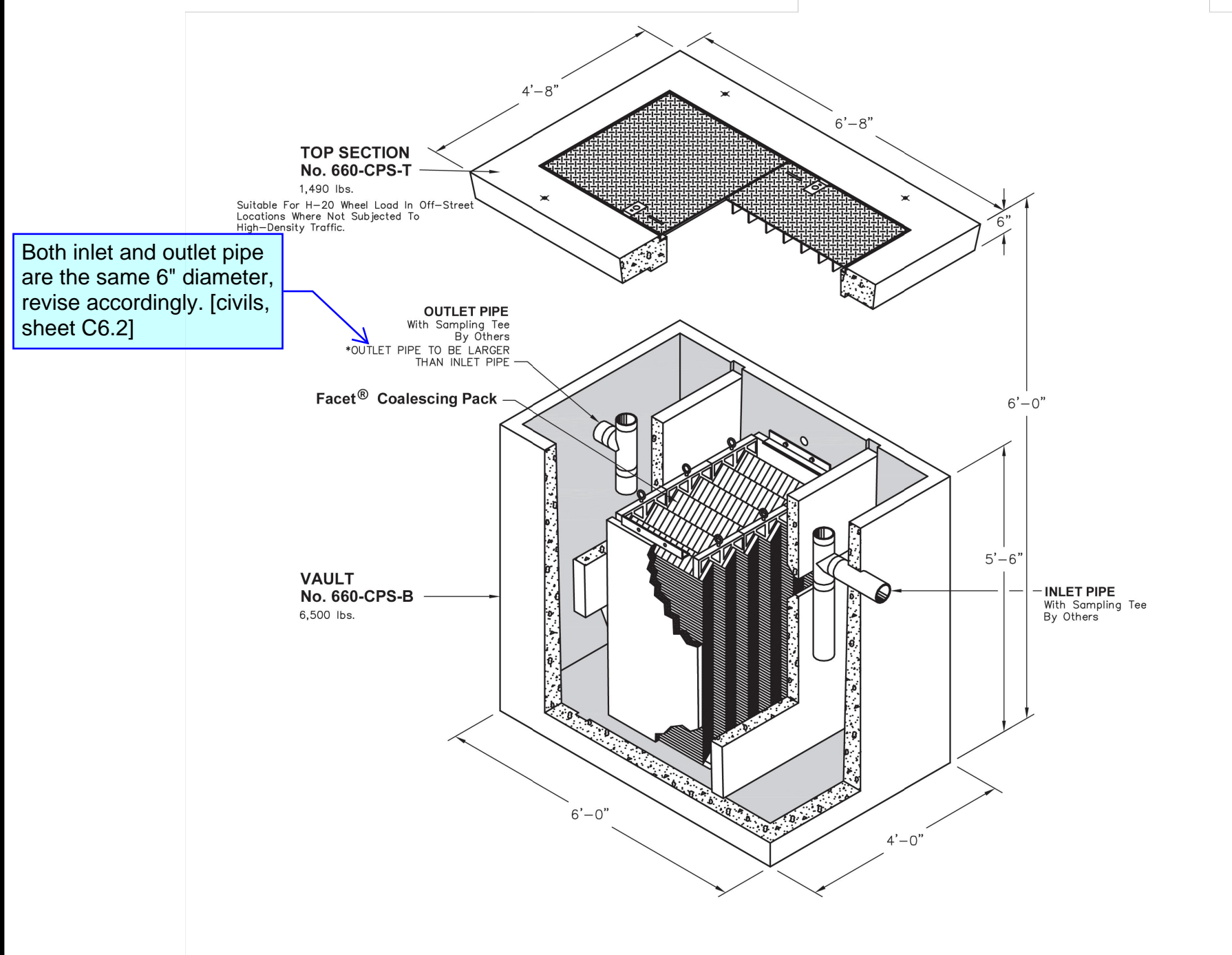
FOR  
**ARCO ampm PUYALLUP**  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



Delivering Reliability

## 660-CPS OIL WATER SEPARATOR

Project Plate Area = 444 Sq/ft  
Maximum Process Flow = 415 GPM



FOR DETAILS, SEE REVERSE>>  
Items Shown Are Subject To Change Without Notice  
Issue Date: April 2016

Mailing Address: PO Box 588, Auburn, WA 98004  
Phone: 800-892-1538, Fax: 253-735-4201, Email: opauburn@oldcastle.com

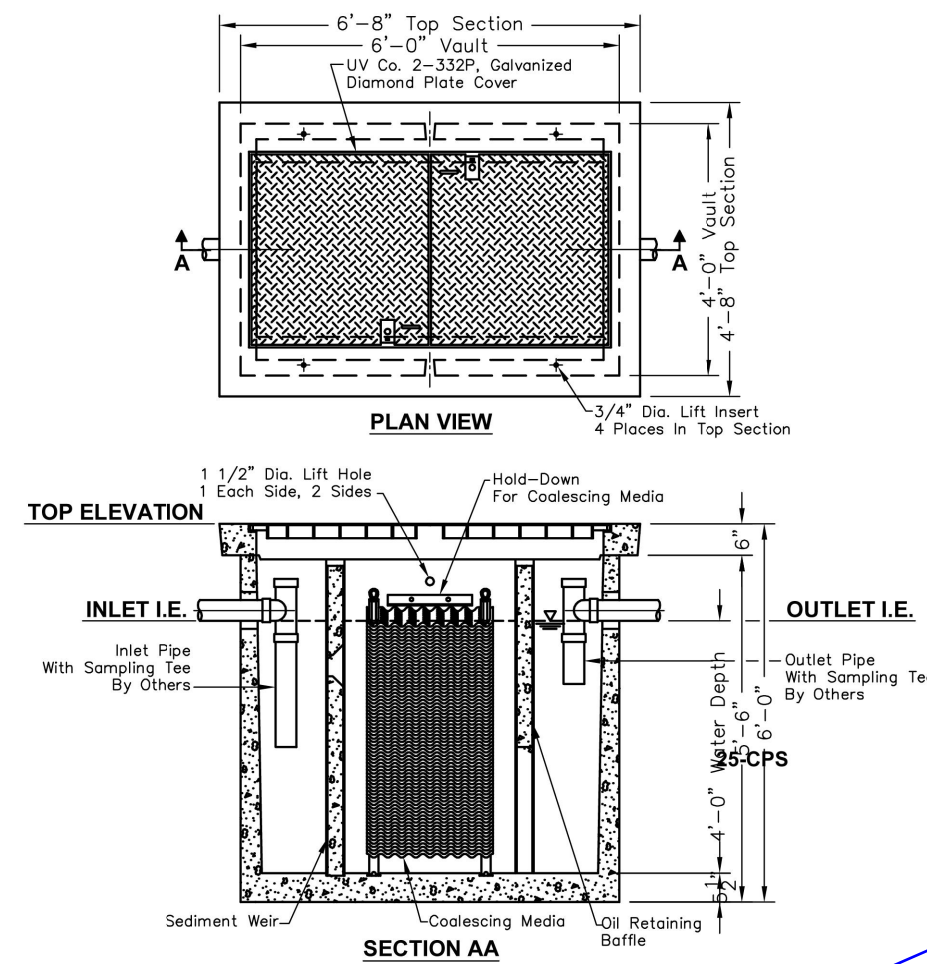
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opauburn.com



Delivering Reliability

## 660-CPS

Project Plate Area = 444 Sq/ft  
Maximum Process Flow = 415 GPM



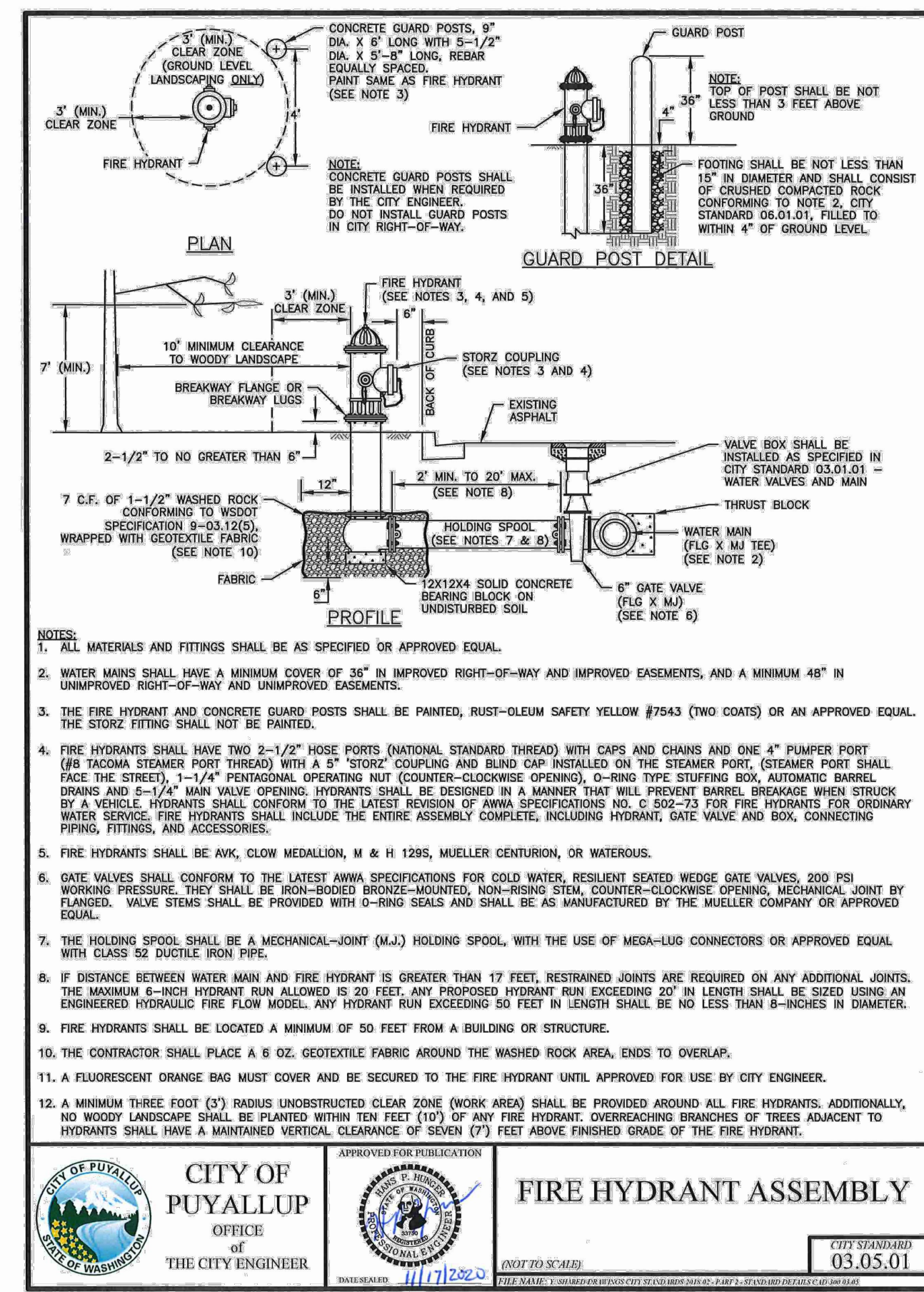
STRUCTURAL NOTES:  
1. Concrete: 28 Day Compressive Strength f'c = 7000 psi  
2. Rebar: ASTM A-615 Grade 60  
3. Mesh: ASTM A-185 Grade 65  
4. Design: ACI 318-05 Building Code  
ASTM C-890 Minimum Structural Design Loading For Underground Precast Concrete Water and Wastewater Structures  
5. Loads: HS-20 Truck Wheel w/ 20K Impact Per AASHTO  
GENERAL NOTES:  
1. All Baffles and Weirs To Be Precast Concrete  
2. Static Water Depth = 4'-0"  
3. Contractor to:  
Supply and Install All Piping & Sampling Tees  
Grout In All Pipes  
Fill With Open Water Prior To "Start-Up" Of System  
Verify All Blockout Sizes and Locations  
INFORMATION NEEDED:  
Top Of Separator Elevation:  
Inlet Pipe Size:  
Inlet Pipe Elevation:  
Outlet Pipe Size:  
Outlet Pipe Elevation:  
BASIC DESIGN INFORMATION:  
INFLUENT CHARACTERISTICS:  
Oil Specific Gravity: 0.88  
Operating Temperature: 50°  
Influent Oil Concentration: 100 ppm  
Mean Oil Droplet Size: 130 Microns  
1.33 lbf/min. Rise Rate  
Designed For Washington State Department of Ecology  
FLOW EFFLUENT COLLECTED  
RATE QUALITY SIZE  
110 GPM 10 ppm 60 Microns

SCALE: 3/8"=1'-0"

141.1

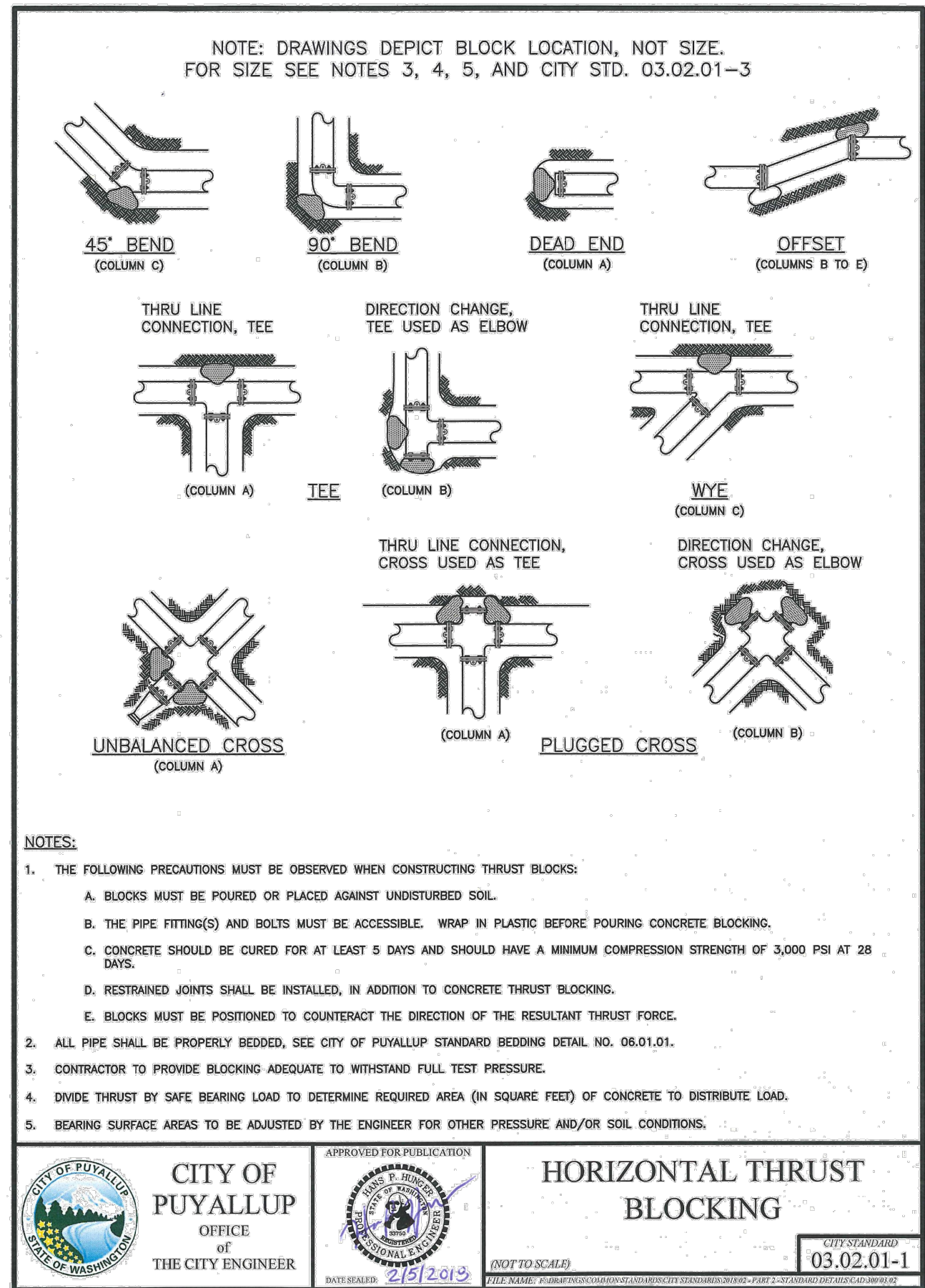
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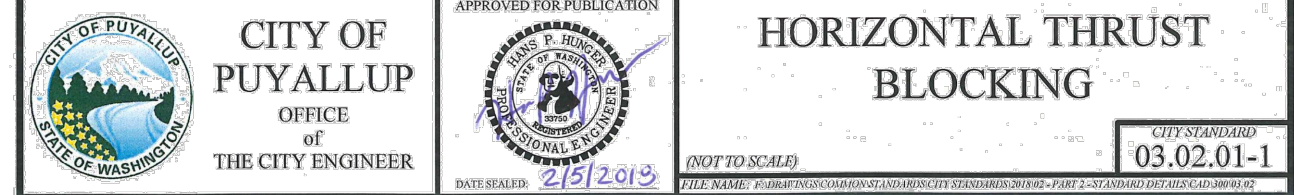
## FIRE HYDRANT ASSEMBLY

SCALE: NTS



### NOTES:

- THE FOLLOWING PRECAUTIONS MUST BE OBSERVED WHEN CONSTRUCTING THURST 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.
- ALL PIPE SHALL BE PROPERLY BEDDED, SEE CITY OF PUYALLUP STANDARD BEDDING DETAIL NO. 06.01.01.
- CONTRACTOR TO PROVIDE BEDDING ADEQUATE TO WITHSTAND FULL TEST PRESSURE.
- DIVIDE THRUST BY SAFE BEARING LOAD TO DETERMINE REQUIRED AREA (IN SQUARE FEET) OF CONCRETE TO DISTRIBUTE LOAD.
- BEARING SURFACE AREAS TO BE ADJUSTED BY THE ENGINEER FOR OTHER PRESSURE AND/OR SOIL CONDITIONS.



## THRUST BLOCKING

SCALE: NTS

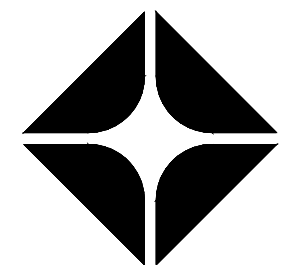
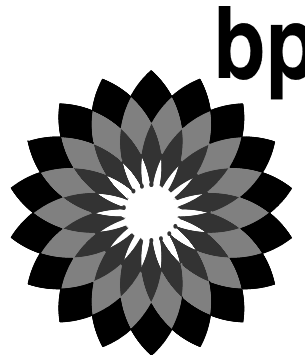
### UTILITY CONFLICT NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT BY POT-HOLING THE UTILITIES AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE AT 811 48 HOURS IN ADVANCE AND THEN POT-HOLING 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 NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

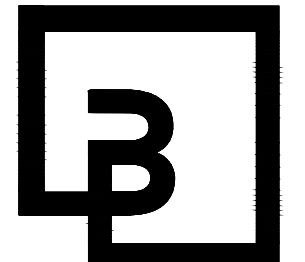


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BP WEST COAST PRODUCTS, LLC



Barghausen Consulting Engineers, Inc.

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Kent, WA 98032  
425.251.6222  
barghausen.com

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1/12/24

### DEVELOPMENT INFORMATION:

ARCO NTI  
3400 am/pm  
FUEL CANOPY w/ 6 MPD's

### SITE ADDRESS:

1402 S. MERIDIAN  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

### FACILITY #TBD

DESIGNED BY: JDF ALLIANCE ZBDW

CHECKED BY: AW BP REP:

DRAWN BY: JDF ALLIANCE PM:

VERSION: PROJECT NO: 21730

DRAWING TITLE: UTILITY NOTES AND DETAILS

SHEET NO:

C6.2

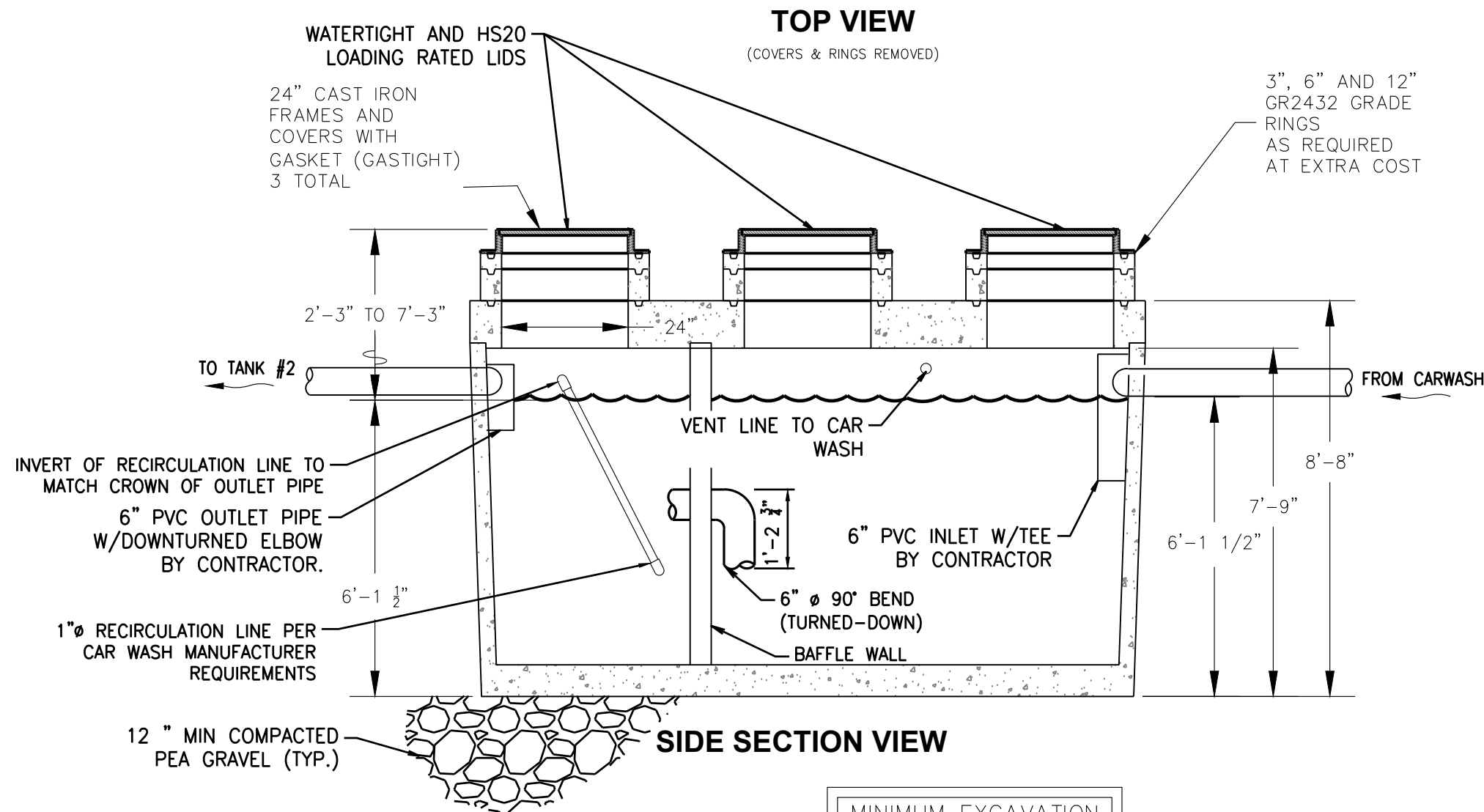
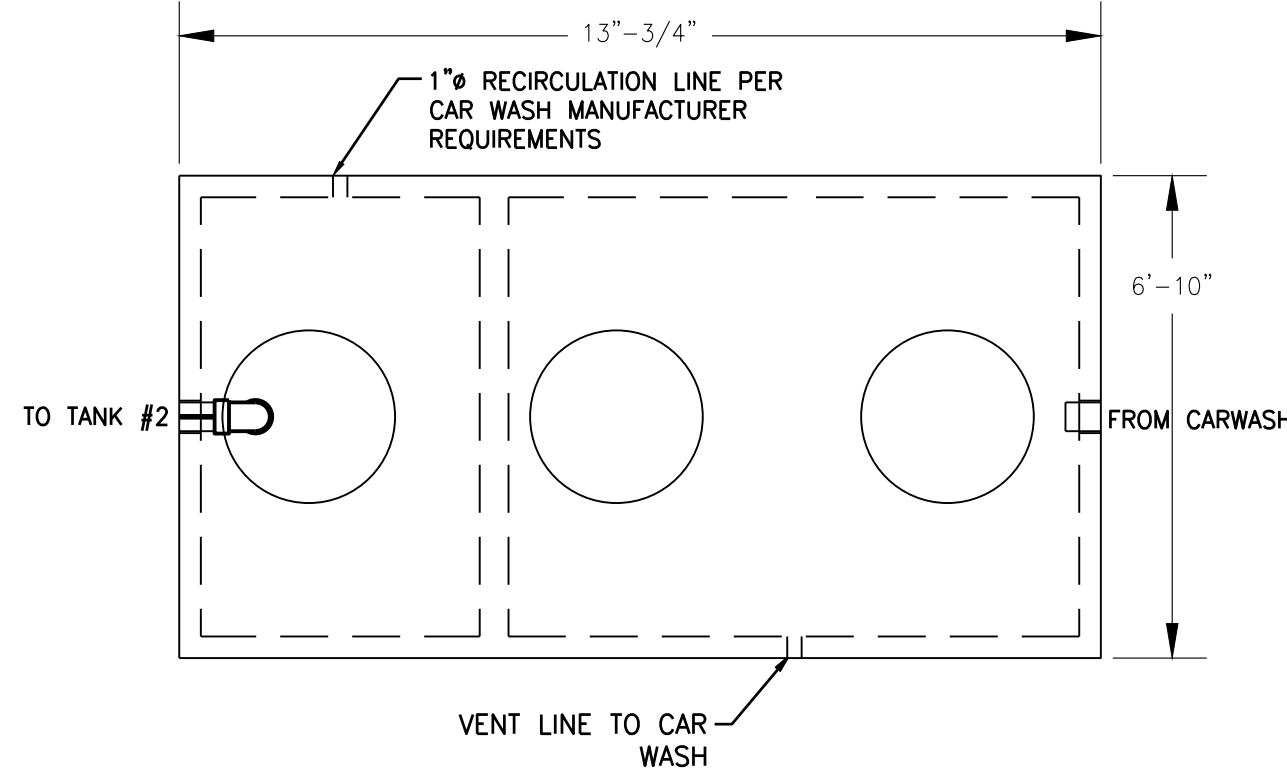


CAR WASH RECLAIM SYSTEM NOTE:

THE CAR WASH PROPOSES IMPLEMENTATION OF A RECLAIM SYSTEM TO FACILITATE RECYCLING EFFORTS OF DISCHARGE RINSE WATER FROM CAR WASH OPERATIONS. DISCHARGE WOULD BE ROUTED THROUGH TWO 1500 GAL RECLAIM TANKS, ROUTING DRAINAGE THROUGH A SYSTEM OF BAFFLE SECTIONS, WHICH ALLOW DRAINAGE TO COLLECT PRIOR BEING CONVEYED TO THE NEXT BAFFLE AREA. THIS PROCESS ALLOWS DISCHARGE TO SEPARATE CONTRIBUTING DEBRIS AND SOLID PARTICLES TO SETTLE TO THE BOTTOM OF THE TANK, AND OILS FLOAT TO THE TOP WHERE THEY ARE TRAPPED WITHIN THE SYSTEM. THE FINAL BAFFLE SECTION CONTAINS TWO-2" SUCTION LINES WHICH PUMP TREATED WATER BACK TO THE RECLAIM SYSTEM FOR REUSE. EXCESS DISCHARGE WILL BE RELEASED FROM THE SYSTEM TO THE PUBLIC SEWER. SETTLED SOLIDS AND FLOATING OILS ARE PERIODICALLY REMOVED (TYPICALLY 3-6 MONTHS) FROM THE SYSTEM VIA MANUAL PUMPING AND MAINTENANCE EFFORTS.

SPECIFICATIONS:

1. CONCRETE: DESIGN STRENGTH OF 5500 PSI AT 28 DAYS.
2. STEEL REINFORCEMENT: ASTM A-615 GRADE 60.
3. LOADING: DESIGNED FOR HS-20 LOADING.
4. C.I. CASTINGS: ASTM A-48 CLASS 30/35.



OPERATING CAPACITY: 1,500 GALLONS.

DESIGN LOAD: H-20 TRAFFIC WITH DRY SOIL CONDITIONS (WATER LEVEL BELOW TANK) AND 1'-6" EARTH COVER.

SUITABLE SUB-BASE BEDDED WITH GRANULAR MATERIAL SHALL BE PREPARED TO HANDLE ANTICIPATED LOADS.

FOR COMPLETE DESIGN AND PRODUCT INFORMATION CONTACT OLDCASTLE PRECAST.

MODIFIED OLDCASTLE PRECAST 1500 GALLON

NOT TO SCALE  
MODEL NO. GT-1500

Revise to  
keynote 1.  
[civils,  
sheet C6.3]

2 RECLAIM TANK #1  
C6.3 SCALE: NTS

UTILITY CONFLICT NOTE:

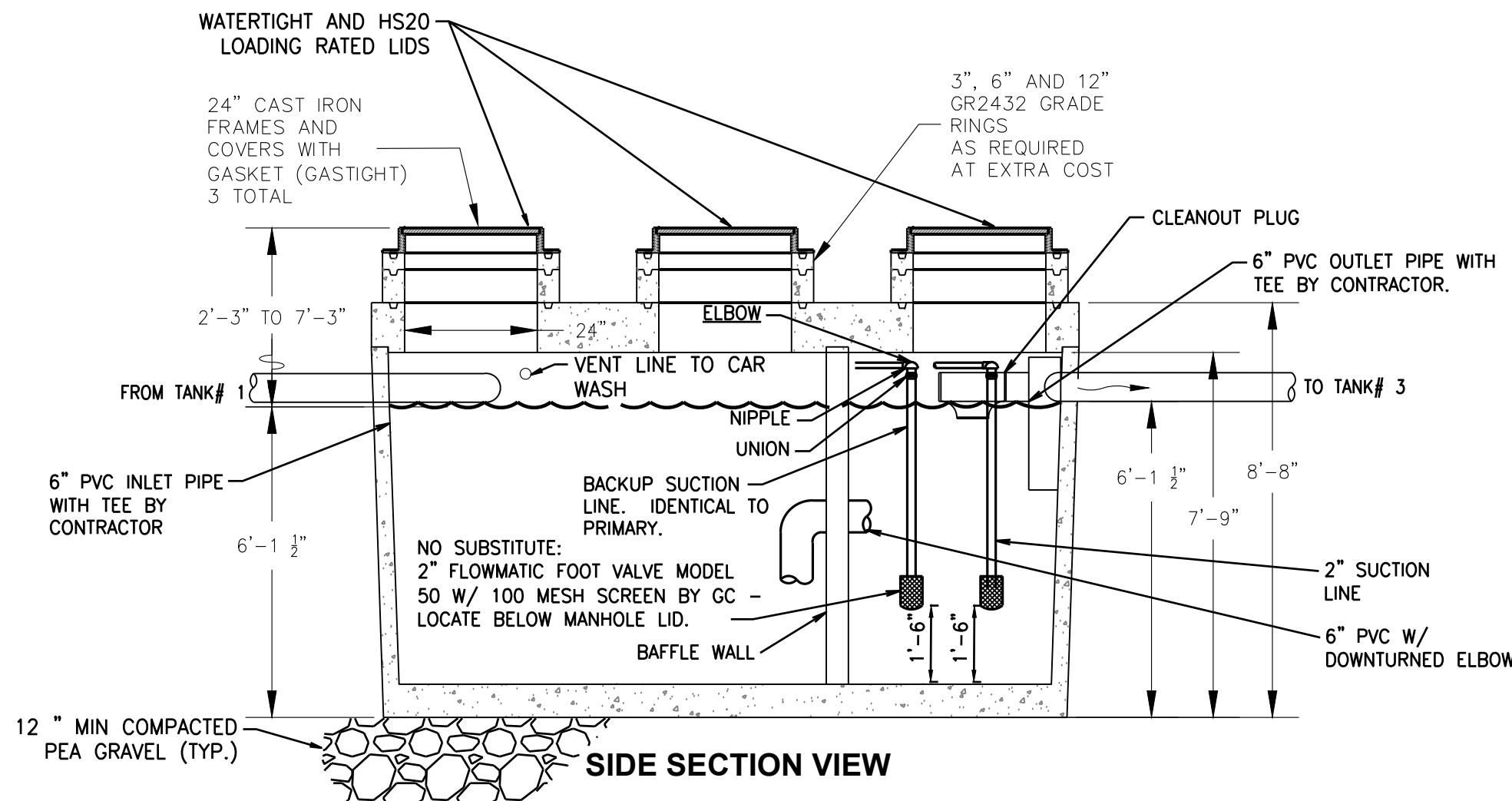
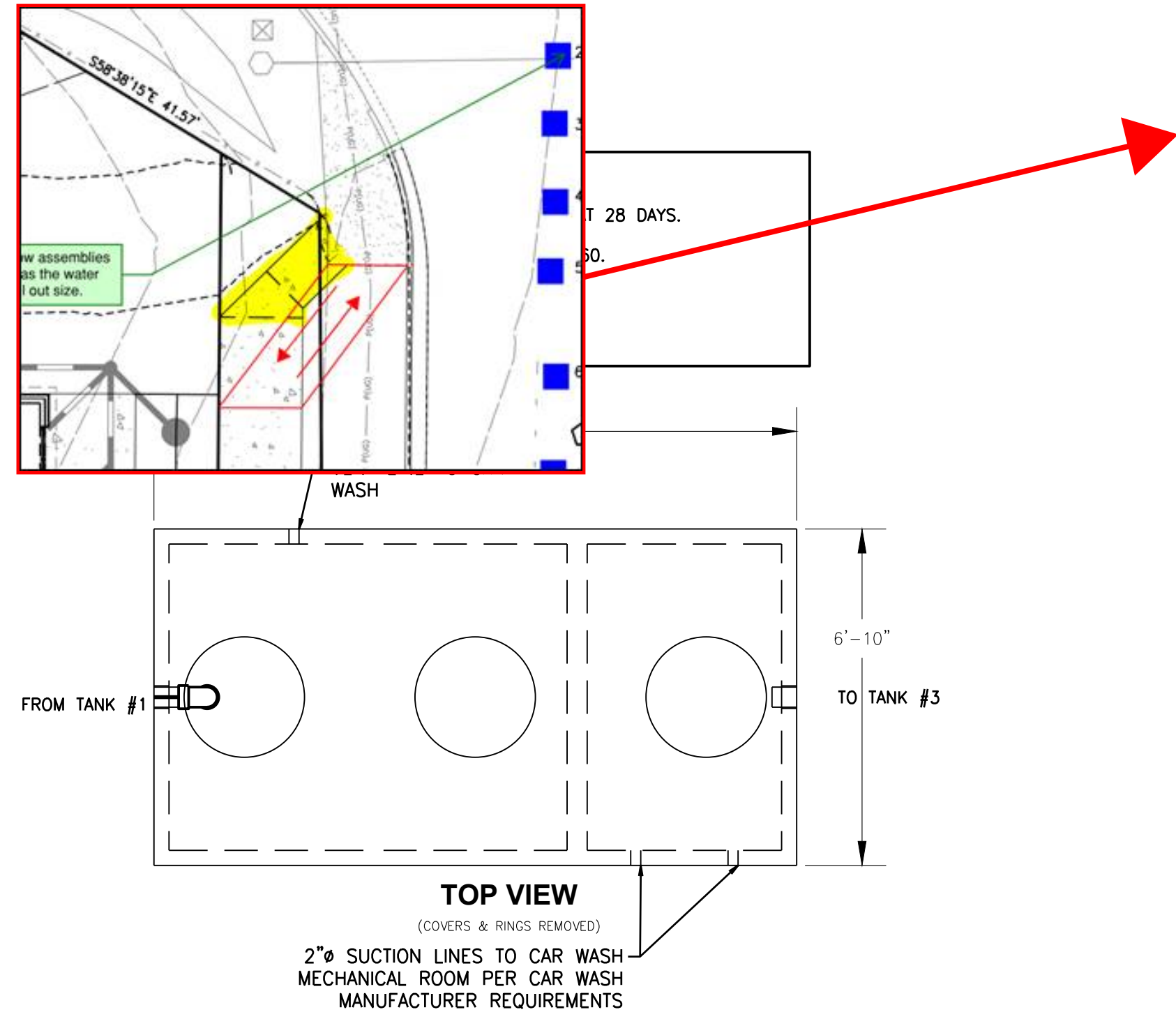
THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT BY POTHOLING THE UTILITIES AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE AT 811 48 HOURS IN ADVANCE AND THEN POTHOLOING 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 NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.



Know what's below.  
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Dial 811

UTILITY DETAILS

FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



OPERATING CAPACITY: 1,500 GALLONS.

DESIGN LOAD: H-20 TRAFFIC WITH DRY SOIL CONDITIONS (WATER LEVEL BELOW TANK) AND 1'-6" EARTH COVER.

SUITABLE SUB-BASE BEDDED WITH GRANULAR MATERIAL SHALL BE PREPARED TO HANDLE ANTICIPATED LOADS.

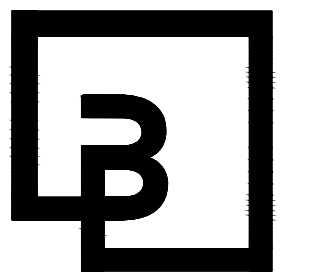
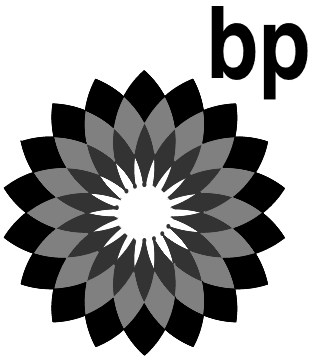
FOR COMPLETE DESIGN AND PRODUCT INFORMATION CONTACT OLDCASTLE PRECAST.

MODIFIED OLDCASTLE PRECAST 1500 GALLON

NOT TO SCALE  
MODEL NO. GT-1500

2 RECLAIM TANK #2  
C6.3 SCALE: NTS

CLIENT:



Barghausen  
Consulting Engineers, Inc.

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

NO.	DATE	REVISION	DESCRIPTION
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SEAL:



1/12/24

DEVELOPMENT INFORMATION:

ARCO NTI  
3400 am/pm  
FUEL CANOPY w/ 6 MPD's

SITE ADDRESS:

1402 S. MERIDIAN  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

FACILITY #TBD

DESIGNED BY: JDF  
CHECKED BY: AW  
DRAWN BY: JDF  
VERSION: 1  
PROJECT NO: 21730

DRAWING TITLE:  
UTILITY DETAILS

SHEET NO:

C6.3

APPROVED	APPROVED
BY CITY OF PUYALLUP WATER PURVEYOR	BY CITY OF PUYALLUP DEVELOPMENT ENGINEERING
DATE	DATE
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 WATER PURVEYOR.	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.



OIL WATER SEPARATOR SIZING CALCULATIONS

THE FOLLOWING ARE CALCUATIONS DEMONSTRATING ADEQUATE SIZE OF THE OIL/WATER SEPARATORS FOR THE CAR WASH, AND THE UNDER-CANOPY FUEL CONTAINMENT AREA.

CAR WASH OIL/WATER SEPARATOR  
GALLONS OF FRESH WATER USED PER CAR = 18 GALLONS  
TOTAL CARS WASHED IN 30 MINUTES = 5  
TOTAL GALLONS OF FRESH WATER USED PER 30 MINUTES = 90 GALLONS

PER TABLE 1014.3.6 OF THE UNIFORM PLUMBING CODE GREASE INTERCEPTOR VOLUME SHALL BE EQUAL TO THE KNOWN FLOW RATE MULTIPLIED BY 30 MINUTES.

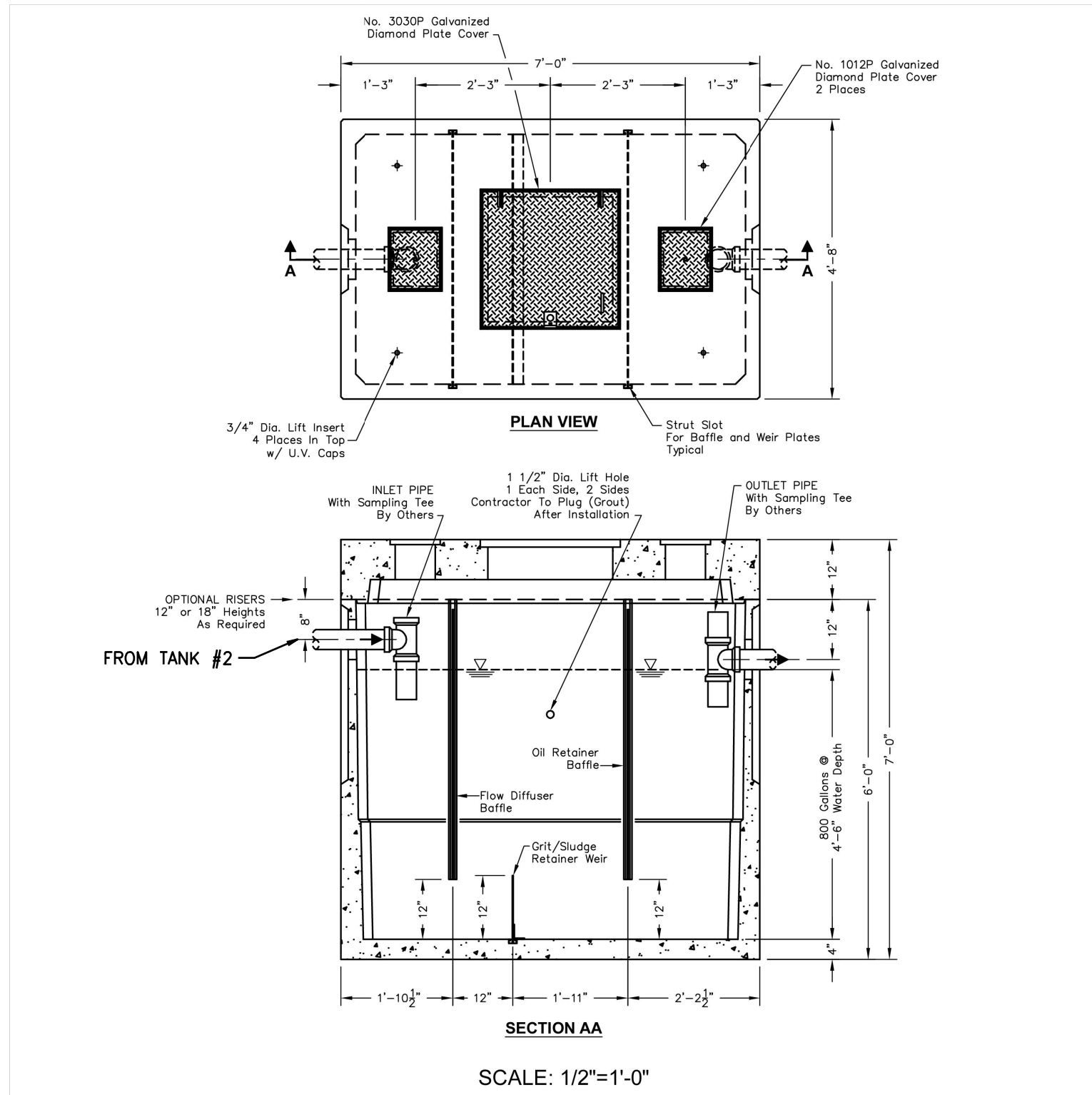
VOLUME PROVIDED BY 660-SA SEPARATOR = 450 GALLONS.

This sentence is discussing grease interceptor sizing rather than oil/water separator sizing. Revise accordingly. [civils, sheet C6.5]



Delivering Reliability

577-SA



135.1

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opauburn.com

OIL/WATER SEPARATOR TANK #3  
MODIFIED OLDCASTLE PRECAST 800 GALLON

MODEL NO. 577-SA-800  
NOT TO SCALE

1 RECLAIM TANK #3  
C6.4 SCALE: NTS

UTILITY CONFLICT NOTE:

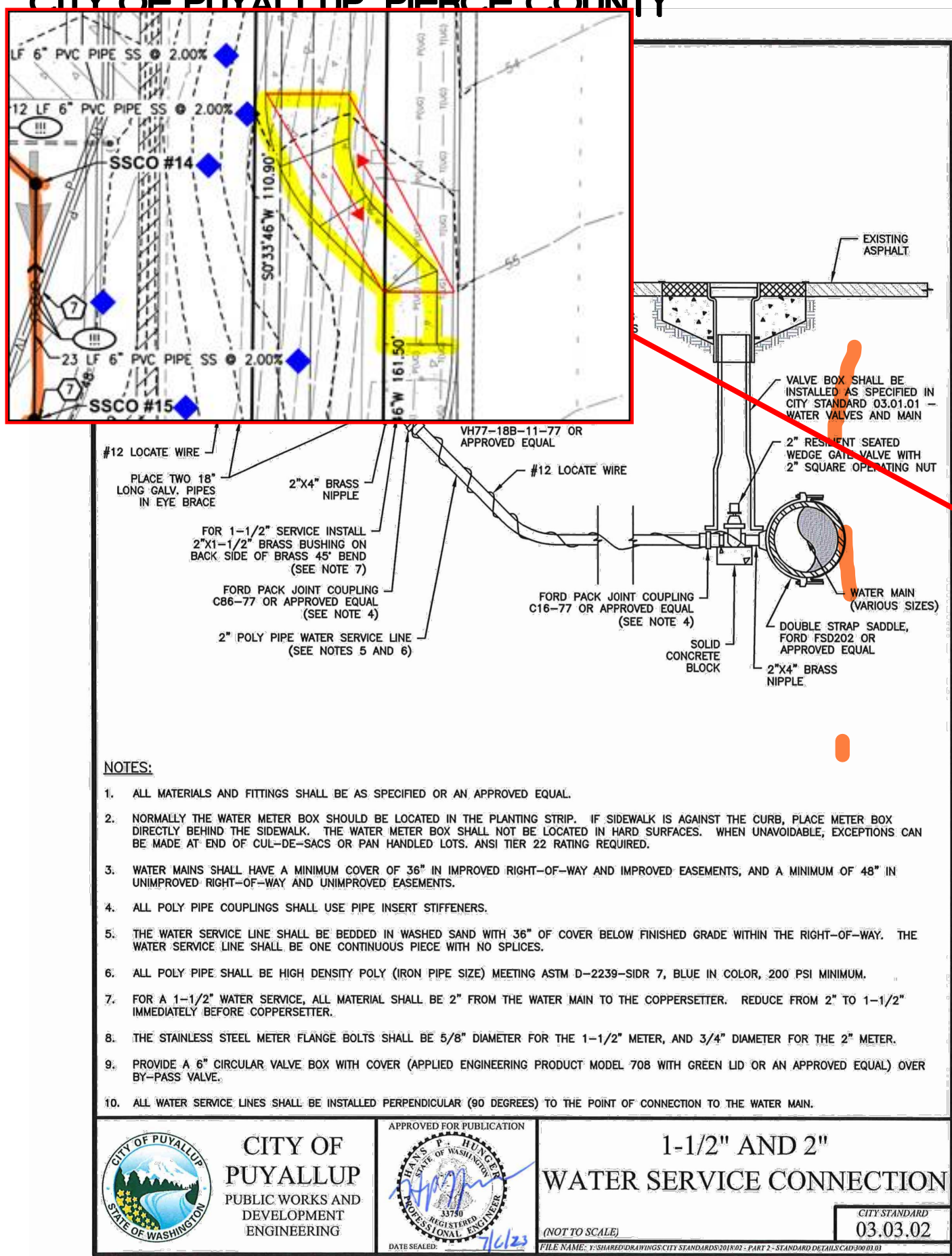
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Know what's below.  
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Dial 811

UTILITY DETAILS

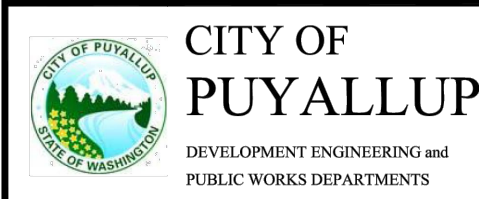
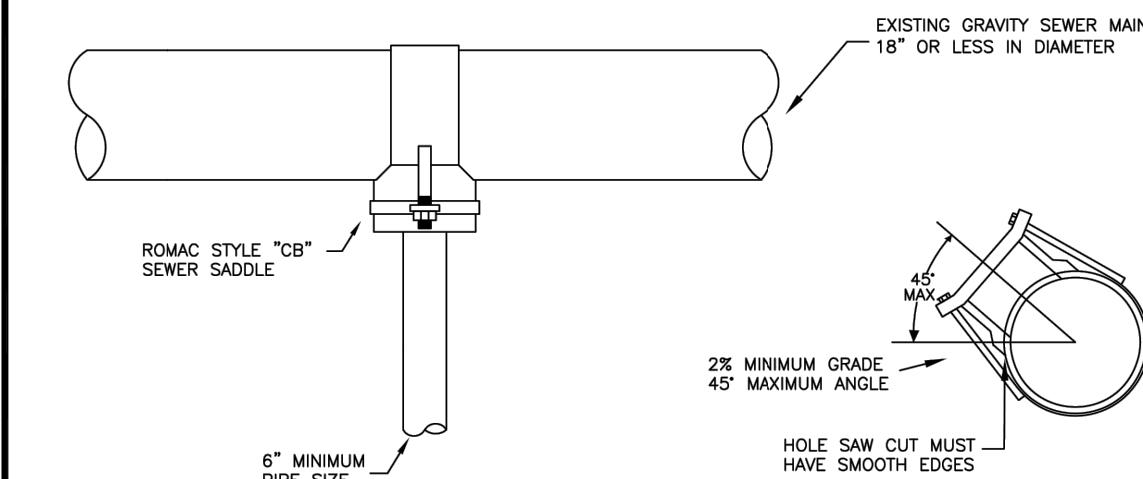
FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



2 CITY OF PUYALLUP 1-1/2" AND 2" WATER SERVICE CONNECTION  
C6.4 SCALE: NTS

NOTES FOR CONNECTING TAPS ON EXISTING SEWER MAINS

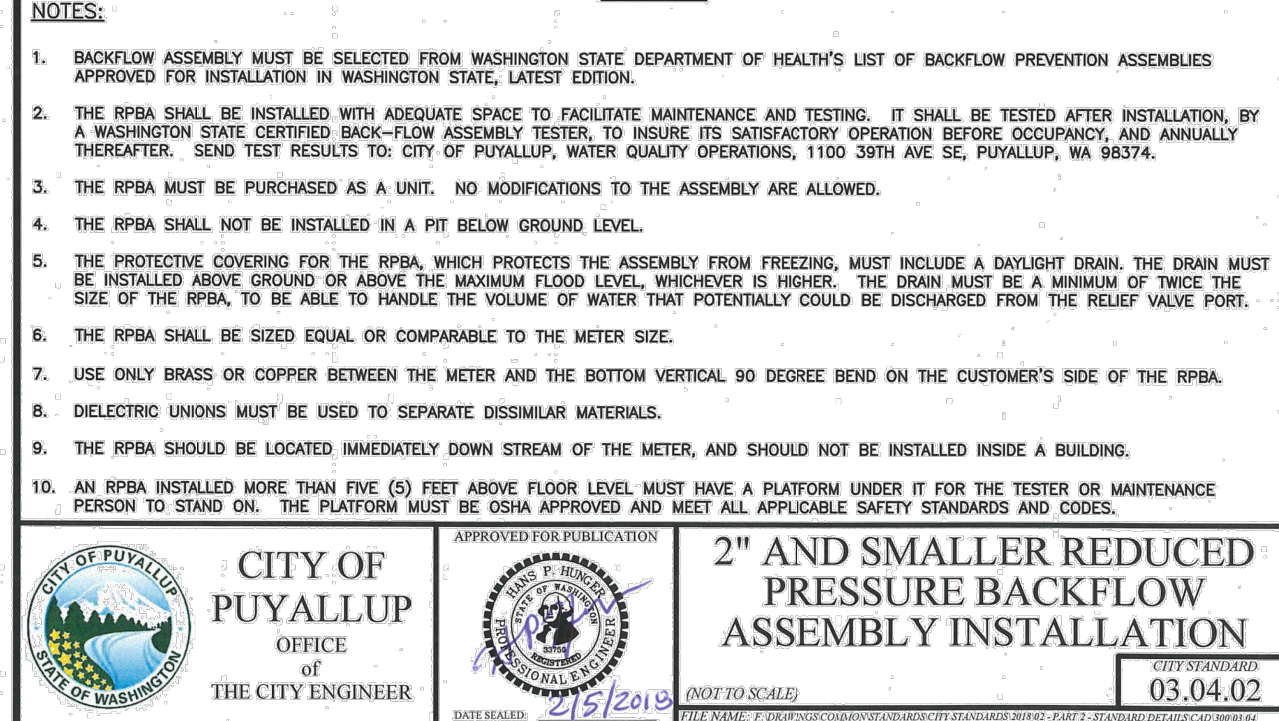
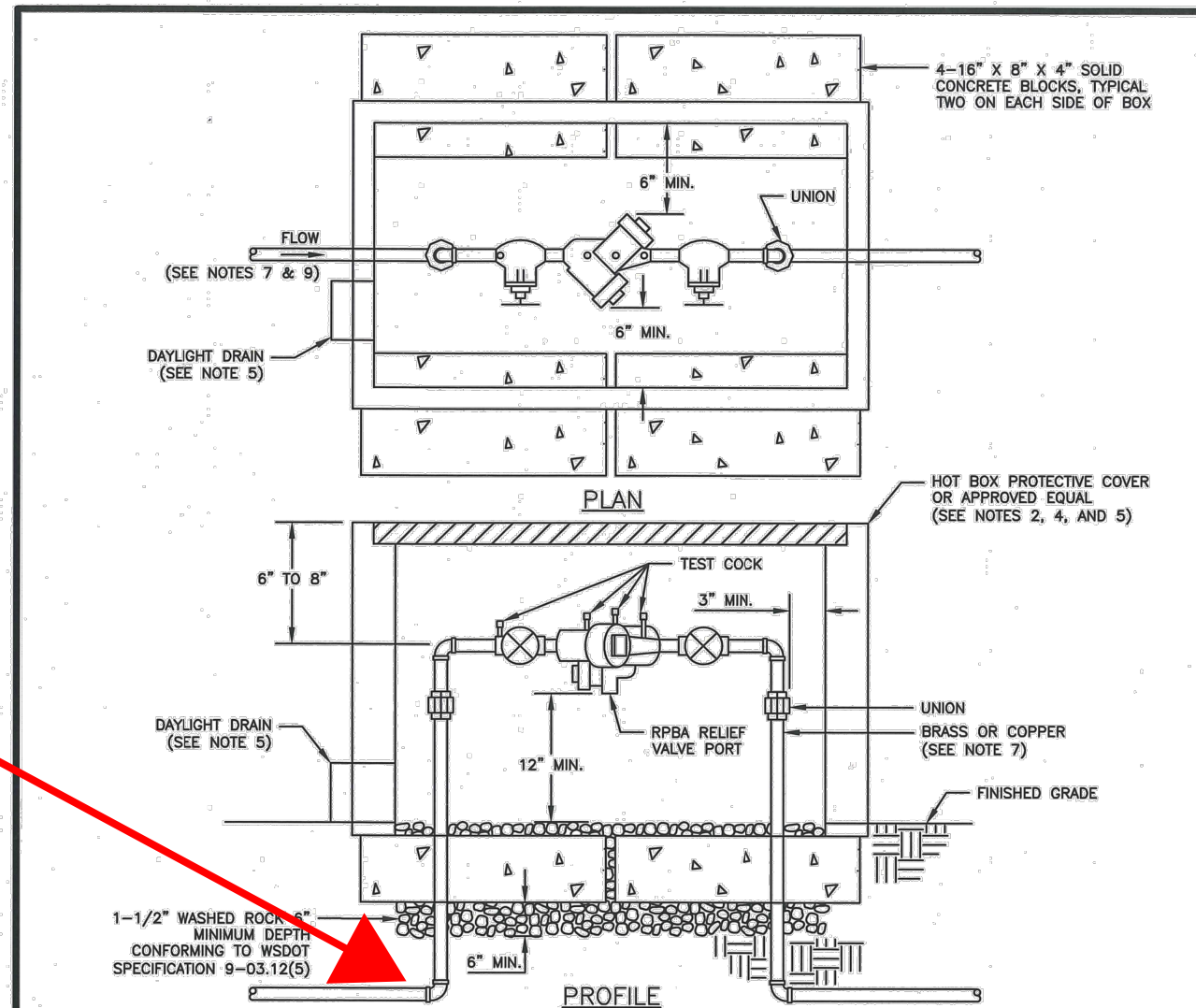
1. THE TEE FITTING SHALL BE A ROMAC INDUSTRIES STYLE "CB" SEWER SADDLE (OR APPROVED EQUAL). ONLY NEW SADDLE AND PARTS SHALL BE INSTALLED. DUE TO PIPE SIZE MATERIALS OR PIPE CONDITION, THE CITY ENGINEER MAY REQUIRE AN ALTERNATE METHOD/MATERIAL BE USED.
2. THE SEWER MAIN TAP SHALL BE CUT WITH A SEWER PIPE TAPPING MACHINE (HOLE SAW) CAPABLE OF RETAINING THE COUPON.
3. THE ROUND HOLE CUT INTO THE SEWER MAIN SHALL BE NO LARGER THAN THE INSIDE DIAMETER OF THE SADDLE GASKET. THE HOLE SAW CUT EDGES SHALL BE SMOOTH.
4. THE COUPON SHALL BE RETAINED AND SURRENDERED TO THE INSPECTOR. THE PERMIT HOLDER WILL PAY ALL COSTS ASSOCIATED WITH THE LOCATION AND RETRIEVAL OF A LOST COUPON. ADDITIONALLY THE PERMIT HOLDER WILL BE HELD LIABLE FOR ANY SUBSEQUENT DAMAGES CAUSED BY A LOST COUPON.
5. BOLTS SHALL BE TORQUED TO MANUFACTURE SPECIFICATIONS, THEN RETORQUED AFTER 10 MINUTES.
6. NO TAPS SHALL BE ALLOWED ON EXISTING SEWER MAINS OVER 18" IN DIAMETER. CONNECTIONS INTO SEWER MAINS OVER 18" IN DIAMETER SHALL INTERSECT THE SEWER MAIN IN A MANHOLE. IN SOME CASES THE CITY ENGINEER MAY ALLOW A VARIANCE TO THIS REQUIREMENT.
7. ALL TRENCHING, BEDDING, AND BACKFILL SHALL BE IN ACCORDANCE WITH CITY STANDARD DETAIL NO. 06.01.01, ALL ASPHALT REPAIR SHALL BE IN ACCORDANCE WITH CITY STANDARD NO. 01.01.20. ALL ADDITIONAL UTILITY AND RIGHT OF WAY REPAIRS SHALL BE IN ACCORDANCE WITH THE "CITY STANDARDS" MANUAL.
8. THE CITY OF PUYALLUP WILL CONDUCT A "SEWER MAIN VIDEO INSPECTION" OF THE SEWER TAP. THE PERMIT HOLDER WILL BE REQUIRED TO REPAIR ANY SEWER TAP CONSTRUCTION DEFECTS FOUND BY THE CITY INSPECTORS. THE COST OF ALL REPAIRS AND SUBSEQUENT "SEWER MAIN VIDEO INSPECTIONS" WILL BE THE RESPONSIBILITY OF THE PERMIT HOLDER. THE DAMAGE DEPOSIT POSTED BY THE BUILDER WILL BE HELD UNTIL PROBLEMS ARE CORRECTED. DUE TO PUBLIC HEALTH AND SAFETY, BUILDING OCCUPANCY WILL NOT BE ALLOWED UNTIL REPAIRS ARE COMPLETED AND ACCEPTED BY THE CITY ENGINEER.



SEWER MAIN TAP

DESIGNED BY JON BRONKHORST CITY ENGINEER	CHECKED BY LINDA LUNA CITY ENGINEER	APPROVED BY CITY ENGINEER	REVIEWED BY CITY ENGINEER	CITY STANDARD 04.02.01
FILE NAME C:\PROJECTS\CONSTRUCTION\21730\0000_0000\04.02.01	DATE APPROVED 03/03/2024	DATE REVIEWED 03/03/2024	SCALE 1/2"	

4 CITY OF PUYALLUP SEWER MAIN TAP  
C6.4 SCALE: NTS

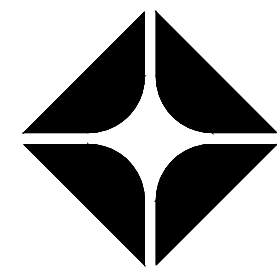
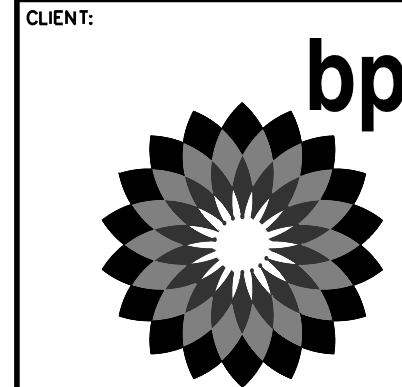


3 CITY OF PUYALLUP 2" AND SMALLER RPBA  
C6.4 SCALE: NTS

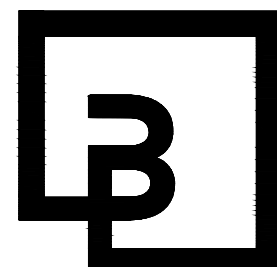
Include city standard detail 03.01.03-1 Water main crossing other utilities. [civils, sheet C6.4]

Include city standard detail 06.01.01 Pipe trenching bedding and backfill. [civils, sheet C6.4]

APPROVED	APPROVED
BY CITY OF PUYALLUP WATER PURVEYOR	BY CITY OF PUYALLUP DEVELOPMENT ENGINEERING
DATE	DATE
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 WATER PURVEYOR.	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.



BP WEST COAST PRODUCTS, LLC



Barghausen  
Consulting Engineers, Inc.

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

NO.	DATE	REVISION	DESCRIPTION
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SEAL:



1/12/24

DEVELOPMENT INFORMATION:

ARCO NTI  
3400 am/pm  
FUEL CANOPY w/ 6 MPD's

SITE ADDRESS:

1402 S. MERIDIAN  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

FACILITY #TBD

DESIGNED BY: JDF	ALLIANCE Z&M:
CHECKED BY: AW	BP REP:
DRAWN BY: JDF	ALLIANCE PM:
VERSION:	PROJECT NO:
	21730

DRAWING TITLE:

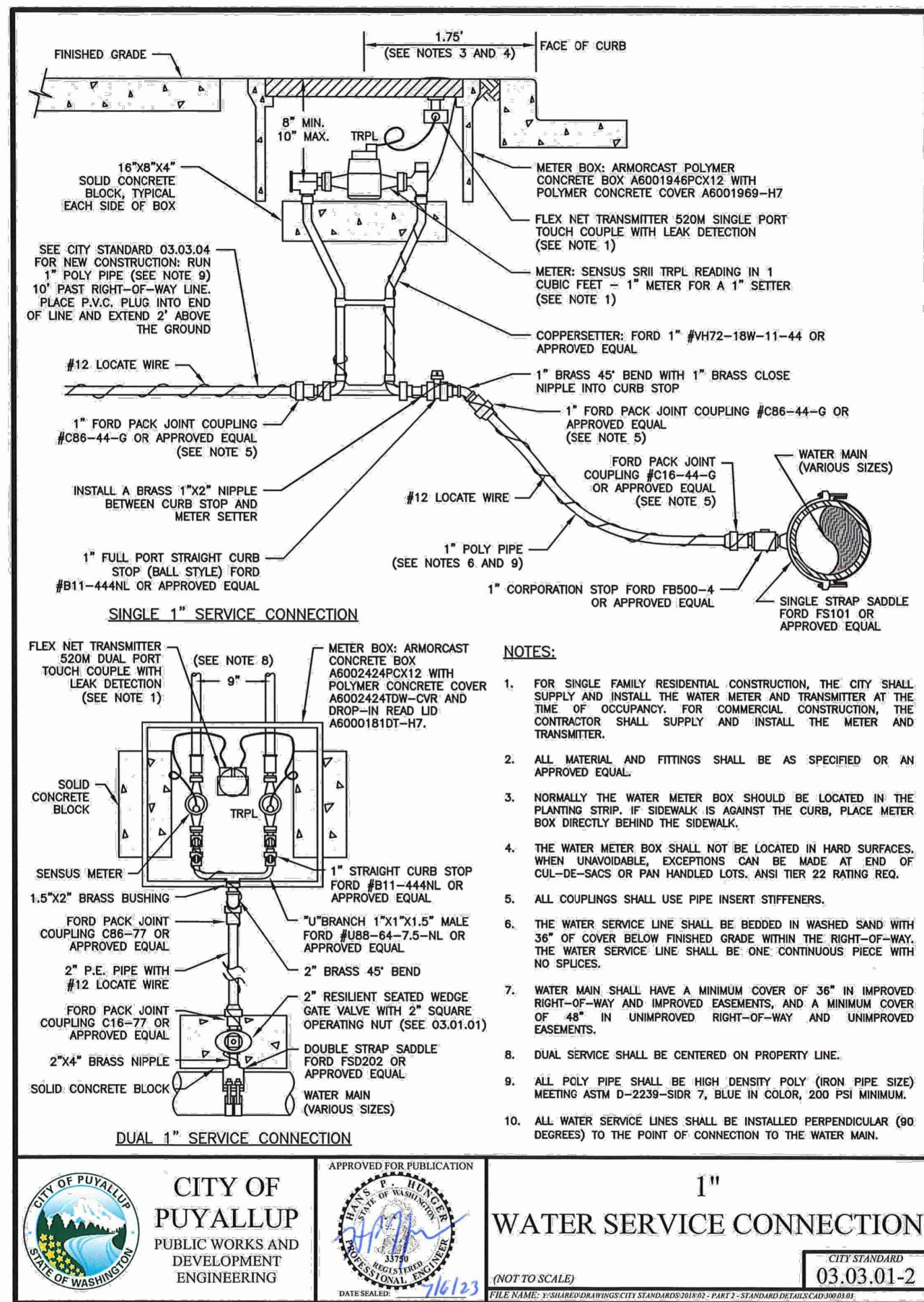
UTILITY DETAILS

SHEET NO:

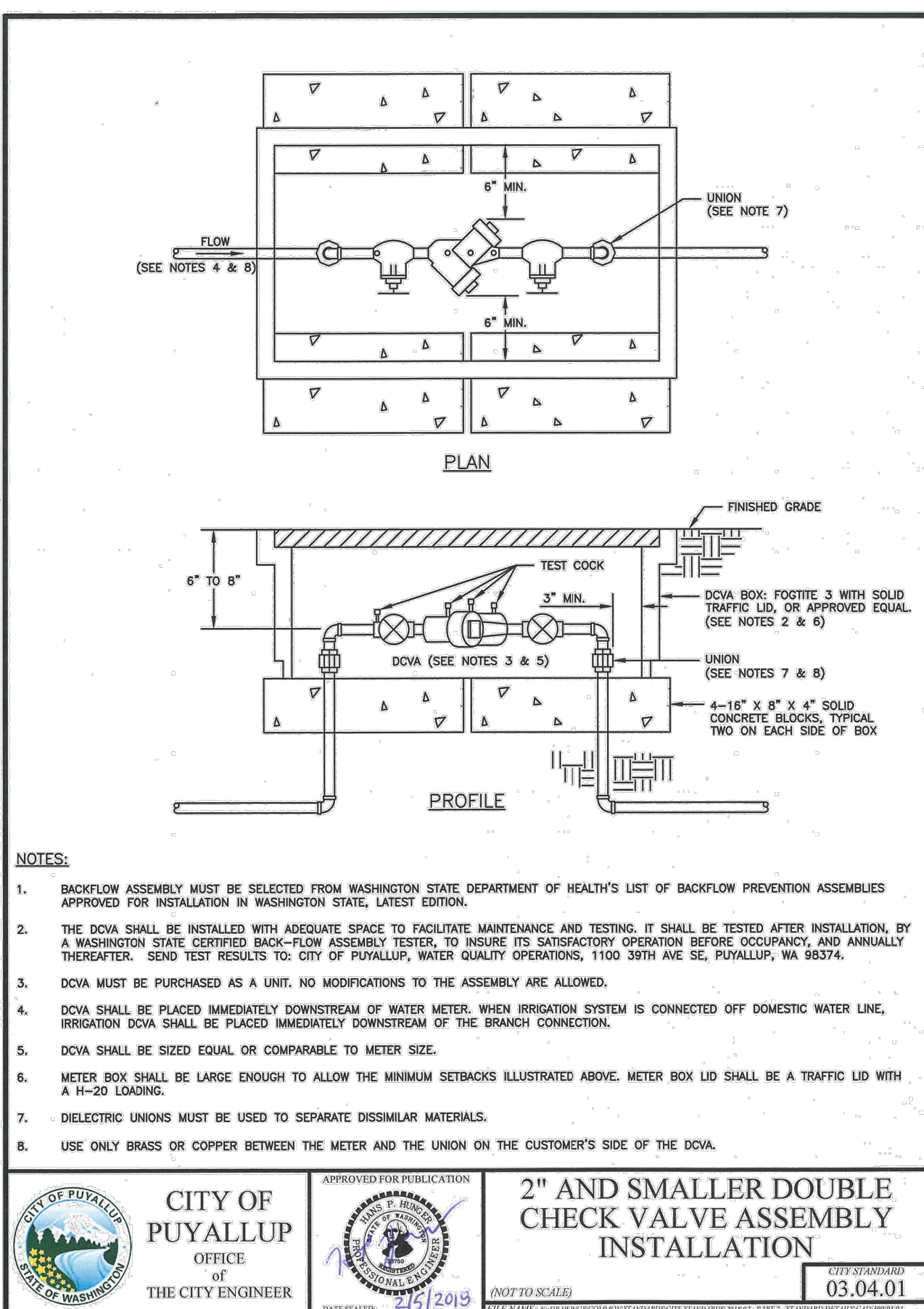
C6.4



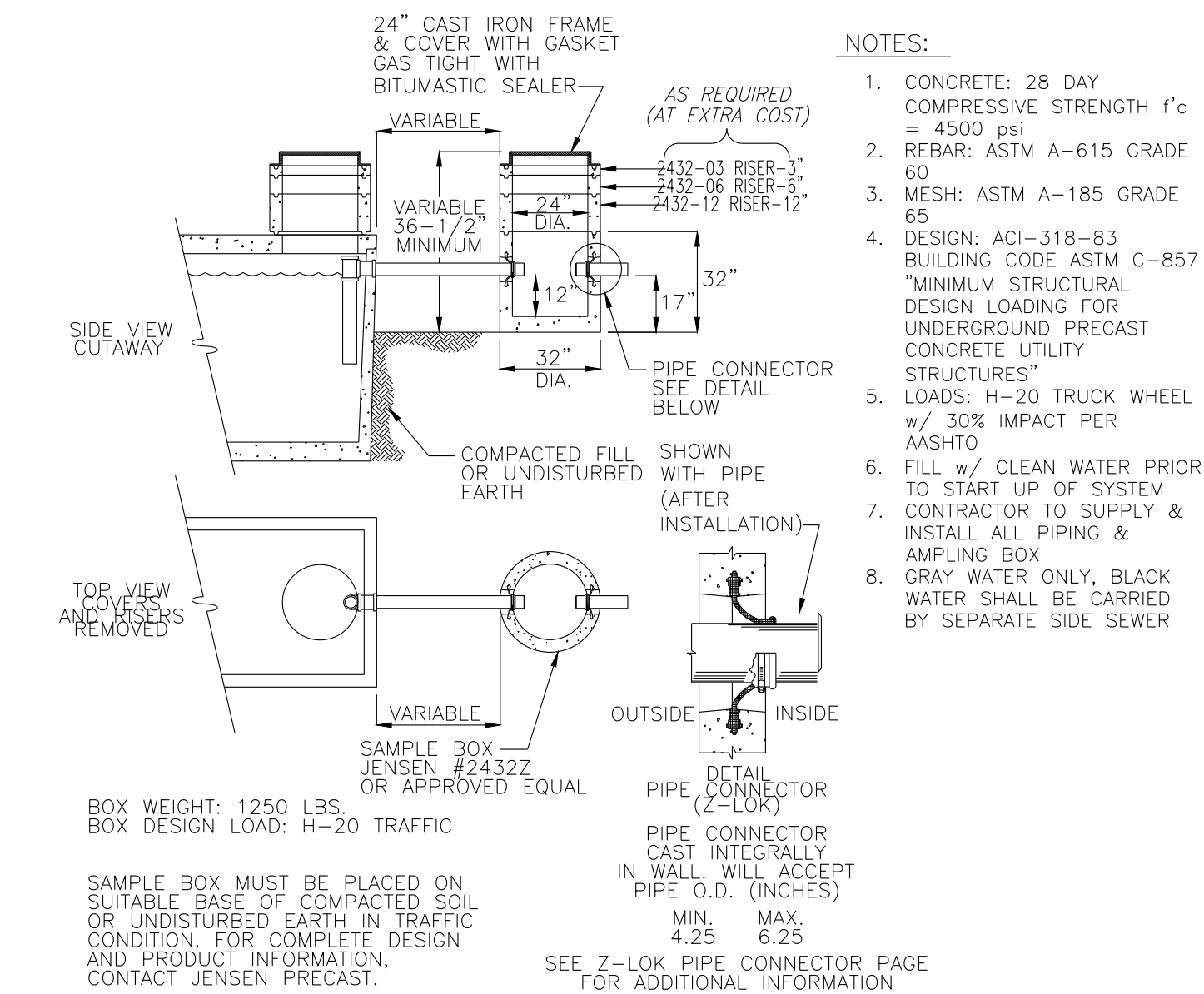
UTILITY DETAILS  
FOR  
**ARCO ampm PUYALLUP**  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



1 CITY OF PUYALLUP 1" WATER SERVICE CONNECTION  
C6.5 SCALE: NTS



2 CITY OF PUYALLUP 2" AND SMALLER DCVA  
C6.5 SCALE: NTS

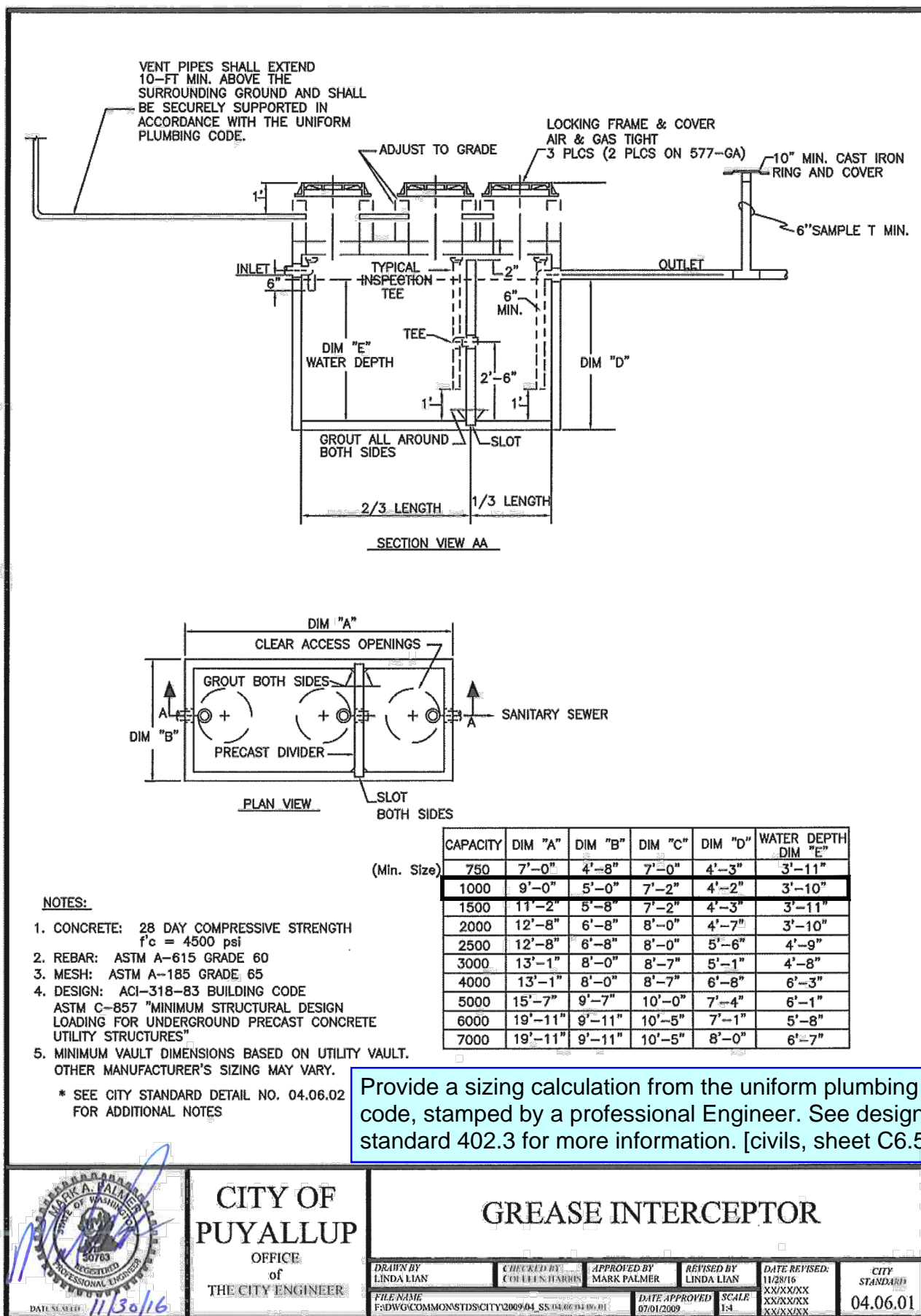


4 GREASE INTERCEPTOR SAMPLING BOX  
C6.5 SCALE: NTS

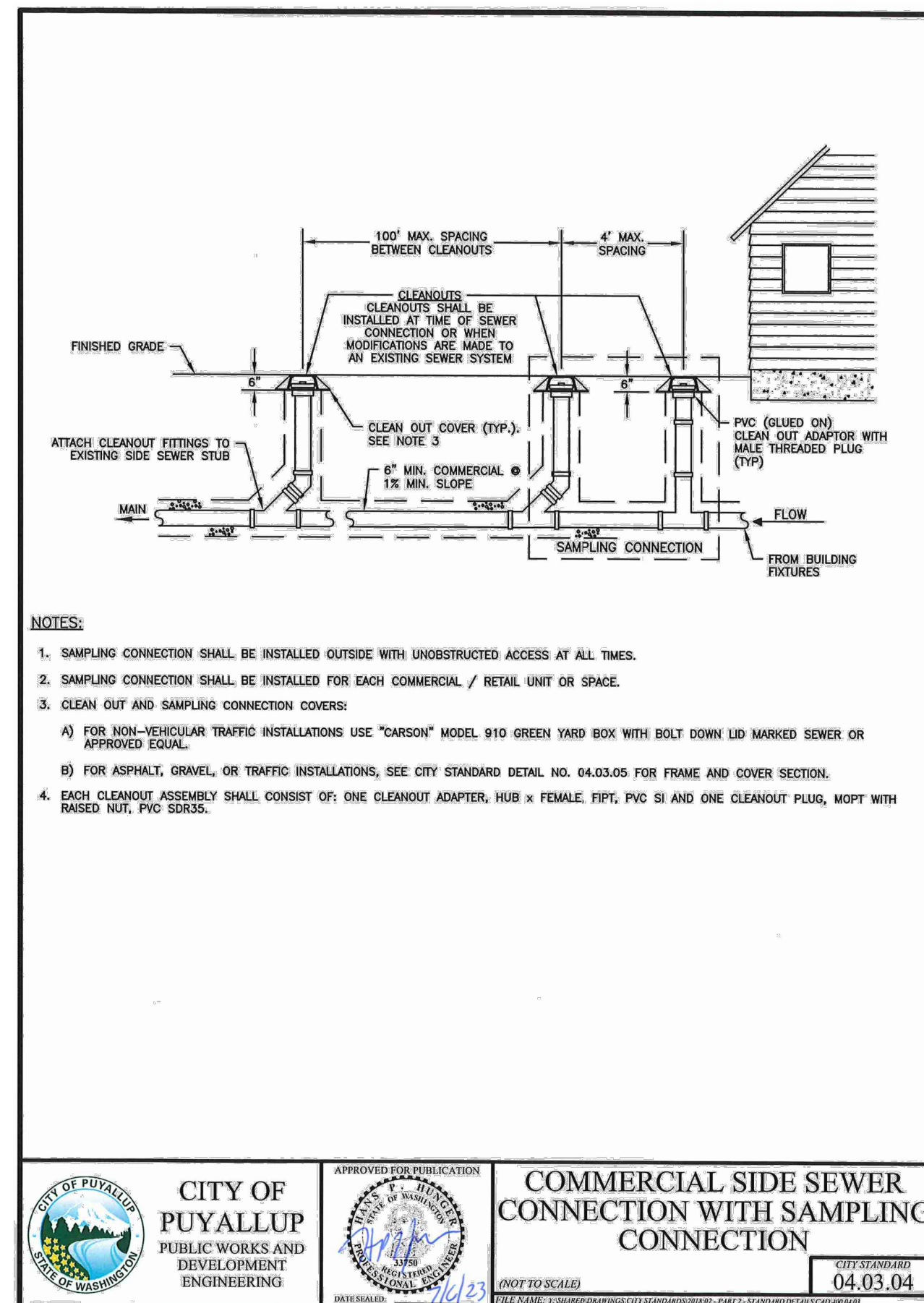
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3 GREASE INTERCEPTOR  
C6.5 SCALE: NTS



5 SAMPLING TEE CONNECTION  
C6.5 SCALE: NTS

NOTES FOR GREASE INTERCEPTORS:

- 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.
- VENTING OF THE INTERCEPTOR SHALL BE IN ACCORDANCE WITH THE UNIFORM PLUMBING CODE CURRENTLY ADOPTED BY THE CITY OF PUYALLUP.
- EFFLUENT FROM GREASE INTERCEPTORS SHALL NOT EXCEED 100 mg/L FAT, OIL, AND/OR GREASE DISCHARGED TO THE DOWNSTREAM SANITARY SEWER SYSTEM.
- GREASE INTERCEPTORS INSTALLED IN PAVED AREAS SHALL COMPLY WITH H-20 LOADING CRITERIA.
- THE GREASE INTERCEPTOR SHALL BE INSTALLED AND CONNECTED 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.
- 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.
- 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.
- 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
- ALL GREASE INTERCEPTORS SHALL BE FILLED WITH CLEAN WATER BEFORE USE.
- 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.
- FINAL INSPECTION IS REQUIRED BY ENGINEERING SERVICES STAFF PRIOR TO CONNECTING TO THE SANITARY SEWER.
- 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.
- 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		GREASE INTERCEPTOR (NOTES)	
DESIGNED BY	CHECKED BY	DESIGNED BY	CHECKED BY
JDF	AW	JDF	AW
DATE	DATE	DATE	DATE
04.06.01	04.06.01	04.06.01	04.06.01

APPROVED		APPROVED	
BY	DATE	BY	DATE
CITY OF PUYALLUP WATER PURVEYOR		CITY OF PUYALLUP DEVELOPMENT ENGINEERING	
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 WATER PURVEYOR.		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.	

CLIENT:

**bp**

**ARCO**

BP WEST COAST PRODUCTS, LLC

**Barghausen Consulting Engineers, Inc.**

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

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SEAL:

**ALEX WHITE**  
STATE OF WASHINGTON  
PROFESSIONAL ENGINEER  
24038771

1/12/24

DEVELOPMENT INFORMATION:

**ARCO NTI**

**3400 am/pm FUEL CANOPY w/ 6 MPD's**

SITE ADDRESS:

**1402 S. MERIDIAN**  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

FACILITY #TBD

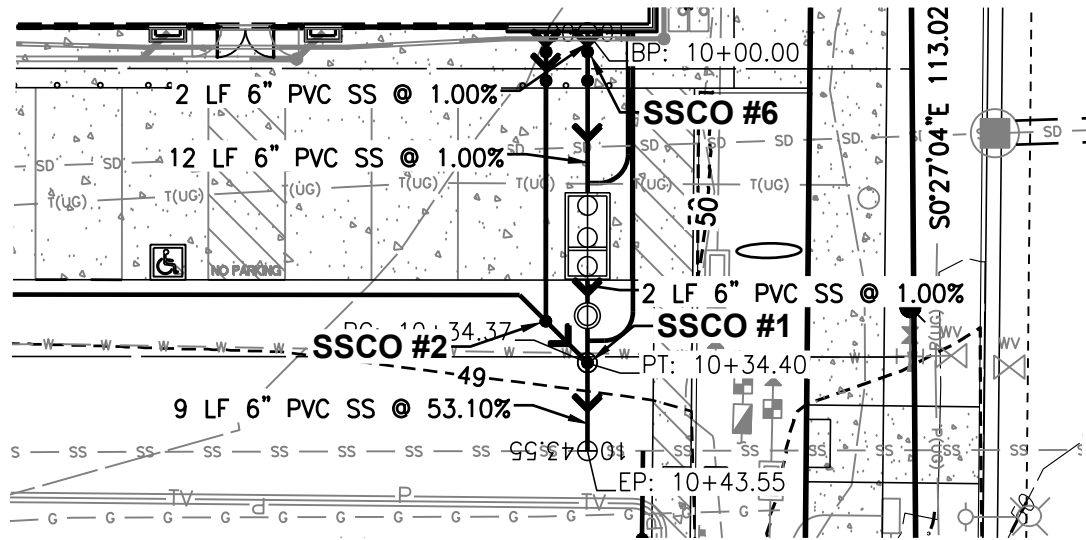
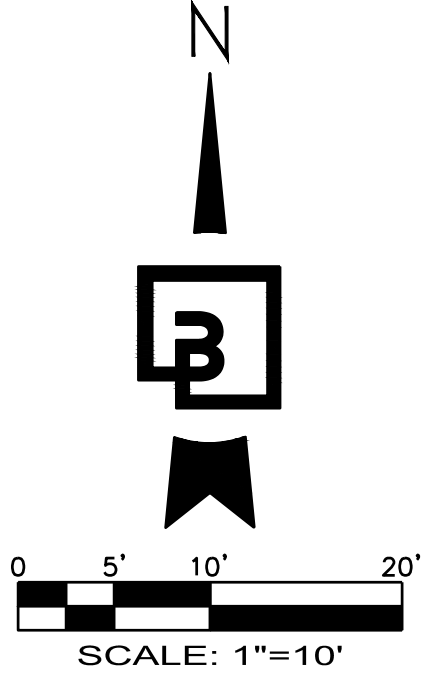
DESIGNED BY: JDF ALLIANCE ZBDK  
CHECKED BY: AW BP REP:  
DRAWN BY: JDF ALLIANCE PM:  
VERSION: PROJECT NO: 21730  
DRAWING TITLE: UTILITY DETAILS  
SHEET NO:

**C6.5**



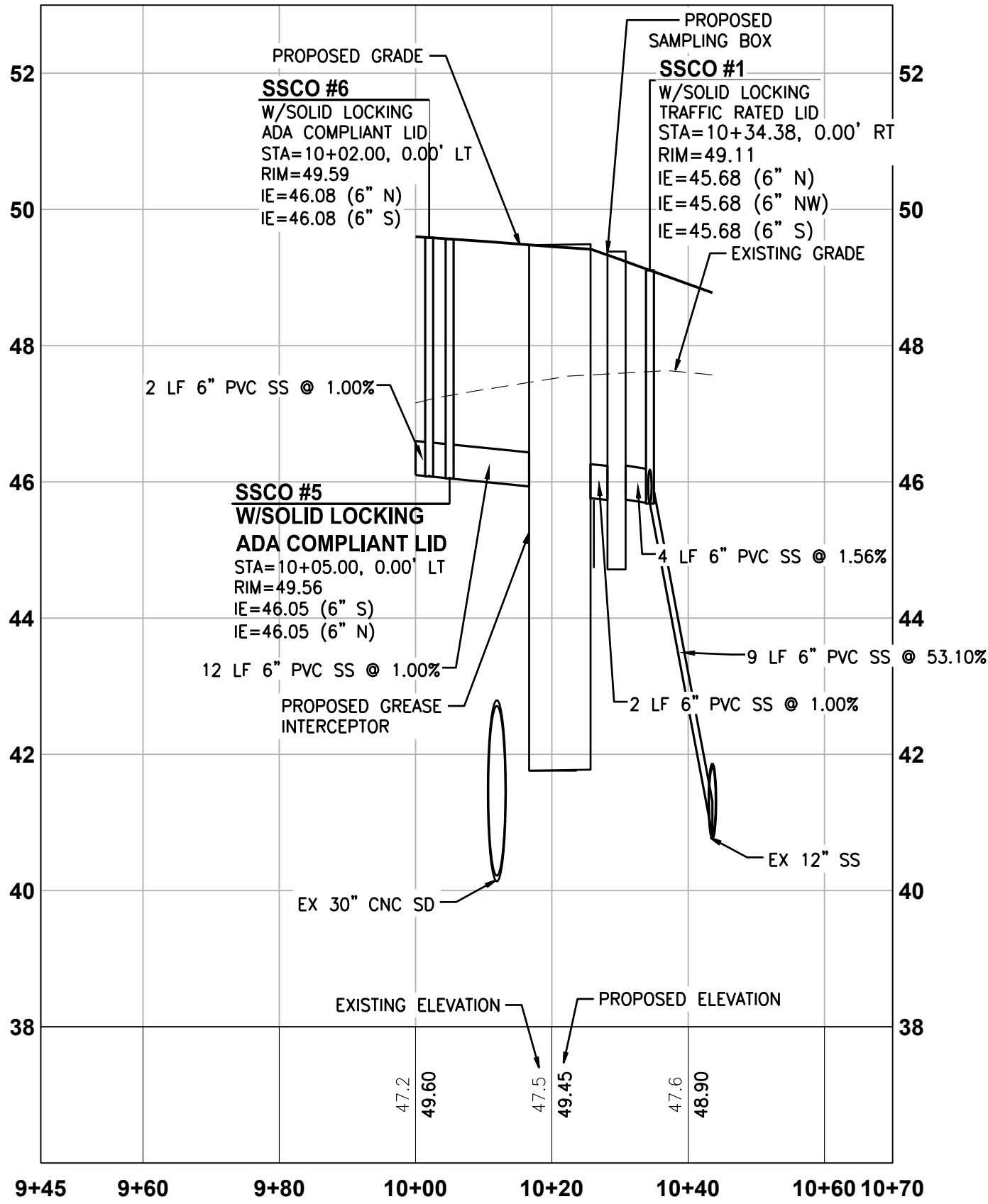
SEWER PROFILE - BUILDING + TRASH ENCLOSURE

FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



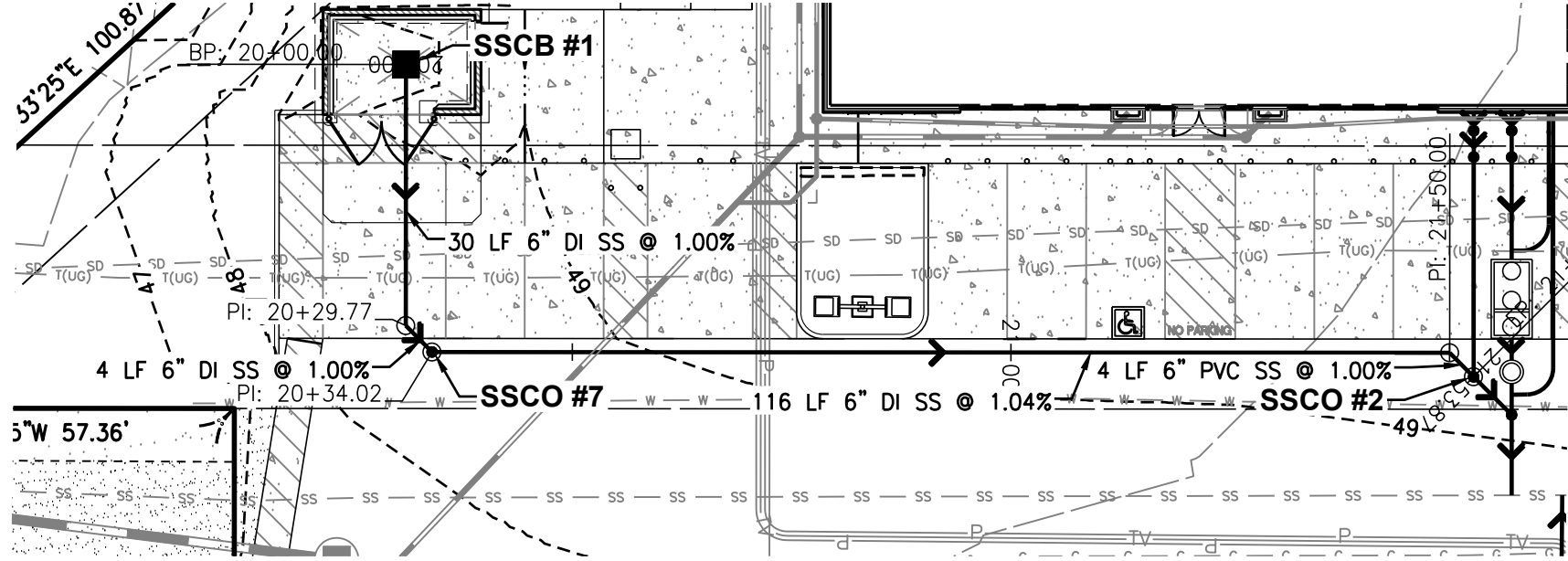
SANITARY SEWER BUILDING  
ALIGNMENT EXHIBIT - C-STORE TO SEWER TAP

HORIZONTAL SCALE: 1"=20'



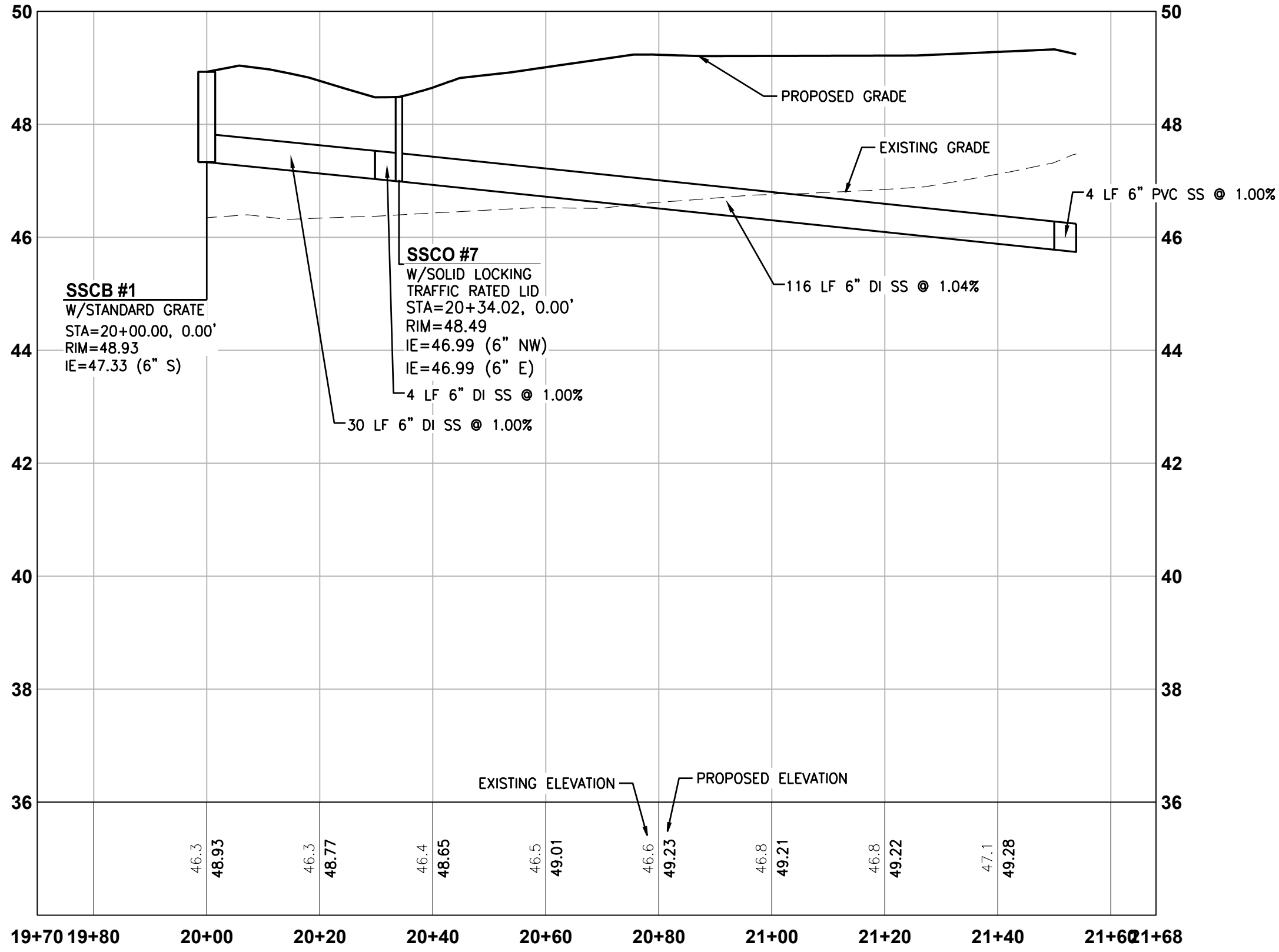
SANITARY SEWER  
BUILDING PROFILE - C-STORE TO SEWER TAP

HORIZONTAL SCALE: 1"=20', VERTICAL SCALE: 1" = 2'



SANITARY SEWER TRASH ENCLOSURE  
ALIGNMENT EXHIBIT - SSCB #1 TO SSCO #2

HORIZONTAL SCALE: 1"=20'



SANITARY SEWER  
TRASH ENCLOSURE PROFILE - SSCB #1 TO SSCO #2

HORIZONTAL SCALE: 1"=20', VERTICAL SCALE: 1" = 2'

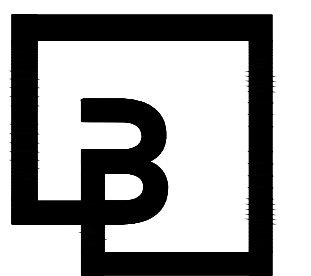
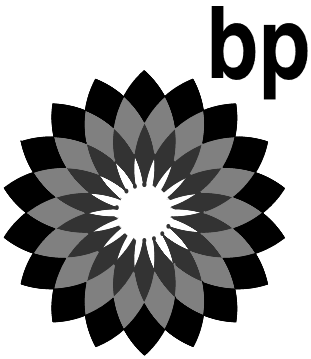
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CLIENT:



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

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SEAL:



1/12/24

DEVELOPMENT INFORMATION:  
**ARCO NTI**  
**3400 am/pm**  
**FUEL CANOPY w/ 6 MPD's**

SITE ADDRESS:  
**1402 S. MERIDIAN**  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

FACILITY #TBD

DESIGNED BY: JDF  
CHECKED BY: AW  
DRAWN BY: JDF  
VERSION: 1  
PROJECT NO: 21730

DRAWING TITLE:  
**SEWER PROFILE - BUILDING & TRASH ENCLOSURE**

SHEET NO:

C6.6

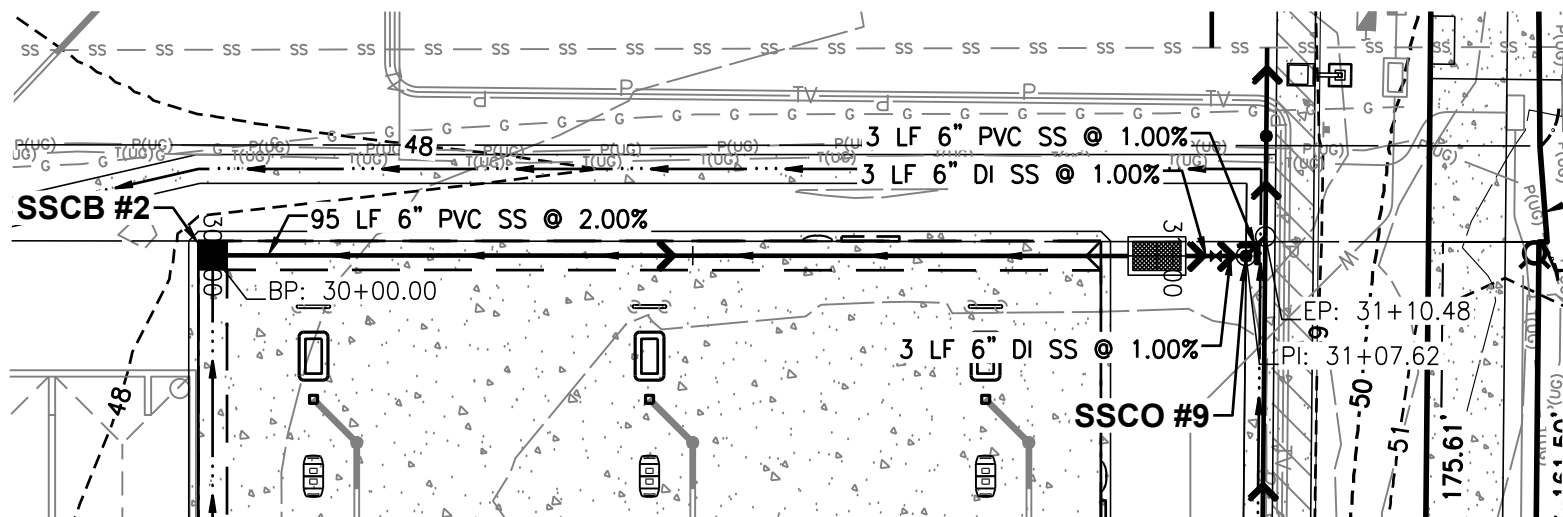
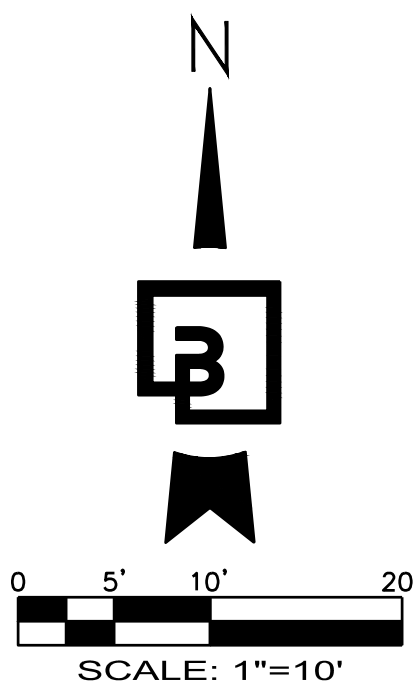
APPROVED	APPROVED
BY: _____ CITY OF PUYALLUP WATER PURVEYOR	BY: _____ CITY OF PUYALLUP DEVELOPMENT ENGINEERING
DATE: _____	DATE: _____
<b>NOTE:</b> THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE. THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE WATER PURVEYOR.	<b>NOTE:</b> 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.

P:\21000s\21730\Engineering\21730-UP.dwg 1/12/2024 4:26 PM JLEHARTY



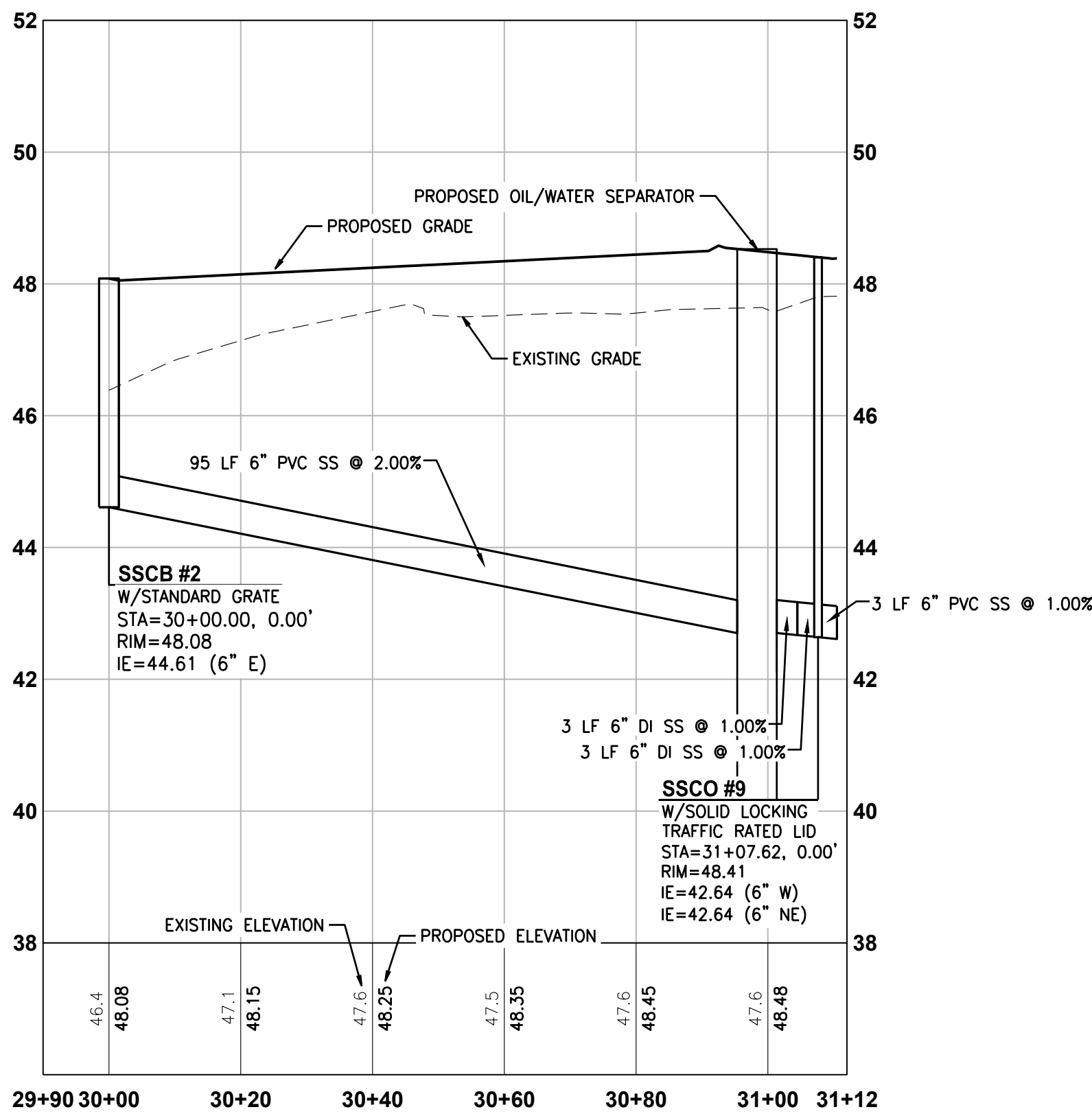
SEWER PROFILE - CANOPY + CAR WASH

FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



◆ SANITARY SEWER CANOPY  
ALIGNMENT EXHIBIT - SSCB #2 TO SSCO #9

HORIZONTAL SCALE: 1"=20'



◆ SANITARY SEWER  
CANOPY PROFILE - SSCB #2 TO SSCO #9

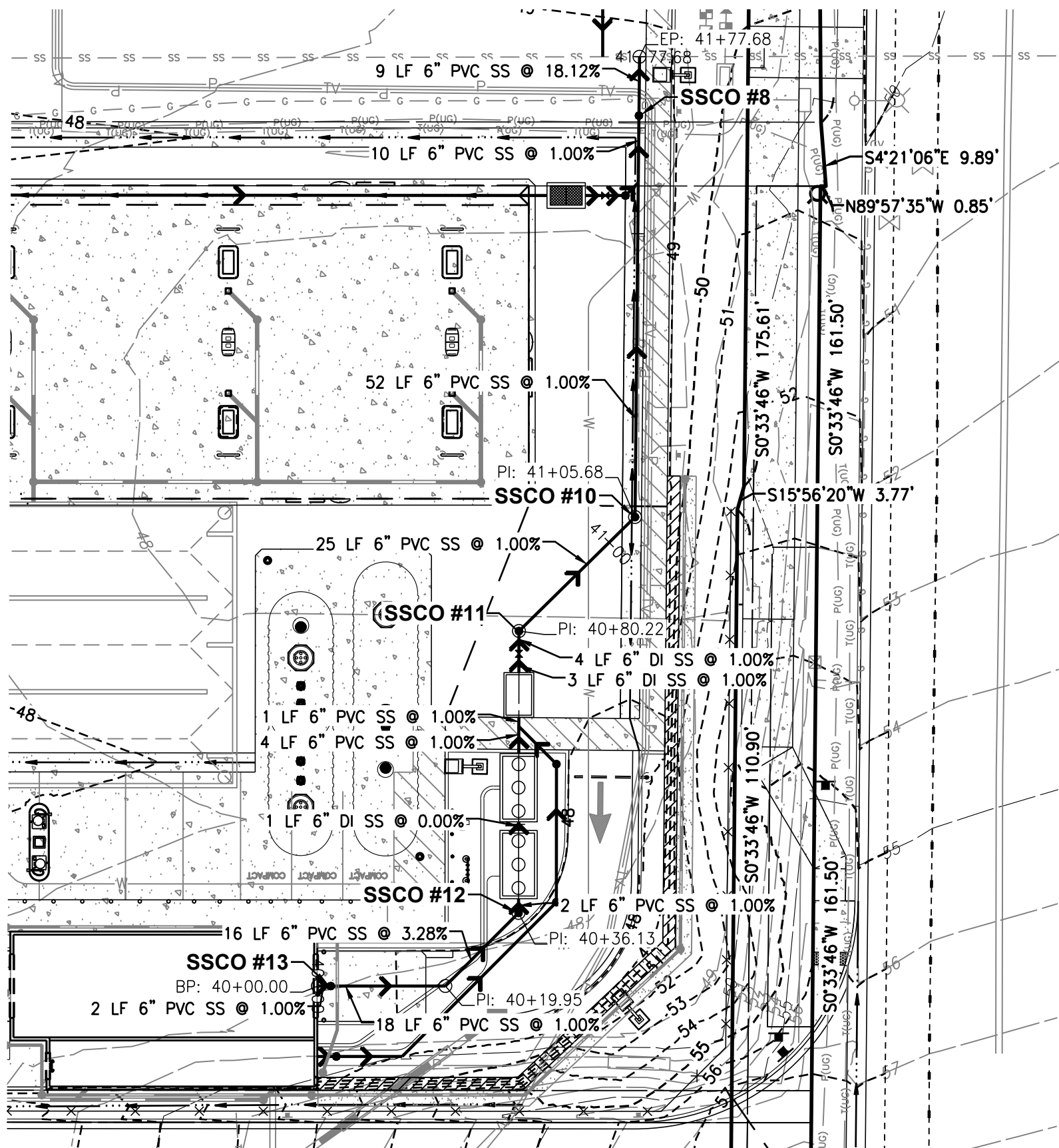
HORIZONTAL SCALE: 1"=20", VERTICAL SCALE: 1" = 2'

UTILITY CONFLICT NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT BY POT-HOLING THE EXISTING CALLING UTILITY LOCATE AT 811 48 HOURS IN ADVANCE AND THEN POT-HOLING 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 NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

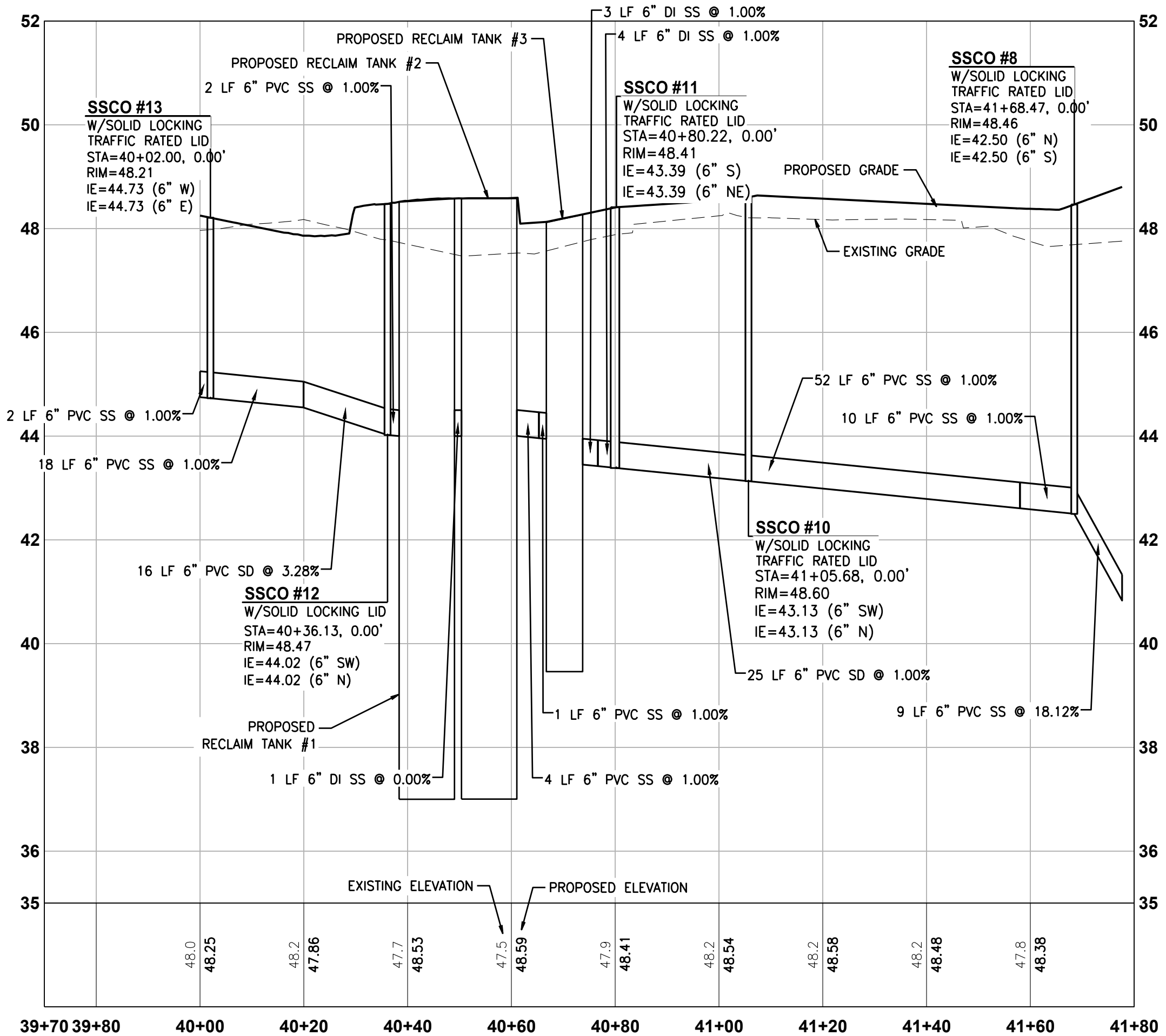


Know what's below.  
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Dial 811



SANITARY SEWER CAR WASH  
ALIGNMENT EXHIBIT - CAR WASH TO SEWER TAP

HORIZONTAL SCALE: 1"=20'



SANITARY SEWER  
CAR WASH PROFILE - CAR WASH TO SEWER TAP

HORIZONTAL SCALE: 1"=20", VERTICAL SCALE: 1" = 2'

APPROVED  
BY: CITY OF PUYALLUP  
WATER PURVEYOR  
DATE:

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 WATER  
PURVEYOR.

APPROVED  
BY: CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING  
DATE:

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.

CLIENT:








Barghausen  
Consulting Engineers, Inc.

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

NO.	DATE	REVISION	DESCRIPTION
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SEAL:



1/12/24

DEVELOPMENT INFORMATION:

ARCO NTI

3400 am/pm

FUEL CANOPY w/ 6 MPD's

SITE ADDRESS:

1402 S. MERIDIAN

@ HIGHWAY 512

PUYALLUP, WASHINGTON

FACILITY #TBD

DESIGNED BY: JDF ALLIANCE Z&M:  
CHECKED BY: AW BP REP:  
DRAWN BY: JDF ALLIANCE PM:  
VERSION: PROJECT NO:  
21730

DRAWING TITLE:  
SEWER PROFILE - CANOPY &  
CAR WASH

SHEET NO:

C6.7

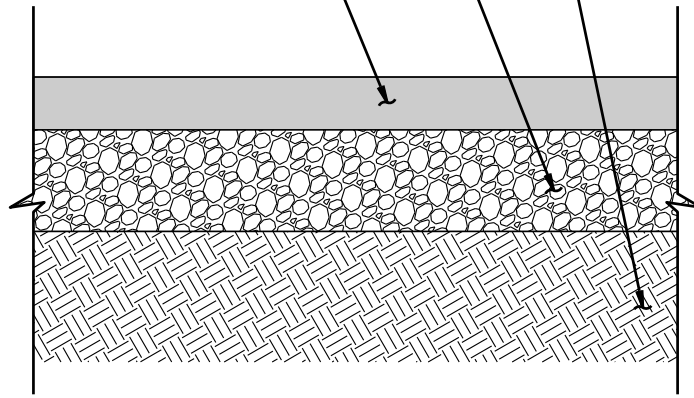


CONSTRUCTION DETAILS

FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY

EXISTING ON-SITE GRANULAR SOIL OR IMPORTED FILL COMPACTED TO 95% MAXIMUM DRY DENSITY FOR DEPTH OF 10" MINIMUM. IT IS RECOMMENDED THAT THE CONTRACTOR SHALL HAVE A GEOTECHNICAL ENGINEER PRESENT DURING SUBGRADE PREPARATION TO VERIFY EXTENT OF OVEREXCAVATION, AND DEPTH OF SUBGRADE COMPACTION. OVEREXCAVATION SHOULD EXTEND TO COMPETENT NATIVE SOILS.

6" (MIN.) AGGREGATE BASE COURSE 95% COMPACTION BASED ON ASTM TEST METHOD D1557  
6" (MIN.) HMA CL ½" 64.22 PG 64.22 PER SECTION 5-04 OF THE WSDOT STANDARD SPECIFICATIONS



NOTE:

- GENERAL CONTRACTOR SHALL REFERENCE GEOTECHNICAL ENGINEERING STUDY PREPARED BY KRAZAN & ASSOCIATES, INC. DATED MAY 6, 2022 FOR PAVEMENT, AGGREGATE, OVER-EXCAVATION AND SUBGRADE REQUIREMENTS.

1 ON-SITE ASPHALT SECTION  
C7.0 SCALE: NTS

EXISTING ON-SITE GRANULAR SOIL OR IMPORTED FILL COMPACTED TO 95% MAXIMUM DRY DENSITY FOR DEPTH OF 10" MINIMUM. IT IS RECOMMENDED THAT THE CONTRACTOR SHALL HAVE A GEOTECHNICAL ENGINEER PRESENT DURING SUBGRADE PREPARATION TO VERIFY EXTENT OF OVEREXCAVATION, AND DEPTH OF SUBGRADE COMPACTION. OVEREXCAVATION SHOULD EXTEND TO COMPETENT NATIVE SOILS.

EXPANSION JOINT PROVIDE AT 15 FEET SPACING. SEE DETAIL JOINT DETAILS ON THIS SHEET.

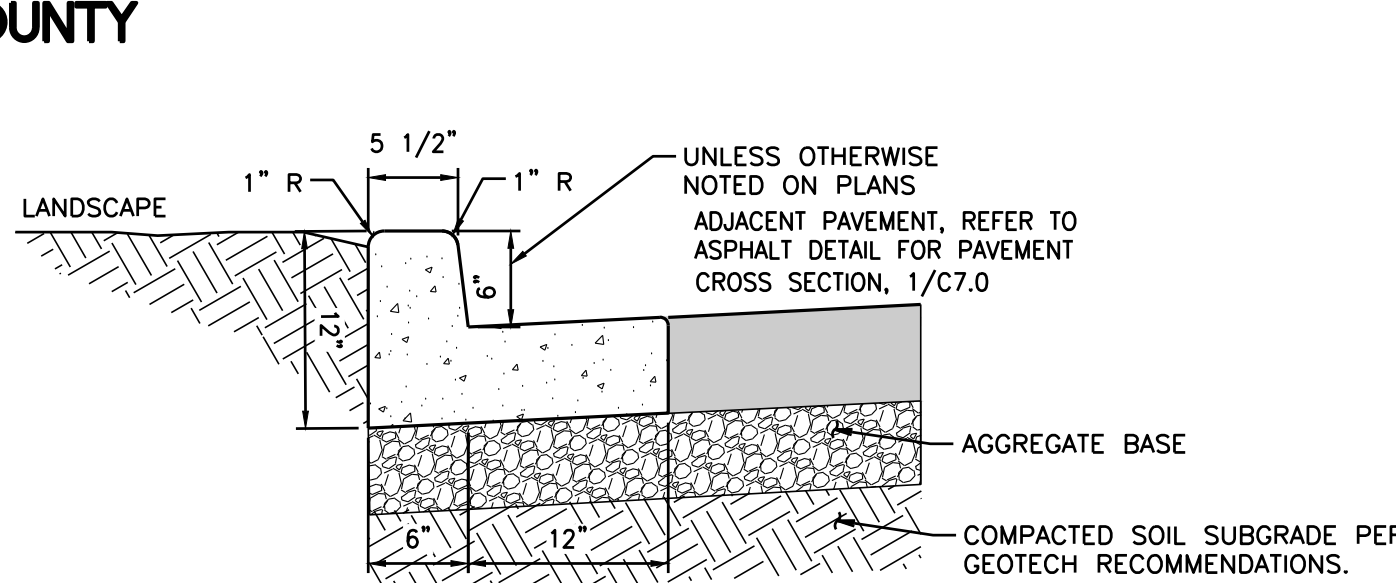
6" (MIN.) PORTLAND CEMENT PAVEMENT WITH 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI WITH A FIBER MESH. FLEXURAL STRENGTH OR MODULUS OF RUPTURE OF 575 PSI.

6" (MIN.) AGGREGATE BASE COURSE 95% COMPACTION BASED ON ASTM TEST METHOD D1557

NOTE:

- GENERAL CONTRACTOR SHALL REFERENCE GEOTECHNICAL ENGINEERING STUDY PREPARED BY KRAZAN & ASSOCIATES, INC. DATED MAY 6, 2022 FOR PAVEMENT, AGGREGATE, OVER-EXCAVATION AND SUBGRADE REQUIREMENTS.

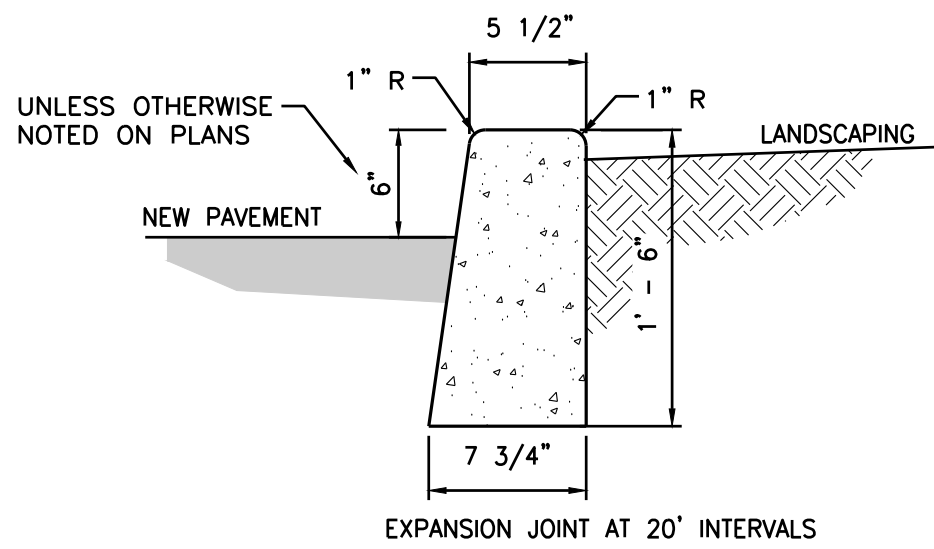
2 ON-SITE CONCRETE SECTION  
C7.0 SCALE: NTS



NOTE:

- PROVIDE EXPANSION JOINT AT 20' INTERVALS.

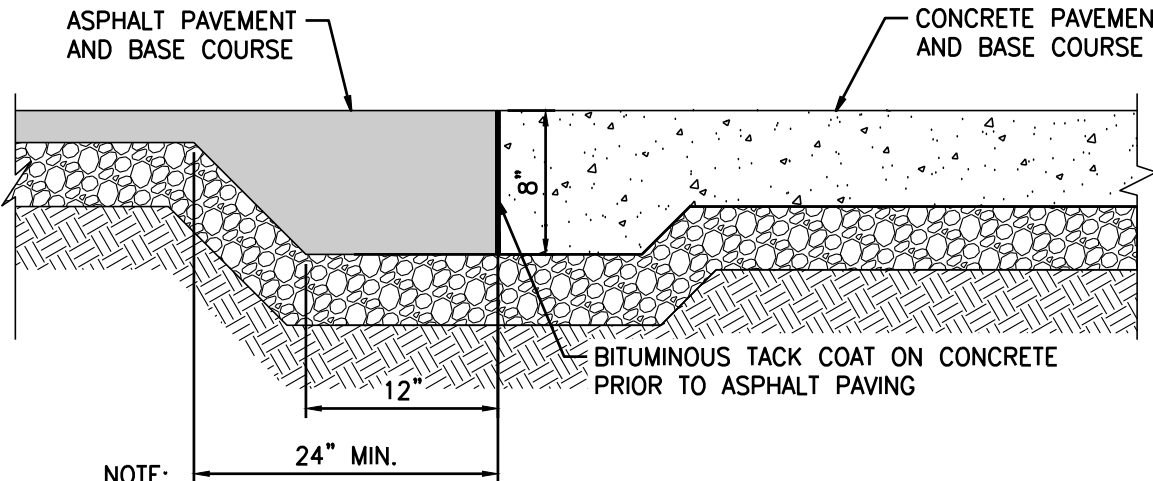
3 ON-SITE CURB AND GUTTER  
C7.0 SCALE: NTS



NOTE:

- EXPANSION JOINT AT 20' INTERVALS.

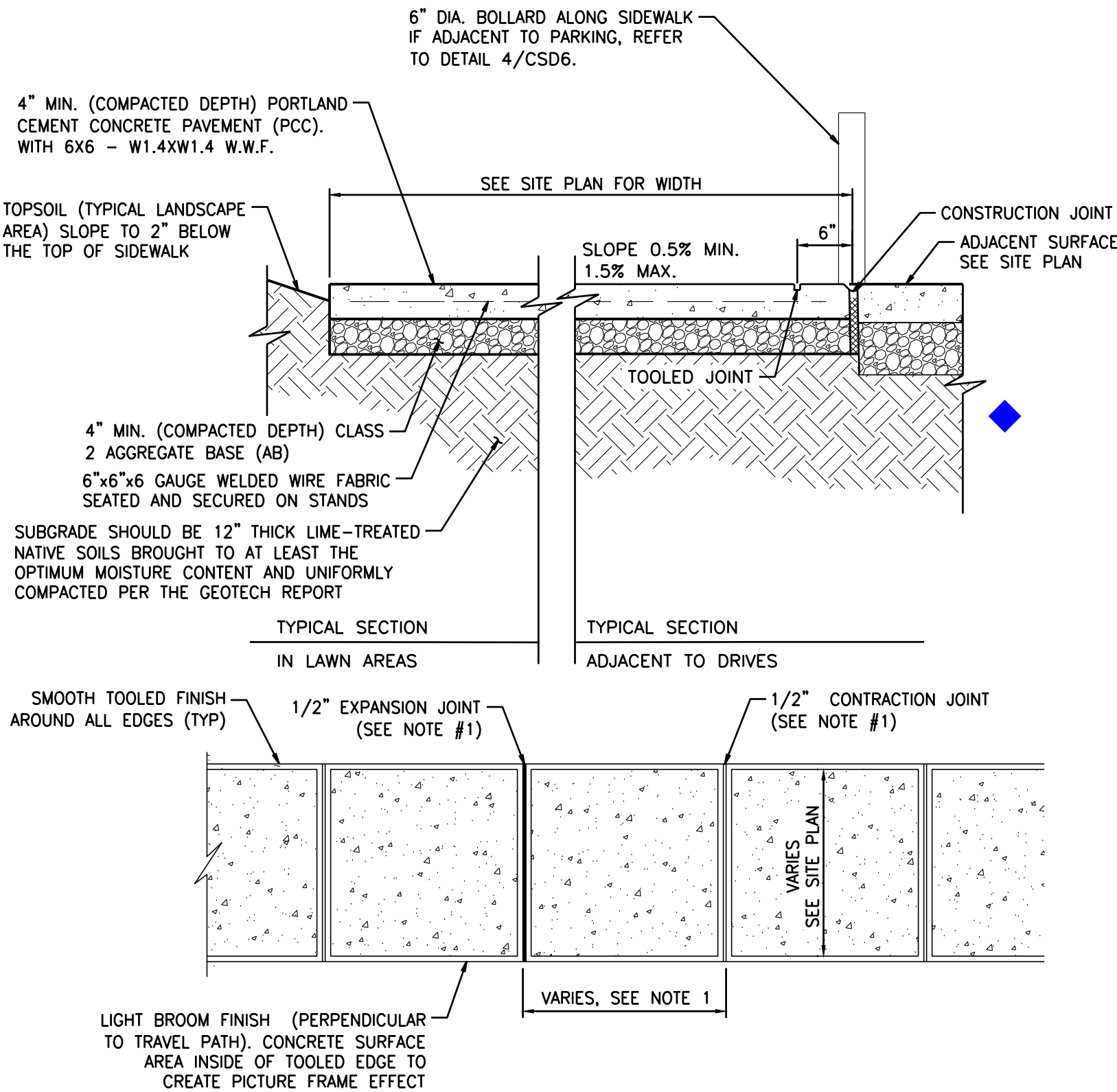
4 ON-SITE BARRIER CURB  
C7.0 SCALE: NTS



NOTE:

- ASPHALT THICKEN EDGE IS REQUIRED AT ALL JUNCTIONS WITH WITH CONCRETE.
- REFER TO ASPHALT AND CONCRETE DETAIL FOR REQUIRED PAVEMENT THICKNESS.

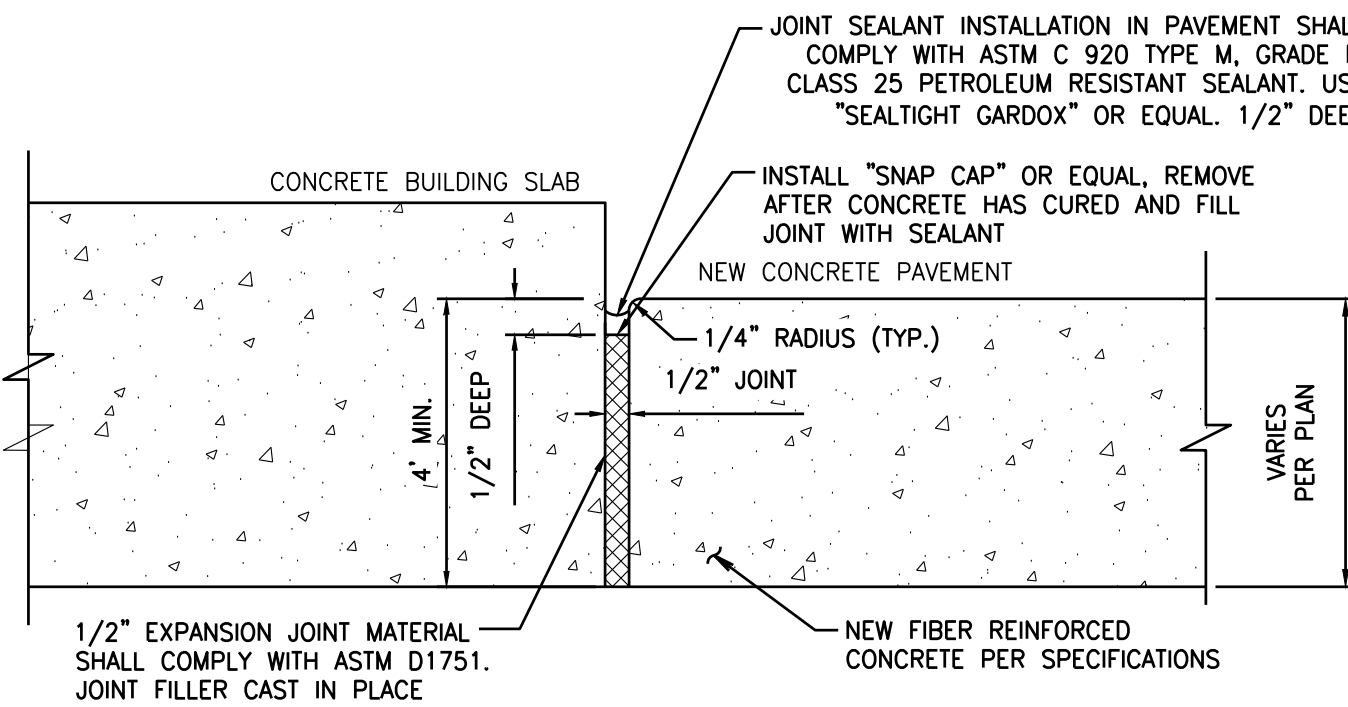
6 ASPAHLT THICKEN EDGE  
C7.0 SCALE: NTS



NOTE:

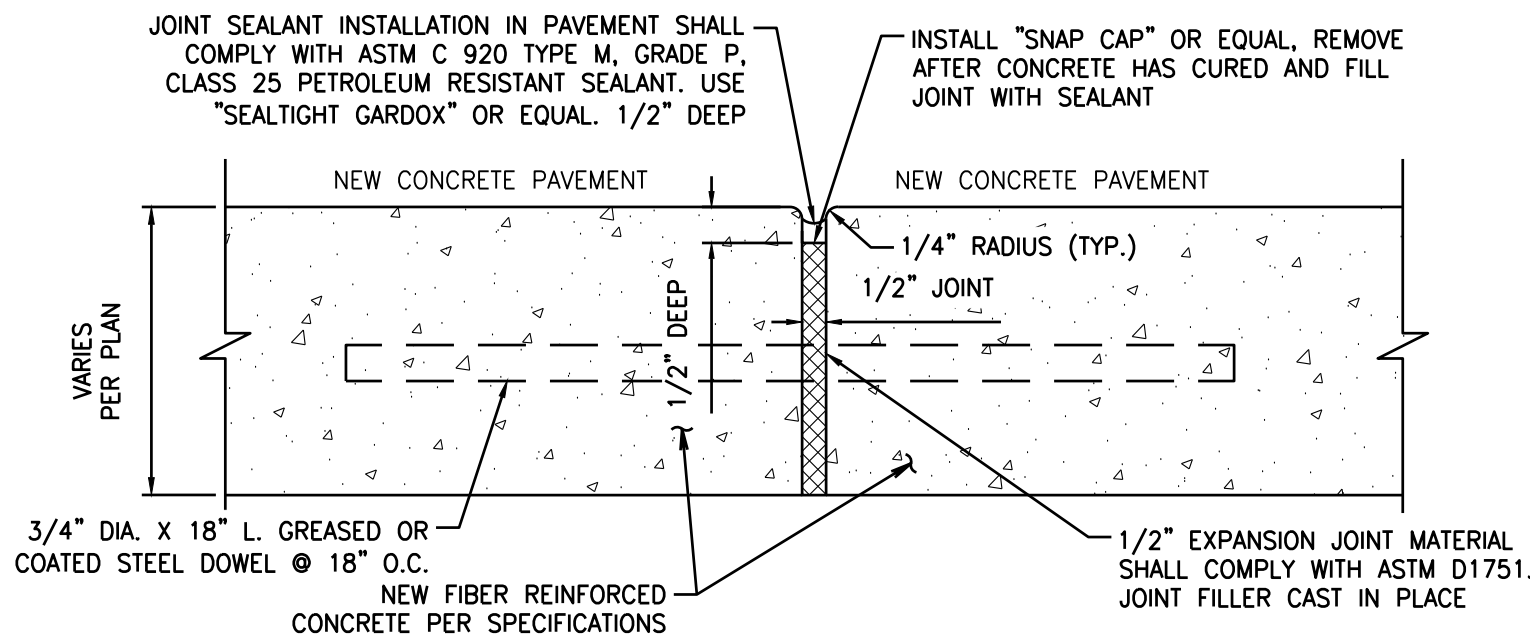
- SIDEWALKS VARY IN WIDTH. CONTROL JOINTS TO BE PLACED AT SPACING EQUAL TO SIDEWALK WIDTH.
- PROVIDE EXPANSION JOINTS AT 28' TO 30' O.C. MAXIMUM.
- WHEN WALK IS ADJACENT TO THE BUILDING PROVIDE 3/8" X 4" IMPREGNATED FIBERBOARD.
- ALL PORTLAND CEMENT CONCRETE PAVEMENT (PCC) SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEERING REPORT.
- EDGES OF SIDEWALKS ADJACENT TO THE BUILDING SHOULD BE THICKENED TO AT LEAST TWICE THE SLAB THICKNESS (8 INCHES) FOR A HORIZONTAL DISTANCE OF 8"

5 ON-SITE CONCRETE SIDEWALK  
C7.0 SCALE: NTS

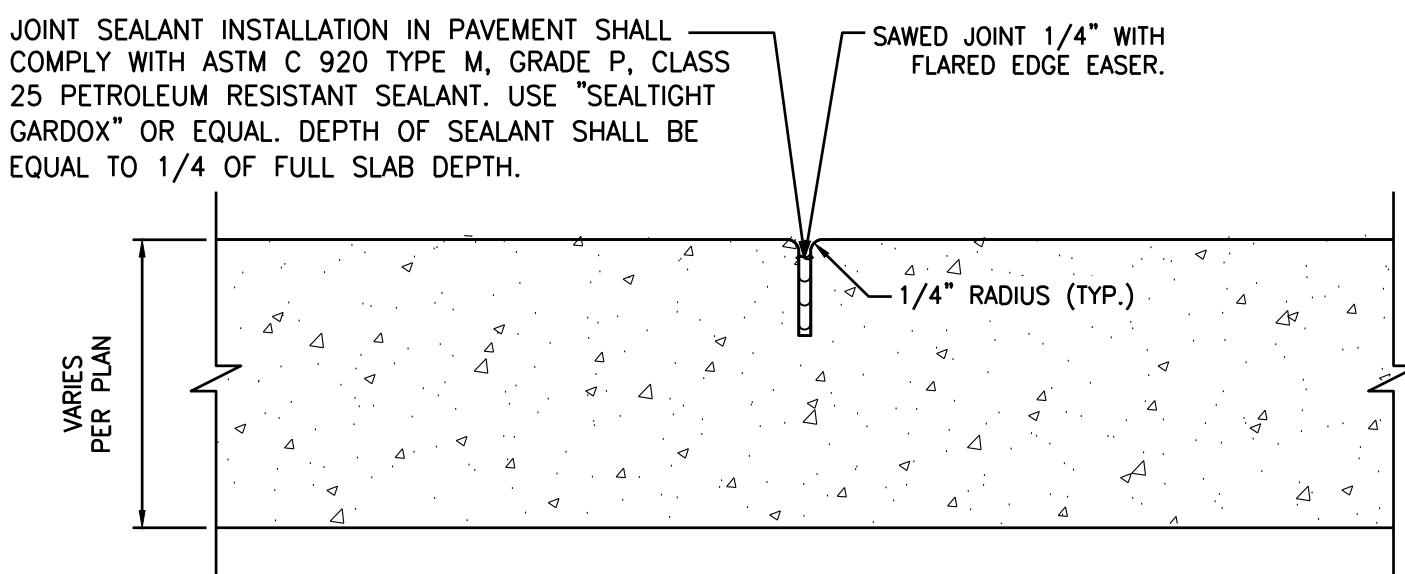


CONSTRUCTION JOINT (BUILDING SLAB)

7 CONSTRUCTION JOINT  
C7.0 SCALE: NTS



8 CONSTRUCTION JOINT  
C7.0 SCALE: NTS



9 EXPANSION JOINT  
C7.0 SCALE: NTS

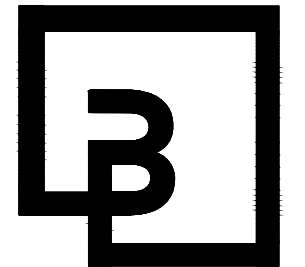
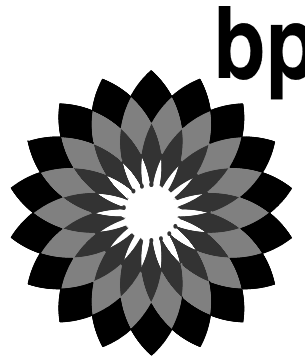
UTILITY CONFLICT NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT BY POTHOLES THE UTILITIES AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE AT 811 48 HOURS IN ADVANCE AND THEN POTHOLES 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 NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.



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CLIENT:



Barghausen  
Consulting Engineers, Inc.

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

NO.	DATE	REVISION DESCRIPTION
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SEAL:



1/12/24

DEVELOPMENT INFORMATION:

ARCO NTI  
3400 am/pm  
FUEL CANOPY w/ 6 MPD's

SITE ADDRESS:

1402 S. MERIDIAN  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

FACILITY #TBD

DESIGNED BY: JDF ALLIANCE ZBDK:

CHECKED BY: AW BP REP:

DRAWN BY: JDF ALLIANCE PM:

VERSION: PROJECT NO:

21730

DRAWING TITLE:

CONSTRUCTION  
DETAILS

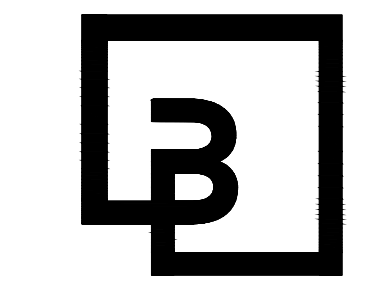
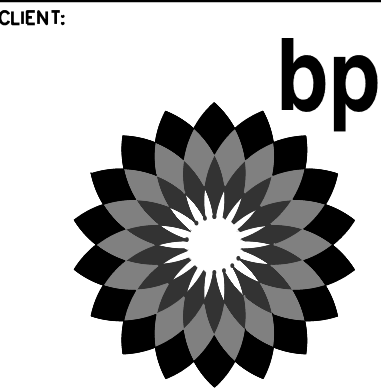
SHEET NO:

C7.0



CONSTRUCTION DETAILS

FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



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

NO.	DATE	REVISION	DESCRIPTION
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1/12/24

DEVELOPMENT INFORMATION:  
**ARCO NTI**  
**3400 am/pm**  
**FUEL CANOPY w/ 6 MPD's**

SITE ADDRESS:  
**1402 S. MERIDIAN**  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

**FACILITY #TBD**

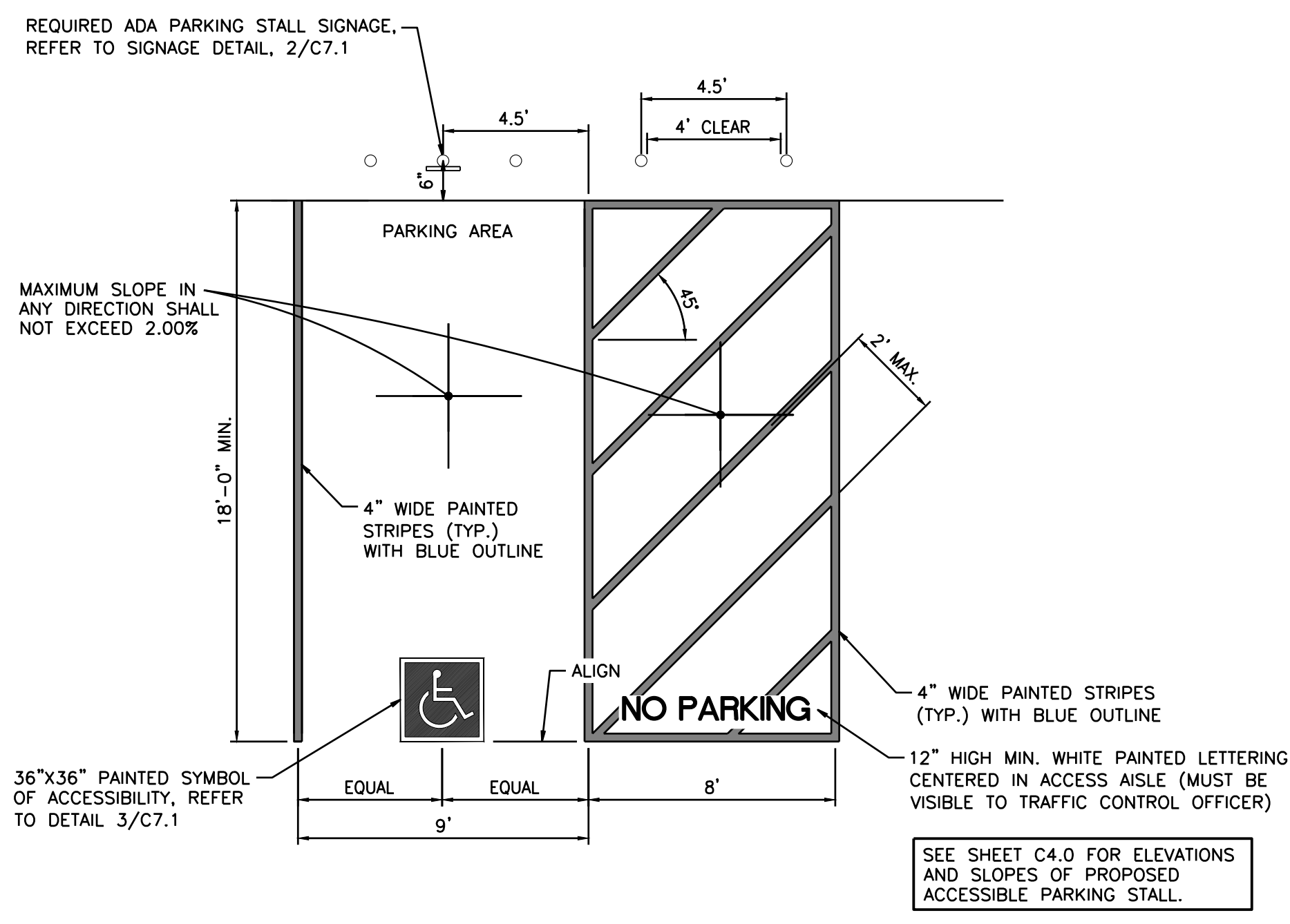
DESIGNED BY: JDF	ALLIANCE Z&M:
CHECKED BY: AW	BP REP:
DRAWN BY: JDF	ALLIANCE PM:
VERSION:	PROJECT NO:
	<b>21730</b>

DRAWING TITLE:  
**CONSTRUCTION DETAILS**

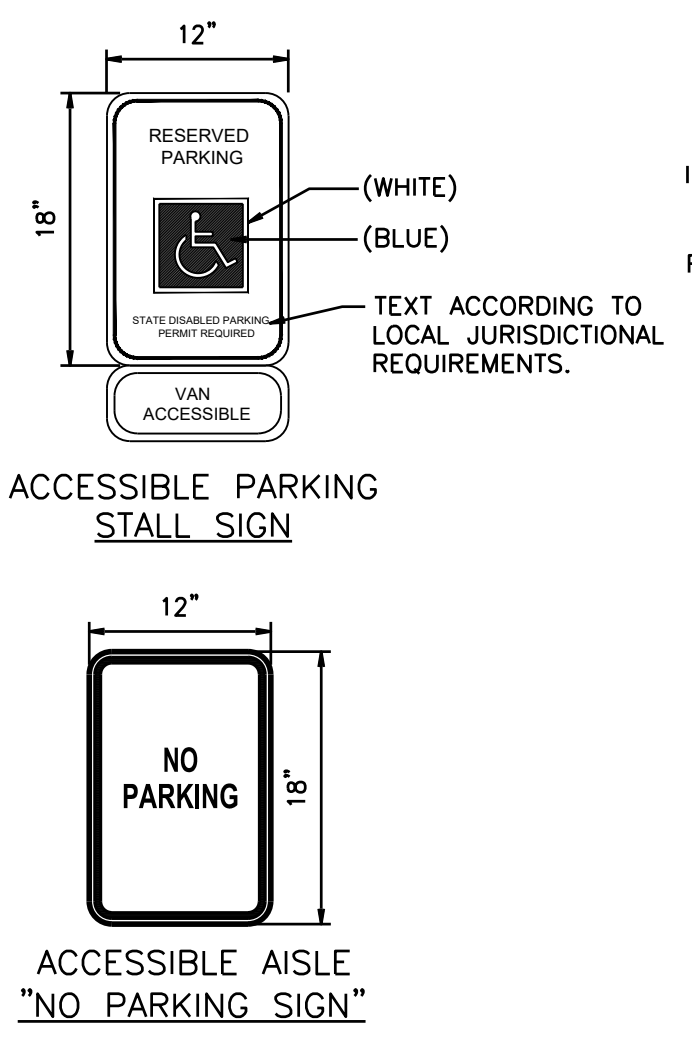
SHEET NO:

**C7.1**

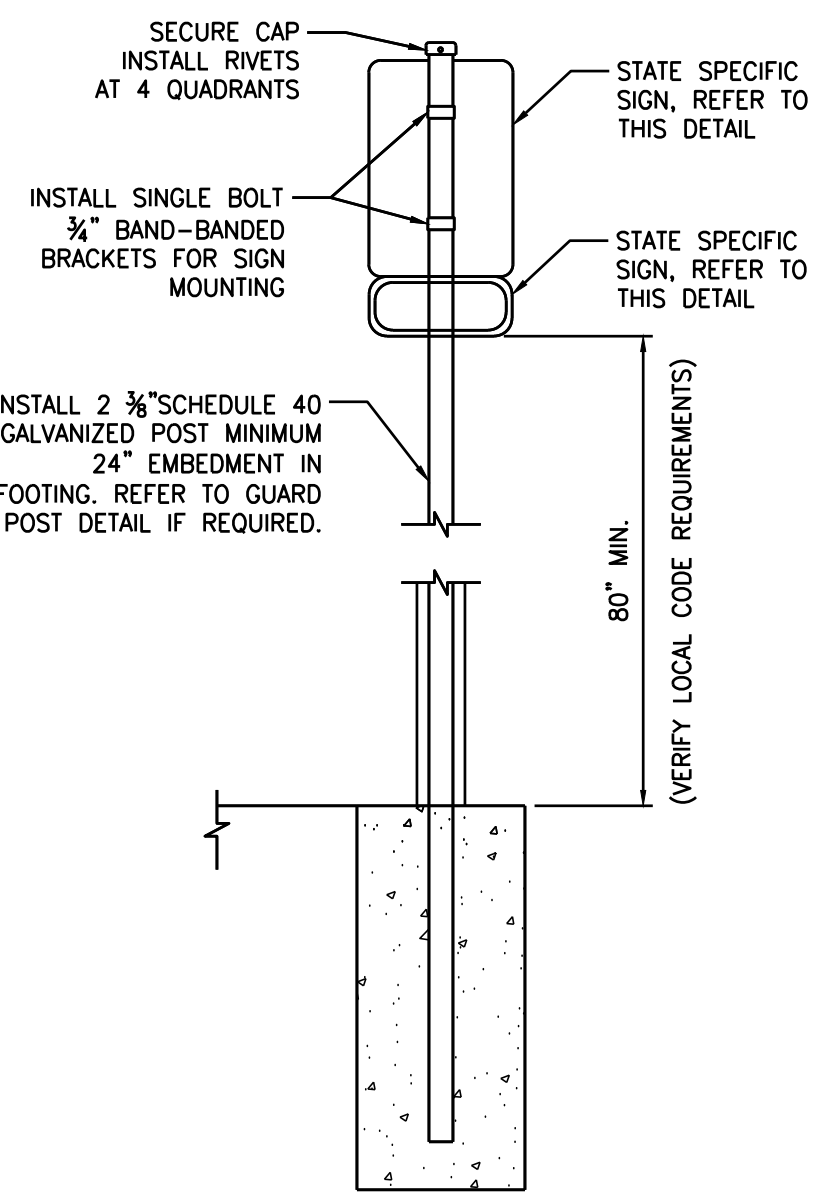
**APPROVED**  
BY \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING  
DATE \_\_\_\_\_  
**NOTE:** THIS APPROVAL IS VOID  
AFTER 180 DAYS FROM APPROVAL  
DATE.  
THE CITY WILL NOT BE  
RESPONSIBLE FOR ERRORS  
AND/OR OMISSIONS ON THESE  
PLANS.  
FIELD CONDITIONS MAY DICTATE  
CHANGES TO THESE PLANS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



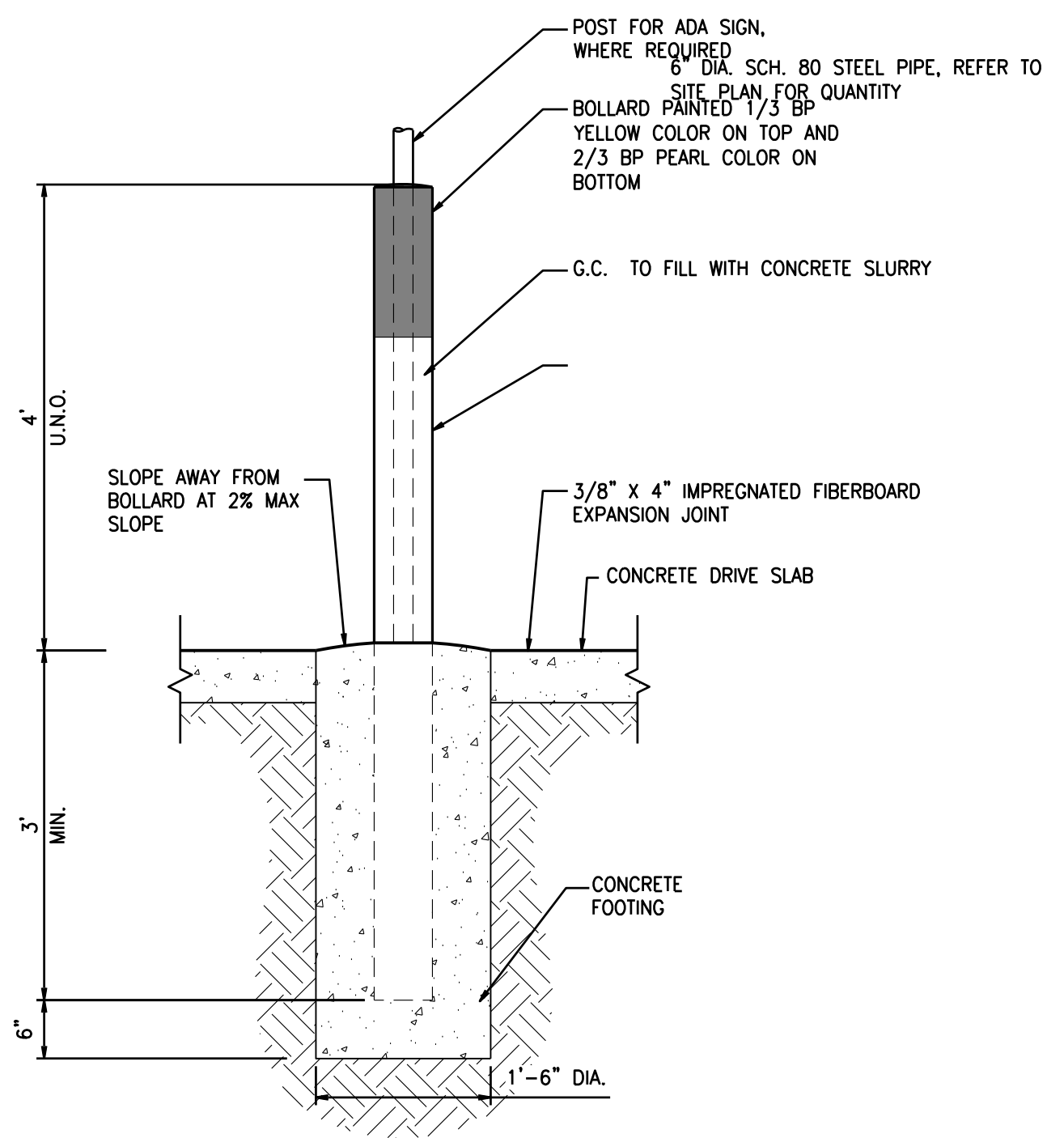
**1 ADA PARKING STALL AND AISLE REQUIREMENTS**  
C7.1 SCALE: NTS



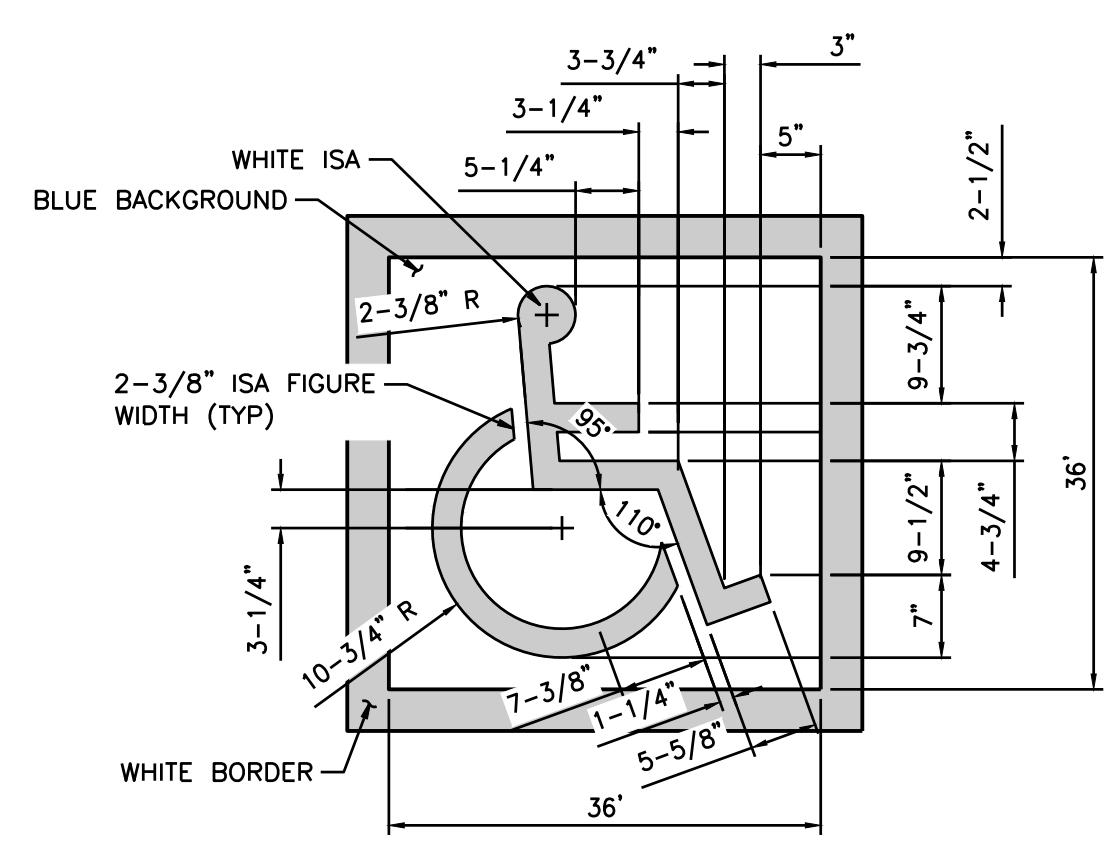
**2 ADA SIGNAGE (WASHINGTON)**



**SIGN POST**

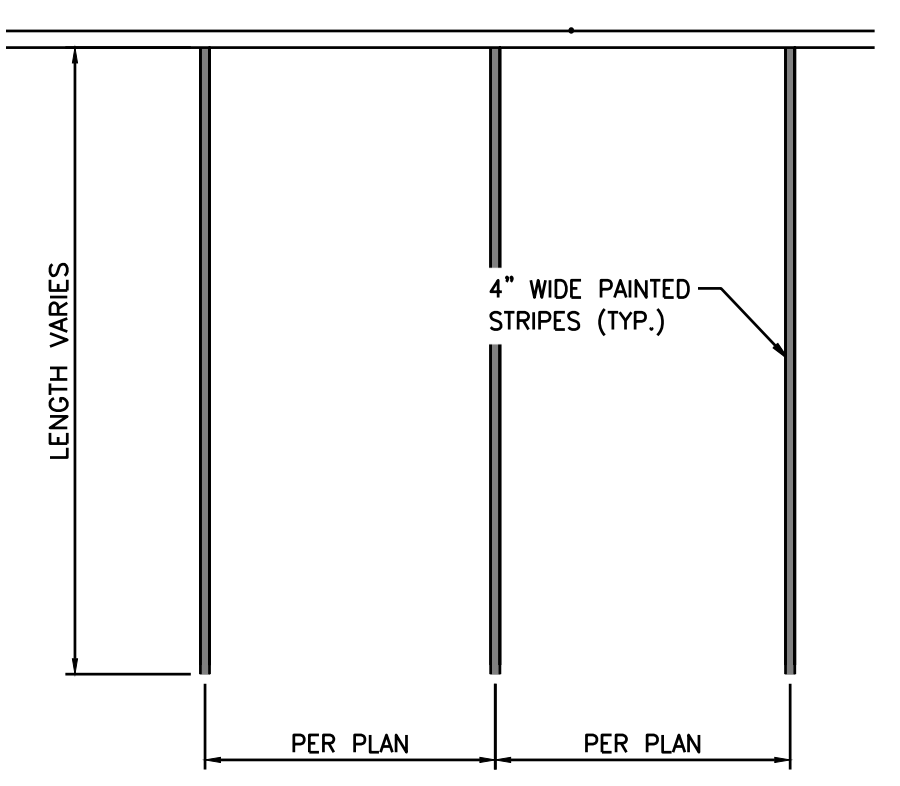


**GUARD POST**

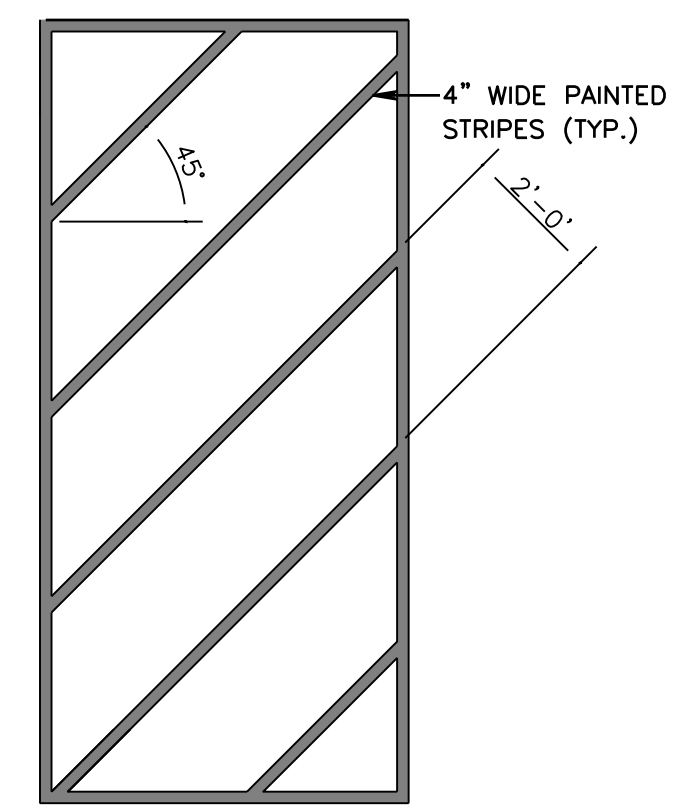


**NOTES:**  
1. SYMBOL TO BE CENTERED ON WIDTH OF PARKING STALL.  
2. BOTTOM OF SYMBOL TO BE LOCATED FLUSH WITH ACCESS DRIVE, CENTERED ON PARKING SPACE.  
3. SYMBOL IS REQUIRED TO CONTRAST WITH BACKGROUND.

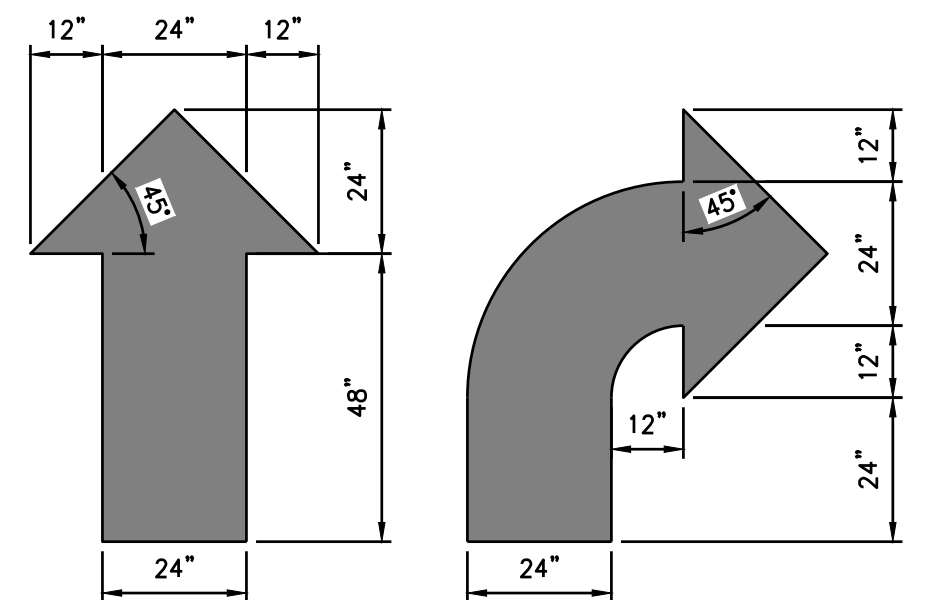
**3 SYMBOL OF ACCESSIBILITY**  
C7.1 SCALE: NTS



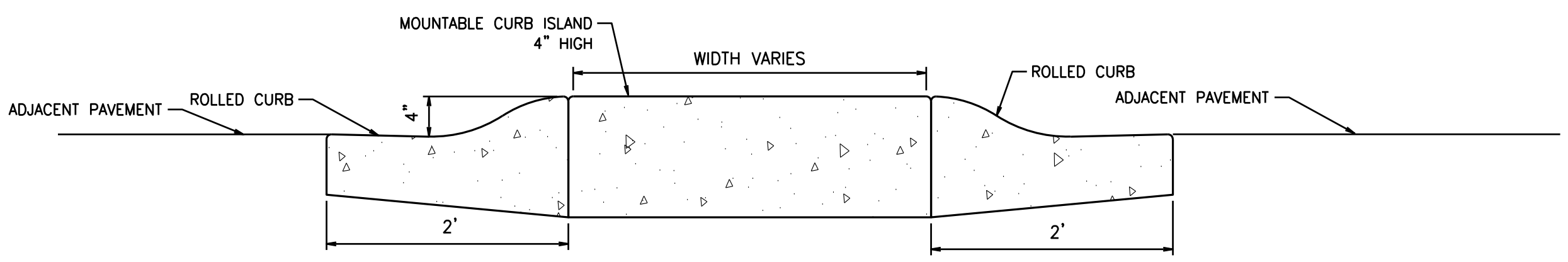
**4 PARKING STALL PAVEMENT MARKING**  
C7.1 SCALE: NTS



**5 PAVEMENT MARKINGS**  
C7.1 SCALE: NTS



**6 DIRECTIONAL ARROW**  
C7.1 SCALE: NTS



**7 MOUNTABLE CURB ISLAND**  
C7.1 SCALE: NTS

**UTILITY CONFLICT NOTE:**  
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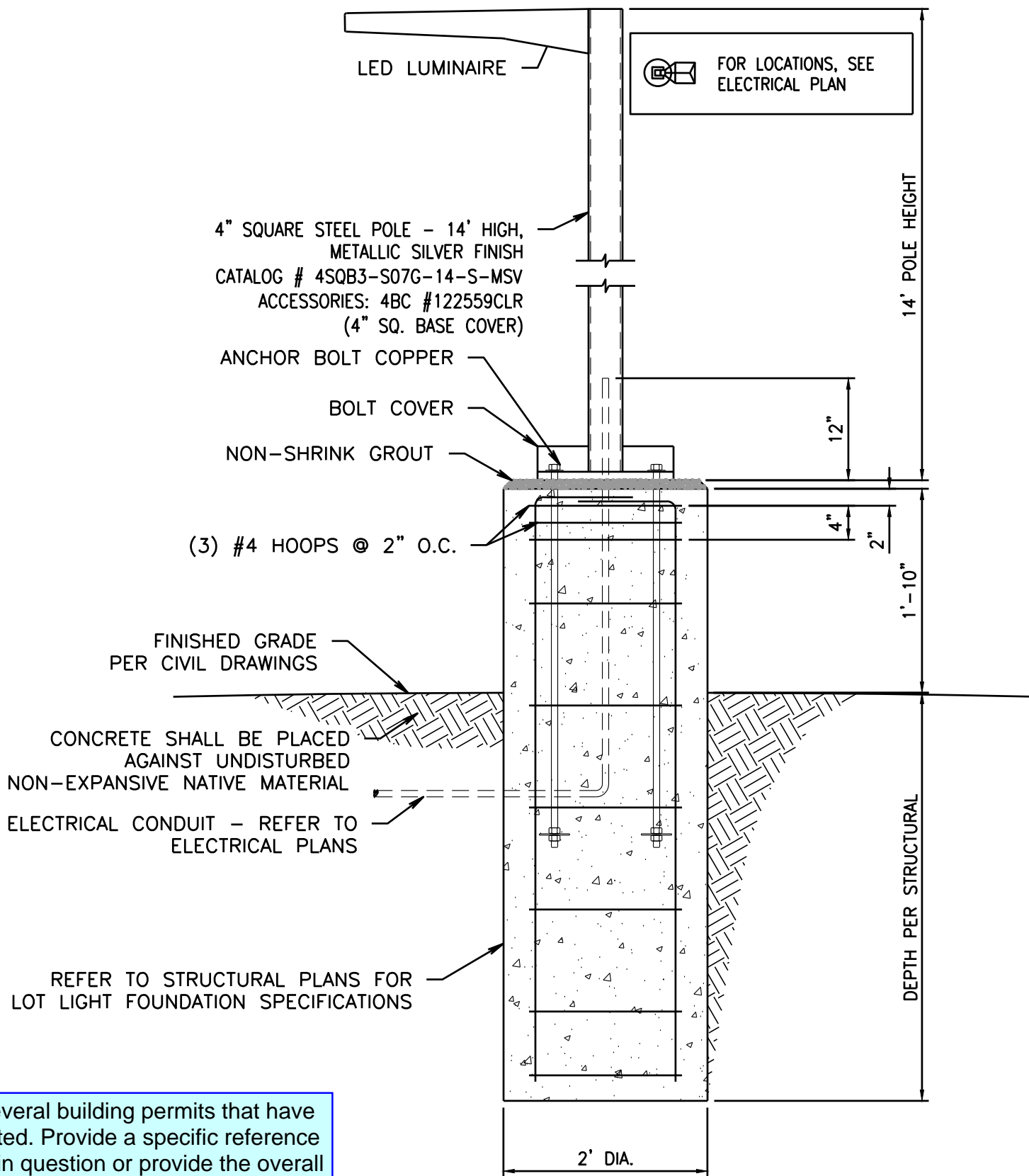
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P:\21000s\21730\engineering\21730-D.dwg 1/12/2024 9:42 AM JLE/MAITY



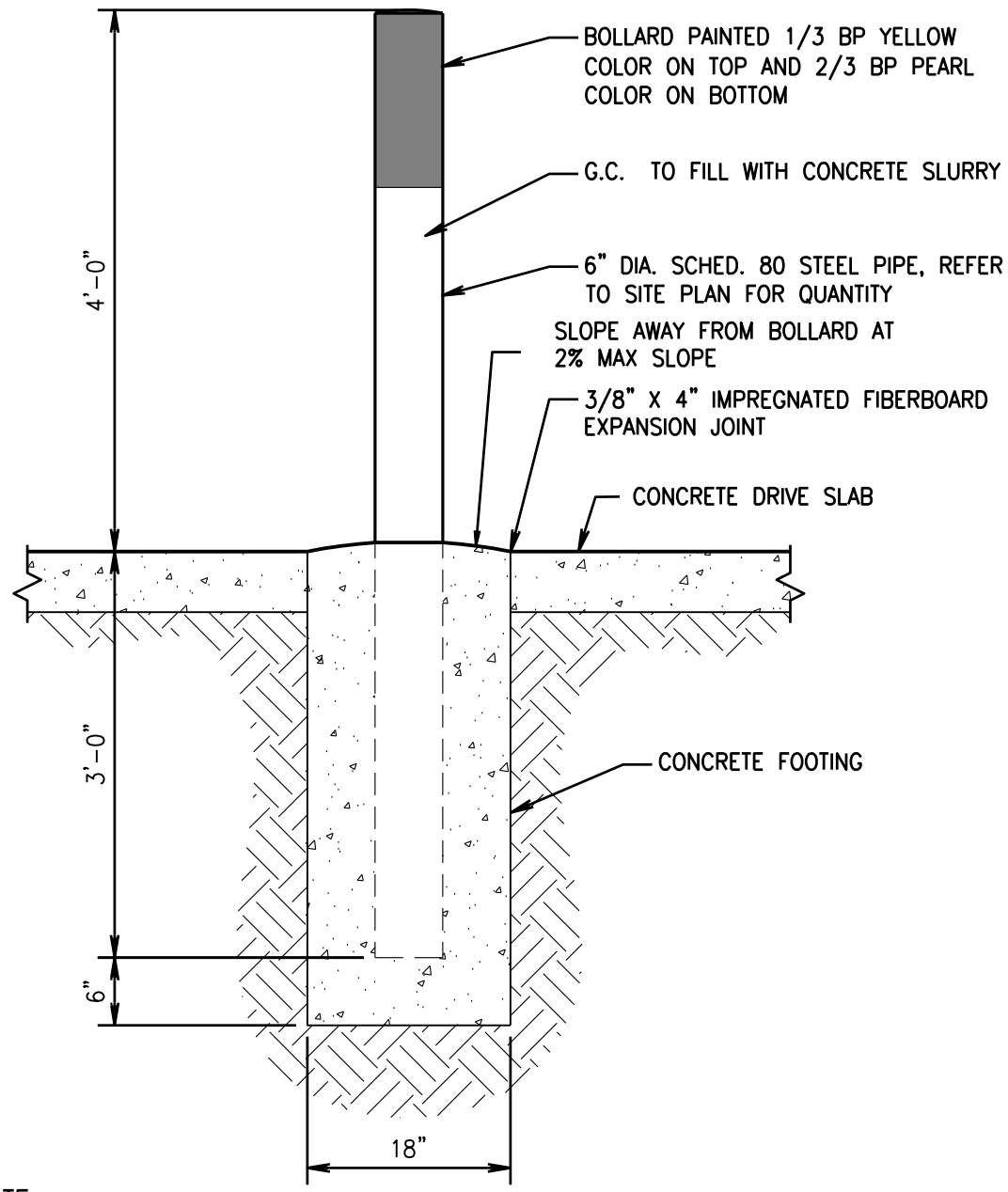
CONSTRUCTION DETAILS

FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



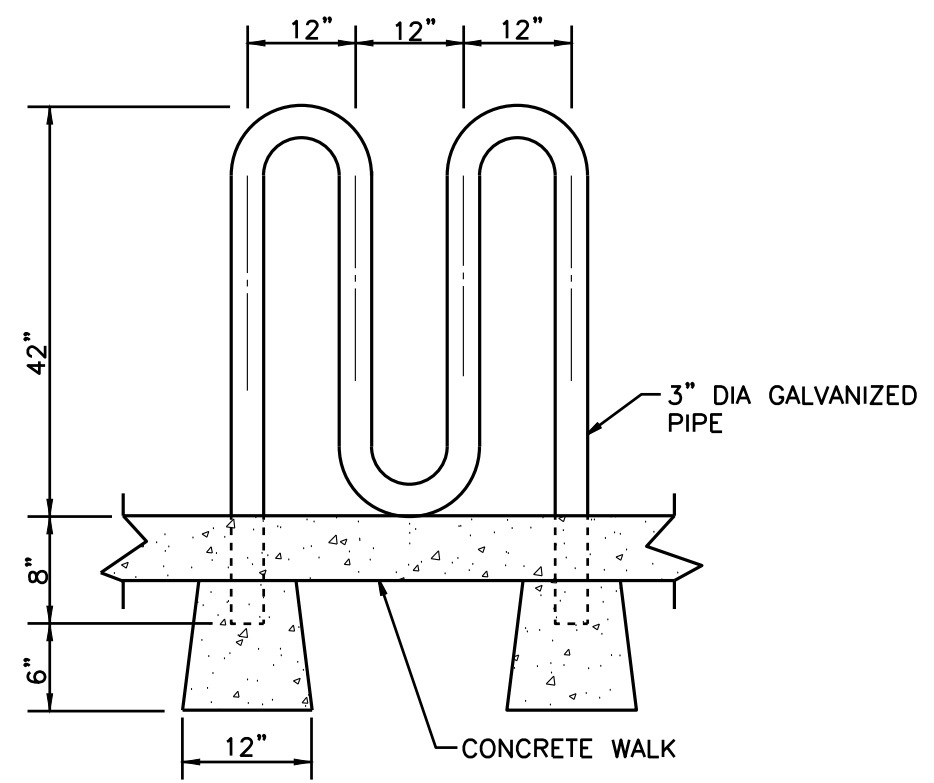
There are several building permits that have been submitted. Provide a specific reference to the plans in question or provide the overall depth of the base. [civils, sheet C7.2]

1 SITE LOT LIGHT  
SCALE: NTS

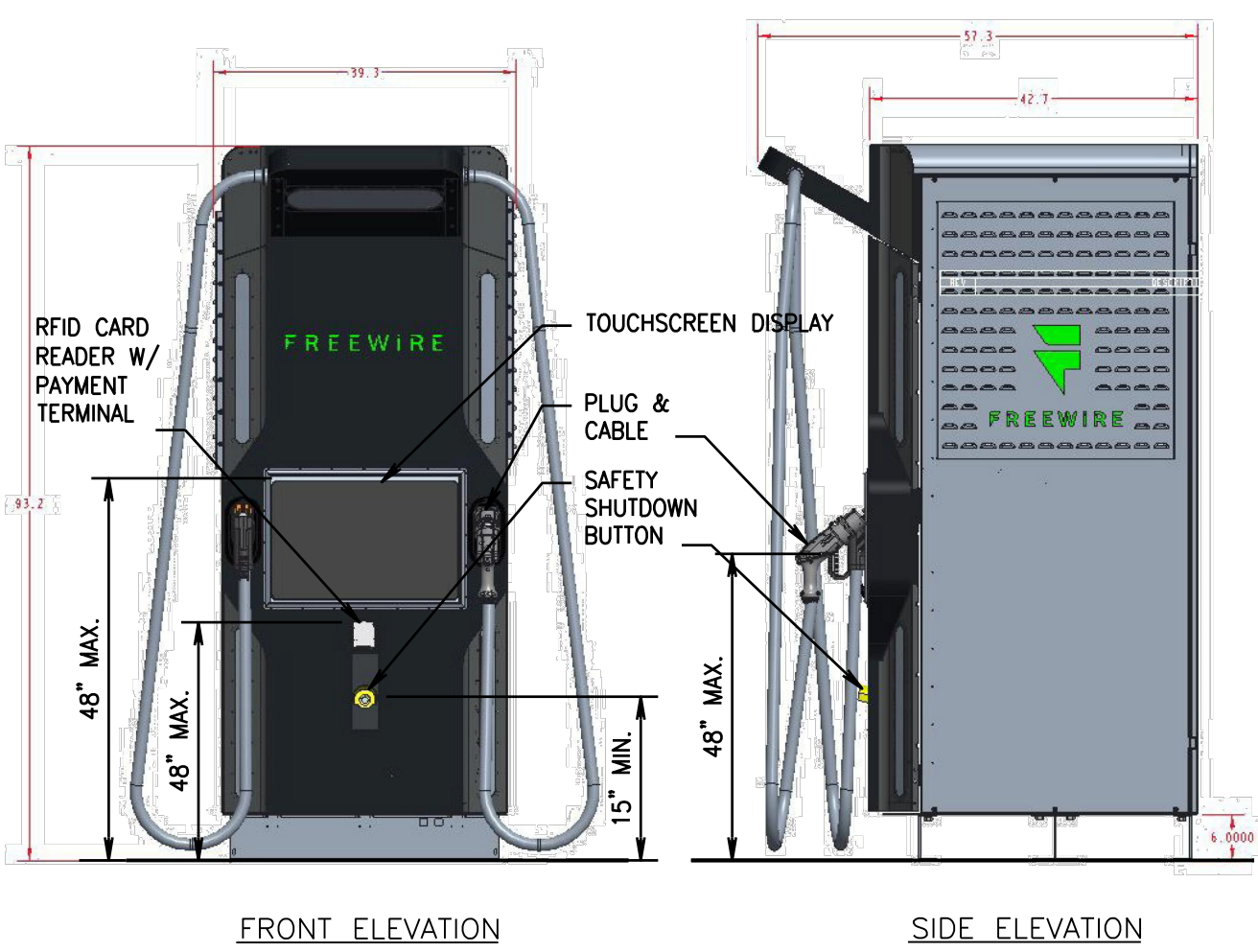


NOTE:  
1. REFER TO FUEL PLANS FOR HOOP BOLLARD PROTECTION DETAIL.

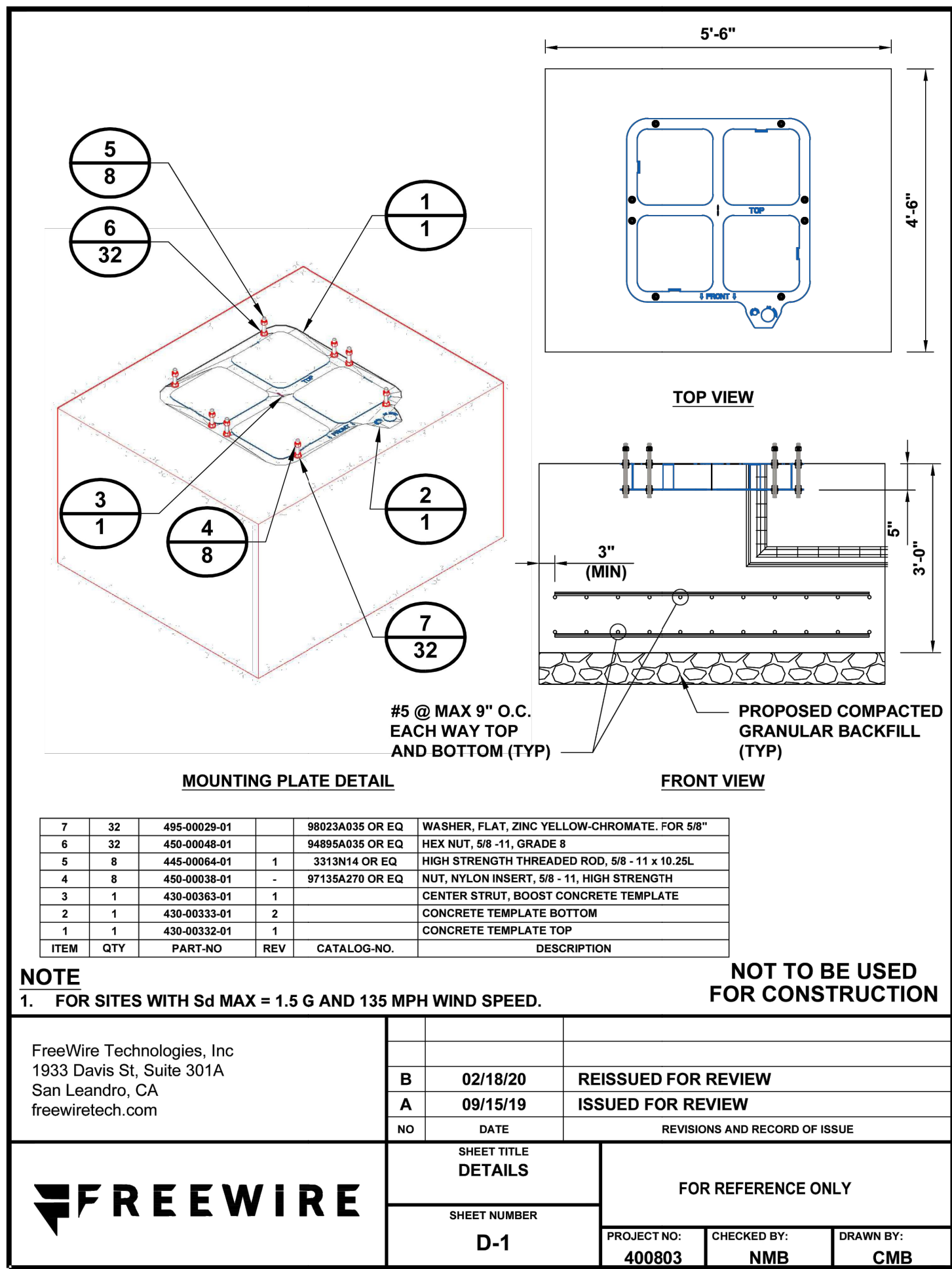
3 SITE BOLLARD  
SCALE: NTS



4 BIKE STORAGE  
SCALE: NTS



2 FREEWIRE EV CHARGING STATION  
SCALE: NTS



**UTILITY CONFLICT NOTE:**  
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**APPROVED**  
BY \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING  
DATE \_\_\_\_\_  
**NOTE:** THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE.  
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FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.

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

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1/12/24

DEVELOPMENT INFORMATION:  
**ARCO NTI**  
3400 am/pm  
FUEL CANOPY w/ 6 MPD's

SITE ADDRESS:  
**1402 S. MERIDIAN**  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

**FACILITY #TBD**

DESIGNED BY: JDF	ALLIANCE 280M:
CHECKED BY: AW	BP REP:
DRAWN BY: JDF	ALLIANCE PM:
VERSION:	PROJECT NO: 21730

DRAWING TITLE:  
**CONSTRUCTION DETAILS**

SHEET NO:  
**C7.2**



## GRADING LEGEND:

PROPOSED CONTOUR	----- 30 -----
EXISTING CONTOUR	----- 30 -----
PROPOSED GRADE BREAK	----- GB -----
PROPOSED RIDGE LINE	----- RIDGE -----
SWALE FLOWLINE	----->-----
PROPOSED GRADING SLOPE	1.00%
SPOT ELEVATION	30.01
FLUSH ELEVATION	30.01 FC
MATCH EXISTING ELEVATION	30.01± ME
FLOW/GUTTER LINE/TOP OF CURB	30.01 FL 30.51 TC



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Call before you dig.  
Dial 811

INGRESS/EGRESS AND UTILITIES EASEMENT  
(TITLE PARCEL A2) AFN 2792268  
EXCEPTION NO. 25

GUNDERSON LAW FIRM  
1410 S MERIDIAN, PUYALLUP,  
WA 98371  
TAX PARCEL NO. 7730000300  
(LAND USE - GENERAL  
COMMERCIAL)

TAX PARCEL NO. 7730000285  
NO KNOWN ADDRESS  
(LAND USE - GENERAL  
COMMERCIAL)

COMMON ACCESS TRACT "A"  
(TITLE PARCEL A1) SP NO. 77-315  
EXCEPTION NO. 24

10' ELECTRIC EASEMENT  
AFN 2792268  
EXCEPTION NO. 25

## GRADING NOTES:

- ALL SPOT ELEVATIONS SHOWN ARE TO FINISH SURFACE (TOP OF ASPHALT OR TOP OF CONCRETE PAVEMENT, NOT TOP OF CURB/SIDEWALK) UNLESS OTHERWISE NOTED. (TA = TOP OF PAVEMENT, TC = TOP OF CONCRETE SIDEWALK/CURB, ME = MATCH EXISTING ELEVATIONS, FC = FLUSH CURB, FL = FLOW LINE, GB = GRADE BREAK)
- CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL PROPOSED GRADES IN RELATIONSHIP TO SURVEYED BASIS OF ELEVATION.
- FILL MATERIAL AND COMPACTION SHALL CONFORM TO THE GEOTECHNICAL REPORT AND CITY OF PUYALLUP REQUIREMENTS.
- CONTRACTOR TO PROTECT AND MAINTAIN EROSION CONTROL FACILITIES DURING GRADING OPERATIONS.
- CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT AND CITY OF PUYALLUP REQUIREMENTS.
- CONTRACTOR TO RAISE AND ADJUST PROPOSED SANITARY SEWER CLEANOUT LIDS TO FINAL GRADE AS NECESSARY. CLEANOUTS WITHIN ADA ACCESSIBLE PATHS SHALL BE ADJUSTED TO FINAL ELEVATIONS IN COMPLIANCE WITH CURRENT ADA REQUIREMENTS.
- CONTRACTOR TO RAISE AND ADJUST ALL EXISTING AND PROPOSED CATCH BASIN RIMS TO FINAL GRADE AS NECESSARY. CATCH BASINS WITHIN ADA ACCESSIBLE PATHS SHALL BE ADJUSTED TO FINAL ELEVATIONS IN COMPLIANCE WITH CURRENT ADA STANDARDS.
- CONTRACTOR TO ORDER LOCATES AND FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION TO ENSURE THAT UTILITY CONFLICTS DO NOT EXIST. CONTRACTOR TO REVIEW UTILITY ASBUILTS IN ORDER TO VERIFY EXISTING UTILITY LOCATIONS. CONTRACTOR SHALL POTHOLE ALL POTENTIAL UTILITY CONFLICTS PRIOR TO CONSTRUCTION. NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. OF ANY CONFLICTS.

## CONSTRUCTION NOTES:

- PROPOSED COMMERCIAL APPROACH PER THE CITY OF PUYALLUP STANDARD DETAIL 1.02.16. SEE DETAIL 3/C8.3. REFER TO DETAIL 1/C8.1 FOR THE PROPOSED ELEVATIONS AND SLOPES. ASPHALT WITHIN ROW SHALL CONFORM TO THE CITY OF PUYALLUP STANDARD DETAIL 1.01.05. SEE DETAIL 5/C8.3. ASPHALT WITHIN PRIVATE PROPERTY SHALL CONFORM WITH DETAIL 1/C7.0.
- PROPOSED CURB AND GUTTER PER THE CITY OF PUYALLUP STANDARD DETAIL 1.02.09. SEE DETAIL 2/C8.3.
- PROPOSED REVERSED SLOPE SIDEWALK PER THE CITY OF PUYALLUP STANDARD DETAIL 1.02.01. SEE DETAIL 1/C8.3.
- PROPOSED COMMERCIAL APPROACH RAMP PER THE CITY OF PUYALLUP STANDARD DETAIL 1.02.19. SEE DETAIL 4/C8.3.
- PROPOSED SAWCUT (TYP.).
- PROTECT EXISTING STREET LIGHT TO REMAIN.
- PROTECT EXISTING J-BOX TO REMAIN. ADJUST TO FINAL GRADE AS NEEDED.
- PROTECT EXISTING FIRE HYDRANT TO REMAIN.
- RELOCATE EXISTING TELEPHONE CABINET TO THE PROPOSED PLANTER. CONTRACTOR TO COORDINATE RELOCATION OF CABINET WITH THE PURVEYOR.
- PROTECT EXISTING UNDERGROUND POWER. CONTRACTOR TO POTHOLE AND VERIFY HORIZONTAL AND VERTICAL LOCATION OF EXISTING THE CONDUIT.
- PROTECT EXISTING UNDERGROUND TELEPHONE. CONTRACTOR TO POTHOLE AND VERIFY HORIZONTAL AND VERTICAL LOCATION OF EXISTING THE CONDUIT.
- PROTECT EXISTING GAS TO REMAIN.
- PROTECT EXISTING WATER MAIN TO REMAIN.
- PROTECT EXISTING SEWER MAIN TO REMAIN.
- PROTECT EXISTING STORM MAIN TO REMAIN.
- PROPOSED MOUNTABLE CURB ISLAND. REFER TO DETAIL 1/C8.1 FOR THE PROPOSED ELEVATIONS AND SLOPES.
- RELOCATE EXISTING SIGN. CONTRACTOR TO CONFIRM FINAL PLACEMENT WITH ROW INSPECTOR.
- PROPOSED BUS STOP BENCH PER PIERCE COUNTY TRANSIT STANDARDS. SEE DETAIL 6/C8.3.
- ASPHALT GRIND AND OVERLAY TO NEAREST LANE EDGE.
- PROPOSED WHITE LANE PAVEMENT MARKINGS PER THE CITY OF PUYALLUP STANDARD DETAIL 1.03.10. SEE DETAIL 2/C8.4. CONTRACTOR TO COORDINATE WITH ROW INSPECTOR AND MATCH EXISTING PAVEMENT MARKINGS.
- PROPOSED DETECTABLE WARNING SURFACE PER THE CITY OF PUYALLUP STANDARD DETAIL 1.02.19. SEE DETAIL 4/C8.3.
- CATCH BASIN TYPE II PER CITY OF PUYALLUP STANDARD DETAIL 02.01.04. SEE DETAIL 1/C5.6.
- PROPOSED FIRE HYDRANT. REFER TO SHEET C6.0 FOR MORE DETAILS.
- FULL DEPTH ASPHALT REPLACEMENT. ASPHALT WITHIN ROW SHALL CONFORM TO THE CITY OF PUYALLUP STANDARD DETAIL 1.01.05. SEE DETAIL 5/C8.3. CONTRACTOR TO MATCH DEPTH OF EXISTING ASPHALT.

## UTILITY CONFLICT NOTE:

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 AT 811 48 HOURS IN ADVANCE 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 NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

## S MERIDIAN - PLAN OVER PROFILE

FOR  
**ARCO ampm PUYALLUP**  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY

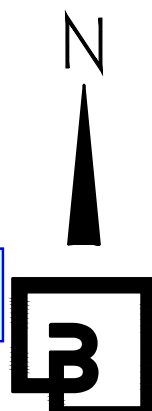
## UTILITY PROTECTION NOTE:

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## UTILITY POTHOLING NOTE:

THE CIRCLED LOCATIONS ARE REQUIRED TO BE POTHOLED TO VERIFY VERTICAL AND HORIZONTAL LOCATION OF EXISTING UTILITY AND/OR POTENTIAL CONFLICTS WITH EXISTING UTILITIES. POTHOLING SHALL BE PERFORMED PRIOR TO INSTALLING ANY PROPOSED UTILITIES. CONTRACTOR SHALL NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. OF ANY CONFLICTS.

Show WSDOT stormwater  
infrastructure. [civils, sheet C8.0]



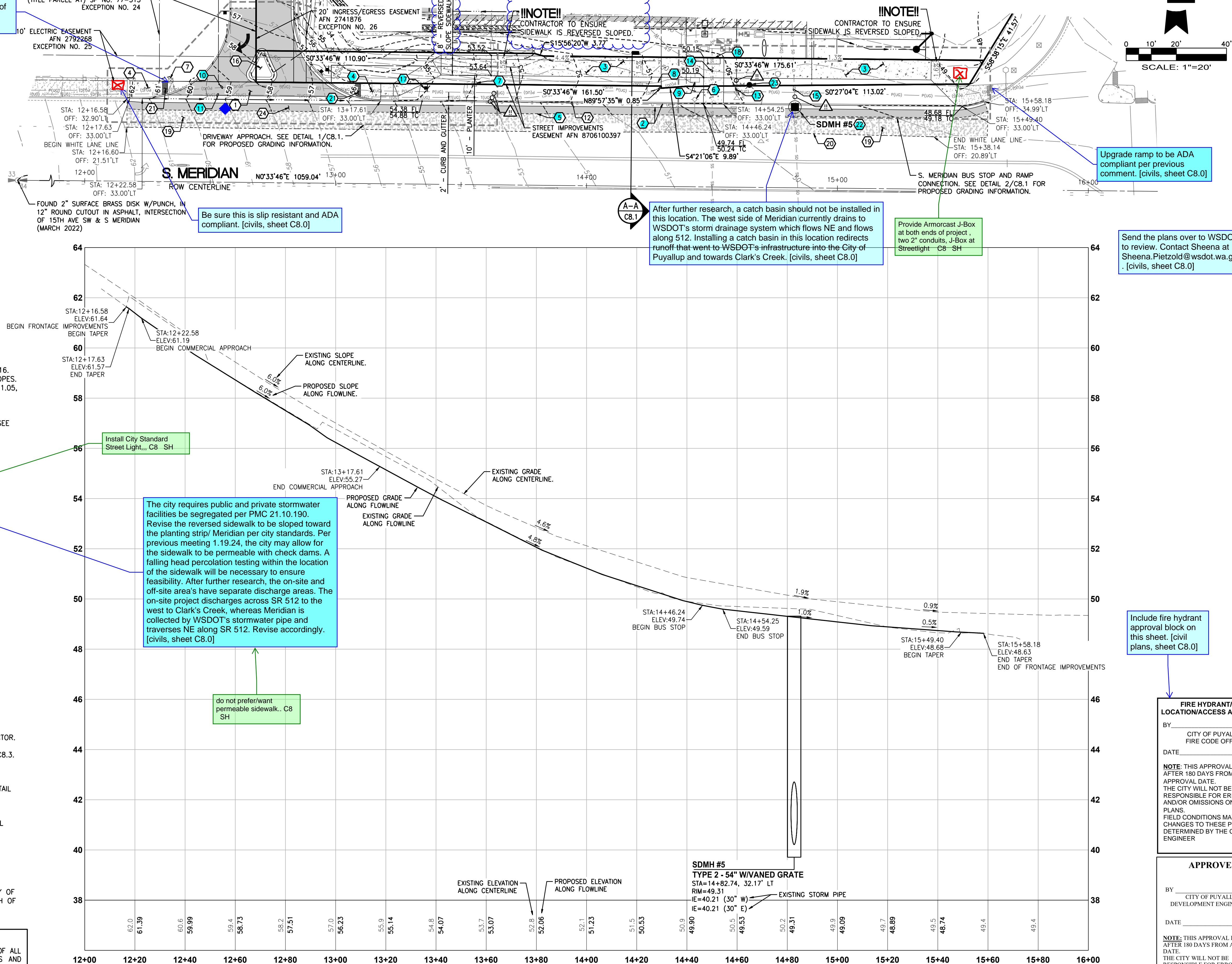
0 10' 20' 40'  
SCALE: 1"=20'

Upgrade ramp to be ADA  
compliant per previous  
comment. [civils, sheet C8.0]

After further research, a catch basin should not be installed in this location. The west side of Meridian currently drains to WSDOT's storm drainage system which flows NE and flows along 512. Installing a catch basin in this location redirects runoff that went to WSDOT's infrastructure into the City of Puyallup and towards Clark's Creek. [civils, sheet C8.0]

Provide Armorcast J-Box  
at both ends of project,  
two 2" conduits, J-Box at  
Streetlight - C8 - SH

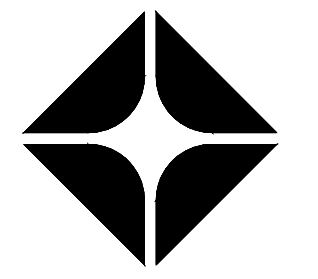
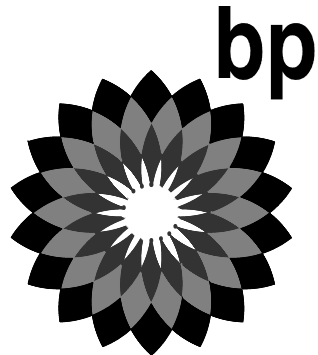
Send the plans over to WSDOT  
to review. Contact Sheena at  
Sheena.Pietzold@wsdot.wa.gov  
[civils, sheet C8.0]



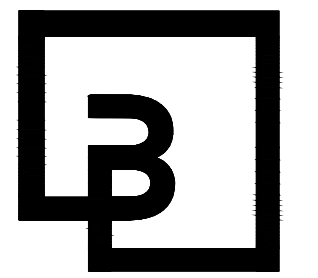
## S. MERIDIAN PROFILE

HORIZONTAL SCALE: 1"=20', VERTICAL SCALE: 1"=2'

CLIENT:



BP WEST COAST PRODUCTS, LLC



**Barghausen  
Consulting Engineers, Inc.**

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

NO.	DATE	REVISION DESCRIPTION
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SEAL:



1/12/24

## DEVELOPMENT INFORMATION:

**ARCO NTI**  
**3400 am/pm**  
**FUEL CANOPY w/ 6 MPD's**

## SITE ADDRESS:

**1402 S. MERIDIAN**  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

## FACILITY #TBD

DESIGNED BY: JDF ALLIANCE ZBDK:  
CHECKED BY: AW BP REP:  
DRAWN BY: JDF ALLIANCE PM:  
VERSION: PROJECT NO:  
21730

## DRAWING TITLE:

**S MERIDIAN - PLAN OVER  
PROFILE**

## SHEET NO:

**C8.0**



- GRADING NOTES:**
- ALL SPOT ELEVATIONS SHOWN ARE TO FINISH SURFACE (TOP OF ASPHALT OR TOP OF CONCRETE PAVEMENT, NOT TOP OF CURB/SIDEWALK) UNLESS OTHERWISE NOTED. (TA = TOP OF PAVEMENT, TC = TOP OF CONCRETE SIDEWALK/CURB, ME = MATCH EXISTING ELEVATIONS, FC = FLUSH CURB, FL = FLOW LINE, GB = GRADE BREAK)
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**UTILITY POT-HOLING NOTE:**

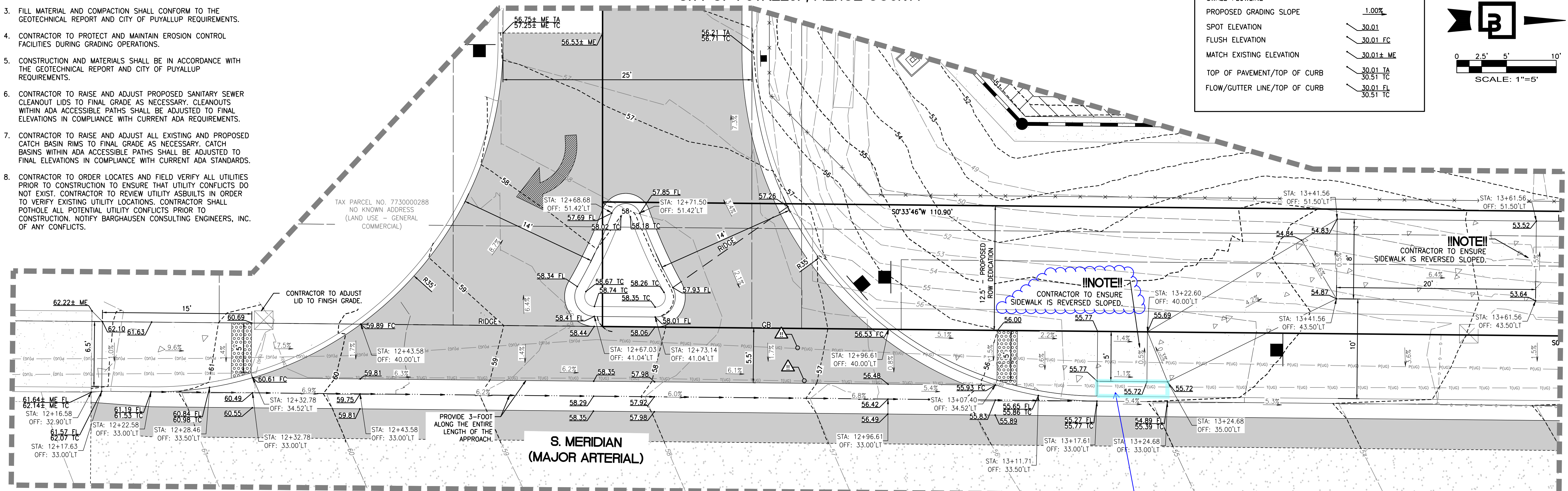
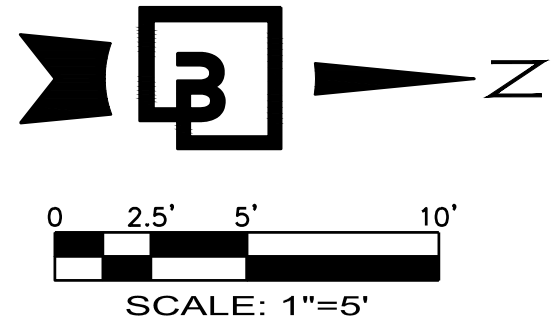
THE CIRCLED LOCATIONS ARE REQUIRED TO BE POT-HOLED TO VERIFY VERTICAL AND HORIZONTAL LOCATION OF EXISTING UTILITY AND/OR POTENTIAL CONFLICTS WITH EXISTING UTILITIES. POT-HOLING SHALL BE PERFORMED PRIOR TO INSTALLING ANY PROPOSED UTILITIES. CONTRACTOR SHALL NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. OF ANY CONFLICTS.

## RIGHT-OF-WAY GRADING DETAILS

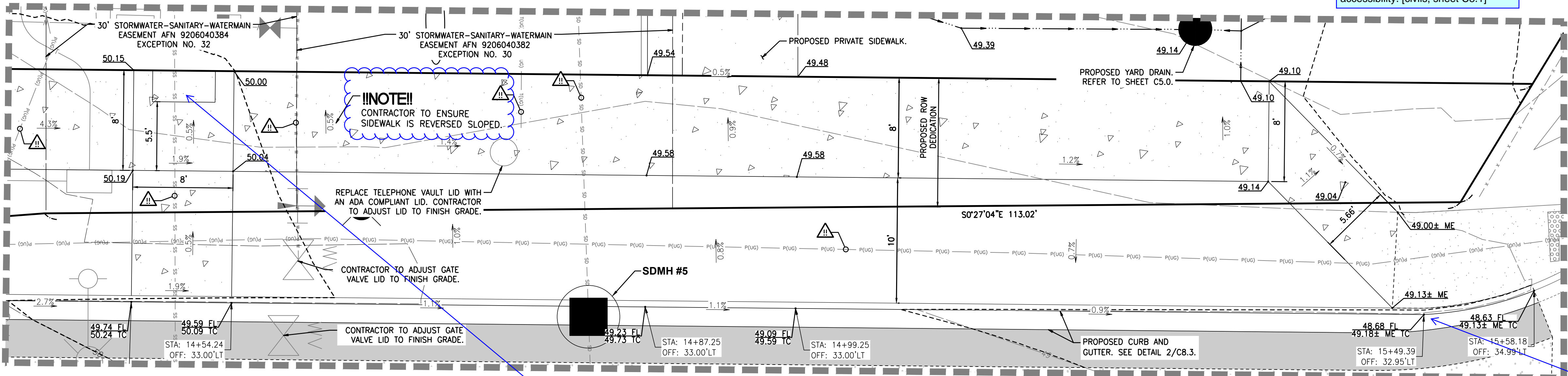
FOR  
**ARCO ampm PUYALLUP**  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY

**GRADING LEGEND:**

PROPOSED CONTOUR	--- 30 ---
EXISTING CONTOUR	--- 30 ---
PROPOSED GRADE BREAK	--- GB ---
PROPOSED RIDGE LINE	--- RIDGE ---
SWALE FLOWLINE	--- FLOWLINE ---
PROPOSED GRADING SLOPE	1.00%
SPOT ELEVATION	30.01
FLUSH ELEVATION	30.01 FC
MATCH EXISTING ELEVATION	30.01± ME
TOP OF PAVEMENT/TOP OF CURB	30.01 TA 30.51 TC
FLOW/GUTTER LINE/TOP OF CURB	30.01 FL 30.51 TC



**1 S MERIDIAN DRIVEWAY DETAIL**  
SCALE: 1" = 5'



**2 S MERIDIAN BUS STOP AND RAMP CONNECTION DETAIL - NEAR NE PROPERTY CORNER**  
SCALE: 1" = 5'

**UTILITY PROTECTION NOTE:**

APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN ON THESE PLANS. CONTRACTOR TO COORDINATE WITH SURVEYOR AND USE EXTREME CAUTION WHEN EXCAVATING ON-SITE. UNTIL EXISTING GAS AND POWER SERVICE LOCATIONS ARE CONFIRMED, CONTRACTOR TO ORDER INDEPENDENT UTILITY LOCATES (INCLUDING GAS AND POWER) FOR THE FULL SCOPE OF WORK PRIOR TO CONSTRUCTION OR ANY GROUND DISTURBING ACTIVITIES.

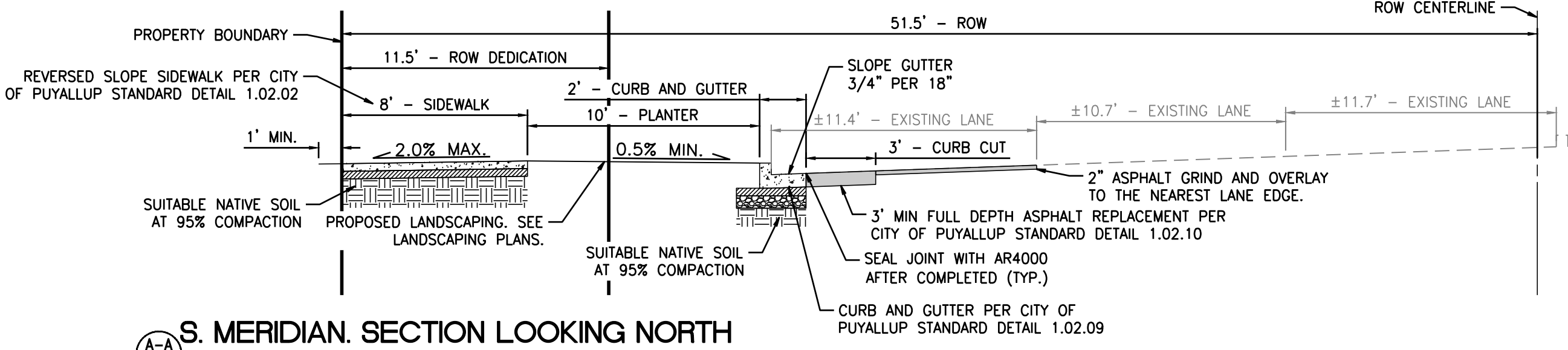
**UTILITY CONFLICT NOTE:**

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Relocate the bus stop bench outside of the 30' utility easement. The bench is proposed directly over top of the sewer main which will be upgraded as a city Capitol Improvement project in the near future [civils, sheet C8.1]



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



**S. MERIDIAN. SECTION LOOKING NORTH**  
SCALE: 1" = 5'

**APPROVED**

BY: CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING

DATE:

**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.

CLIENT:

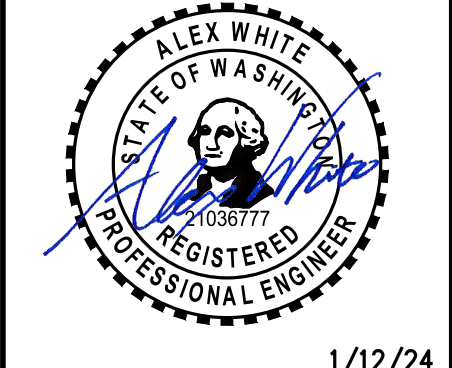
**bp**

**ARCO**  
BP WEST COAST PRODUCTS, LLC

**Barghausen Consulting Engineers, Inc.**

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

NO.	DATE	REVISION DESCRIPTION
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1/12/24

DEVELOPMENT INFORMATION:

**ARCO NTI**

**3400 am/pm**

**FUEL CANOPY w/ 6 MPD's**

SITE ADDRESS:

**1402 S. MERIDIAN**

@ HIGHWAY 512  
PUYALLUP, WASHINGTON

**FACILITY #TBD**

DESIGNED BY: JDF  
CHECKED BY: AW  
DRAWN BY: JDF  
VERSION: 1  
PROJECT NO: 21730

DRAWING TITLE:  
**RIGHT-OF-WAY GRADING DETAILS**

SHEET NO:

**C8.1**



GRADING NOTES:

- ALL SPOT ELEVATIONS SHOWN ARE TO FINISH SURFACE (TOP OF ASPHALT OR TOP OF CONCRETE PAVEMENT, NOT TOP OF CURB/SIDEWALK) UNLESS OTHERWISE NOTED. (TA = TOP OF PAVEMENT, TC = TOP OF CONCRETE SIDEWALK/CURB, ME = MATCH EXISTING ELEVATIONS, FC = FLUSH CURB, FL = FLOW LINE, GB = GRADE BREAK)
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- CONTRACTOR TO ORDER LOCATES AND FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION TO ENSURE THAT UTILITY CONFLICTS DO NOT EXIST. CONTRACTOR TO REVIEW UTILITY ASBLUTS IN ORDER TO VERIFY EXISTING UTILITY LOCATIONS. CONTRACTOR SHALL POTHOLE ALL POTENTIAL UTILITY CONFLICTS PRIOR TO CONSTRUCTION. NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. OF ANY CONFLICTS.

CONSTRUCTION NOTES:

- PROPOSED URBAN COMMERCIAL APPROACH PER CITY OF PUYALLUP STANDARD 01.02.18. SEE DETAIL 1/C8.2.
- PROPOSED CURB AND GUTTER PER THE CITY OF PUYALLUP STANDARD DETAIL 1.02.09. SEE DETAIL 2/C8.3. CONTRACTOR TO MATCH EXISTING GUTTER WIDTH.
- PROPOSED SIDEWALK PER THE CITY OF PUYALLUP STANDARD DETAIL 1.02.01. SEE DETAIL 1/C8.3.
- PROPOSED ASPHALT PAVEMENT. SEE DETAIL SEE DETAIL 1/C7.0.
- PROPOSED SAWCUT (TYP.). CONTRACTOR SAWCUT AT THE EDGE OF THE EXISTING GUTTER.
- PROTECT EXISTING WATER GATE VALVE TO REMAIN.
- PROTECT EXISTING FIRE HYDRANT TO REMAIN.
- PROTECT EXISTING SITE SIGN TO REMAIN.
- EXISTING ASPHALT TO REMAIN. EXISTING ASPHALT TO BE PROTECTED AND HAVE NO SIGNS OF CONCRETE RESIDUE OR STAINING ON ROAD UPON COMPLETION OF CONSTRUCTION.
- PROTECT EXISTING WATER MAIN. CONTRACTOR TO POTHOLE AND VERIFY HORIZONTAL AND VERTICAL LOCATION OF THE EXISTING MAIN.
- SAWCUT SIDEWALK AT NEAREST COLD JOINT.

Create a note to have the contractor place a silt sock in the downstream CB to the west of this approach during construction. [civils, sheet C8.2]

Civil Resub Sheet C8.2: This existing fire hydrant has been hit more than once due to turn radius issues with this traffic access entrance/exit. Now traffic on this access road will likely increase 20-fold. Concrete bollards cannot be used to protect the hydrant because they are not crash worthy and would create liability issues for the City. The hydrant needs to be relocated out of the potential large vehicle off tracking turn radius while providing a minimum 3-foot flat clear zone around the hydrant. This fire hydrant is currently placed behind the sidewalk, and it is located too close to the private access driveway that will allow every vehicle coming from northbound S Meridian, as well as any traffic from 15th Ave to access this proposed Arco fuel station / food mart. Just because the fuel tanker trucks that make deliveries to this development will not use this private access driveway does not mean traffic will not increase. Food delivery vehicles for the food mart will likely use this entrance, as well as private vehicles pulling trailers with recreational vehicles that want to fuel up at this development. We have high static water pressure on 15th Ave SW. If the fire hydrant gets hit and breaks the foot of the hydrant below ground, it could potentially take out one of the existing buildings or the access driveway itself, leaving your development without access from northbound S Meridian. If the existing sidewalk is wide enough to allow the fire hydrant to be relocated 15-feet to the east and placed behind the 15th Ave curb per City Standard detail 03.05.01 it should be back far enough to be safe from traffic off-tracking. Having the fire hydrant relocated, would allow the driveway approach radius to be widened and fortified to support the additional vehicle traffic.

UTILITY POTHOLING NOTE:

THE CIRCLED LOCATIONS ARE REQUIRED TO BE POTHOLED TO VERIFY VERTICAL AND HORIZONTAL LOCATION OF EXISTING UTILITY AND/OR POTENTIAL CONFLICTS WITH EXISTING UTILITIES. POTHOLING SHALL BE PERFORMED PRIOR TO INSTALLING ANY PROPOSED UTILITIES. CONTRACTOR SHALL NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. OF ANY CONFLICTS.

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UTILITY CONFLICT NOTE:

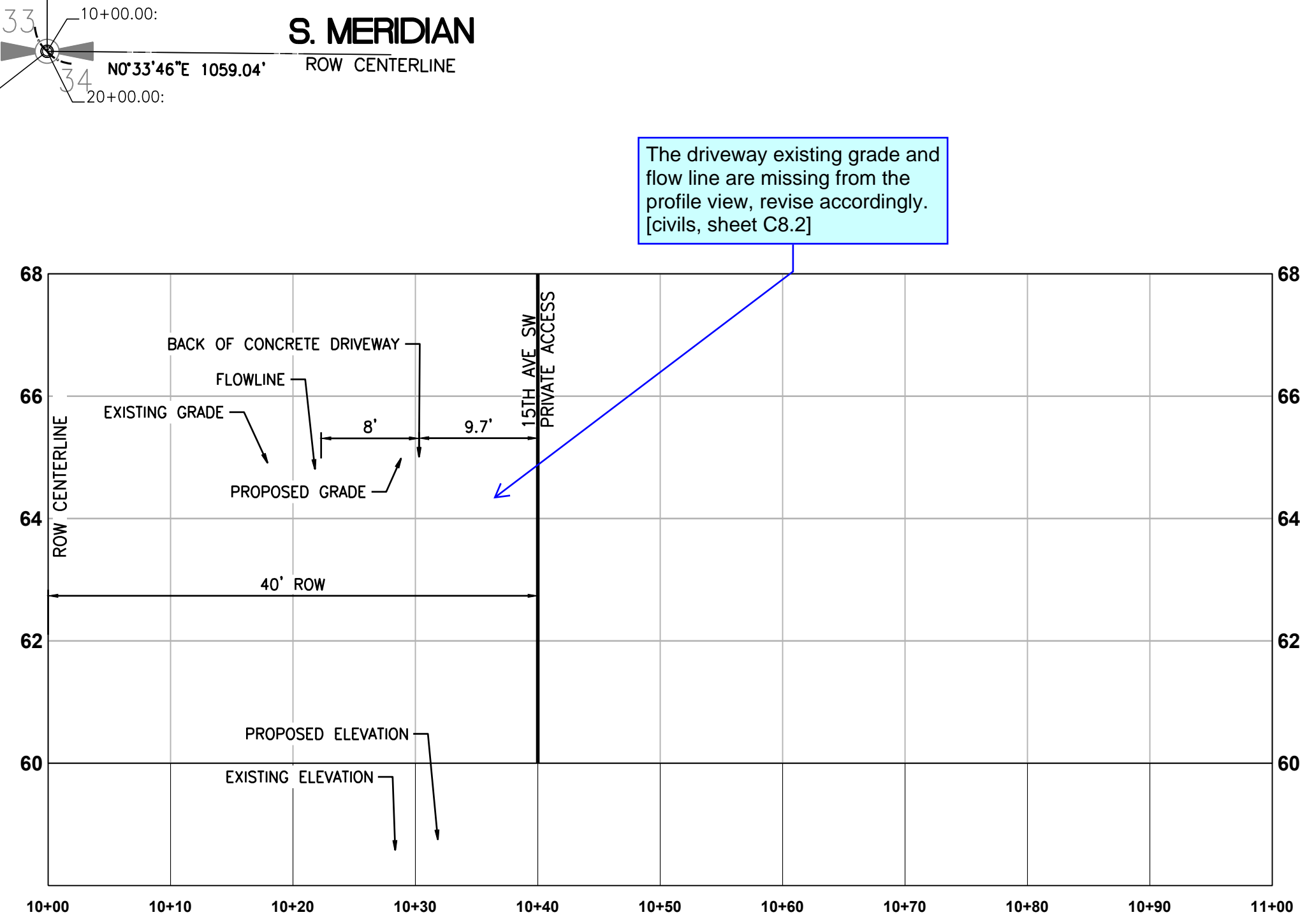
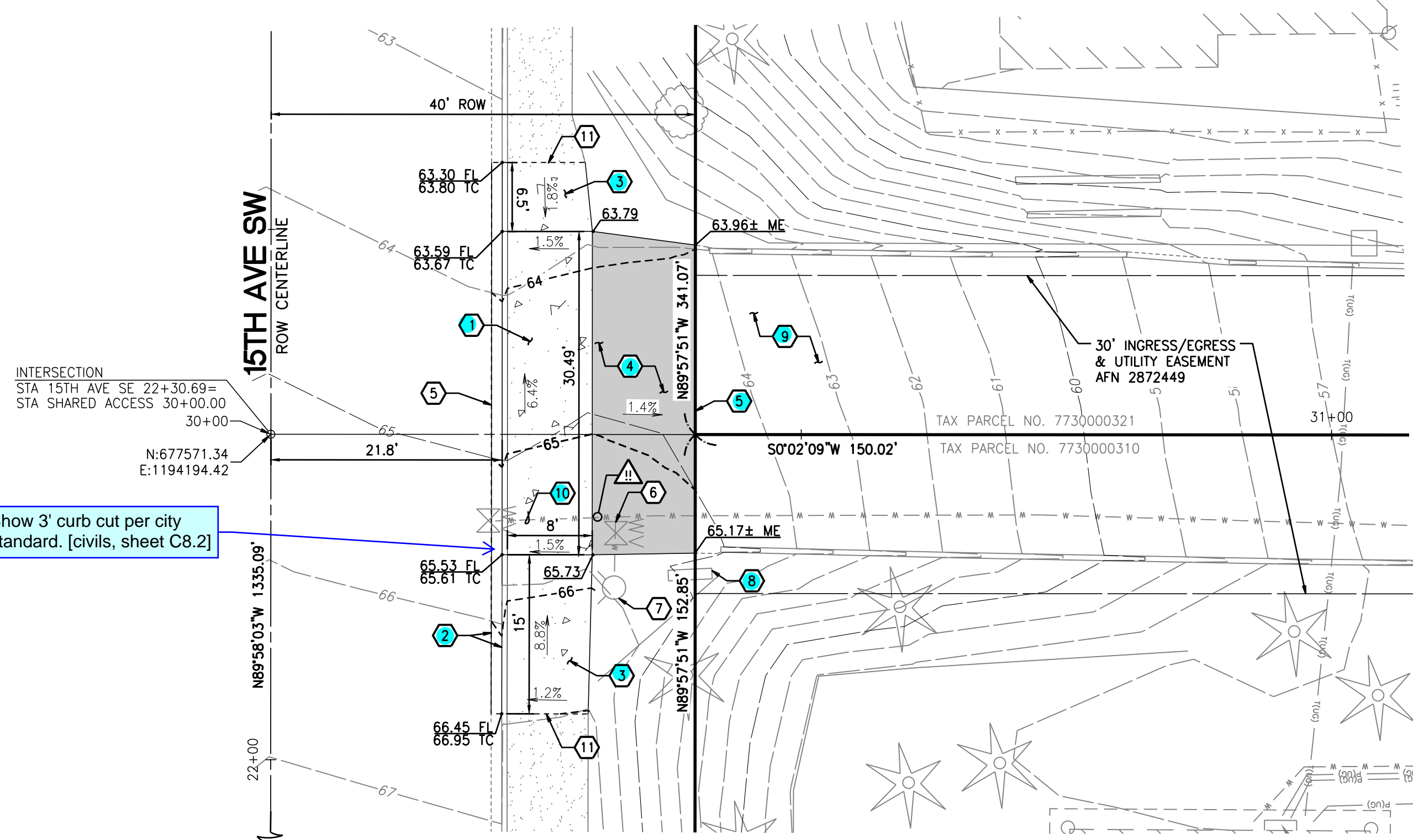
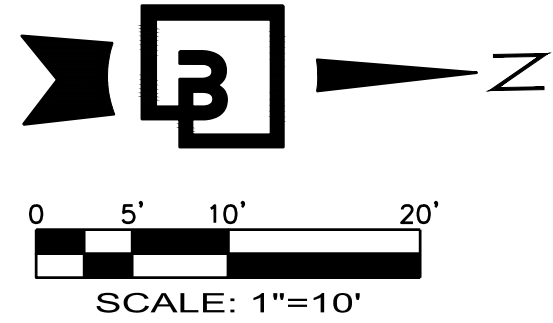
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GRADING LEGEND:

PROPOSED CONTOUR	----- 30 -----
EXISTING CONTOUR	----- 30 -----
PROPOSED GRADE BREAK	----- GB -----
PROPOSED RIDGE LINE	----- RIDGE -----
SWALE FLOWLINE	----->-----
PROPOSED GRADING SLOPE	1.00%
SPOT ELEVATION	30.01
FLUSH ELEVATION	30.01 FC
MATCH EXISTING ELEVATION	30.01± ME
TOP OF PAVEMENT/TOP OF CURB	30.01 TA 30.51 TC
FLOW/GUTTER LINE/TOP OF CURB	30.01 FL 30.51 TC

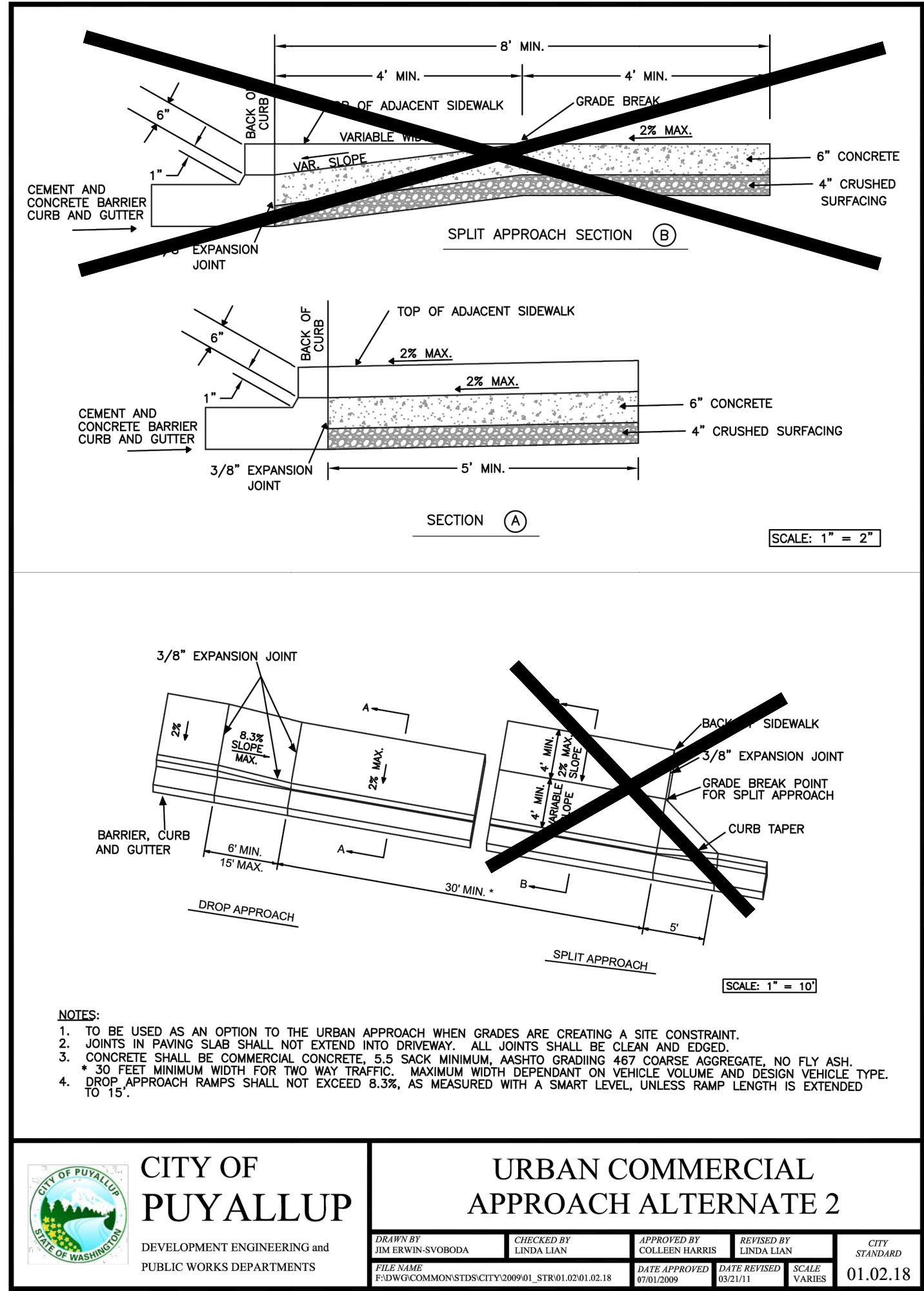
15TH AVE. SE - DRIVEWAY PLAN

FOR  
**ARCO ampm PUYALLUP**  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



SOUTH DRIVEWAY PROFILE

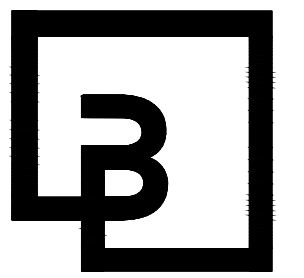
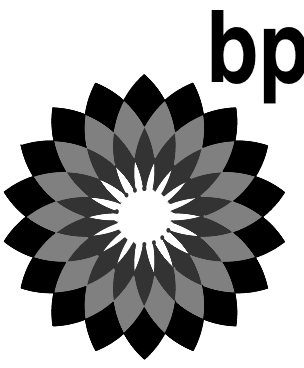
HORIZONTAL SCALE: 1"=20', VERTICAL SCALE: 1"=2'



1  
C8.2 CITY OF PUYALLUP COMERCIAL APPROACH  
SCALE: NTS

CITY OF PUYALLUP		URBAN COMMERCIAL APPROACH ALTERNATE 2			
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS		DESIGNED BY TODD L. HANSEN DATE: 11/02/2018	CHECKED BY LINDA L. LARSEN DATE: 11/02/2018	APPROVED BY ALEX WHITE DATE: 11/02/2018	REVISED BY LINDA L. LARSEN DATE: 11/02/2018
		FILE NAME P:\210000\COMMON\PROJECTS\21730-40-00.dwg	DATE APPROVED 11/02/2018	DATE REVISION 11/02/2018	CITY STANDARD 01.02.18

CLIENT:



**Barghausen Consulting Engineers, Inc.**

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

NO.	DATE	REVISION	DESCRIPTION
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SEAL:



1/12/24

DEVELOPMENT INFORMATION:

**ARCO NTI**  
**3400 am/pm**  
**FUEL CANOPY w/ 6 MPD's**

SITE ADDRESS:

**1402 S. MERIDIAN**  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

**FACILITY #TBD**

DESIGNED BY: JDF ALLIANCE 280M

CHECKED BY: AW BP REP:

DRAWN BY: JDF ALLIANCE PM:

VERSION: 1 PROJECT NO: 21730

DRAWING TITLE:  
**15TH AVE. SE - DRIVEWAY PLAN**

SHEET NO:

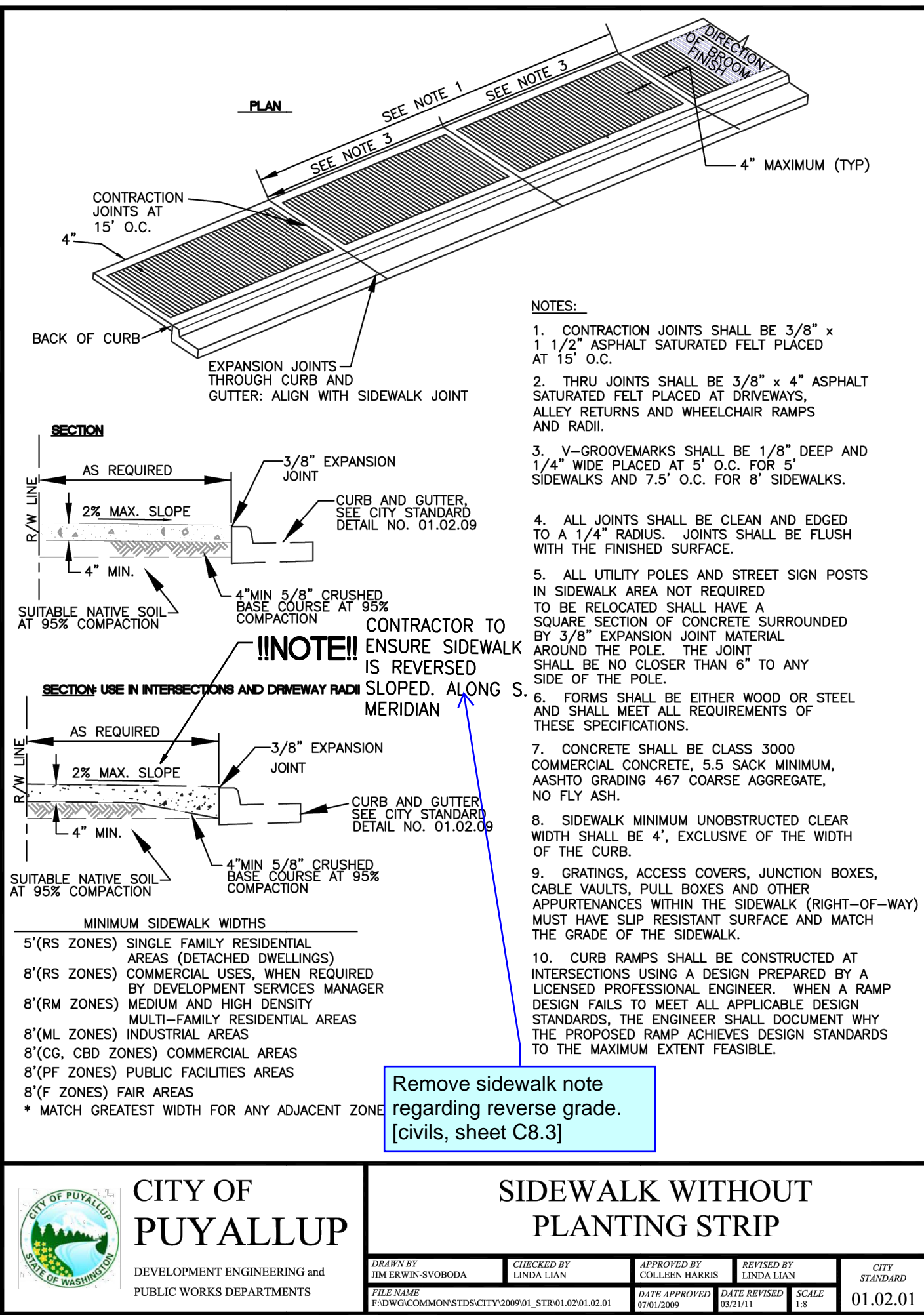
**C8.2**

**APPROVED**  
BY \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING  
DATE \_\_\_\_\_  
**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.



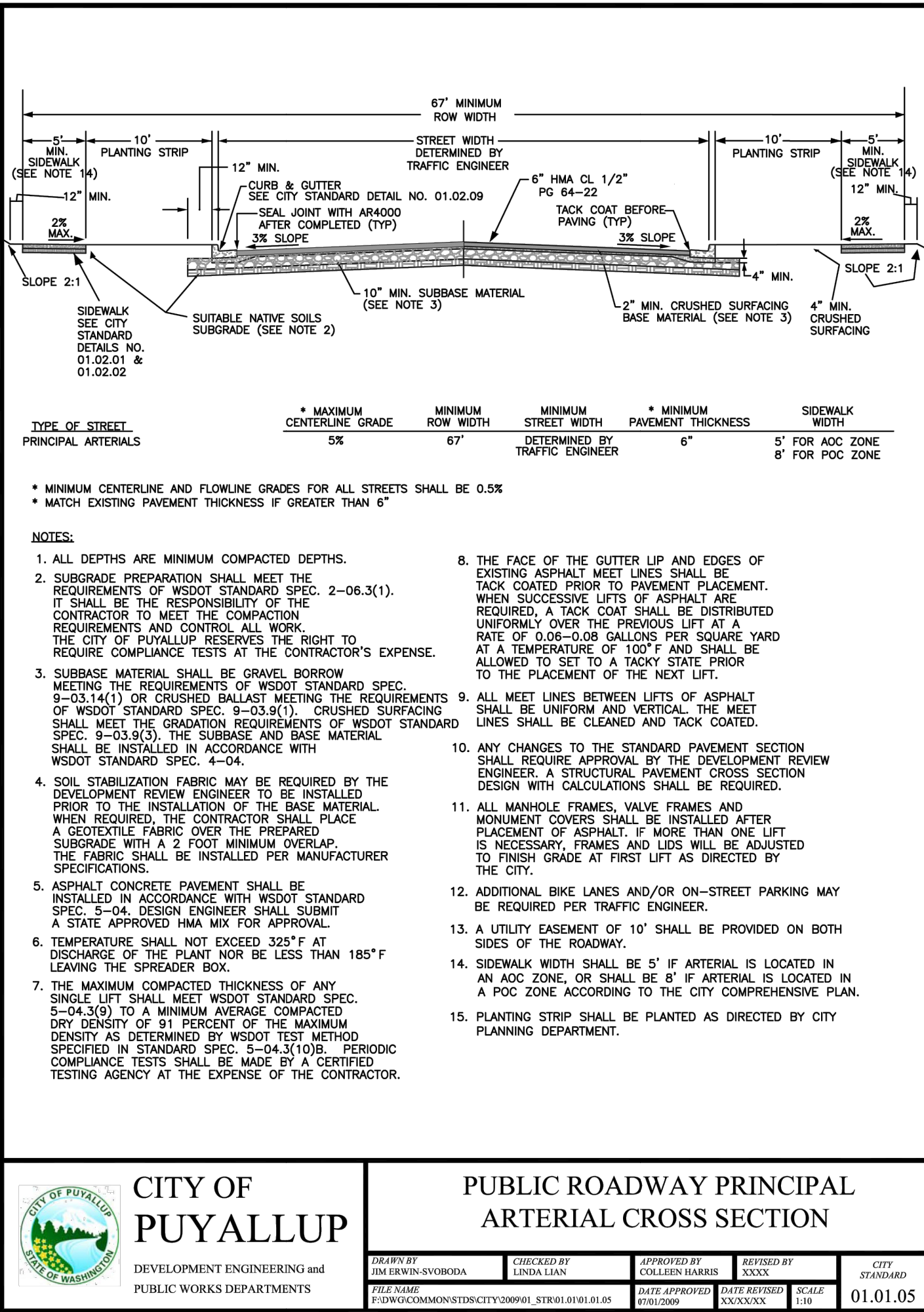
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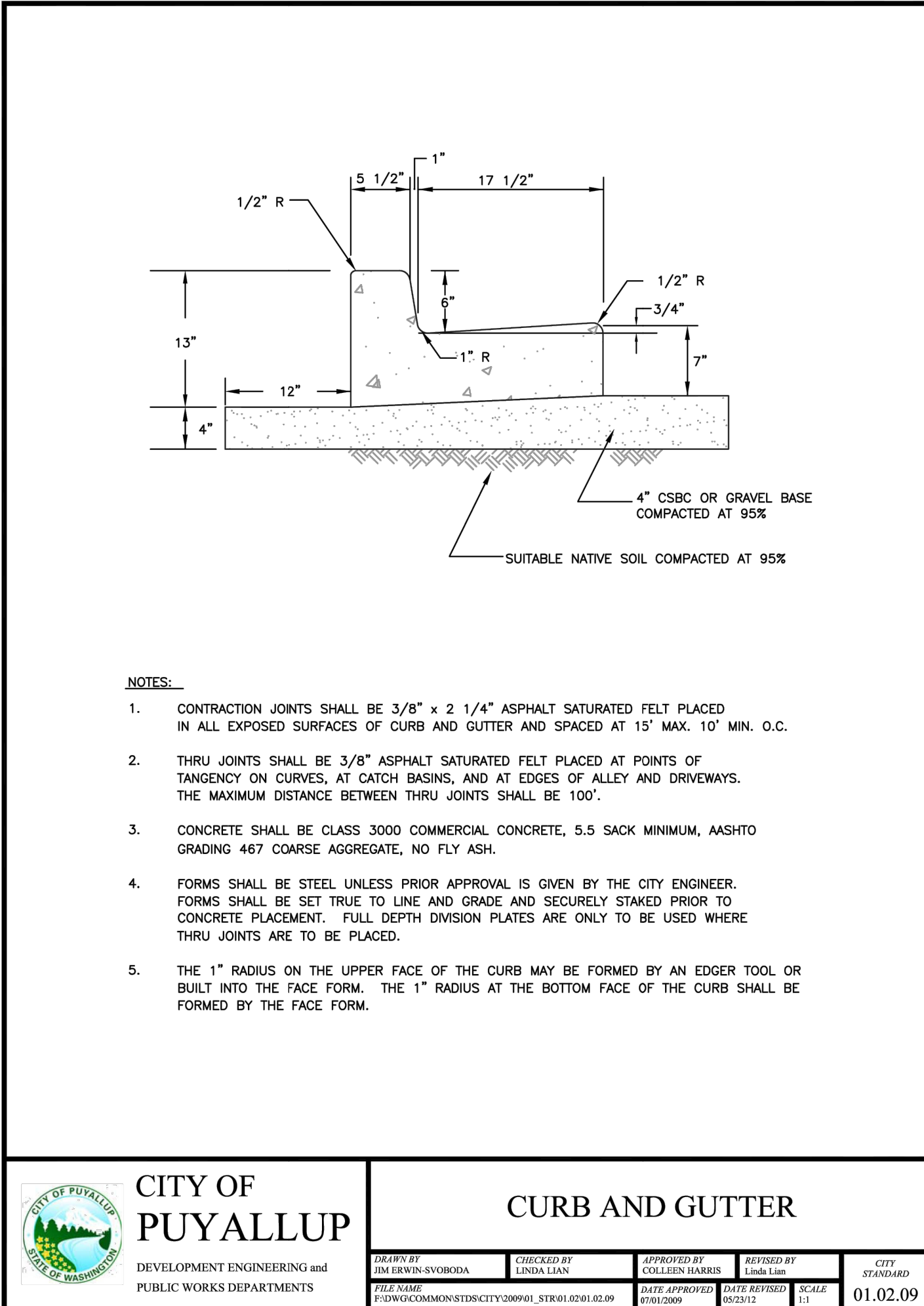
1 CITY OF PUYALLUP CONCRETE SIDEWALK (MODIFIED)

C8.3 SCALE: NTS



5 CITY OF PUYALLUP ASPHALT PAVEMENT

C8.3 SCALE: NTS



2 CITY OF PUYALLUP CURB AND GUTTER

C8.3 SCALE: NTS

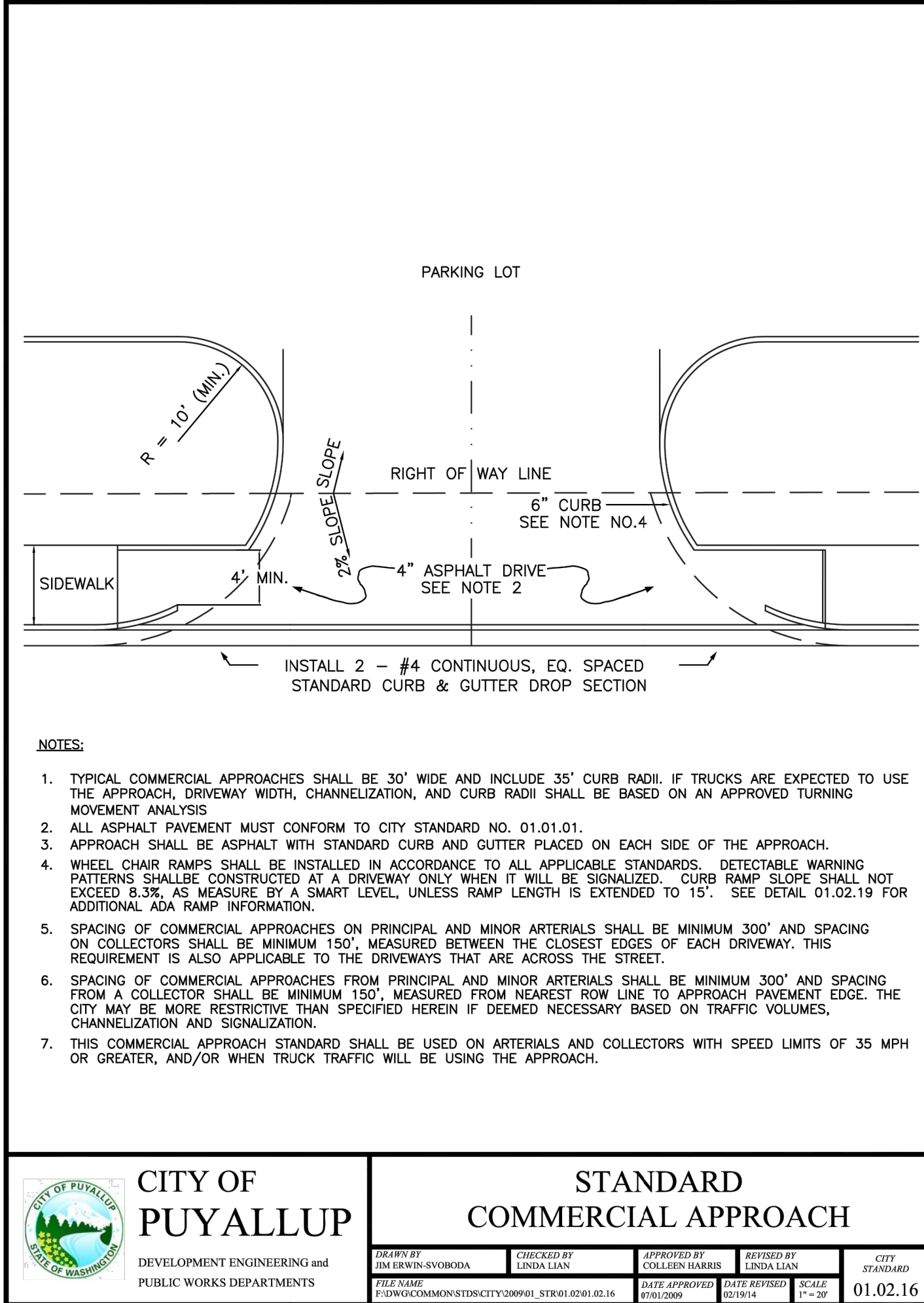
## RIGHT-OF-WAY DETAILS

FOR

### ARCO ampm PUYALLUP

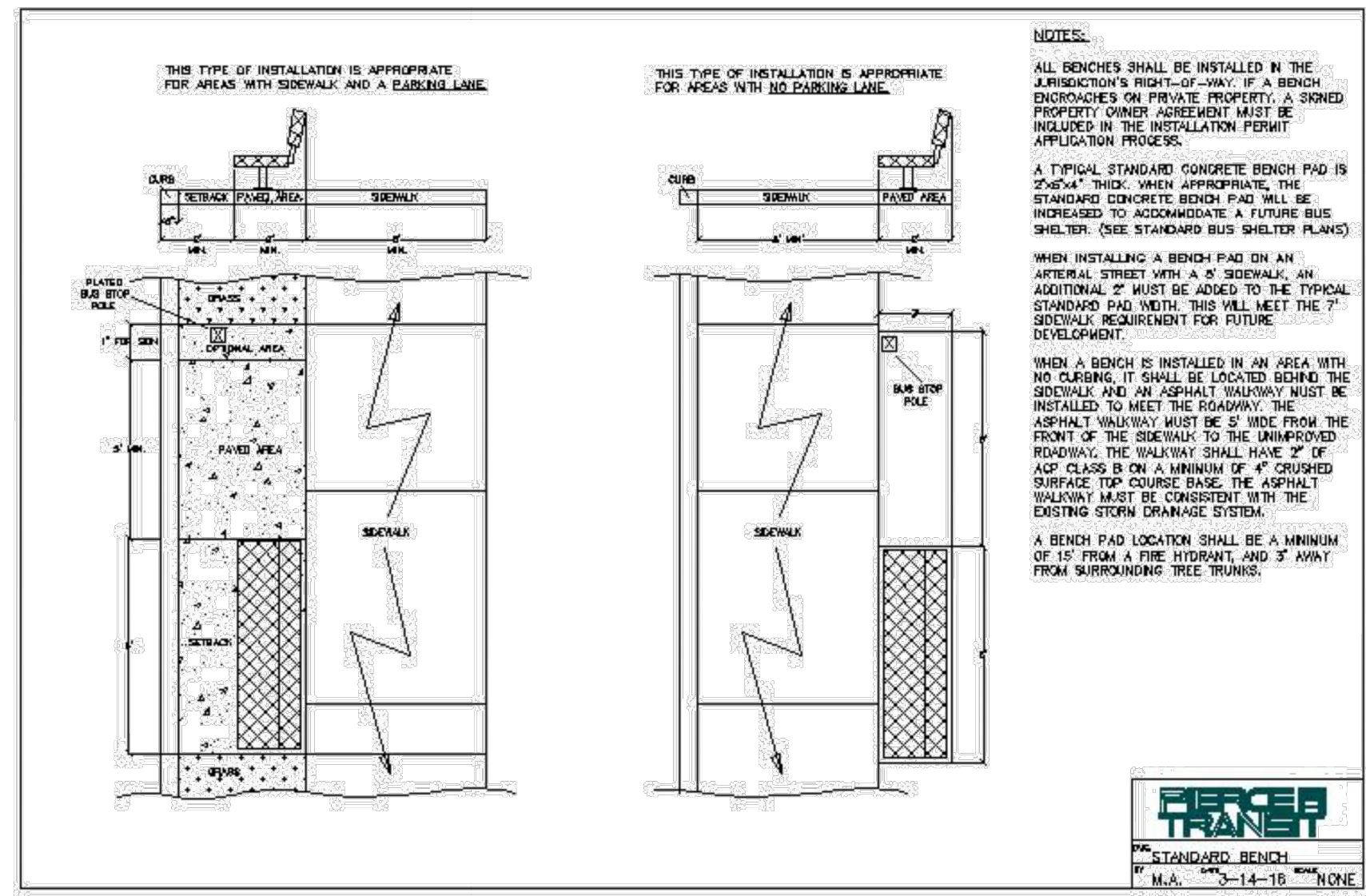
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.

CITY OF PUYALLUP, PIERCE COUNTY



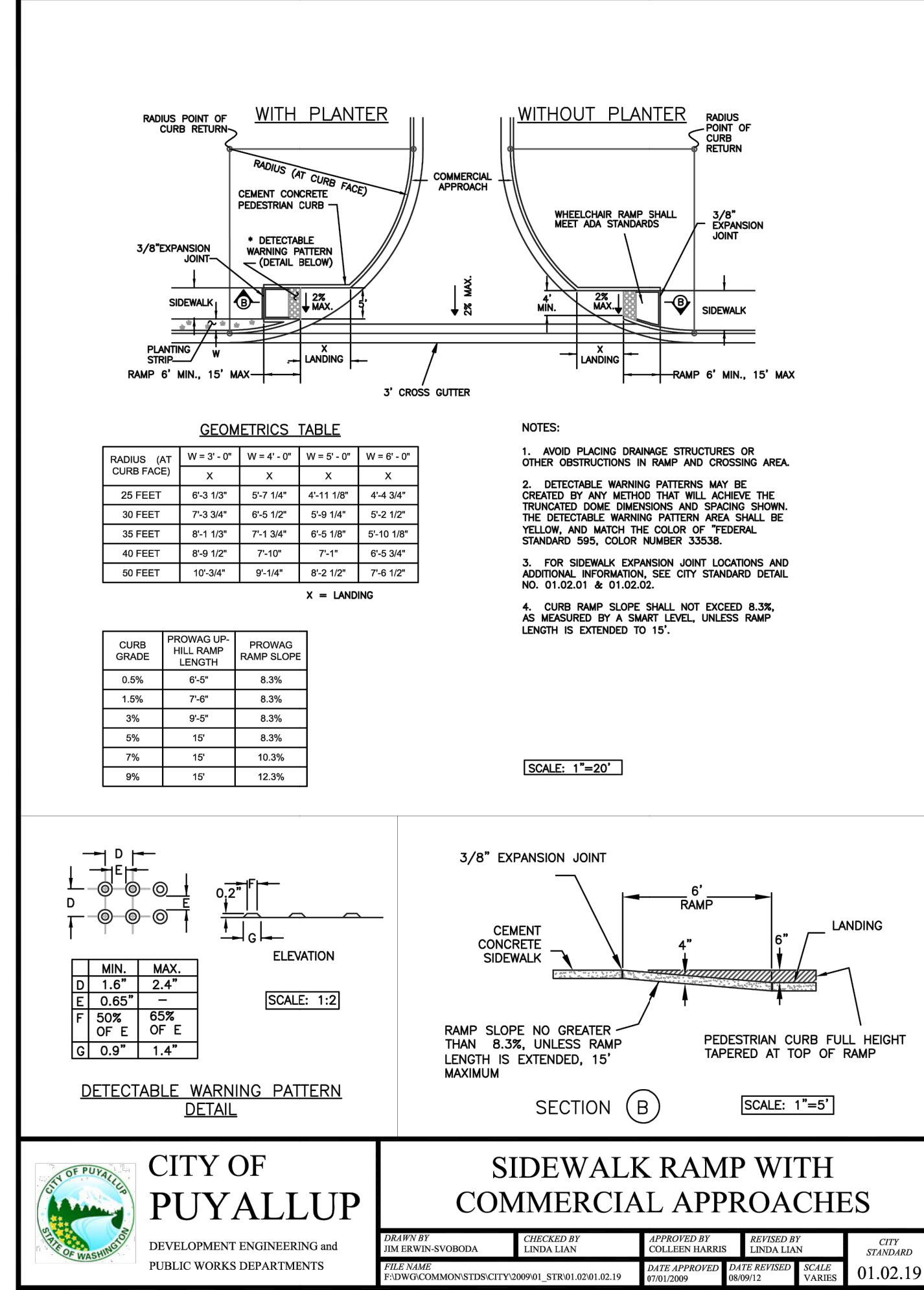
3 CITY OF PUYALLUP STANDARD COMMERCIAL APPROACH

C8.3 SCALE: NTS



6 PIERCE COUNTY TRANSIT BENCH

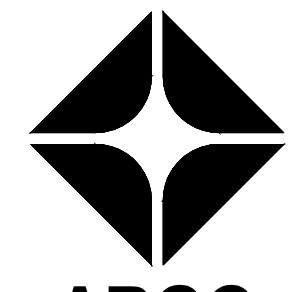
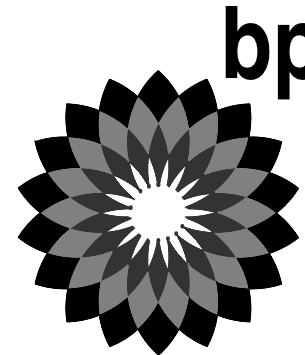
C8.3 SCALE: NTS



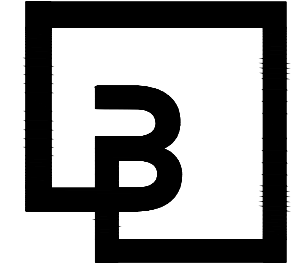
4 CITY OF PUYALLUP SIDEWALK RAMP

C8.3 SCALE: NTS

CLIENT:



BP WEST COAST PRODUCTS, LLC



Barghausen Consulting Engineers, Inc.

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

NO. DATE REVISION DESCRIPTION

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SEAL:



1/12/24

DEVELOPMENT INFORMATION:

ARCO NTI

3400 am/pm  
FUEL CANOPY w/ 6 MPD's

SITE ADDRESS:

1402 S. MERIDIAN  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

FACILITY #TBD

DESIGNED BY: JDF

ALLIANCE ZBDM:

CHECKED BY: AW

BP REP:

DRAWN BY: JDF

ALLIANCE PM:

VERSION: 1

PROJECT NO:

21730

DRAWING TITLE:

RIGHT-OF-WAY DETAILS

SHEET NO:

C8.3

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.



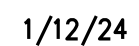
FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



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DEVELOPMENT INFORMATION:

**ARCO NTI**

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**3400 am/pm**

**FUEL CANOPY w/ 6 MPD's**

**SITE ADDRESS:**  
**1402 S. MERIDIAN**  
**@ HIGHWAY 512**  
**PUYALLUP, WASHINGTON**

FACILITY #TBD

DESIGNED BY: JDF	ALLIANCE Z&DM:
CHECKED BY: AW	BP REP#:
DRAWN BY: JDF	ALLIANCE PM:
VERSION:	PROJECT NO: <b>21730</b>

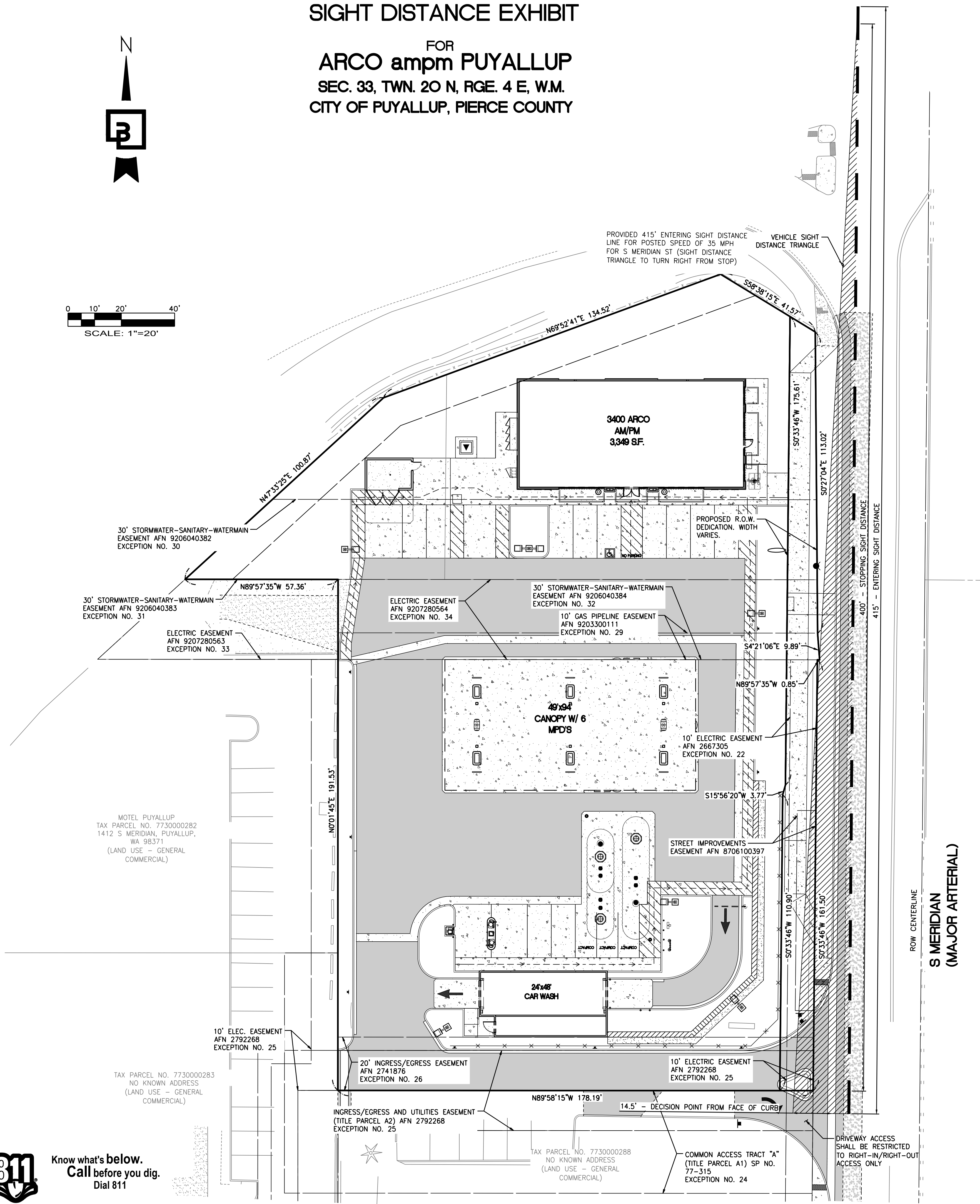
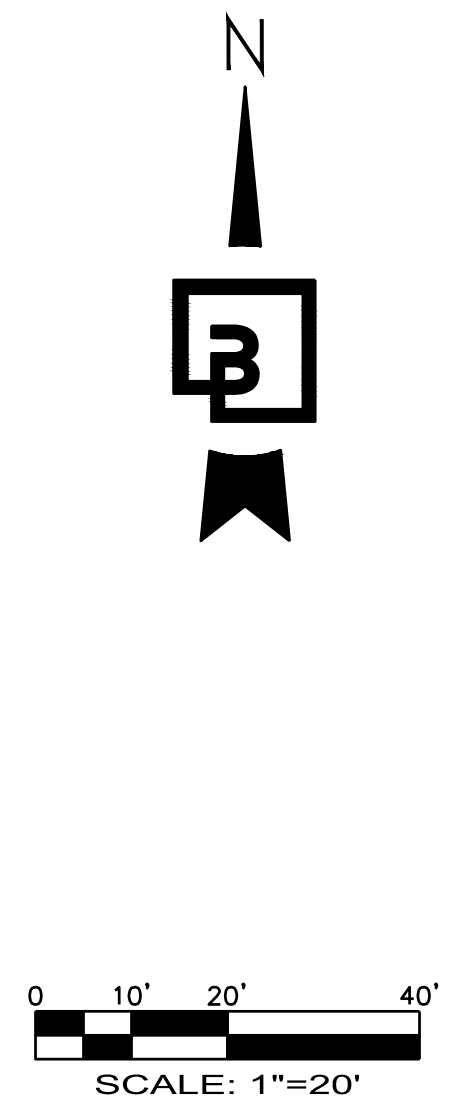
**RIGHT-OF-WAY DETAILS**

**SHEET NO:**

## C8.4



SIGHT DISTANCE EXHIBIT  
FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



VEHICLE SIGHT DISTANCE NOTE:

TABLE 100-2 OF THE CITY OF PUYALLUP ROADWAY DESIGN STANDARDS (LAST REVISED 01/2016) WAS REFERENCED TO EVALUATE AND DETERMINE ENTERING SIGHT DISTANCE AND STOPPING SIGHT DISTANCE.

POSTED SPEED ON S MERIDIAN ST (MAJOR ARTERIAL): 35 MPH  
DESIGN SPEED ON S MERIDIAN ST (MAJOR ARTERIAL): 45 MPH  
PER TABLE 100-2 OF THE CITY OF PUYALLUP ROADWAY DESIGN STANDARDS (LAST REVISED 01/2016), THE ENTERING SIGHT DISTANCE AND STOPPING SIGHT DISTANCE FOR THE MODIFIED DRIVEWAY IS 415' AND THE STOPPING SIGHT DISTANCE IS 400'.

THE DECISION POINT DISTANCE OF 14.5' FROM FACE OF CURB WAS USED TO EVALUATE THE ENTERING AND STOPPING SIGHT DISTANCES.

UTILITY CONFLICT NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT BY POT-HOLING THE UTILITIES AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE AT 811 48 HOURS IN ADVANCE AND THEN POT-HOLING 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 NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.



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**APPROVED**

BY \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING

DATE \_\_\_\_\_

**NOTE:** THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE.  
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CLIENT:

BP WEST COAST PRODUCTS, LLC

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

NO.	DATE	REVISION	DESCRIPTION
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SEAL:

1/12/24

DEVELOPMENT INFORMATION:

**ARCO NTI**  
**3400 am/pm**  
**FUEL CANOPY w/ 6 MPD'S**

SITE ADDRESS:

**1402 S. MERIDIAN**  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

**FACILITY #TBD**

DESIGNED BY: JDF	ALLIANCE Z&M:
CHECKED BY: AW	BP REP:
DRAWN BY: JDF	ALLIANCE PM:
VERSION:	PROJECT NO:
	<b>21730</b>

DRAWING TITLE:

**SIGHT DISTANCE EXHIBIT**

SHEET NO:

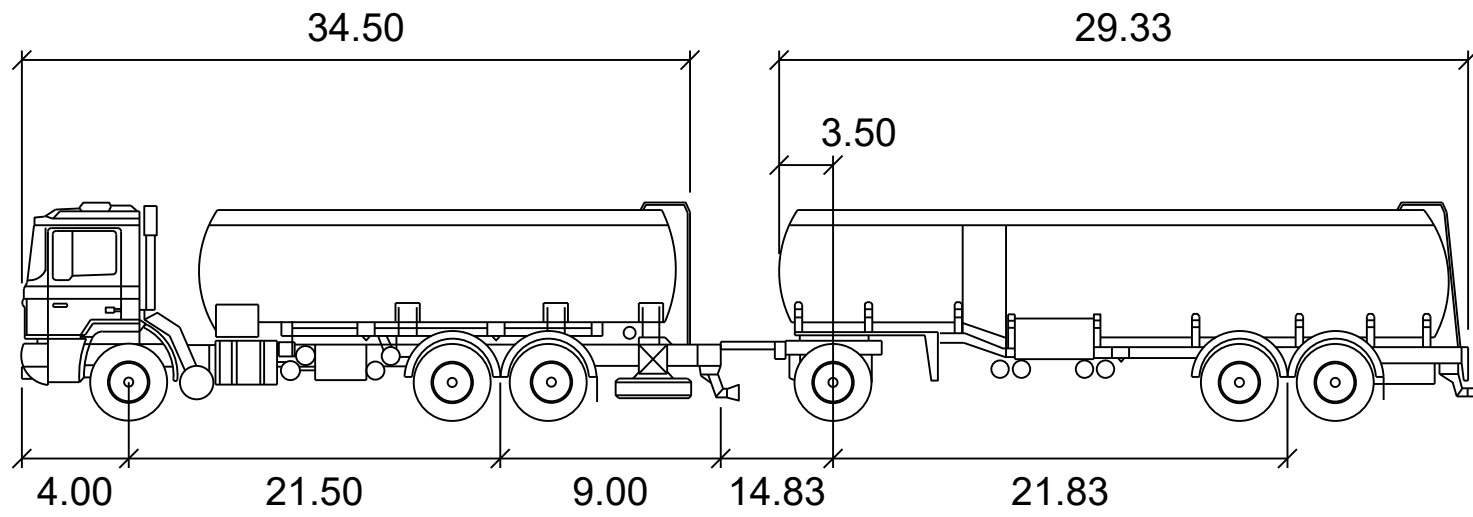
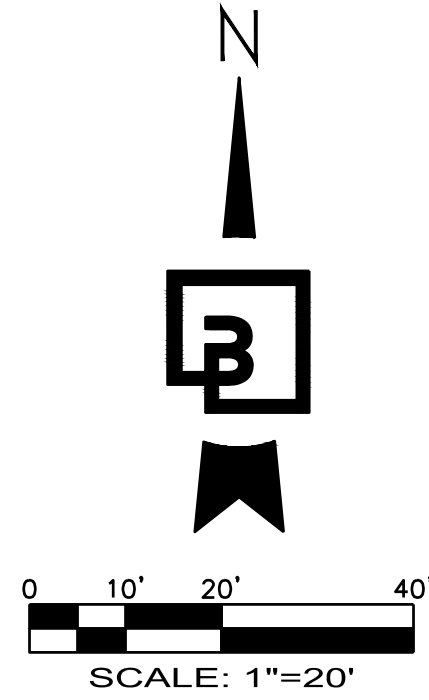
**C9.0**

P:\21000s\21730\Engineering\21730-EXHIBITS.dwg 1/12/2024 4:41 PM JLEHARTY



TANKER PATH EXHIBIT

FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



arco-75  
feet

First Unit Width	: 8.50	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 36.0
First Unit Track	: 8.50	Articulating Angle	: 70.0
Trailer Track	: 8.50		

If existing asphalt is to remain and be used for forms must be protected and have no concrete residue or staining on road when complete...  
Sheet C8.2 SH

Civil Sheet C8.2: This existing fire hydrant has been hit more than once due to turn radius issues with this traffic access entrance/exit. Now traffic on this access road will likely increase 20-fold. Concrete bollards cannot be used to protect the hydrant because they are not crash worthy and would create liability issues for the City. The hydrant needs to be relocated out of the potential large vehicle off tracking turn radius while providing a minimum 3-foot flat clear zone around the hydrant.

MOTEL PUYALLUP  
TAX PARCEL NO. 7730000282  
1412 S MERIDIAN, PUYALLUP,  
WA 98371  
(LAND USE - GENERAL  
COMMERCIAL)

TAX PARCEL NO. 7730000283  
NO KNOWN ADDRESS  
(LAND USE - GENERAL  
COMMERCIAL)

10' ELEC. EASEMENT  
AFN 2792268  
EXCEPTION NO. 25

20' INGRESS/EGRESS EASEMENT  
AFN 2741876  
EXCEPTION NO. 26

10' ELECTRIC EASEMENT  
AFN 2792268  
EXCEPTION NO. 25

INGRESS/EGRESS AND UTILITIES EASEMENT  
(TITLE PARCEL A2) AFN 2792268  
EXCEPTION NO. 25

TAX PARCEL NO. 7730000288  
NO KNOWN ADDRESS  
(LAND USE - GENERAL  
COMMERCIAL)

COMMON ACCESS TRACT "A"  
(TITLE PARCEL A1) SP NO.  
77-315  
EXCEPTION NO. 24

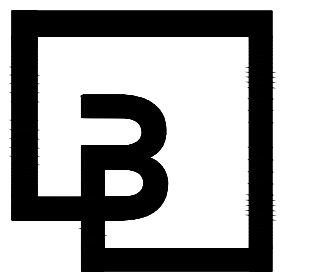
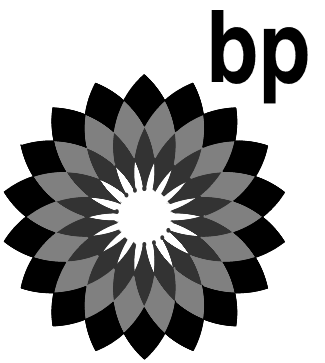
UTILITY CONFLICT NOTE:

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Kent, WA 98032  
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barghausen.com

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SEAL:



1/12/24

DEVELOPMENT INFORMATION:

ARCO NTI  
3400 am/pm  
FUEL CANOPY w/ 6 MPD's

SITE ADDRESS:

1402 S. MERIDIAN  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

FACILITY #TBD

DESIGNED BY: JDF  
CHECKED BY: AW  
DRAWN BY: JDF  
VERSION: 1  
ALLIANCE Z&M:  
BP REP:  
ALLIANCE PM:  
PROJECT NO.:  
21730

APPROVED

BY  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING

DATE

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DRAWING TITLE:  
TANKER PATH EXHIBIT

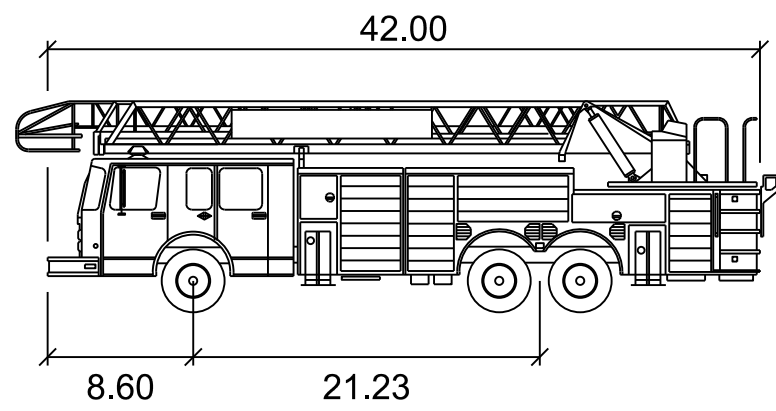
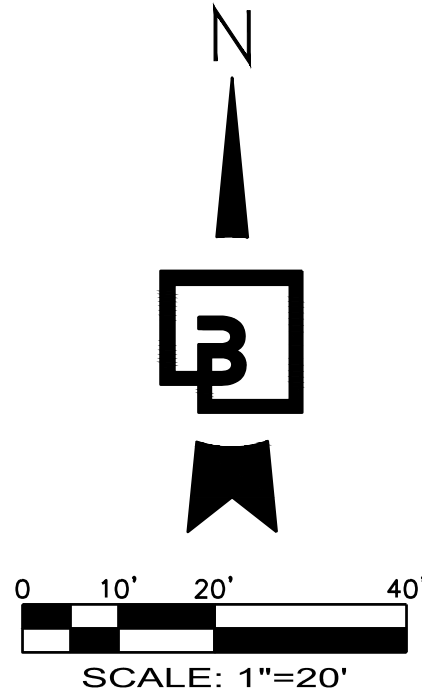
SHEET NO:

C9.1



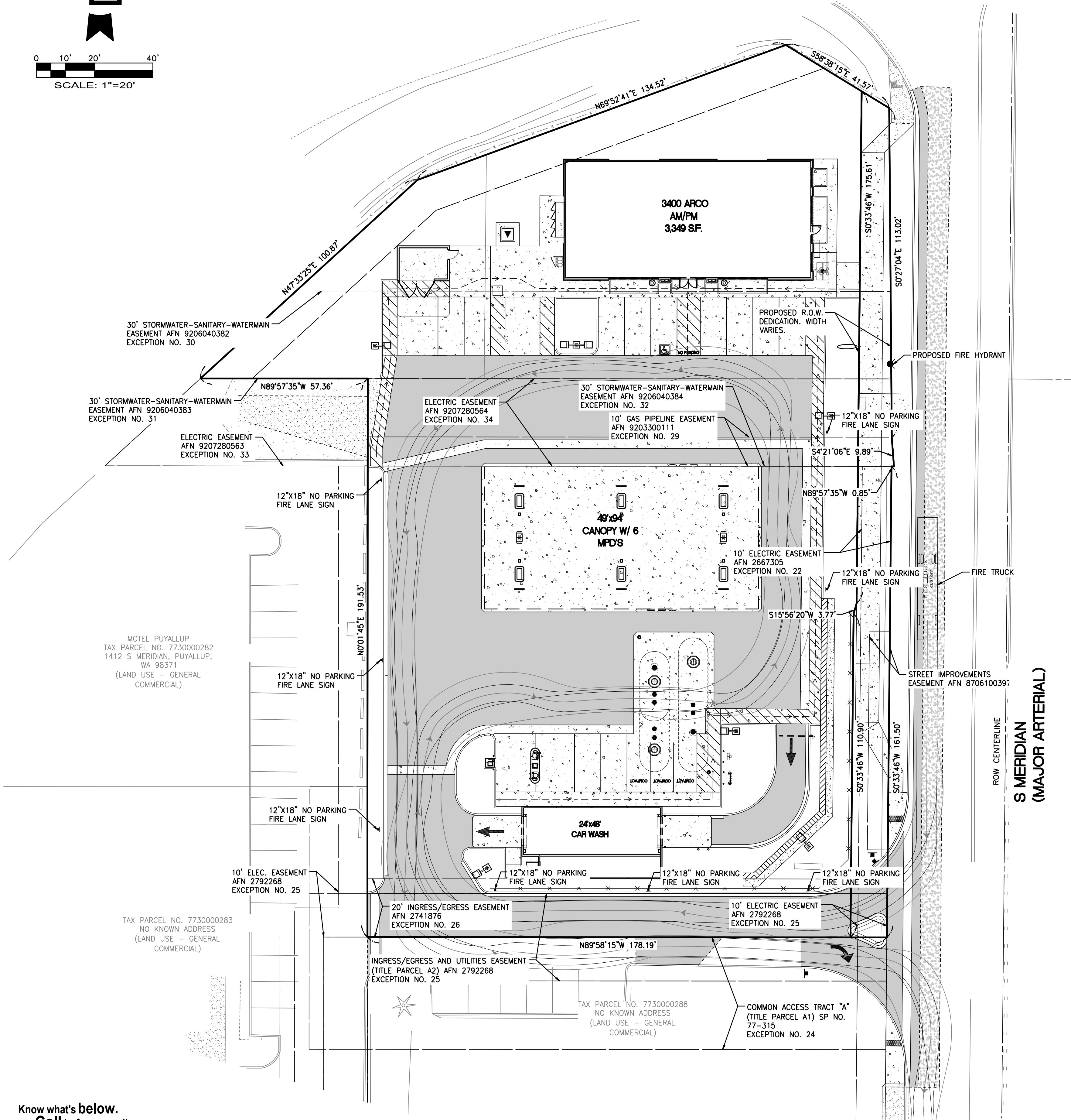
FIRE ACCESS EXHIBIT

FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



40' FIRE TRUCK

	feet
Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.8

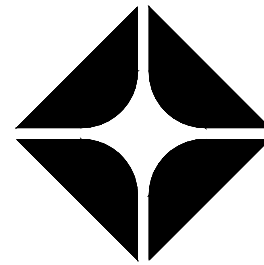
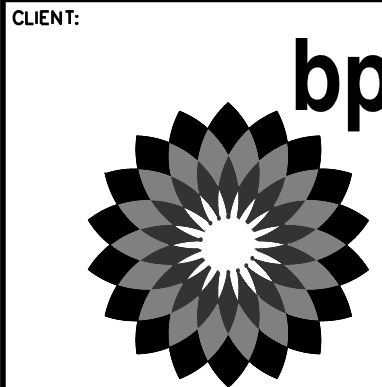


UTILITY CONFLICT NOTE:

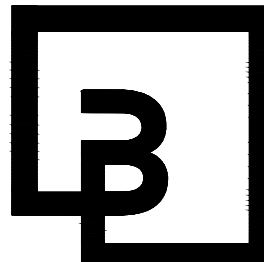
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SEAL:



1/12/24

DEVELOPMENT INFORMATION:  
**ARCO NTI**  
**3400 am/pm**  
**FUEL CANOPY w/ 6 MPD's**

SITE ADDRESS:  
**1402 S. MERIDIAN**  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

**FACILITY #TBD**

DESIGNED BY: JDF ALLIANCE ZBDK:  
CHECKED BY: AW BP REP:  
DRAWN BY: JDF ALLIANCE PM:  
VERSION: PROJECT NO:  
21730

APPROVED  
BY: \_\_\_\_\_  
CITY OF PUYALLUP  
DEVELOPMENT ENGINEERING  
DATE: \_\_\_\_\_

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MANAGER.

DRAWING TITLE:  
**FIRE ACCESS EXHIBIT**

SHEET NO:

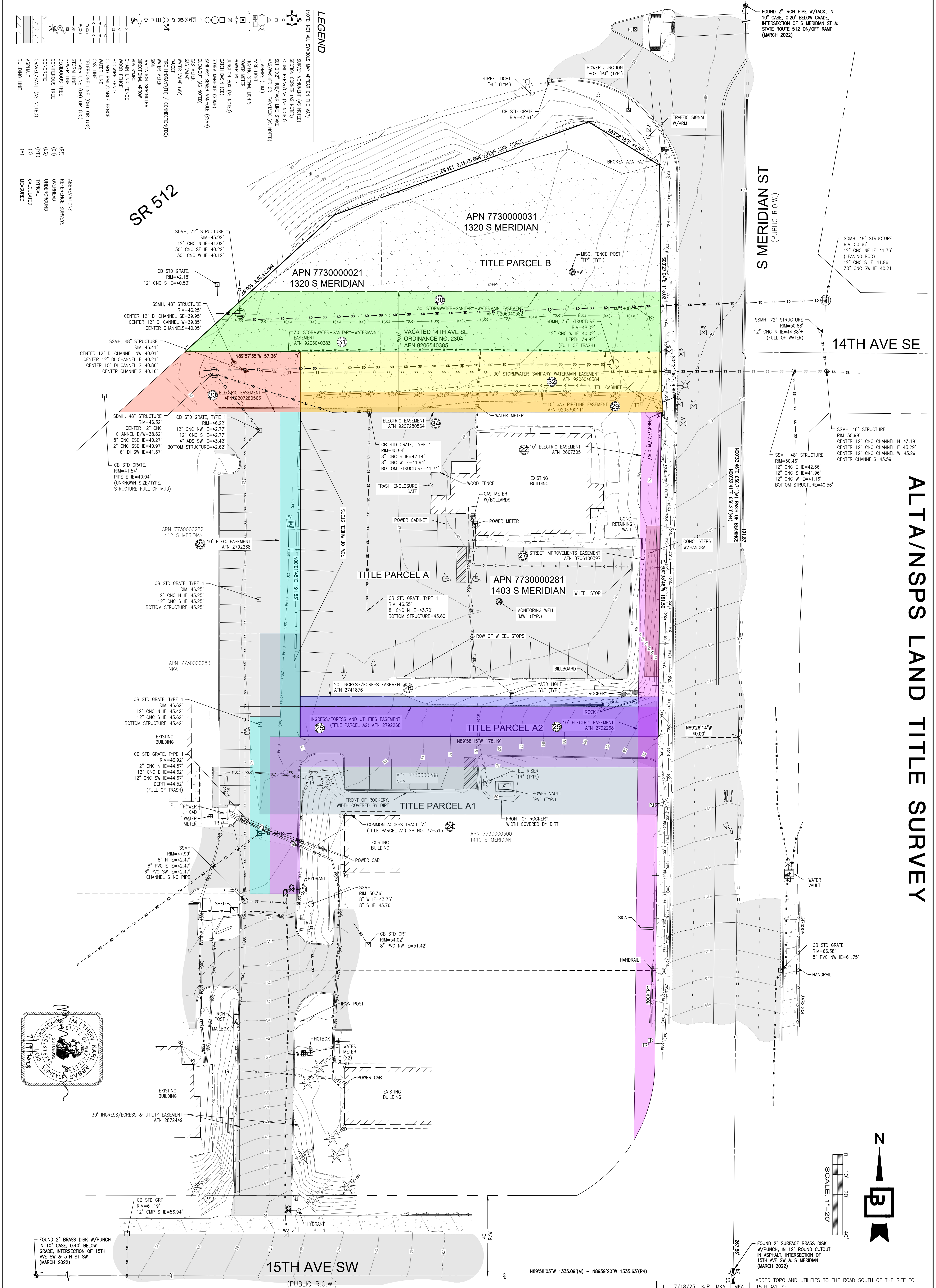
C9.2








ALTA/NSPS LAND TITLE SURVEY

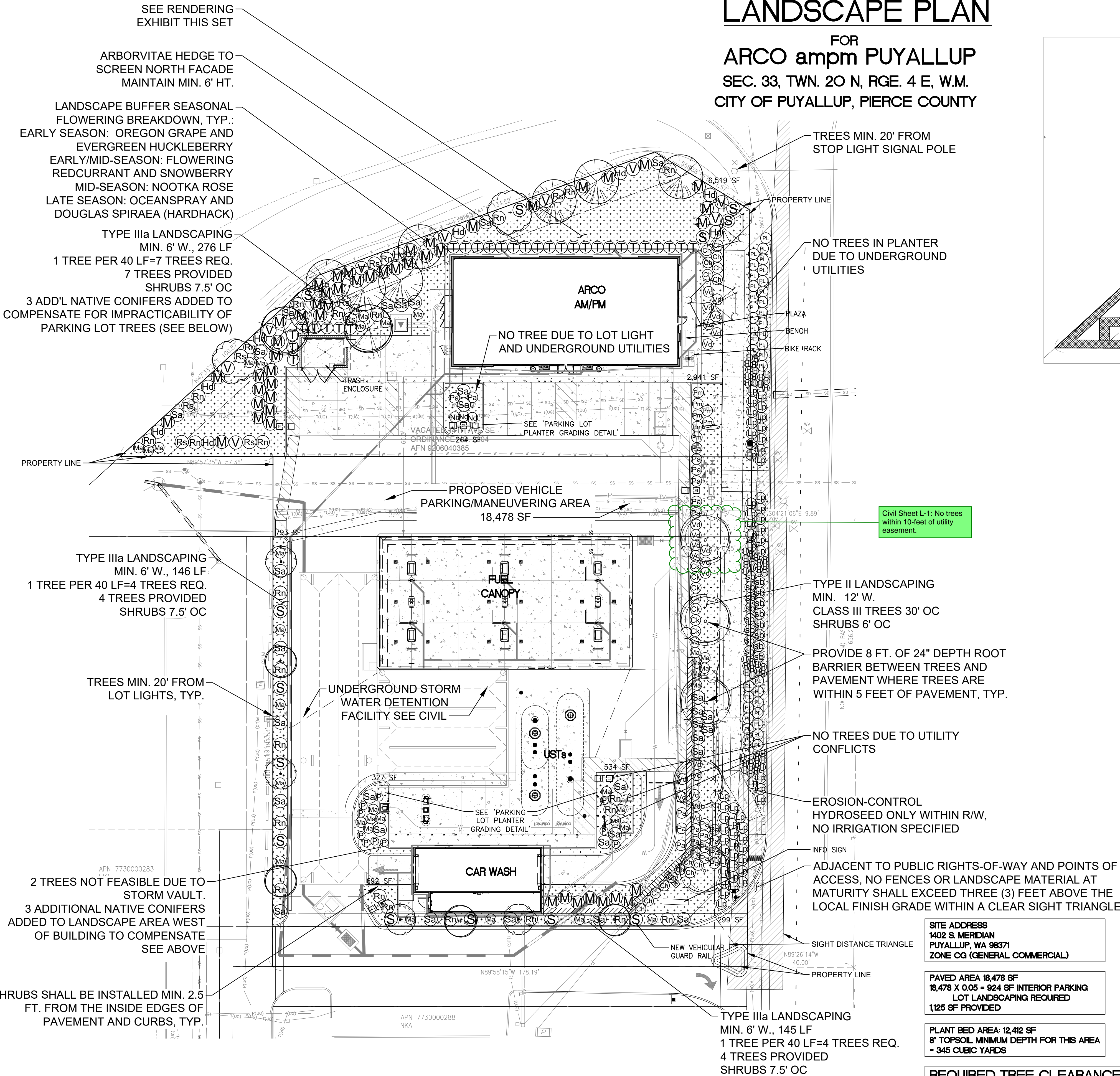


Job Number <div>21730</div>		<div><div><div>Barghausen Consulting Engineers, Inc.</div><div>18215 72nd Avenue South Kent, WA 98032 425.251.6222    <a href="http://barghausen.com">barghausen.com</a></div></div></div>	Designed _____ Drawn <u>AEF</u> Checked <u>MKA</u> Approved <u>MKA</u> Date <u>7/19/23</u>	Scale: Horizontal 1"=20' Vertical	For: <div>BP FUELS NA</div>	<table><tr><th>No.</th><th>Date</th><th>By</th><th>Ckd.</th><th>Appr.</th><th>Revision</th></tr><tr><td>1</td><td>7/18/23</td><td>KJR</td><td>MKA</td><td>MKA</td><td>ADDED TOPO AND UTILITIES TO THE ROAD SOUTH OF THE SITE TO 15TH AVE SE</td></tr></table>	No.	Date	By	Ckd.	Appr.	Revision	1	7/18/23	KJR	MKA	MKA	ADDED TOPO AND UTILITIES TO THE ROAD SOUTH OF THE SITE TO 15TH AVE SE	Title: <div>ALTA/NSPS LAND TITLE SURVEY PTN OF THE SE1/4, OF THE NE1/4 OF SEC. 33, TWP. 20 N., RGE 4 E., W. M. CITY OF PUYALLUP, PIERCE COUNTY, WASHINGTON STATE</div>
No.	Date		By	Ckd.			Appr.	Revision											
1	7/18/23	KJR	MKA	MKA	ADDED TOPO AND UTILITIES TO THE ROAD SOUTH OF THE SITE TO 15TH AVE SE														
Sheet <div>2 of 2</div>																			

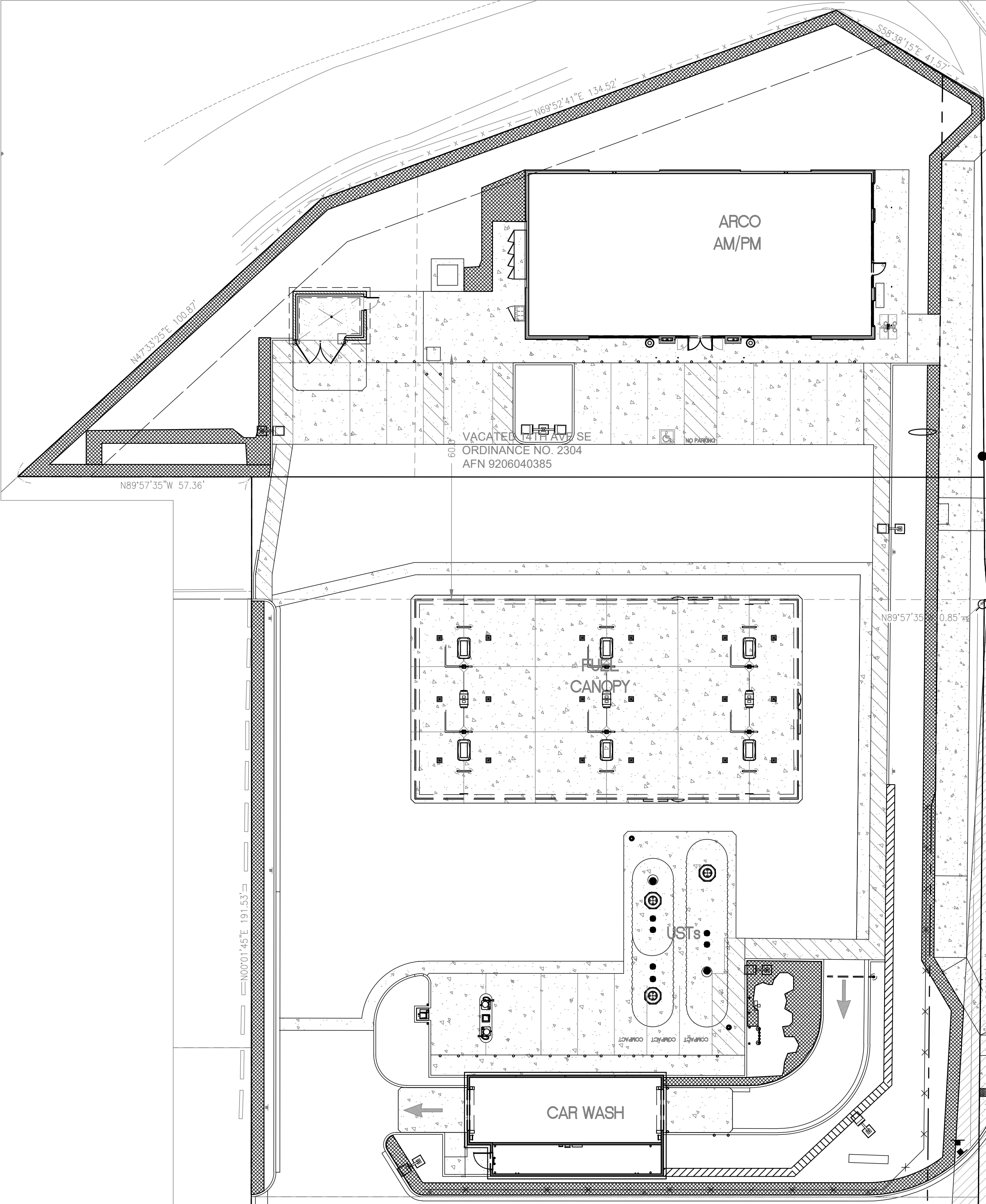


LANDSCAPE PLAN

FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



PERIMETER BULB PLANTING PLAN



PERIMETER BULB PLANTING - PLANT SCHEDULE AND NOTES

3,368 SF	NARCISSUS 'KING ALFRED', NARCISSUS 'DUTCH MASTER' (ANY COMBINATION OF THESE TWO VARIETIES)	BARE BULB	6" O.C.
15,556 BULBS			

PER PMC 20.58, ALL PERIMETER LANDSCAPE YARD AREAS SHALL INCLUDE NARCISSUS TRUMPET 'KING ALFRED' OR 'DUTCH MASTER' IN THE FIRST 3' OF LANDSCAPE AREAS BEHIND THE PROPERTY LINE, PLANTED 6" ON-CENTER (TRIANGULAR SPACING). OTHER GROUPINGS OF NARCISSUS (SAME VARIETIES) SHALL BE USED IN GROUPINGS THROUGHOUT LANDSCAPE AREAS. SEE BULB PLANTING PLAN FOR BULB PLANTING AREAS. DAFFODIL BULB PLANTING SHALL BE COMPLETED AT APPROPRIATE TIME OF YEAR TO ALLOW ESTABLISHMENT (SEPTEMBER - NOVEMBER OR VERY EARLY SPRING). IF LANDSCAPE INSTALLATION DOES NOT OCCUR DURING THIS TIME, BULB PLANTING MAY BE COMPLETED AFTER LANDSCAPE INSTALLATION HAS BEEN COMPLETED. HOWEVER, IF BULB PLANTING OCCURS AFTER OTHER PLANTS AND MULCH HAVE BEEN INSTALLED, SPECIAL CARE MUST BE TAKEN TO ENSURE THAT EXISTING PLANTINGS ARE NOT DAMAGED AND ALL LANDSCAPE MULCH IS CAREFULLY RESTORED AFTER BULB PLANTING. DO NOT ALLOW SOIL TO BE EXPOSED OR MIXED IN TO SURFACE MULCH, AND INSTALL ADDITIONAL MULCH AS REQUIRED TO COVER ANY AREAS OF EXPOSED SOIL.

UTILITY CONFLICT NOTE:

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SITE ADDRESS  
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PUYALLUP, WA 98371  
ZONE Cg (GENERAL COMMERCIAL)

PAVED AREA 18,478 SF  
18,478 X 0.05 = 924 SF INTERIOR PARKING  
LOT LANDSCAPING REQUIRED  
1,125 SF PROVIDED

PLANT BED AREA: 12,412 SF  
8" TOPSOIL MINIMUM DEPTH FOR THIS AREA  
= 345 CUBIC YARDS

REQUIRED TREE CLEARANCES  
FOR CLASS III TREES, PER PUYALLUP VMS 12.4

BUILDINGS	10'
UTILITY AND STREET LIGHT POLES	10'
FIRE HYDRANTS	5'
DRIVEWAY (OUTER PAVING EDGE)	7.5'
STOP LIGHT SIGNAL POLES	20'
UNDERGROUND WATER, SANITARY SEWER OR STORM SEWER LINES	10'
UNDERGROUND GAS, POWER OR OTHER CONDUIT	3'
INTERSECTION (FACE OF CURB LINE CORNER AT INTERSECTION)	30'
STREET SIGNS (EXCL. PARKING SIGNS)	30' LEADING SIDE, 10' TRAILING SIDE

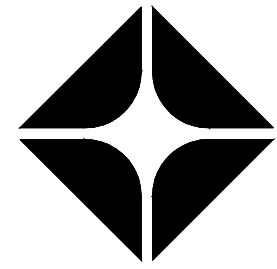
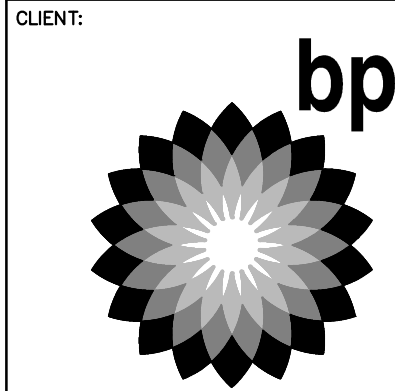
CITY OF PUYALLUP  
Planning Division  
Approved Landscape Plan  
(253) 864-4165

Staff:  
Date:  
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 PLANNING  
MANAGER, DESIGNER, OR PROJECT  
PLANNER.  
NOTE: If street trees are required, Call Housing  
Division for final inspection: (253) 864-4165 (Option 3)  
Root Barriers are required around street trees in  
accordance with city standard detail. Top soil shall be  
installed in accordance with city standards - field  
verification required. Failure to install top soil and root  
barriers in accordance with city standard may result in  
rejection of installation.

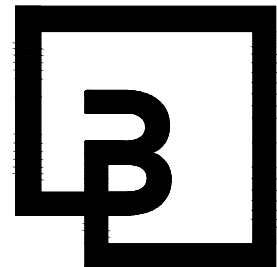
APPROVED

BY  
CITY OF PUYALLUP  
WATER PURVEYOR

DATE  
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 WATER  
PURVEYOR.

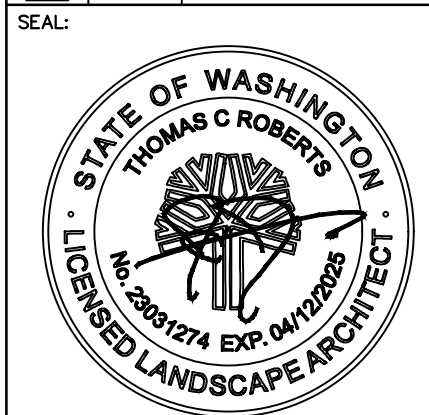


BP WEST COAST PRODUCTS, LLC



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

NO.	DATE	REVISION	DESCRIPTION
1	12/27/23	N. FACADE SCREENING	
2	1/12/24	PER CITY COMMENTS	
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			



DEVELOPMENT INFORMATION:  
ARCO NTI  
3400 am/pm  
FUEL CANOPY w/ 6 MPD's

SITE ADDRESS:  
SWC S MERIDIAN  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

FACILITY #TBD

DESIGNED BY: TCR  
CHECKED BY: JMV  
DRAWN BY: TCR  
VERSION: -  
PROJECT NO.: 21730

DRAWING TITLE:

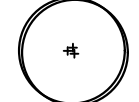
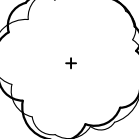
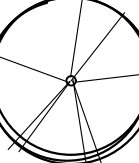
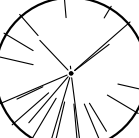
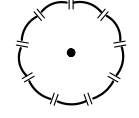
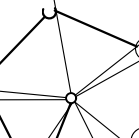
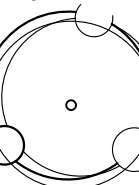

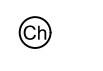

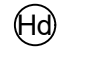


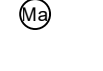
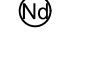
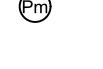
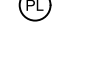
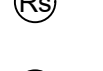
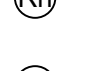


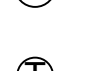

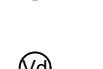


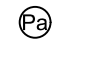

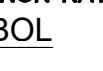
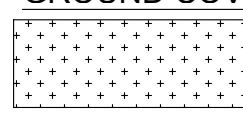
LANDSCAPE  
PLAN

SHEET NO:

L-1



PLANT SCHEDULE

SYMBOL	QTY	BOTANICAL / COMMON NAME	CONT.	SIZE	WATER USE	ORIGIN	FOLIAGE
TREES							
	4	ACER CIRCINATUM / VINE MAPLE 2" TOTAL CAL. IF MULTI-STEM. NURSERY GROWN. STAKE AND GUY ONE GROWING SEASON.	B & B	1" CAL	LOW	NATIVE	DECIDUOUS
	2	FRAXINUS LATIFOLIA / OREGON ASH NURSERY GROWN, SINGLE-STEMMED. STAKE AND GUY ONE GROWING SEASON.	B & B	1" CAL	MEDIUM	NATIVE	DECIDUOUS
	2	GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE' / SKYLINE HONEY LOCUST NURSERY GROWN FOR STREET TREE USE; BRANCHING AT 5'; STAKE AND GUY ONE GROWING SEASON	B & B	1" CAL	LOW	ADAPTIVE	DECIDUOUS
	8	PSEUDOTSUGA MENZIESII 'FASTIGIATA' / DOUGLAS FIR FULL TO BASE, SINGLE, STRAIGHT UN-CUT LEADER; STAKE AND GUY ONE GROWING SEASON	B & B	5'-6" MIN. HT.	LOW	NATIVE	EVERGREEN
	4	THUJA PLICATA 'EXCELSA' / EXCELSA CEDAR FULL TO BASE, SINGLE, STRAIGHT UN-CUT LEADER; STAKE AND GUY ONE GROWING SEASON	B & B	5'-6" MIN. HT.	LOW	NATIVE	EVERGREEN
STREET TREES							
	2	TILIA CORDATA 'PNI 6025' / LITTLELEAF LINDEN SYN. TILIA 'GREENSPIRE'. MEDIUM STREET TREE. NURSERY GROWN FOR STREET TREE USE; BRANCHED AT FIVE (5) FEET; STAKE AND GUY ONE GROWING SEASON	B & B	1" DBH	LOW	ADAPTIVE	DECIDUOUS
	5 27	ZELKOVA SERRATA 'VILLAGE GREEN' / SAWLEAF ZELKOVA CLASS III MEDIUM STREET TREE PER VMS 12.9. NURSERY GROWN FOR STREET TREE USE; BRANCHED AT FIVE (5) FEET; STAKE AND GUY ONE GROWING SEASON	B & B	1" DBH	LOW	ADAPTIVE	DECIDUOUS
	18 NATIVE 9 NON-NATIVE						
SHRUBS							
	16	CHAENOMELES X SUPERBA 'JET TRAIL' / DWARF FLOWERING QUINCE	2 GAL.	MEDIUM	ADAPTIVE	DECIDUOUS	
	7	CORNUS SERICEA 'KELSEY' / DWARF REDTWIG DOGWOOD	2 GAL.	LOW	NATIVE	DECIDUOUS	
	8	HOLODISCUS DISCOLOR / OCEAN-SPRAY	2 GAL.	LOW	NATIVE	DECIDUOUS	
	55	LONICERA PILEATA / PRIVET HONEYSUCKLE MATURE HT. <36", USE WITHIN SIGHT TRIANGLE. MAINTAIN AT 24" HT.	2 GAL.	MEDIUM	ADAPTIVE	EVERGREEN	
	48	MAHONIA AQUIFOLIUM / OREGON GRAPE	#2	LOW	NATIVE	EVERGREEN	
	35	MAHONIA AQUIFOLIUM 'COMPACTA' / COMPACT OREGON GRAPE	2 GAL.	LOW	NATIVE	EVERGREEN	
	3	NANDINA DOMESTICA 'GULF STREAM' / HEAVENLY BAMBOO	2 GAL.	LOW	ADAPTIVE	EVERGREEN	
	7	PINUS MUGO 'PUMILIO' / DWARF MUGO PINE	2 GAL.	LOW	ADAPTIVE	EVERGREEN	
	37	PRUNUS LAUROCERASUS 'MOUNT VERNON' / LOW ENGLISH LAUREL MATURE HT. <36", USE WITHIN SIGHT TRIANGLE. MAINTAIN AT 24" HT.	2 GAL.	LOW	ADAPTIVE	EVERGREEN	
	8	RIBES SANGUINEUM / RED FLOWERING CURRANT	2 GAL.	LOW	NATIVE	DECIDUOUS	
	25	ROSA NUTKANA / NOOTKA ROSE	2 GAL.	MEDIUM	NATIVE	DECIDUOUS	
	13	SPIRAEA DOUGLASII / HARDHACK	2 GAL.	MEDIUM	NATIVE	DECIDUOUS	
	16	SPIRAEA X BUMALDA 'WALBUMA' / MAGIC CARPET SPIREA MATURE HT. <36", USE WITHIN SIGHT TRIANGLE. MAINTAIN AT 24" HT.	2 GAL.	MEDIUM	ADAPTIVE	DECIDUOUS	
	31	SYMPHORICARPOS ALBUS / SNOWBERRY	2 GAL.	LOW	NATIVE	DECIDUOUS	
	29	THUJA OCCIDENTALIS 'SMARAGD' / ARBORVITAE SYN. 'EMERALD GREEN'	5' HT.	LOW	ADAPTIVE	EVERGREEN	
	9	VACCINIUM OVATUM / EVERGREEN HUCKLEBERRY	2 GAL.	LOW	NATIVE	EVERGREEN	
	21	VIBURNUM DAVIDII / DAVID VIBURNUM	2 GAL.	LOW	ADAPTIVE	EVERGREEN	
FERNS AND GRASSES							
	50	HELICOTRICHON SEMPERVIRENS 'SAPPHIRE' / BLUE OAT GRASS MATURE HT. <36", USE WITHIN SIGHT TRIANGLE. MAINTAIN AT 24" HT.	2 GAL.	LOW	ADAPTIVE	EVERGREEN	
	22	PENNISETUM ALOPECUROIDES 'HA MELN' / FOUNTAIN GRASS	2 GAL.	LOW	ADAPTIVE	DECIDUOUS	
	10	POLYSTICHUM MUNITUM / WESTERN SWORD FERN	2 GAL.	LOW	NATIVE	EVERGREEN	
	194 NATIVE 256 NON-NATIVE						
GROUND COVERS							
	746	ARCTOSTAPHYLOS UVA-URSI / KINNIKINNICK	1 GAL.	LOW	NATIVE	EVERGREEN	36" o.c.
746 NATIVE							

SEE SHEET L1 FOR PERIMETER BULB PLANTING PLAN AND SCHEDULE

UTILITY CONFLICT NOTE:

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. UTILITIES AND 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 NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.



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

QUANTITY NATIVE SHRUBS AND GROUNDCOVERS:	889	90.1%
QUANTITY NON-NATIVE SHRUBS AND GROUNDCOVERS:	88	9.9%
TOTAL SHRUBS AND GROUNDCOVERS:	977	

FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY

SEE SHEET L1 FOR ADDITIONAL PLANTING SPECIFICATIONS, CONFORM TO THE SPECIFICATIONS AND DRAWINGS IN THESE LANDSCAPE PLANS AND THE REQUIREMENTS OF CITY OF PUYALLUP VEGETATION MANAGEMENT STANDARDS (VMS). WHERE THERE IS A CONFLICT CONFORM TO THE MORE STRINGENT REQUIREMENTS.

CITY OF PUYALLUP MINIMUM  
SOIL REQUIREMENTS:  
SOIL PREPARATION IN ALL  
DISTURBED AREAS WITH NEW  
LANDSCAPING SHALL CONFORM  
TO SPECIFICATIONS PROVIDED IN  
BMP T5.13 - THE "STORM WATER  
MANAGEMENT MANUAL OF  
WESTERN WASHINGTON",  
DEPARTMENT OF ECOLOGY,  
DATED AUGUST 2012, OR AS  
SUBSEQUENTLY AMENDED.  
COMPACTION OF LANDSCAPED  
AREAS FROM VEHICLES AND  
HEAVY EQUIPMENT SHALL BE  
AVOIDED AFTER TILLING.

SOIL AMENDMENT NOTES

ALL SOILS IN ALL LANDSCAPE INSTALLATIONS SHALL CONFORM TO THE FOLLOWING SOIL DEPTH AND QUALITY REQUIREMENTS. PLEASE REFER TO APPENDIX 20.9 FOR FURTHER INSTALLATION GUIDANCE:

- A MINIMUM OF EIGHT (8) INCHES OF TOP SOIL, CONTAINING TEN PERCENT DRY WEIGHT IN PLANTING BEDS, AND SIX ORGANIC MATTER CONTENT IN TURF AREAS, AND A PH FROM 6.0 TO 8.0 OR MATCHING THE PH OF THE ORIGINAL UNDISTURBED SOIL. THE TOPSOIL LAYER SHALL HAVE A MINIMUM DEPTH OF EIGHT INCHES (8") EXCEPT WHERE TREE ROOTS LIMIT THE DEPTH OF INCORPORATION OF AMENDMENTS NEEDED TO MEET THE CRITERIA. SUBSOILS BELOW THE TOPSOIL LAYER SHOULD BE SCARIFIED AT LEAST 6 INCHES WITH SOME INCORPORATION OF THE UPPER MATERIAL TO AVOID STRATIFIED LAYERS, WHERE FEASIBLE. INSTALLATION OF THE EIGHT INCHES (8") OF TOPSOIL, AS DESCRIBED ABOVE, SHALL GENERALLY BE ACHIEVED BY PLACING FIVE INCHES (5") OF IMPORTED SANDY-LOAM SOIL INTO PLANNED LANDSCAPE AREAS (SUB-DIST SCARIFIED FOUR INCHES (4") WITH A THREE INCH (3") LAYER OF COMPOST TILLED INTO THE ENTIRE DEPTH).
- FOR STREET TREES IN THE RIGHT-OF-WAY PLANTER STRIP, THE FOLLOWING STANDARDS SHALL APPLY IN RELATION TO SOIL DEPTH, SOIL AMENDMENTS AND INSTALLATION OF NEW STREET TREES. THE FOLLOWING NOTES SHALL BE SHOWN ON THE FACE OF THE PRELIMINARY AND FINAL LANDSCAPE PLAN SHEETS:
  - FOR NEW CONSTRUCTION IN AREAS WHERE A NEW PLANTER STRIP AND STREET TREE SHALL BE ESTABLISHED OR RECONSTRUCTED DUE TO A STREET CONSTRUCTION PROJECT, THE PLANTER STRIP AREA SHALL BE EXCAVATED TO A DEPTH OF 24" AND BACKFILLED FOLLOWING THE STANDARD ABOVE TO ACHIEVE A TOPSOIL MIX WITH 40 PERCENT COMPOST BY VOLUME. THE CONTRACTOR OR INSTALLER SHALL:
    - REVIEW THE CITY STANDARD PLANTING DETAIL - ALL CONTRACTORS/INSTALLERS AREA REQUIRED TO FOLLOW CITY STANDARD #01.02.07 (STREET TREE PLANTING) AND #01.02.03 (ROOT BARRIER INSTALLATION). THE CONTRACTOR/INSTALLER SHALL REVIEW THE PLANTING STANDARD DETAIL PRIOR TO INSTALLATION TO UNDERSTAND THE CITY'S REQUIREMENTS. FAILURE TO FOLLOW THE STANDARD MAY RESULT IN REJECTION OF THE WORK BY THE INSPECTOR AND/OR PLANNING DEPARTMENT.
    - SCHEDULE A FIELD PRE-CONSTRUCTION MEETING - THE CONTRACTOR/INSTALLER SHALL CONTACT THE SITE INSPECTOR AND PLANNING DEPARTMENT 48 HOURS IN ADVANCE OF THE INSTALLATION OF STREET TREE(S) FOR A FIELD PRE-CONSTRUCTION MEETING ON-SITE TO REVIEW THE APPROVED PLAN, SET AND CITY STANDARD DETAILS. IF STREET TREES ARE TO BE INSTALLED OVER A LONGER TIMELINE (SUCH AS A RESIDENTIAL LOT WHERE TREES MAY BE INSTALLED OVER A MULTI-MONTH PERIOD OF TIME), THE CONTRACTOR/INSTALLER SHALL HOLD ONE CONSOLIDATED PRE-CON TO REVIEW PLANS. ALL STREET TREES SHALL BE INSPECTED AFTER PLANTING BY THE PLANNING DEPARTMENT.
    - EXCAVATE ALL CONSTRUCTION MATERIALS - EXCAVATE ALL CONSTRUCTION MATERIALS, REMNANT SOIL, GRAVEL, PIT RUN, CONSTRUCTION DEBRIS, ETC. FROM THE PLANTER STRIP AREA TO A DEPTH OF 24" PRIOR TO PLANTING. DISCARD THIS MATERIAL AS THE PLACEMENT OF NEW COMPOST AMENDED TOP SOIL IS REQUIRED.
    - PREPARE THE PLANTING STRIP - AFTER EXCAVATING ALL MATERIALS FROM THE PLANTER STRIP, SCARIFY AND RIP THE SUB-BASE WITH THE TEETH OF A BACKHOE BUCKET (OR OTHER MECHANICAL MEANS OR HAND TOOLS) TO A DEPTH OF 6" WITH MULTIPLE PASSES, 90-DEGREES TO EACH OTHER, PRIOR TO PLANTING THE TREE. RE-COMPACT THE TREE BASE WHERE THE STREET TREE WILL BE PLANTED TO AVOID SETTING OF THE ROOT BALL AT THIS STAGE. IF THE TREE IS TO BE PLANTED WHEN THE PLANTER STRIP IS BACKFILLED WITH AMENDED TOPSOIL, THE CONTRACTOR/INSTALLER SHOULD MEASURE THE DEPTH OF THE ROOT BALL TO DETERMINE WHEN TO PLACE THE TREE IN THE PIT DURING THE BACKFILLING PROCESS. IF THE ROOTBALL OR ROOT MASS (IN THE CASE OF BARE ROOT TREES) IS LESS THAN 24", THE STREET TREE SHALL BE PLANTED IN A MANNER IN WHICH THE ROOT FLARE IS LEVEL WITH OR AT LEAST 1" ABOVE GRADE AT THE TIME OF FINISHED PLANTING. THE MIX REQUIRE THE ROOTBALL BE PLACED ON A COMPACTED SUB-BASE OF THE COMPOST AMENDED TOPSOIL AS BACKFILLING IS OCCURRING.
    - INSTALL ROOT BARRIER PANELS - AT THIS STAGE THE CONTRACTOR/INSTALLER SHALL PLACE 24" DEEP ROOT BARRIER PANELS (UB-24) ALONG THE EDGE OF THE SIDEWALK AND CURB LINE FOR A TOTAL OF EIGHT FEET (8') OF LINEAL PROTECTION ALONG EITHER SIDE OF THE PLANTING AREA. THE PANELS SHALL BE INSTALLED PERPENDICULAR TO THE EDGE OF THE PLANTING AREA. THE PANELS SHALL BE INSTALLED PERPENDICULAR TO THE DOG OF PAVED SURFACE IN ACCORDANCE WITH THE MANUFACTURER'S STANDARDS FOR A 'LINEAR' APPLICATION; THE ROOT BARRIER PANELS SHALL NOT BE INSTALLED IN THE PLANTING PIT AS A 'SURROUND' APPLICATION, UNLESS SPECIFIED ON THE FINAL LANDSCAPE PLANS. THE TOP OF THE ROOT BARRIER PANEL SHALL BE INSTALLED SUCH THAT 1" OF THE ROOT BARRIER IS ABOVE THE FINISHED GRADE.
    - COMPOST AMENDED TOP SOILS REQUIRED - TOPSOIL SOURCE SHALL BE REVIEWED AND APPROVED DURING THE PRE-CONSTRUCTION MEETING; ALL TOPSOIL SHALL BE A TOP QUALITY SANDY-LOAM MIX, OR EQUIVALENT AS APPROVED BY THE PLANNING DEPARTMENT. THE TOPSOIL SHALL BE AMENDED ON SITE DURING INSTALLATION WITH COMPOST TO ACHIEVE A 40 PERCENT BY VOLUME TOPSOIL MIX IN THE RIGHT-OF-WAY PLANTER STRIP. IMPORTED TOPSOIL MAY BE USED BY THE CONTRACTOR IF DATA "OUT SHEETS" ARE AVAILABLE FROM THE SUPPLIER CERTIFYING COMPOST AMENDMENT EQUATING 40 PERCENT BY VOLUME USING ONE OF THE APPROVED COMPOST SOURCES BELOW. COMPOST SHALL ONLY BE SOURCED FROM:
      - CASCADE COMPOST (ALSO KNOWN AS PREP/LRI) (AVAILABLE THROUGH PIERCE COUNTY RECYCLING, COMPOSTING & DISPOSAL, 10308 SALES ROAD, TACOMA, WASHINGTON 98499, OR RETAIL/WHOLESALE LANDSCAPE MATERIAL SUPPLIERS)
      - TACRO COMPOST MIX (AVAILABLE THROUGH CITY OF TACOMA, 2201 EAST PORTLAND AVENUE, DATE 6, TACOMA, WA 98421, OR RETAIL/WHOLESALE LANDSCAPE MATERIAL SUPPLIERS)
      - CEDAR GROVE COMPOST (AVAILABLE THROUGH CEDAR GROVE COMPOST, 17825 CEDAR GROVE ROAD SE, MAPLE VALLEY, 98038, OR RETAIL/WHOLESALE LANDSCAPE MATERIAL SUPPLIERS)
    - INSTALL AND AMEND TOPSOILS - TO AVOID STRATIFIED LAYERS, FIRST PLACE SEVEN INCHES (7") OF APPROVED TOPSOIL IN THE PREPARED/SCARIFIED PLANTING STRIP AREA AND MECHANICALLY TILL IN FIVE INCHES (5") OF APPROVED COMPOST. FOLLOW THIS PROCEDURE TWICE TO ACHIEVE THE TOTAL 24" TOPSOIL DEPTH. FINISHED GRADE OR TOPSOIL SHOULD BE 1" BELOW THE EDGE OF SIDEWALK TO ALLOW THE ROOT BARRIER PANEL TO BE PROPERLY INSTALLED ABOVE FINISHED GRADE.
    - INSTALL TREE STAKES AND FINISH MULCH - PLACEMENT OF FOUR INCHES (4") OF WOOD CHIP MULCH, WATER BUSH PINUS, TREE STAKING AND TEMPORARY IRRIGATION BAGS (WHICH REQUIRED CHIP MULCH CITY STANDARD #01.02.07

LANDSCAPE PLANTING NOTES AND MATERIALS

FURNISH ALL MATERIALS, LABOR, EQUIPMENT AND RELATED ITEMS NECESSARY TO ACCOMPLISH TOPSOIL, TREATMENT AND PREPARATION OF SOIL, FINISH GRADING, PLACEMENT OF SPECIFIED PLANT MATERIALS, FERTILIZER, STAKING, MULCH, CLEAN-UP, DEBRIS REMOVAL, AND 30-DAY MAINTENANCE.

QUALIFICATIONS:  
LANDSCAPE CONTRACTOR TO BE SKILLED AND KNOWLEDGEABLE IN THE FIELD OF WORK AND HAVE A MINIMUM OF FIVE (5) YEARS EXPERIENCE INSTALLING SIMILAR WORK. CONTRACTOR TO BE LICENSED TO PERFORM THE WORK SPECIFIED WITHIN THE PRESIDING JURISDICTION.

JOB CONDITIONS:  
IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE SITE AND REPORT ANY DISCREPANCIES TO THE OWNER OR THE OWNER'S REPRESENTATIVES. ALL PLANT MATERIAL AND FINISH GRADES ARE SUBJECT TO APPROVAL BY THE OWNER.

PROTECTION:  
SAVE AND PROTECT ALL EXISTING PLANTINGS SHOWN TO REMAIN AND ALL ON-SITE AND OFF-SITE TREES TO BE RETAINED. DO NOT PLANT UNTIL OTHER CONSTRUCTION OPERATIONS WHICH CONFLICT HAVE BEEN COMPLETED. IF AN IRRIGATION SYSTEM IS TO BE INSTALLED DO NOT PLANT UNTIL THE SYSTEM HAS BEEN INSTALLED, TESTED, AND APPROVED BY THE OWNER. HANDLE PLANTS WITH CARE - DO NOT DAMAGE OR BREAK ROOT SYSTEM, BARK, OR BRANCHES. REPAIR AND/OR REPLACE ITEMS DAMAGED AS A RESULT OF WORK, OR WORK NOT IN COMPLIANCE WITH PLANS AND SPECIFICATIONS, AS DIRECTED BY OWNER AT NO ADDITIONAL COST TO THE OWNER.

REPAIR OF EXISTING PLANTINGS:  
DURING THE COURSE OF WORK, REPAIR ALL EXISTING PLANTING AREAS BY PRUNING DEAD GROWTH, RE-ESTABLISHING FINISH GRADE AND RE-MULCHING TO SPECIFIED DEPTH.

REPAIR OF IRRIGATION SYSTEM:  
DURING THE COURSE OF WORK, REPAIR ANY DAMAGE TO THE IRRIGATION SYSTEM TO MATCH CONDITIONS PRIOR TO THE DAMAGE.

GUARANTEE:  
GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE OF THE JOB BY OWNER.

30-DAY MAINTENANCE:  
CONTRACTOR TO PROVIDE OWNER WITH A SCOPE OF WORK AT TIME OF INITIAL PROJECT BID TO PROVIDE LANDSCAPE AND IRRIGATION MAINTENANCE FOR 30 DAYS FOLLOWING OCCUPANCY. WORK TO INCLUDE MAINTENANCE AS DESCRIBED BELOW, IN PLANTING AND IRRIGATION MAINTENANCE.

SUBMITTALS:  
SUBMIT THE FOLLOWING TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO THE START OF ANY WORK:

- DOCUMENTATION THAT ALL PLANT MATERIAL HAS BEEN ORDERED.
- TOPSOIL ANALYSIS AND RECOMMENDED AMENDMENTS.
- TREE STAKING AND GUYING MATERIALS.
- ONE (1) QUART SIZE OF TOPSOIL AND MULCH.
- PLANTING SCHEDULE INCLUDING DATES AND TIMES.
- MAINTENANCE INSTRUCTIONS FOR ONE (1) FULL YEAR.

MATERIALS:

PLANT MATERIALS:  
PLANT MATERIALS TO BE GRADE NO. 1, SIZED IN ACCORDANCE WITH (A&N) AMERICAN STANDARDS FOR NURSERY STOCK (ANSI Z-60-2014). PRUNE PLANTS RECEIVED FROM THE NURSERY ONLY UPON AUTHORIZATION BY THE LANDSCAPE ARCHITECT. "B & B" INDICATES BALLED AND BURLAPPED; "CONT." INDICATES CONTAINER; "BR" INDICATES BARE ROOT; "CAL" INDICATES CALIPER AT "A" ABOVE SOIL LINE; "OAL" INDICATES GALLON.

- A SPECIFIED PLANT CANOPY SIZE OR CALIPER IS THE MINIMUM ACCEPTABLE CONTAINER OR BALL SIZE AND ESTABLISHES MINIMUM PLANT CONDITION TO BE PROVIDED.
- QUALITY:
  - PLANT MATERIAL TO COMPLY WITH STATE AND FEDERAL LAWS FOR DISEASE INSPECTION. PLANTS TO BE FULLY LIVE, VIGOROUS, WELL FORMED, WITH WELL DEVELOPED FIBROUS ROOT SYSTEMS. ROOT BALLS OF PLANTS TO BE SOLID AND FIRMLY HELD TOGETHER, SECURELY CONTAINED AND PROTECTED FROM INJURY AND DESICCATION. PLANTS DETERMINED BY LANDSCAPE ARCHITECT TO HAVE BEEN DAMAGED: HAVE DEFORMITIES OF STEMS, BRANCHES, OR ROOTS; LACK SYMMETRY; HAVE MULTIPLE LEADERS OR "Y" CROTCHES LESS THAN 30 DEGREES IN TREES, OR DO NOT MEET SIZE OR ANSI STANDARDS WILL BE REJECTED. PLANT MATERIAL TO BE FROM A SINGLE NURSERY SOURCE FOR EACH SPECIFIED SPECIES/HYBRID. NURSERY SOURCES TO BE THOSE LOCATED IN THE STATE REGION AS THE JOB SITE.
  - SUBSTITUTION:
    - NO SUBSTITUTION OF PLANT MATERIAL, SPECIES OR VARIETY, WILL BE PERMITTED UNLESS WRITTEN EVIDENCE IS SUBMITTED TO THE OWNER FROM TWO QUALIFIED PLANT BROKERAGE OFFICES. SUBSTITUTIONS WHICH ARE PERMITTED TO BE IN WRITING FROM THE OWNER AND LANDSCAPE ARCHITECT. THE SPECIFIED SIZE, SPECIES AND NEAREST VARIETY, AS APPROVED, TO BE FURNISHED. SUBSTITUTIONS MAY REQUIRE SUBMITTAL TO REVISED LANDSCAPE PLAN TO CITY FOR APPROVAL.
  - LABEL AT LEAST ONE (1) TREE, SHRUB, AND GROUND COVER OF EACH VARIETY WITH A SECURELY ATTACHED WATERPROOF TAG BEARING LEGIBLE DESIGNATION OF BOTANICAL AND COMMON NAMES.
  - DELIVER PLANT MATERIAL AFTER PREPARATION OF PLANTING AREAS HAVE BEEN COMPLETED AND PLANT IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN SIX (6) HOURS AFTER DELIVERY, SET MATERIAL IN SHADE, PROTECT FOR WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOT BALLS MOIST BY COVERING WITH MULCH, BURLAP OR OTHER ACCEPTABLE MEANS OF RETAINING MOISTURE.

SOIL PREPARATION:  
TOPSOIL, AMENDMENT, AND BACKFILL, ARE GENERAL REQUIREMENTS FOR ALL LANDSCAPE AREAS, UNLESS NOTED OTHERWISE ON THE PLANS. FOR SOIL PREPARATION AND INSTALLATION REQUIREMENTS, SEE CITY OF PUYALLUP VEGETATION MANAGEMENT STANDARDS SECTION 8.2, SOIL QUANTITY AND QUALITY STANDARDS. SOIL AMENDMENTS AND FERTILIZER ARE TO BE USED FOR BID PRICE BASIS ONLY. SPECIFIC AMENDMENTS AND FERTILIZERS WILL BE MADE AFTER SOIL SAMPLES ARE LABORATORY TESTED BY THE CONTRACTOR. PROVIDE CHANGE ORDER FOR ADDITIONAL OR REDUCTION OF MATERIALS REQUIRED OR NOT REQUIRED BY THE SOILS REPORT.

SOIL FERTILITY AND AGRICULTURAL SUITABILITY ANALYSIS:  
AFTER ROUGH GRADING AND PRIOR TO SOIL PREPARATION, CONTRACTOR TO OBTAIN TWO REPRESENTATIVE SOIL SAMPLES, FROM LOCATIONS AS DIRECTED BY THE LANDSCAPE ARCHITECT, TO AN ACCREDITED SOIL TESTING LABORATORY FOR TESTING. SUBMIT RESULTS TO LANDSCAPE ARCHITECT FOR REVIEW. TESTS TO INCLUDE FERTILITY AND SUITABILITY ANALYSIS WITH WRITTEN RECOMMENDATIONS FOR SOIL AMENDMENT, FERTILIZER, CONDITIONS, APPLICATION RATES, AND POST-CONSTRUCTION MAINTENANCE PROGRAM. TESTS TO BE CONTRACTED WITH AND PAID FOR BY THE CONTRACTOR.

ORGANIC MULCH (TOPDRESSING):

PER CITY OF PUYALLUP VEGETATION MANAGEMENT STANDARDS SECTION 8.3, MULCHING, ALL PLANTING AREAS SHALL BE MULCHED WITH A UNIFORM FOUR INCH (4") LAYER OF ORGANIC COMPOST MULCH MATERIAL OR WOOD CHIPS OVER A PROPERLY CLEANED, AMENDED AND GRADED SUBSURFACE. FOUR INCHES (4") OF MULCH IN PLANTING AREAS SHALL BE MAINTAINED THROUGH THE LIFE OF THE PROJECT.

STAKES:

2-INCH DIAMETER BY 8-FOOT MINIMUM LODGEPOLE PINE STAKES.

GUY MATERIAL:  
1-INCH WIDE POLYETHYLENE CHAIN LOCK TYPE TIES; OR, 3/8" DIAMETER RUBBER, NO WIRE.

EXECUTION:

CONTAMINANTS:  
VERIFY THAT ALL SOIL CONTAMINANTS (E.G., PAINT, SEALANTS, SOLVENTS, OILS, GREASES, CONCRETE/ASPHALT SPOILS, ETC.) HAVE BEEN SATISFACTORY REMOVED FROM ALL PLANTING AREAS. DO NOT BEGIN WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

FINISH GRADES:

FINE GRADE AND REMOVE ROCKS, DEBRIS, AND FOREIGN OBJECTS OVER 2 INCHES DIAMETER FROM TOP SURFACE OF PREPARED LANDSCAPE AREAS. FINISH ELEVATIONS TO BE DEFINED AS 3 INCHES BELOW CURBS, WALKS AND/OR OTHER ADJACENT HARDSCAPE FOR ALL PLANTING BED AREAS AND 1-INCH BELOW CURBS, WALKS AND/OR OTHER ADJACENT HARDSCAPE FOR ALL LAWN AREAS. FINISH GRADE REFER TO GRADES PRIOR TO INSTALLATION OF MULCH OR LAWN. ALL FINISH GRADES TO BE SMOOTH EVEN GRADES, LIGHTLY COMPACTED, AS SHOWN ON THE PLAN AND DETAILED. PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS AND STRUCTURES. SITE CIVIL DRAWINGS IDENTIFY FINAL ELEVATIONS. MOISTEN PREPARED AREAS BEFORE PLANTING IF SOIL IS DRY. WATER THOROUGHLY AND ALLOW SURFACE TO DRY BEFORE PLANTING. DO NOT CREATE MUDDY SOIL.

TREES AND SHRUBS:

ARRANGE TREES AND SHRUBS ON SITE IN PROPOSED LOCATIONS PER DRAWINGS. EXCAVATE PIT, PLANT AND STAKE OR GUY, AS CALLED OUT AND DETAILED. ALL TREES, SHRUBS, AND SUPPORTS TO STAND VERTICAL. BACKFILL SHALL BE PIT SPOILS. SETTLE BACKFILL USING WATER ONLY. NO MECHANICAL COMPACTION.

GROUND COVERS:

EXCAVATE PITS TO A MINIMUM OF 3 INCHES BELOW, AND TWICE THE ROOT BALL DIAMETER. WATER THOROUGHLY AND TAKE CARE TO ENSURE THAT ROOT CROWN IS AT PROPER GRADE, AS DETAILED.

UTILITY CLEARANCES:

FIELD ADJUST PLANT LOCATIONS FOR 5-FOOT SEPARATION OF TREES/SHRUBS AND 2-FOOT SEPARATION FOR GROUND COVER FROM FIRE HYDRANTS AND UTILITY VAULTS.

CLEANUP AND PROTECTION:

DURING LANDSCAPE WORK, KEEP ALL PAVEMENT CLEAN AND WORK AREAS IN AN ORDERLY CONDITION. PROTECT LANDSCAPE WORK AND MATERIALS FROM DAMAGE DUE TO LANDSCAPE OPERATIONS AND TRESPASSERS. MAINTAIN PROTECTION DURING INSTALLATION AND MAINTENANCE PERIOD. TREAT, REPAIR, OR REPLACE DAMAGE LANDSCAPE WORK AS DIRECTED BY THE OWNER.

PLANTING MAINTENANCE:

PROVIDE FULL MAINTENANCE BY SKILLED EMPLOYEES OF LANDSCAPE INSTALLERS. CONTRACTOR TO MAINTAIN PLANTINGS THROUGH COMPLETED INSTALLATION, AND UNTIL ACCEPTANCE OF LANDSCAPE INSTALLATION. PLANTING MAINTENANCE TO INCLUDE WATERING, WEEDING, CULTIVATING, TIGHTENING AND REPAIRING OF TREE GUYS, RESETTling PLANTS TO PROPER GRADES OR POSITION, RE-ESTABLISHING SETTLED GRADES; AND MOWING LAWNS WEEKLY AFTER LAWN ESTABLISHMENT. HERBICIDE IS NOT RECOMMENDED FOR ONE YEAR FOLLOWING LANDSCAPE INSTALLATION. INCLUDED IS REPLACEMENT OF DEAD PLANTS AND PLANTS SHOWING LOSS OF 40 PERCENT OR MORE OF CANOPY.

IRRIGATION MAINTENANCE:

THE IRRIGATION SYSTEM TO BE MAINTAINED INCLUDING ADJUSTMENTS FOR BALANCED WATER DISTRIBUTION AND PRECIPITATION. FAILED OR MALFUNCTIONING IRRIGATION EQUIPMENT SHALL BE REPLACED AND/OR CORRECTED. PLANTING AND IRRIGATION MAINTENANCE TO INCLUDE THOSE OPERATIONS NECESSARY TO THE PROPER GROWTH AND SURVIVAL OF ALL PLANT MATERIALS. CONTRACTOR TO PROVIDE THIS WORK IN ADDITION TO SPECIFIC WARRANTY/GUARANTEES.

CITY OF PUYALLUP  
Planning Division  
Approved Landscape Plan  
(253) 864-4165

Staff:  
Date:

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 PLANNING MANAGER, DESIGNER, OR PROJECT PLANNER.

NOTE: If street trees are required, Call Planning Division for final inspection: (253) 864-4165 (Option 3). Road Barriers are required around street trees in accordance with city standard detail. Top soil shall be installed in accordance with city standards - field verification required. Failure to install top soil and root barriers in accordance with city standards may result in rejection of installation.

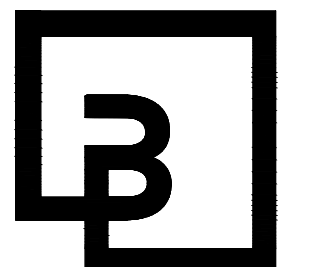
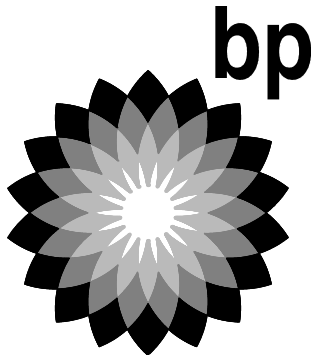
APPROVED

BY: CITY OF PUYALLUP  
WATER PURVEYOR

DATE:

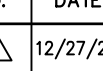
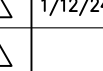



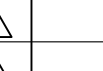
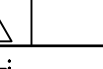



NOTE: THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE. THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE WATER PURVEYOR.

CLIENT:

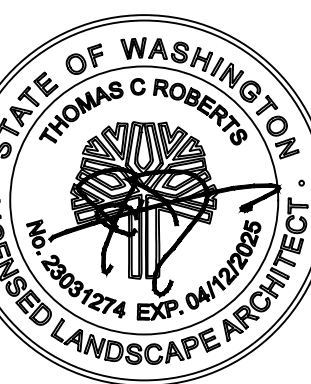


Barghausen  
Consulting Engineers, Inc.

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

NO.	DATE	REVISION	DESCRIPTION
	12/27/23	N. FACADE	SCREENING
	1/12/24	PER CITY	COMMENTS
			
			
			
			
			
			
			
			

SEAL:



DEVELOPMENT INFORMATION:

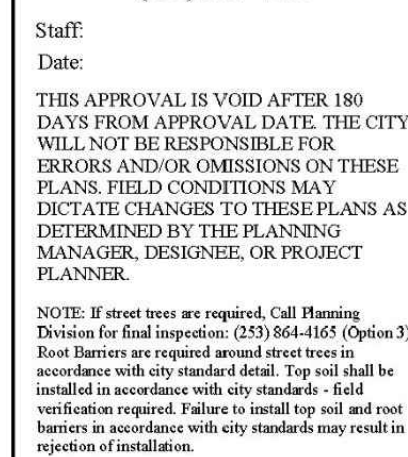
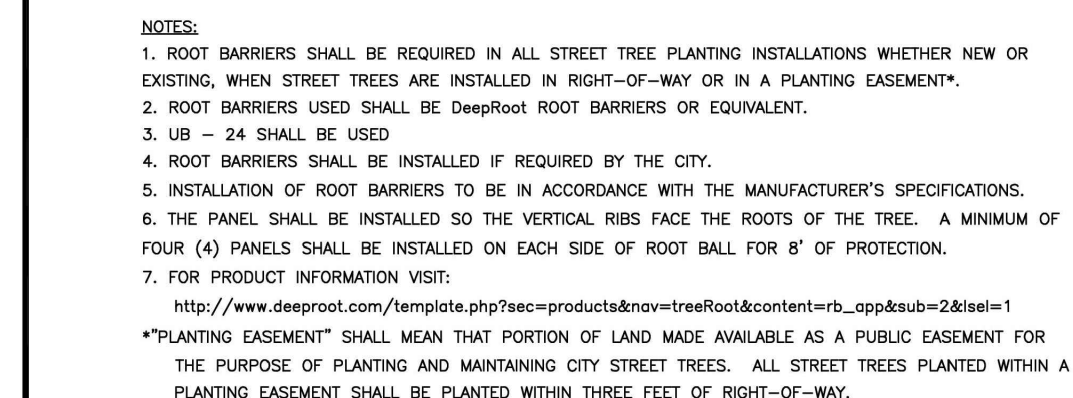
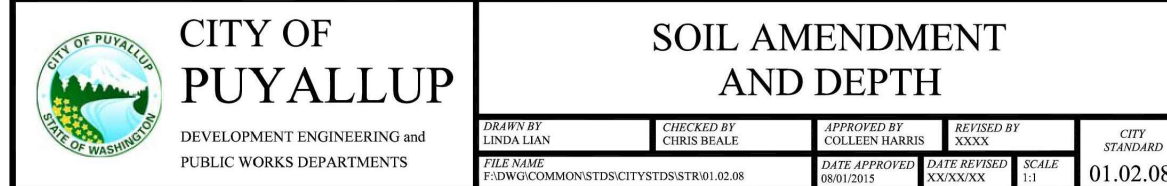
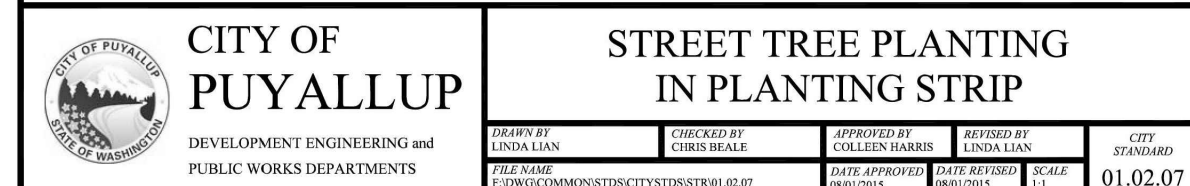
ARCO NTI  
3400 am/pm  
FUEL CANOPY w/ 6 MPD's



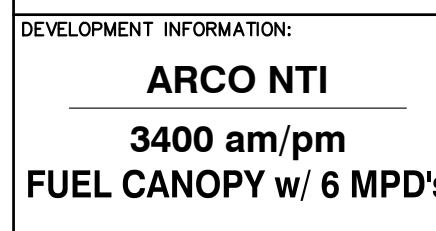
FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT BY POTHOLES THE UTILITIES AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE AT 811 48 HOURS IN ADVANCE AND THEN POTHOLES ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATION OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON THE UNVERIFIED SUBMITTAL INFORMATION AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.



**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 WATER PURVEYOR.



FACILITY #TBD

DRAWING TITLE:

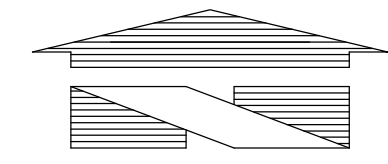
**LANDSCAPE  
DETAILS**

# L-3

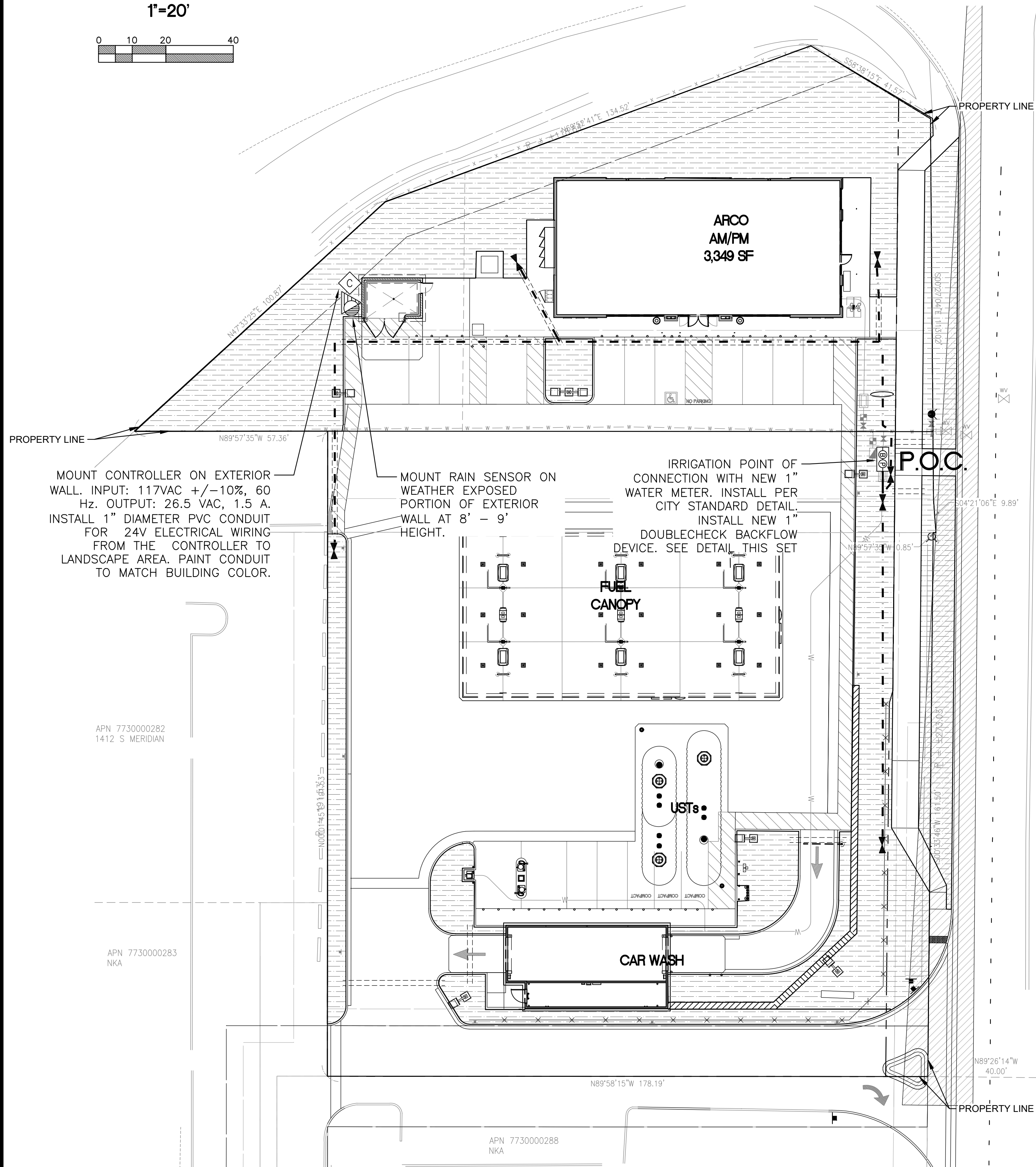


# IRRIGATION PLAN

FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



1"=20'  
0 10 20 40



MOUNT CONTROLLER ON EXTERIOR WALL. INPUT: 117VAC +/-10%, 60 Hz. OUTPUT: 26.5 VAC, 1.5 A. INSTALL 1" DIAMETER PVC CONDUIT FOR 24V ELECTRICAL WIRING FROM THE CONTROLLER TO LANDSCAPE AREA. PAINT CONDUIT TO MATCH BUILDING COLOR.

MOUNT RAIN SENSOR ON WEATHER EXPOSED PORTION OF EXTERIOR WALL AT 8' - 9' HEIGHT.

IRRIGATION POINT OF CONNECTION WITH NEW 1" WATER METER. INSTALL PER CITY STANDARD DETAIL. INSTALL NEW 1" DOUBLECHECK BACKFLOW DEVICE. SEE DETAIL THIS SET

FUEL CANOPY

CAR WASH

APN 7730000282  
1412 S MERIDIAN

APN 7730000283  
NKA

APN 7730000288  
NKA

## UTILITY CONFLICT NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT BY POT-HOLING THE UTILITIES AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE AT 811 48 HOURS IN ADVANCE AND THEN POT-HOLING 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 NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.



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

## IRRIGATION LEGEND

DESCRIPTION

DRIP IRRIGATION:



HUNTER LANDSCAPE DRIPLINE COMPONENTS

HDL-06-12-250-CV SUB-SURFACE DRIPLINE TUBING 0.6 GPH PRESSURE COMPENSATING EMITTERS WITH CHECK VALVE AT 12" ON-CENTER SPACING - ALL TUBING SHALL BE INSTALLED ON GRADE W/ 9" WIRE STAKES FOUR (4) FEET ON-CENTER; VERIFY THE LAYOUT AND 18" ON-CENTER SPACING IN THE FIELD PRIOR TO STARTING WORK. INSTALL ALL COMPONENTS PER MANUF. SPECIFICATIONS.

USE HUNTER PLD-LOC FITTINGS FOR CONNECTION BETWEEN PVC LATERAL LINES AND INLINE DRIP TUBING

DRIP IRRIGATION: ICZ-101/151-XL REMOTE CONTROL DRIP ZONE KIT WITH FILTER AND PRESSURE REGULATOR MAXIMUM 2 VALVES PER BOX

HUNTER SOLAR SYNC WIRE RAIN SENSOR COMBO

HUNTER PRO-C CONTROLLER 3 TO 15 STATIONS, (HARDWIRE CONNECTION); PROVIDE GROUND AND BATTERIES PER MANUFACTURER'S SPECIFICATIONS

P.O.C.

WILKINS 950 XLT- 1" DOUBLE CHECK VALVE (STATE APPROVED); TEST AND CERTIFICATION BY LICENSED BACKFLOW TESTER  
WILKINS 850 - BALL VALVE, SIZE TO MATCH PIPE  
CARSON INDUSTRIES #1730 (TWO AT P.O.C.) GRADE LEVEL VAULT WITH BOLT LOCK LID

PLASTIC BALL VALVE, MATCH LINE SIZE, IN VALVE BOX

HUNTER HQ-33DLRC 3/4" QUICK COUPLING VALVE, IN VALVE BOX, PROVIDE TWO KEYS AND SWIVELS

MAINLINE - SCH 40 PVC (18" COVER); SIZE PER PLAN, 1-1/2" SIZE MINIMUM

LATERAL - SCH 40 PVC (12" COVER); SIZE PER PLAN, 3/4" SIZE MINIMUM

SLEEVE - SCH 40 PVC; 24" MINIMUM COVER AT VEHICLE CROSSINGS AND 18" MINIMUM COVER IN LANDSCAPE AREAS, 6" SIZE WHERE IRRIGATION MAINLINE TRAVELS THROUGH PIPE. 4" SIZE WHERE ONLY LATERALS TRAVEL THROUGH PIPE

IRRIGATION SHOWN DIAGRAMMATICALLY FOR PLAN CLARITY. COMMON TRENCH AND PLACE EQUIPMENT IN LANDSCAPE; MANIFOLD GROUPED VALVES IN ADJACENT SHRUB AREAS WHERE FEASIBLE.

## SCH 40 PIPE SIZING CHART

PIPE SIZE	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	
FLOW GPM	1-8	8.1-13	13.1-23	23.1-32	32.1-53	53.1-74	GPM (MAX.)

## LANDSCAPE IRRIGATION NOTES

- GENERAL CONTRACTOR AND LANDSCAPE CONTRACTOR TO COORDINATE:
  - INSTALLATION OF 110V ELECTRICAL SERVICE FROM ELECTRICAL SOURCE TO AUTOMATIC CONTROLLER, INCLUDING WIRE HOOK-UP INTO MOUNTED CONTROLLER. IRRIGATION CONTRACTOR WILL MOUNT CONTROLLER PER DESIGN AND COORDINATE WITH GENERAL CONTRACTOR.
  - INSTALLATION OF IRRIGATION/SERVICE METER AND STUB TO IRRIGATION POINT OF CONNECTION, PER UTILITY PLAN(S). PROVIDE STANDARD THREADED STUB-OUT WITH THREADED CAP ON DISCHARGE SIDE OF METER. STUB-OUT TO BE INSTALLED APPROXIMATELY 18 INCHES BELOW FINISH GRADE.
  - VERIFICATION OF STATIC WATER PRESSURE AT POINT-OF-CONNECTION (P.O.C.) CONTRACTOR SHALL NOTIFY OWNER AND BARGHAUSEN CONSULTING ENGINEERS, INC., OF ANY VARIATION IN STATIC PRESSURE OVER 5 PSI GREATER/LESS THAN DESIGN PRESSURE.
  - INSTALLATION OF SLEEVING.
- PROVIDE ALL LABOR, MATERIALS, TRANSPORTATION, AND SERVICES NECESSARY TO FURNISH AND INSTALL A COMPLETE IRRIGATION SYSTEM AS INDICATED ON THE DRAWINGS AND/OR NOTES. PROVIDE A ONE (1) YEAR WARRANTY/GUARANTEE FROM FINAL ACCEPTANCE AGAINST ALL DEFECTS IN MATERIALS, EQUIPMENT, AND WORKMANSHIP.
- COORDINATE IRRIGATION INSTALLATION WITH GENERAL CONTRACTOR, ELECTRICAL CONTRACTOR, LANDSCAPE CONTRACTOR, OWNER, ARCHITECT, AND LANDSCAPE ARCHITECT.
- LANDSCAPE CONTRACTOR TO TEST AVAILABLE WATER PRESSURE PRIOR TO BEGINNING ANY WORK. PROVIDE LANDSCAPE ARCHITECT WITH WRITTEN PSI RESULTS.
- ALL WORK PER LOCAL CODE. INSTALLATION PER MANUFACTURER'S WRITTEN SPECIFICATIONS.
- CONTRACTOR TO OBTAIN AND PAY FOR ALL PERMITS, FEES, AND REQUIRED CITY INSPECTIONS.
- SUBMITTALS:
  - SUBMIT EACH ITEM LISTED BELOW FOR LANDSCAPE ARCHITECT'S REVIEW AND APPROVAL.
  - PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED.
  - CONTROL WIRING PATH DIAGRAM.
  - "AS-BUILT" DRAWINGS.
  - OPERATION AND MAINTENANCE MANUALS.
- PROVIDE AND KEEP UP TO DATE A COMPLETE "AS-BUILT" RECORD SET OF PRINTS WHICH ARE TO BE CORRECTED DAILY AND SHOW EVERY CHANGE FROM THE ORIGINAL DRAWINGS AND NOTES AND EXACT "AS-BUILT" LOCATIONS, SIZES AND KIND OF EQUIPMENT. THIS SET OF DRAWINGS. ARE TO BE KEPT ON SITE AND ARE TO BE USED ONLY AS THE RECORD SET. ALL WORK IS TO BE NEAT AND LEGIBLE ANNOTATIONS THEREON DAILY AS THE WORK PROCEEDS, SHOWING WORK AS ACTUALLY INSTALLED.  
DIMENSION FORM TWO (2) PERMANENT POINTS OF REFERENCE, BUILDING CORNERS, WALKS, OR ROAD INTERSECTIONS, ETC., THE LOCATION OF THE FOLLOWING:
  - CONNECTION TO WATER LINES (P.O.C.),
  - CONNECTIONS TO ELECTRICAL POWER,
  - GATE VALVE, QUICK COUPLERS, AND REMOTE CONTROL VALVE,
  - ROUTING OF MAINLINE (DIMENSION MAXIMUM 100' ALONG ROUTING),
  - ROUTING OF CONTROL WIRING,
  - OTHER RELATED EQUIPMENT AS DIRECTED BY THE LANDSCAPE ARCHITECT.
- PREPARE AND PROVIDE PRIOR TO COMPLETION OF CONSTRUCTION, A THREE RING BINDER CONTAINING THE FOLLOWING INFORMATION:
  - INDEX SHEET STATING CONTRACTOR'S ADDRESS, TELEPHONE NUMBER, FAX, E-MAIL AND A LIST OF EQUIPMENT WITH NAME AND ADDRESS OF LOCAL MANUFACTURER'S REPRESENTATIVES,
  - CATALOG AND PARTS SHEETS ON EVERY MATERIAL AND EQUIPMENT INSTALLED UNDER THIS, CONTRACT,
  - GUARANTEE STATEMENT,
  - COMPLETE OPERATING AND MAINTENANCE INSTRUCTIONS ON ALL MAJOR EQUIPMENT.
  - CONSTRUCTION DETAILS FROM THE PROJECT,
  - COMPLETE TROUBLE-SHOOTING GUIDE TO COMMON IRRIGATION PROBLEMS,
  - WINTERIZATION AND SPRING START-UP PROCEDURES,
  - CHART OF APPROXIMATE WATERING TIMES FOR SPRING, SUMMER, AND FALL,
  - A COPY OF THE "AS-BUILT" DRAWINGS AND CONTROLLER CHART.
- ALL VALVES TO BE PLACED IN "CARSON" GRADE LEVEL BOXES WITH BOLT-LOCK LIDS (OR APPROVED EQUIVALENT). SET BOXES 2 INCHES HIGHER THAN FINISH GRADE IN MULCH AREAS AND FLUSH WITH FINISH GRADE IN LAWN AREAS. JUMBO BOX FOR CHECK VALVE, 10" ROUND BOX FOR GATE/QUICK COUPLER/WIRE SPLICES, AND 12" STANDARD FOR CONTROL VALVES. PROVIDE BOX EXTENSIONS AS REQUIRED.
- MAINLINE PIPE TO BE BURIED 18 INCHES, LATERALS 12 INCHES, AND SLEEVES 24" INCHES BELOW FINISH GRADE. NO ROCK OR DEBRIS TO BE BACKFILLED OVER PIPE.
- HEAD AND LINE POSITIONING IS DIAGRAMMATIC ON PLAN. ADJUST IN FIELD AS NECESSARY FOR 100 PERCENT COVERAGE. VALVES TO BE POSITIONED ADJACENT TO PAVEMENT/CURBS, IN SHRUB BEDS WHERE POSSIBLE.
- FAMILIARIZE OWNERS FACILITY OPERATOR WITH IRRIGATION SYSTEM FUNCTION, CONTROLLER PROGRAMMING, SYSTEM OPERATION AND MAINTENANCE REQUIREMENTS.
- SPRINKLERS ON RISERS WILL NOT BE ALLOWED UNLESS NOTED ON PLANS.
- RADIUS REDUCTION TO BE MADE BY USE OF PRESSURE ADJUSTMENT, SCREENS, AND/OR ALTERNATE NOZZLES. IN-NOZZLE ADJUSTMENT IS LIMITED TO 10 PERCENT FOR SPRAY HEADS AND PER MANUFACTURER'S LIMITS FOR OTHER SPRINKLERS. SPRINKLER SPACING NOT EXCEED 60% OF THE DIAMETER OF THE PUBLISHED DATA.
- ALL CONTROL WIRE SPLICES TO BE MADE AT VALVE BOXES WITH WATER TIGHT ELECTRICAL SPLICES, 3M, SCOTT'S LOCK SEAL TACK 3576-78, OR EQUIVALENT.
- EACH VALVE BOX TO CONTAIN A MINIMUM OF TWO (2) SPARE ORANGE CONTROL WIRES FOR JACKETED WIRE. ROUTE SPARE WIRES FROM THE CONTROLLER TO THE LAST VALVE OF EACH MAINLINE BRANCH. COMMON WIRE TO BE WHITE. SINGLE STRAND WIRE TO BE A MINIMUM OF 14 GAUGE.
- ALL ELECTRICAL EQUIPMENT TO BE U.L. TESTED AND APPROVED, AND BEAR THE U.L. LABEL.
- CROSS CONNECTION PROTECTION INSPECTION REQUIRED. THE BACKFLOW DEVICE TO BE TESTED UPON THE ORIGINAL INSTALLATION. THE TESTING TO BE PERFORMED BY A PERSON HOLDING A CURRENT CERTIFICATE AS A BACKFLOW TESTER. THE TEST REPORT TO BE SUBMITTED TO THE LOCAL WATER DISTRICT, OR PURVEYOR, AND OWNER WITH A COPY TO BARGHAUSEN CONSULTING ENGINEERS, INC. CONTRACTOR TO INCLUDE TESTING IN THE SCOPE OF WORK. OWNER IS RESPONSIBLE FOR ANNUAL INSPECTIONS AFTER THE INTIAL INSPECTION.
- CONTRACTOR TO PROVIDE SYSTEM WINTERIZATION/SPRING SERVICE WHEN INSTALLATION HAS BEEN COMPLETED WITHIN 90 DAYS OF NOVEMBER 1 FOR WINTERIZATION, OR MAY 15 FOR SPRING SERVICE. SERVICE TO BE PERFORMED AS NEAR AS PRACTICAL

CITY OF PUYALLUP  
Planning Division  
Approved Landscape Plan  
(253) 864-4165

Staff:  
Date:

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 PLANNING MANAGER, DESIGNER, OR PROJECT PLANNER.

NOTE: If street trees are required, Call Planning Division for final inspection: (253) 864-4165 (Option 3)  
Root Barriers are required around street trees in accordance with city standard detail. Top soil shall be installed in accordance with city standard - field verification required. Failure to install top soil and root barriers in accordance with city standard may result in rejection of installation.

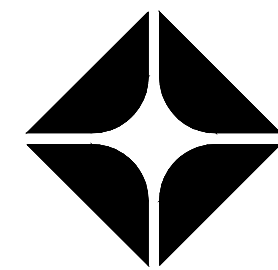
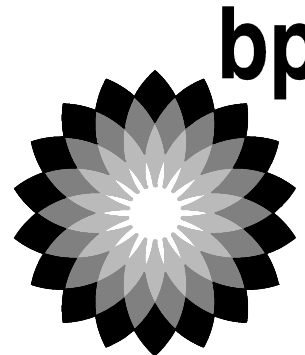
## APPROVED

BY: \_\_\_\_\_  
CITY OF PUYALLUP  
WATER PURVEYOR

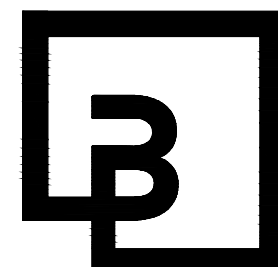
DATE: \_\_\_\_\_

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 WATER PURVEYOR.

CLIENT:



BP WEST COAST PRODUCTS, LLC



Barghausen  
Consulting Engineers, Inc.

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

NO. DATE REVISION DESCRIPTION

1	12/27/23	N. FACADE SCREENING
2	1/12/24	PER CITY COMMENTS
3		
4		
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20		

SEAL:



DEVELOPMENT INFORMATION:

ARCO NTI  
3400 am/pm  
FUEL CANOPY w/ 6 MPD's

SITE ADDRESS:

SWC S MERIDIAN  
@ HIGHWAY 512  
PUYALLUP, WASHINGTON

FACILITY #TBD

DESIGNED BY: TCR ALLIANCE ZADN:

CHECKED BY: JMV BP REP:

DRAWN BY: TCR ALLIANCE PM:

VERSION: - PROJECT NO: 21730

DRAWING TITLE:

IRRIGATION

PLAN

SHEET NO:

L-4



FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



PER MANUFACTURER'S SPECIFICATIONS

MOUNTING BRACKET

RAIN SENSOR

NOTE:  
MOUNT ON  
WEATHER EXPOSED  
WALL 8' ABOVE GRADE

SECURE PER  
MANUFACTURER'S  
SPECIFICATIONS

WALL

A detailed cross-section diagram of a wellhead assembly installed in the ground. The diagram shows a vertical pipe with a valve box at the surface. Below the valve box, the pipe continues down through a layer of washed gravel, supported by three bricks. The pipe is connected to a horizontal section that then turns downward. Various components are labeled with arrows pointing to them.

Labels and components shown in the diagram:

- SUPPORT STAKES AND CLAMPS
- FINISH GRADE
- VALVE BOX
- QUICK COUPLING VALVE
- SUMP 1 C.F. 7/8" WASHED GRAVEL
- THREE (3) 4"x8" BRICKS
- MARLEX ELL - TYPICAL
- SCH 80 P.V.C. NIPPLE
- SCH 40 PVC SXSXT TEE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT BY POTHOLES THE UTILITIES AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE AT 811 48 HOURS IN ADVANCE AND THEN POTHOLES ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATION OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON THE UNVERIFIED SUBMITTAL INFORMATION AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.


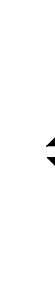




**APPROVED**

BY \_\_\_\_\_  
CITY OF PUYALLUP  
WATER PURVEYOR

DATE \_\_\_\_\_

**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 WATER  
PURVEYOR.

CLIENT:		
<div><div></div><div> ARCO BP WEST COAST PRODUCTS, LLC</div></div>		
<div><div></div><div>Barghausen Consulting Engineers, Inc.  18215 72nd Avenue South Kent, WA 98032 425.251.6222 barghausen.com</div></div>		
NO.	DATE	REVISION DESCRIPTION
1	12/27/23	N. FACADE SCREENING
2	1/12/24	PER CITY COMMENTS
3		
4		
5		
6		
7		
8		
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10		
11		
12		
SEAL:		
<div></div>		
DEVELOPMENT INFORMATION:		
ARCO NTI 3400 am/pm FUEL CANOPY w/ 6 MPD's		
SITE ADDRESS:		
SWC S MERIDIAN @ HIGHWAY 512 PUYALLUP, WASHINGTON		
FACILITY #TBD		
DESIGNED BY:	TCR	ALLIANCE ZONE:
CHECKED BY:	JMV	BP REF#:
DRAWN BY:	TCR	ALLIANCE PM:
VERSION:	-	PROJECT NO: 21730
DRAWING TITLE:		
IRRIGATION DETAILS		
SHEET NO:		
L-5		







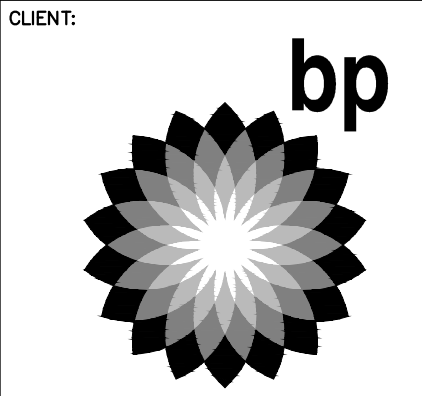
LANDSCAPE RENDERING: REAR ELEVATION

FOR  
ARCO ampm PUYALLUP  
SEC. 33, TWN. 20 N, RGE. 4 E, W.M.  
CITY OF PUYALLUP, PIERCE COUNTY



REAR ELEVATION (NORTH BUILDING FACADE)

NOT TO SCALE



NO.	DATE	REVISION	DESCRIPTION
1	11/30/23		RENDERING
2			
3			
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12			



DEVELOPMENT INFORMATION:

**ARCO NTI**  
**3400 am/pm**  
**FUEL CANOPY w/ 6 MPD's**

SITE ADDRESS:

**SWC S MERIDIAN**  
**@ HIGHWAY 512**  
**PUYALLUP, WASHINGTON**

**FACILITY #TBD**

DESIGNED BY:	ALLIANCE ZADN:
CHECKED BY:	BP REP:
DRAWN BY:	ALLIANCE PM:
VERSION:	PROJECT NO:
	<b>21730</b>

DRAWING TITLE:

**REAR ELEV.  
RENDERING**

SHEET NO:

**EXHIBIT**